N. Research, Development and Demonstration

1. The applicant should submit a letter to the Department summarizing the proposed research prior to submitting the formal application so that the Department may, in accordance with 17-730.330(2), determine if any of the requirements of the application can be waived. This letter should contain:
   a) The purpose of the research;
   b) An explanation of why the research is innovative and experimental; and
   c) A summary of the research objectives.
2. As part of the formal application, the applicant should submit the following information:
   a) The purpose of this project.
   b) An explanation as to why the proposed activity is experimental and innovative..
   c) A general description of the proposed activity.
   d) The estimated time of operation for the experimental activities.
   e) Any information on the expected performance of the unit.
   f) A description of performance data that may have been previously generated from the operation of the unit.
3. Monitoring and inspection requirements should be established at a level consistent with the proposed activity in order to assure protection of human health and the environment.
4. Reporting and record keeping should be proposed in a manner which will sufficiently provide the Department with data about the operating efficiency of the RD&D activity. Time frames for the submission of data should be proposed and should be at a frequency adequate to allow proper department oversight of the experimental activity.
5. Personnel qualifications should be given and be consistent with the proposed experimental activity. The personnel responsible for conducting and managing the experimental testing should be technically competent to assure that any situations which arise as a result of the experimental activity will be properly handled.
6. A closure plan should be prepared in accordance with the appropriate sections of Part II of this application.

O. Exposure Information (§270.10(j))

The applicant must provide the following information, if the facility has a surface impoundment, miscellaneous units, or a landfill:

1. Reasonably foreseeable potential releases from both normal operations and accidents at the unit, including releases associated with transportation to or from the unit.
2. The potential pathways of human exposure to hazardous wastes or constituents resulting from the release described under Paragraph One (1).
3. The potential magnitude and nature of the human exposure resulting from such releases.

P. Information Regarding Potential Releases from Solid Waste Management Units

Facility name: Safety-Kleen Corporation, Medley Facility

EPA I.D. number: Applied for (FDER Construction Permit No. HC 13-175466)

Location: City Medley State Florida

1. Are there any of the following solid waste management units (existing or closed) at your facility?
   Note - Do not include hazardous wastes units currently shown in your Part B application

	Yes	No		Yes	No		Yes	No
Landfill	☐	☒	Storage Tank (Above Ground)	☐	☒	Wastewater Treatment Units	☐	☒
Surface Impoundment	☐	☒	Storage Tank (Underground)	☐	☒	Transfer Stations	☐	☒
Land Farm	☐	☒	Container Storage Area	☐	☒	Waste Recycling Operations	☐	☒
Waste Pile	☐	☒	Injection Wells	☐	☒	Land Treatment Facility	☐	☒
Incinerator	☐	☒						

MEDLEY, FLORIDA

DER Form # 17-730.900(2)
Form Title Ap. for a Hazardous Waste Facility Permit
Effective Date July 3, 1989
DER Application No. _____ (Filled in by DER)

2. If there are "Yes" answers to any of the items in Number 1 above, please provide a description of the wastes that were stored, treated or disposed of in each unit. In particular please focus on whether or not the wastes would be considered as hazardous wastes or hazardous constituents under RCRA. Also include any available data on quantities or volumes of wastes disposed of and the dates of disposal. Please also provide a description of each unit and include capacity, dimensions, and location at facility. Provide a site plan if available.

Not Applicable

Note: Hazardous waste are those identified in 40 CFR Part 261. Hazardous constituents are those listed in Appendix VIII of 40 CFR Part 261.

3. For the units noted in Number 1 above and *also* those hazardous waste units in your Part B application, please describe for each unit any data available on any prior or current releases of hazardous wastes or constituents to the environment that may have occurred in the past or still be occurring.

Please provide the following information:

a. Date of release
b. Type of waste released
c. Quantity or volume of waste released
d. Describe nature of release (i.e., spill, overflow, ruptured pipe or tank, etc.)

Facility is under construction and hazardous wastes have not been stored on site.

4. In regard to the prior releases described in Number 3 above, please provide (for each unit) any analytical data that may be available which would describe the nature and extent of environmental contamination that exists as a result of such releases. Please focus on concentrations of hazardous wastes or constituents present in contaminated soil or ground water.

Not Applicable

Signature and Certification

As with reports in RCRA Permit Applications, submittal of this information must contain the following certification and signature by a principal executive officer of at least the level of Vice President or by a duly authorized representative of that person:

I certify under penalty of law that 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 is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Scott E. Fore

Signature

Scott E. Fore, Vice President
Environment, Health & Safety

Name and Title (Typed)

MEDLEY, FLORIDA

91-204

DER Form # 17-730.900(2)
Form Title Ap. for a Hazardous Waste Facility Permit
Effective Date July 3, 1989
DER Application No. _____ (Filled in by DER)

Application for a Hazardous Waste Facility Permit
Certification

To be completed by all applicants

1. **Operator**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possiblity of fine and imprisonment for knowing violations. 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 17-730, FAC, and, if granted a permit, the Department of Environmental Regtulation will be notified prior to the sale or legal transfer of the permitted facility.

Scott E. Fore
Signature of the Operator or Authorized Representative*

Scott E. Fore, Vice President
Environment, Health & Safety
Name and Title (Please Type or Print)

*Attach a letter of authorization

Date: 4/1/91 Telephone No. (708) 697-8460

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.

Scott E. Fore
Signature of the Facility Owner or Authorized Representative*

Scott E. Fore, Vice President
Environment, Health & Safety
Name and Title (Please Type or Print)

*Attach a letter of authorization

Date: 4/1/91 Telephone No. (708) 697-8460

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 §264.119 and §265.119, as adopted by reference in Chapter 17-730, FAC.

Michael D Craig Genevieve S. Craig
Signature of the ~~Facility~~ Land Owner or Authorized Representative*

MICHAEL D CRAIG Genevieve S. Craig
Name and Title (Please Type or Print)

*Attach a letter of authorization

Date: 4-25-91 Telephone No. (407) 692-3205

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.

Frederick W. Blickle, III
Signature

Frederick Blickle, III
Name (Please Type)

Florida Registration No.: 39409

Mailing address: 9501 Princess Palm Ave., Suite 10
Street or P.O. Box

Tampa Florida 33619
City State Zip

(Please Affix Seal)

FREDERICK W. BLICKLE III CERTIFICATE No. 39409 STATE OF FLORIDA REGISTERED ENGINEER

(813) 622-8727
Telephone No.

5/2/91
Date

Medley, Florida

91-204

ERM-South, inc.

9501 Princess Palm Avenue, Suite 100 • Tampa, Florida 33619 • (813) 622-8727
2858 N. W. 79th Avenue • Miami, Florida 33122 • (305) 591-3076

Reply To: Tampa Office

November 8, 1990

Project No. 13112.21, Task 1

RECEIVED
NOV 13 1990
Dept. of Environmental Reg.
West Palm Beach

Mr. Knox McKee
Florida Department of
Environmental Regulation
1900 South Congress Avenue, Suite A
West Palm Beach, FL 33406

RE: Safety-Kleen Corp. Medley, Florida Construction Permit Application

Dear Knox:

On behalf of Safety-Kleen Corp., Environmental Resources Management-South, Inc. (ERM) is pleased to submit six copies of revised portions of the above-referenced Construction Permit Application. ERM has reviewed the entire application and am submitting six copies of the Engineer's Certification is included with this submittal. We did modify certain sections beyond those you had requested in your letter dated September 27, 1990. Attachment 1 lists revised portions of the application that we are submitting.

We believe that you will find the information submitted to be complete and look forward to receiving the construction permit. If you have any questions, please do not hesitate to contact Ellen Jurczak of Safety-Kleen Corp. (1-800 669-5740), Cynthia Norton of ERM, or me.

Sincerely,

Frederick W. Blickle

Frederick W. Blickle, P.E.
Senior Engineer

pjh

Enclosure(s)

cc: Melissa Halebasko - Safety-Kleen, Elgin (letter only)
Joe Hartline - Safety-Kleen, Norcross
Ellen Jurczak - Safety-Kleen, Elgin
Cynthia Norton - ERM (letter only)
Jack Riggenbach - ERM (letter only)

RECEIVED
NOV 16 1990
HAZ. WASTE PERMITTING

13112.21/TSK1/KM110890.LTR

ATTACHMENT 1

RESPONSE TO FDER COMMENTS DATED SEPTEMBER 27, 1990 FOR SAFETY-KLEEN CONSTRUCTION PERMIT APPLICATION FILE NUMBER HC 13-175466 SAFETY-KLEEN CORP. MEDLEY, FLORIDA

Comment:

1. Provide a site-specific surface water management plan certified by the design engineer.

Response:

A site-specific surface water management plan is provided. This is a new Exhibit numbered Exhibit I.B.6-1 and should be placed immediately following Exhibit I.B.5-1.

Comment:

2. Provide manufacturer's specifications which support that the containment area coating (Sikagard 62 or Concressive 1305) material is compatible with all solvents which it may contact. (Exhibit I.E. 3-10).

Response:

Safety-Kleen, through use and experience with this coating material, has determined that the coating is compatible with the primary solvents encountered at a Safety-Kleen facility. Safety-Kleen is attempting to have the manufacturer provide certification that the coating is compatible with the primary constituents found in Safety-Kleen's waste streams. A copy of the letter to the manufacturer requesting this information is attached. (Exhibit I.E.3-11). The manufacturer's certification will be forwarded to FDER when they are available.

Comment:

3. Provide manufacturer's specifications which support that the sump liner (SIC Part No. 5280) is compatible with all solvents with which it may come in contact. (Exhibit I.E. 3-10).

Response:

Safety-Kleen Drawing STD-1020-00 (24" Diameter Stainless Steel Sump Liner Fabrication) (Exhibit I.E.3-12) provides for a stainless steel sump liner to be

used at the Medley facility. Stainless steel is compatible with the primary constituents of Safety-Kleen's waste streams.

Comment:

4. Drawing D11150, solvent pump piping installation details have not, to date, been supplied to the Department. The drawing should show the location of the tank's drain line connection, vent line connection, fill line connection, and the connection of the high level alarm transmitter.

Response:

Drawing D11150 (Exhibit I.E.3-13) has been provided along with a replacement drawing for Exhibit I.E.3-6 and an additional drawing showing tank farm sections and details (Exhibit I.E.3-14).

Comment:

5. Revised portions of the construction permit application (if appropriate).

Response:

Since the original submittal of the construction permit application, Safety-Kleen has initiated the distributions and collection of a new immersion cleaner #699. In addition the regulations regarding waste analysis (i.e., TCLP) have been altered. Parts I.D.2a, I.D.2.b-c, and I.D.4 have been modified to reflect these changes. Parts I.D.2a and I.D.4 should be replaced in their entirety. The textual portion Part I.D.2b-c should be replaced. Exhibits I.2-1 through I.D.2-9 should be retained.

In addition to the previously identified changes, the cover page and Table of Contents should be replaced in their entirety. Exhibit I.A.20-1 should be replaced in its entirety.

Comment:

6. An engineer's certification for the construction permit application.

Response:

This is provided on Department forms.

AUTHORIZATION TO PAY

TO: Florida Dept. of Environmental Regulation
1900 South Congress Ave., Suite A
West Palm Beach, FL 33406

DATE 1-10-90

USE REVERSE SIDE IF MULTIPLE CHARGES ARE INVOLOVED

TO BE COMPLETED BY ACCOUNTING	DATE VOUCHERED	VENDOR CODE	VOUCHER NO.
		~~9#~~19172	

TO BE COMPLETED BY INDIVIDUAL PREPARING FORM

RESPONSIBILITY AREA	EXPENSE NO.	WORK ORDER NO. (IF APPLICABLE)	AMOUNT	TAB
3-097-02	09051		$5,000	00

DESCRIPTION OF INVOICES COVERED OR REASON FOR THIS APPLICATION:

Part B. Permit Application Fee

AFE # 89531

REMITTANCE ADVICE ATTACHED IS OUR CHECK IN FULL SETTLEMENT OF ITEMS SHOWN HEREON.

DESCRIPTION	DATE	INVOICE NO.	AMOUNT OF INVOICE	DISCOUNT	NET
Part B Permit Application fee	01-10-90		5,000.00		5,000.00
00-09051-00 5,000.00					

172

SAFETY - KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123
(708) 697-8460
DUNS NO. 05106-0408

The Northern Trust Company
Payable Through
Northern Trust Bank/Du Page

70-2382
719

safety-kleen corp.
777 BIG TIMBER ROAD
ELGIN, ILLINOIS 60123

No. 003461

DATE 01-16-90

AMOUNT $5,000.00

SAFETY KLEEN 5,000 [illegible]

TO THE ORDER OF
Florida Dept. of Environmental Regulation
1900 South Congress Ave Suite A
West Palm Beach FL 33406

SAFETY - KLEEN CORP.
AUTHORIZED SIGNATURE

NOT VALID OVER $20,000.00

[redacted]

HAZARDOUS WASTE
CONSTRUCTION AND OPERATING PERMIT
APPLICATION
HAZARDOUS WASTE STORAGE FACILITY
SAFETY-KLEEN CORP. SERVICE CENTER
MEDLEY, FLORIDA

JANUARY 17, 1990

Revision 1 April 25, 1990 by Safety-Kleen Corp.
Revision 2 November 8, 1990 by ERM-South for Safety-Kleen Corp.

TABLE OF CONTENTS

LIST OF EXHIBITS

(Exhibits are presented at the end of each Section)

LIST OF EXHIBITS - Continued

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	Material Safety Data Sheet for Lacquer Thinner
I.E.2-8	Letter to Local Policy Department
I.E.2-9	Letter to Local Fire Department
I.E.2-10	Letter to Local Hospital
I.E.2-11	Primary and Alternate Evacuation Routes
I.E.3-1	Construction Specifications for 30-Steel Barrels
I.E.3-2	Construction Specifications for 16-Gallon Steel Barrel (4 pages)
I.E.3-3	Dry Cleaner Waste Drum Specifications (3 pages)
I.E.3-4	20-Gallon Dry Cleaner Waste Container Specifications
I.E.3-5	Paint Waste Container Specifications
I.E.3-6	Tank Farm Details (309702-5000-01)
I.E.3-7	Typical Aboveground Storage Tank Fabrication Details (D13073)
I.E.3-8	High Level Alarm System--Installation Details (D13102)
I.E.3-9	Used Solvent Tank Installation Details (D11124)
I.E.3-10	Typical Concrete Construction Details (D11322)
I.E.3-11	Manufacturer's Information on Coating
I.E.3-12	24" Diameter Stainless Steel Sump Liner (STD-1020-00)
I.E.3.13	Solvent Pump Piping (D11150)
I.E.3-14	Tank Farm Sections/Details (309702-5001-00)
I.E.4-1	Facility Inspection Record (4 pages)
I.E.4-2	Emergency Response Equipment
I.E.4-3	Schematic Sprinkler Plan--Warehouse and Dock Areas
I.E.5-1	List of Branch Employees
I.E.5-2	Job Descriptions (5 pages)
I.E.5-3	Trainer Qualifications (7 pages)
I.E.5-4	New Branch Manager Training (2 pages)
I.E.5-5	Introductory and Annual training Topics for Branch Employees
I.E.5-6	Training Topic Log
I.F.1-1	Anticipated Schedule for Closure
I.F.2-1	Financial Assurance for Closure
I.F.3-1	Certification of Liability Insurance

LIST OF EXHIBITS - Continued

II-1	Warehouse and Return/Fill Station Plan
II-2	Warehouse and Return/Fill Station Foundation Plan
II-3	Warehouse--Pallet Layout Plan
III-1	Dock Plan (Return/Fill Area)
III-2	Dumpster Final Assembly Details
III-3	Solvent Pump Piping Installation Details
III-4	Pipe Bridge Plan

PART I

GENERAL INFORMATION

ATTACHMENT I.A

EXISTING OR PENDING ENVIRONMENTAL PERMITS

DER Form # 17-730.900(2)
Form Title Ap. for a Hazardous Waste Facility Permit
Effective Date June 1, 1990
DER Application No. _____ (Filled in by DER)

EXHIBIT I.A. 20-1

Application for a Hazardous Waste Facility Permit

Part I - General

To Be Completed By All Applicants

Please Type or Print

A. General Information

1. Type of Facility:
   - Disposal ☐ Landfill ☐ Land Treatment ☐ Surface Impoundment ☐ Miscellaneous Units ☐
   - Storage ☒ Containers ☒ Tanks ☒ Piles ☐ Surface Impoundment ☐ Miscellaneous Units ☐
   - Treatment ☐ Tanks ☐ Piles ☐ Incineration ☐ Surface Impoundment ☐ Miscellaneous Units ☐
2. Type of Application: ☐ TOP ☒ Construction ☐ Operation ☐ Closure ☐ RD&D
3. Application Submittal: ☐ New ☐ Revised
4. Date current operation began (or is expected to begin): 01/05/91
5. Facility Name: Safety-Kleen Corp. (3-097-02)
6. EPA/DER I.D. No.: Applied For
7. Facility location or street address: East of NW 89th Ave. & 96th St., Medley, FL 33166
8. Facility mailing address: Safety-Kleen Corp., 777 Big Timber Rd., Elgin, IL 60123
   (Street or P.O. Box / City / State / Zip)
9. Contact person: Mr. Joe Hartline Telephone: (708) 697-8460
   Title: Environmental Regional Engineer
   Mailing address: 777 Big Timber Road Elgin, IL 60123
   (Street or P.O. Box / City / State / Zip)
10. Operator's name: Safety-Kleen Corp. Telephone: (708) 697-8460
11. Operator's address: 777 Big Timber Rd. Elgin, IL 60123
    (Street or P.O. Box / City / State / Zip)
12. Facility owner's name: Safety-Kleen Corp.
13. Facility owner's address: 777 Big Timber Rd. Elgin, IL 60123
    (Street or P.O. Box / City / State / Zip)
14. Legal structure: ☒ Corporation ☐ Non-Profit Corporation ☐ Partnership ☐ Individual
    ☐ Local Government ☐ State Government ☐ Federal Government ☐ Other _____
15. If an individual, partnership, or business is performed under an assumed name, specify county and state where name is registered.
    County: _____ State: N/A
16. If a corporation, indicate state of incorporation Wisconsin.

17. If an individual or partnership, list owners:

Name: _____

Address: _____ (Street or P.O. Box) (City) (State) (Zip)

Name: _____

Address: _____ (Street or P.O. Box) (City) (State) (Zip)

Name: _____

Address: _____ (Street or P.O. Box) (City) (State) (Zip)

Name: _____

Address: _____ (Street or P.O. Box) (City) (State) (Zip)

18. Site ownership status: [X] Owned [ ] To be purchased [ ] To be leased _____ years

[ ] Presently leased: Expiration date _____ If leased, give:

Land owner's name Safety-Kleen Corp.

Land owner's address 777 Big Timber Road (Street or P.O. Box) Elgin (City) IL (State) 60123 (Zip)

19. Engineer: Frederick W. Blickle Registration No.: 39409

Address: 9501 Princess Palm Ave. #100 (Street or P.O. Box) Tampa (City) FL (State) 33619 (Zip)

Associated with: ERM-South, Inc.

20. Facility located on Indian land: [ ] Yes [X] No

21. Existing or pending environmental permits: (Attach a separate sheet if necessary)

Name of Permit	Agency	Permit Number	Date Issued	Expiration Date

B. Site Information

1. Facility location: County: Dade Nearest community: Medley

Latitude: N 25° 51' 90" Longitude: W 80° 20' 23"

2. Area of facility site (acres): 4.50

3. Attach a scale drawing and photographs of the facility showing the location of all past, present, and future treatment, storage and disposal areas. Also show the hazardous wastes traffic pattern including estimated volume and control.

4. Attach topographic map which shows all the features indicated in the instruction sheet for this part.

5. Is the site located in a 100-year flood plain? [ ] Yes [X] No

C. Land Use Information

1. Present zoning of the site? M-1 Light manufacturing/Industry
2. If a zoning change is needed, what should new zoning be? N/A
3. Present land use of site Undeveloped - To be industrial

D. Operating Information

1. Is waste generated on site? [X] Yes [ ] No List the SIC codes (4-digit)

7399 5172 5084 5013

2. Attach a brief description of the facility operation, nature of the business, and activities that generate, treat, store or dispose of hazardous waste.
3. Using the following table and codes provided, specify, (1) each process used for treating, storing, or disposing of hazardous waste (including design capacities) at the facility, and (2) the hazardous waste (or wastes) listed or designated in 40 CFR Part 261, including the annual quantities, to be treated, stored, or disposed by each process at the facility. (See instructions for list of process codes and units).

Process Code	Process Design Capacity and Units of Measure	Hazardous Waste Code	Annual Quantity of Hazardous Waste and Units of Measure	
S02	Storage Tank	D001 D018 D039	803	T
S01	Container Storage Area	D001 D006,D008 D007,D039	10	T
		F002,D006 D008,D007		
		F004,D007 D022	28	T
		F002	271	T
		D001,D006,D007,F003 F005,D008	69	T
		D006,D007,D008,D018 D021,D027,D039,D040	28	T

DER Form # 17-730.900(2)
Form Title Ap. for a Hazardous Waste Facility Permit
Effective Date June 1, 1990
DER Application No. _____ (Filled in by DER)

Application for a Hazardous Waste Facility Permit
Certification

To be completed by all applicants

1. **Operator**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possiblity of fine and imprisonment for knowing violations. 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 17-730, FAC, and, if granted a permit, the Department of Environmental Regtulation will be notified prior to the sale or legal transfer of the permitted facility.

Signature of the Operator or Authorized Representative*
*Attach a letter of authorization

Name and Title (Please Type or Print)
Date: _____ Telephone No. (_____) _____

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.

Signature of the Facility Owner or Authorized Representative*
*Attach a letter of authorization

Name and Title (Please Type or Print)
Date: _____ Telephone No. (_____) _____

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 §264.119 and §265.119, as adopted by reference in Chapter 17-730, FAC.

Signature of the Facility Owner or Authorized Representative*
*Attach a letter of authorization

Name and Title (Please Type or Print)
Date: _____ Telephone No. (_____) _____

4. **Professional Engineer Registered in Florida** (Where Required by Chapter 471, F.S. or not exempted by Rule 17-730.220(5), F.A.C.)

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.

Frederick W. Blickle III
Signature

Frederick W. Blickle
Name (Please Type)

Florida Registration No.: 39409

Mailing address: 9501 Princess Palm Ave.#100
Street or P.O. Box

Tampa FL 33619
City State Zip

(Please Affix Seal)

Date: 11/9/90 Telephone No. (813) 622-8727

Safety-Kleen Corp. Medley Construction

EXHIBIT I.B. 3-1

QUADRANGLE LOCATION

HIALEAH, FLA.

N2545—W8015/7.5

1962

PHOTOREVISED 1969

AMS 4935 IV SE—SERIES V847

SCALE 1:24000

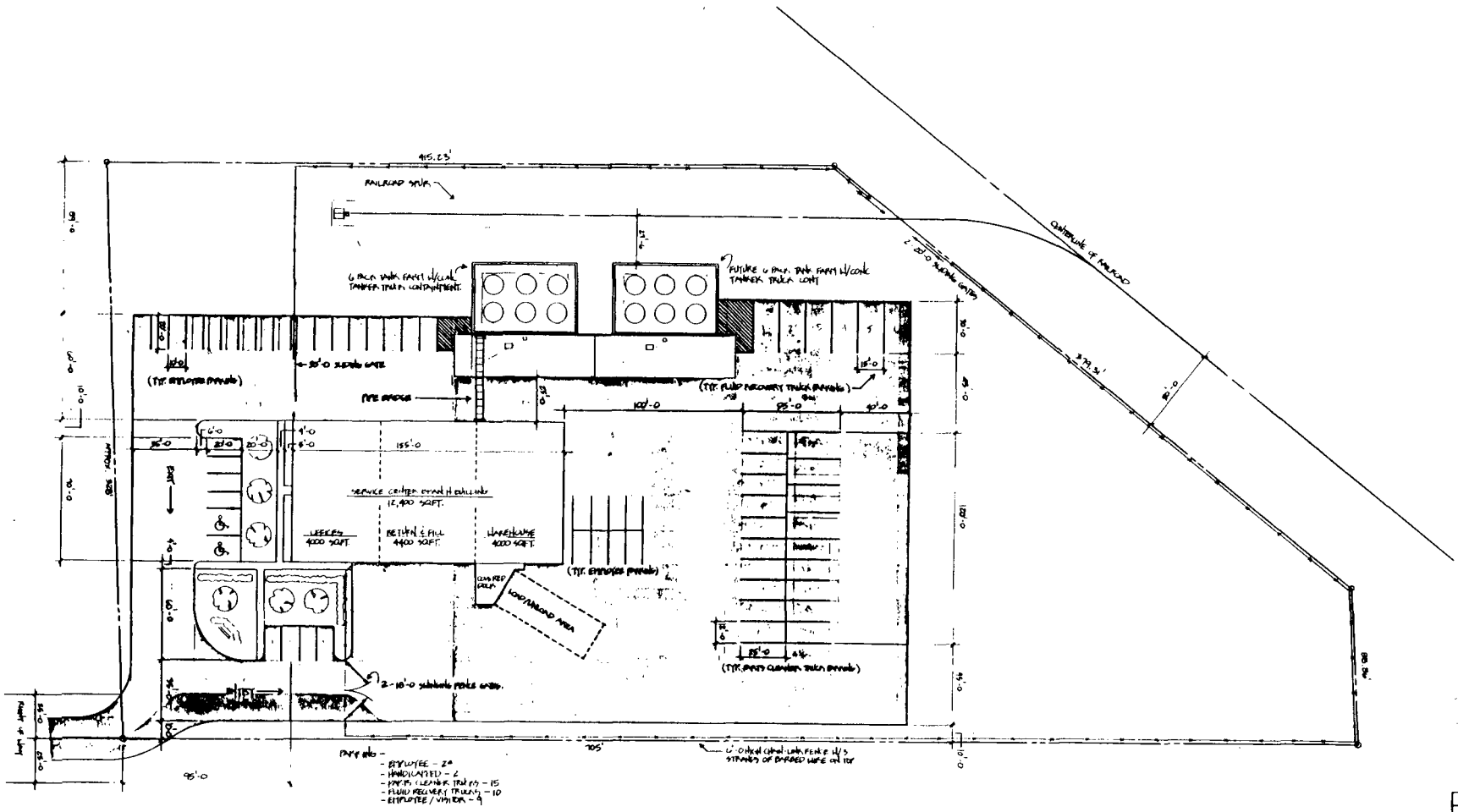
1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 5 FEET

DATUM IS MEAN SEA LEVEL



SITE PLAN

4.5 ACRES

NO.	DESCRIPTION	BY	CHKD	APPD	DATE
1	REVISE ENTRY & PARKING	JHD			9-28-09

TITLE: SITE PLAN (SPI)

SAFETY-KLEEN CORP.

777 [illegible]

FIELD ENGR. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		1" = 80'-0	JHD	6-9-09
LOCATION		DRAWING NO.		REV.
MIAMI, FL (9-097-02)		P35535		

Please print or type in the unshaded areas only
(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Exhibit I.A. 20-2

Form Approved OMB No. 158-R0175

FORM 1 GENERAL

U.S. ENVIRONMENTAL PROTECTION AGENCY

GENERAL INFORMATION

Consolidated Permits Program

(Read the "General Instructions" before starting.)

I. EPA I.D. NUMBER

F F L D

GENERAL INSTRUCTIONS

If a preprinted label has been provided, it in the designated space. Review the information carefully; if any of it is incorrect, through it and enter the correct data in appropriate fill—in area below. Also, if an the preprinted data is absent *(the area to left of the label space lists the informa that should appear)*, please provide it in proper fill—in area(s) below. If the lab complete and correct, you need not comp Items I, III, V, and VI *(except VI-B w must be completed regardless)*. Complet items if no label has been provided. Refe the instructions for detailed item des tions and for the legal authorizations u which this data is collected.

LABEL ITEMS

I. EPA I.D. NUMBER

III. FACILITY NAME

V. FACILITY MAILING ADDRESS

VI. FACILITY LOCATION

PLEASE PLACE LABEL IN THIS SPACE

II. POLLUTANT CHARACTERISTICS

INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to an 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 colum 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 activit is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold—faced terms.

SPECIFIC QUESTIONS	MARK 'X' YES	NO	FORM ATTACHED	SPECIFIC QUESTIONS	MARK 'X' 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		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	
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		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	
E. Does or will this facility treat, store, or dispose of **hazardous wastes**? (FORM 3)	X		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	
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		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	
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		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	

III. NAME OF FACILITY

1 SKIP: SAFETY-KLEEN CORP.

IV. FACILITY CONTACT

A. NAME & TITLE *(last, first, & title)*	B. PHONE *(area code & no.)*
2 HARTLINE, JOE--ENV. ENG.R.	708 697 8460

V. FACILITY MAILING ADDRESS

A. STREET OR P.O. BOX			
3 777 BIG TIMBER ROAD			
B. CITY OR TOWN	**C. STATE**	**D. ZIP CODE**	
4 ELGIN	IL	60123	

VI. FACILITY LOCATION

A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER			
5 EAST OF NW 89th AVE & NW 96th ST.			
B. COUNTY NAME			
DADE			
C. CITY OR TOWN	**D. STATE**	**E. ZIP CODE**	**F. COUNTY CODE** *(if known)*
6 MEDLEY	FL	33166	

CONTINUE ON REV

CONTINUED FROM THE FRONT

IX. SIC CODES (4-digit, in order of priority)

A. FIRST	B. SECOND
7399 (specify) Business Services N.E.C.	5172 (specify) Petroleum Product Wholesalers
C. THIRD	**D. FOURTH**
5084 (specify) Industrial Machinery & Equipment	5013 (specify) Automotive Parts and Supplies

X. OPERATOR INFORMATION

A. NAME: SAFETY-KLEEN CORP. ELGIN IL

B. Is the name listed in Item VIII-A also the owner? [X] YES [ ] NO

C. OWNERSHIP OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)
F = FEDERAL P = PUBLIC (other than federal or state) S = STATE O = OTHER (specify) P (specify)

D. PHONE (area code & no.): A 708 697 8460

E. STREET OR P.O. BOX: 777 BIG TIMBER ROAD

F. CITY OR TOWN: ELGIN

G. STATE: IL

H. ZIP CODE: 60123

XI. REMARKS

Is this facility located on Indian lands? [ ] YES [X] NO

XII. PERMITS

B. UIC (Underground Injection of Fluids): U

C. RCRA (Hazardous Wastes): R

D. PSD (Air Emissions from Proposed Sources): P

E. OTHER (specify): O (specify)

XIII. 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.

XIV. 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.

XV. 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
Scott E. Fore--Vice President, Environment, Health and Safety	Scott E. Fore	11/15/90

COMMENTS FOR OFFICIAL USE ONLY

90-009

Please print or type in the unshaded areas only
(fill—in areas are spaced for elite type, i.e., 12 characters/inch).

Form Approved OMB No. 158-S80004

FORM 3 RCRA

EPA

U.S. ENVIRONMENTAL PROTECTION AGENCY

HAZARDOUS WASTE PERMIT APPLICATION

Consolidated Permits Program

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

I. EPA I.D. NUMBER

F F L D

FOR OFFICIAL USE ONLY

APPLICATION APPROVED	DATE RECEIVED (yr., 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 I 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.)*

FOR EXISTING FACILITIES, PROVIDE THE DATE *(yr., mo., & day)* OPERATION BEGAN OR THE DATE CONSTRUCTION COMMENCED *(use the boxes to the left)*

C 8 — YR. — MO. — DAY

☒ 2. NEW FACILITY *(Complete item below.)*

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

YR. 9 1 — MO. 0 1 — DAY 0 5

B. REVISED APPLICATION *(place an "X" below and complete Item I 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 B(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
Storage:		
CONTAINER *(barrel, drum, etc.)*	S01	GALLONS OR LITERS
TANK	S02	GALLONS OR LITERS
WASTE PILE	S03	CUBIC YARDS OR CUBIC METERS
SURFACE IMPOUNDMENT	S04	GALLONS OR LITERS
Disposal:		
INJECTION WELL	D79	GALLONS OR LITERS
LANDFILL	D80	ACRE-FEET *(the volume that would cover one acre to a depth of one foot)* OR HECTARE-METER
LAND APPLICATION	D81	ACRES OR HECTARES
OCEAN DISPOSAL	D82	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	D83	GALLONS OR LITERS
Treatment:		
TANK	T01	GALLONS PER DAY OR LITERS PER DAY
SURFACE IMPOUNDMENT	T02	GALLONS PER DAY OR LITERS PER DAY
INCINERATOR	T03	TONS PER HOUR OR METRIC TONS PER HOUR; GALLONS PER HOUR OR LITERS PER HOUR
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.)*	T04	GALLONS PER DAY OR LITERS PER DAY

UNIT OF MEASURE	UNIT OF MEASURE CODE
GALLONS	G
LITERS	L
CUBIC YARDS	Y
CUBIC METERS	C
GALLONS PER DAY	U
LITERS PER DAY	V
TONS PER HOUR	D
METRIC TONS PER HOUR	W
GALLONS PER HOUR	E
LITERS PER HOUR	H
ACRE-FEET	A
HECTARE-METER	F
ACRES	B
HECTARES	Q

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.

C D U P T/A C 1

LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT (specify)	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY	LINE NUMBER	A. PROCESS CODE (from list above)	B. PROCESS DESIGN CAPACITY 1. AMOUNT	B. PROCESS DESIGN CAPACITY 2. UNIT OF MEASURE (enter code)	FOR OFFICIAL USE ONLY
X-1	S02	600	G		5				
X-2	T03	20	E		6				
1	S01	6,912	G		7				
2	S02	20,000	G		8				
3					9				
4					10				

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1)		FOR OFFICIAL USE ONLY	
W	FLD	W	DUP
T/A	1	T/A	2
C		C	DUP

DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	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)	D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	D001	813	T	S02 S01	Spent Mineral Spirits
2	D006 D008				Included with above
3	F002	28	T	S01	Spent Immersion Cleaner
4	F004				Included with above
5	F002	271	T	S01	Dry Cleaner Waste
6	F003	69	T	S01	Paint Waste
7	F005				Included with above
8	D001				
9	D006				
10	D007				
11	D008				
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					

Continued from the front.

IV. DESCRIPTION OF HAZARDOUS WASTES *(continued)*

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

EPA I.D. NO. *(enter from page 1)*

													T/N	C
F	F	L	D											6

V. 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)*.

VI. 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)*.

VII. FACILITY GEOGRAPHIC LOCATION

LATITUDE *(degrees, minutes, & seconds)*	LONGITUDE *(degrees, minutes, & seconds)*
28 48 00 N	080 20 23 W

VIII. FACILITY OWNER

[X] 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.)*
E	

3. STREET OR P.O. BOX	4. CITY OR TOWN	5. ST.	6. ZIP CODE
F	G		

IX. 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
Scott E. Fore--Vice President, Environment, Health and Safety	Scott E. Fore	1/15/90

X. 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
Scott E. Fore--Vice President, Environment, Health and Safety	Scott E. Fore	1/15/90

90-009

Please print or type with ELITE type (12 characters per inch) in the unshaded areas only

Form Approved. OMB No. 2050-0028. Expires 3-31-88
CSA No. 0246-EPA-DT

United States Environmental Protection Agency
Washington, DC 20460

EPA Notification of Hazardous Waste Activity

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (*Section 3010 of the Resource Conservation and Recovery Act*).

For Official Use Only

Comments

C
C

Installation's EPA ID Number	T/A	Approved	Date Received (yr. mo. day)
C F	C 1		

I. Name of Installation

SAFETY-KLEEN CORP. (3-097-02)

II. Installation Mailing Address

Street or P.O. Box

C 3 777 BIG TIMBER ROAD

City or Town	State	ZIP Code
C 4 ELGIN	IL	60123

III. Location of Installation

Street or Route Number

C 5 EAST OF NW 89th AVE & NW 96th ST

City or Town	State	ZIP Code
C 6 MEDLEY	FL	33166

IV. Installation Contact

Name and Title (*last, first, and job title*)	Phone Number (*area code and number*)
C 7 HARTLINE, JOE - REG. EN.	708 697 8460

V. Ownership

A. Name of Installation's Legal Owner	B. Type of Ownership (*enter code*)
C 8 SAFETY-KLEEN CORP.	P

VI. Type of Regulated Waste Activity (*Mark 'X' in the appropriate boxes. Refer to instructions.*)

A. Hazardous Waste Activity

- [X] 1a. Generator
- [ ] 1b. Less than 1,000 kg/mo.
- [X] 2. Transporter
- [X] 3. Treater/Storer/Disposer
- [ ] 4. Underground Injection
- [ ] 5. Market or Burn Hazardous Waste Fuel (*enter 'X' and mark appropriate boxes below*)
  - [ ] a. Generator Marketing to Burner
  - [ ] b. Other Marketer
  - [ ] c. Burner

B. Used Oil Fuel Activities

- [ ] 6. Off-Specification Used Oil Fuel (*enter 'X' and mark appropriate boxes below*)
  - [ ] a. Generator Marketing to Burner
  - [ ] b. Other Marketer
  - [ ] c. Burner
- [ ] 7. Specification Used Oil Fuel Marketer (*or On site Burner*) Who First Claims the Oil Meets the Specification

VII. Waste Fuel Burning: Type of Combustion Device (*enter 'X' in all appropriate boxes to indicate type of combustion device(s) in which hazardous waste fuel or off-specification used oil fuel is burned. See instructions for definitions of combustion devices.*)

- [ ] A. Utility Boiler
- [ ] B. Industrial Boiler
- [ ] C. Industrial Furnace

VIII. Mode of Transportation (*transporters only — enter 'X' in the appropriate box(es)*)

- [ ] A. Air
- [X] B. Rail
- [X] C. Highway
- [ ] D. Water
- [ ] E. Other (*specify*)

IX. First or Subsequent Notification

Mark 'X' in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your installation's EPA ID Number in the space provided below.

- [X] A. First Notification
- [ ] B. Subsequent Notification (*complete item C*)

C. Installation's EPA ID Number

EPA Form 8700-12 (Rev. 11-85) Previous edition is obsolete.

Continue on reverse

ID — For Official Use Only	
C	
W	

X. Description of Hazardous Wastes *(continued from front)*

A. Hazardous Wastes from Nonspecific Sources. Enter the four-digit number from 40 *CFR* Part 261.31 for each listed hazardous waste from nonspecific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
F002	F003	F004	F005		
7	**8**	**9**	**10**	**11**	**12**

B. Hazardous Wastes from Specific Sources. Enter the four-digit number from 40 *CFR* Part 261.32 for each listed hazardous waste from specific sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
19	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**

C. Commercial Chemical Product Hazardous Wastes. Enter the four-digit number from 40 *CFR* Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary.

31	32	33	34	35	36
37	**38**	**39**	**40**	**41**	**42**
43	**44**	**45**	**46**	**47**	**48**

D. Listed Infectious Wastes. Enter the four-digit number from 40 *CFR* Part 261.34 for each hazardous waste from hospitals, veterinary hospitals, or medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. Characteristics of Nonlisted Hazardous Wastes. Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 — 261.24)*

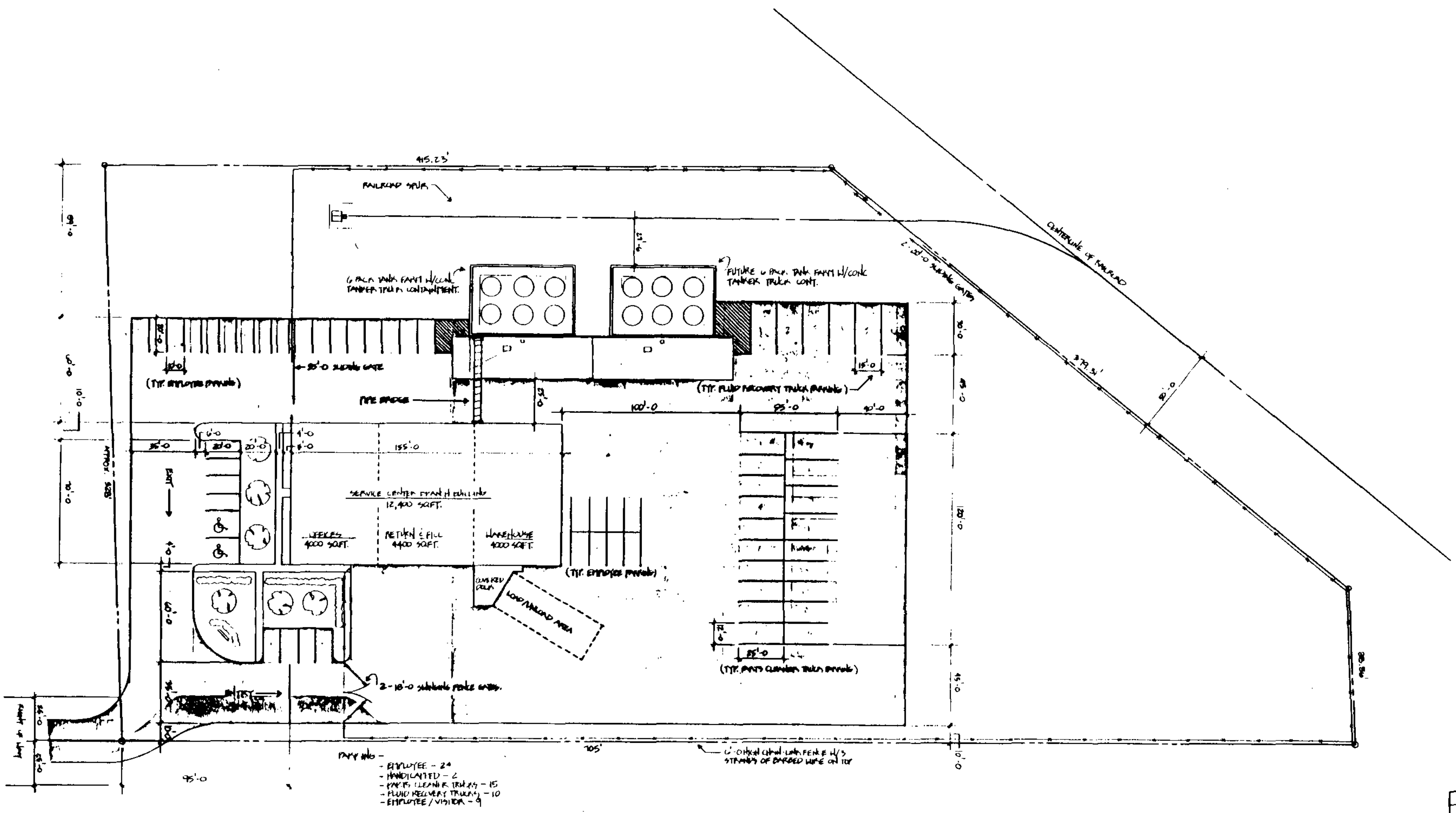
- [X] 1. Ignitable *(D001)*
- [ ] 2. Corrosive *(D002)*
- [ ] 3. Reactive *(D003)*
- [X] 4. Toxic *(D000)*

XI. 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.

Signature	Name and Official Title *(type or print)*	Date Signed
Scott Fore	Scott E. Fore--Vice President/ Environment, Health and Safety	1/15/90

90-010



SITE PLAN

4.5 ACRES

NO.	DESCRIPTION	BY	CHKD	APPD	DATE
1	REVISE ENTRY & PARKING	JHD			9-21-89

REVISIONS

TITLE

SITE PLAN (SP1)

SAFETY-KLEEN CORP.

SCALE: 1" = 30'-0

DRAWN: JHD DATE: 6-9-89

BRANCH: MIAMI, FL (3-097-02)

DRAWING NO.: P13535

ATTACHMENT I.B

SITE INFORMATION

EXHIBIT I.B. 3-1

QUADRANGLE LOCATION

HIALEAH, FLA.

N2545—W8015/7.5

1962

PHOTOREVISED 1969

AMS 4935 IV SE—SERIES V847

SCALE 1:24 000

1 MILE

7000 FEET

1 KILOMETER

CONTOUR INTERVAL 5 FEET

DATUM IS MEAN SEA LEVEL

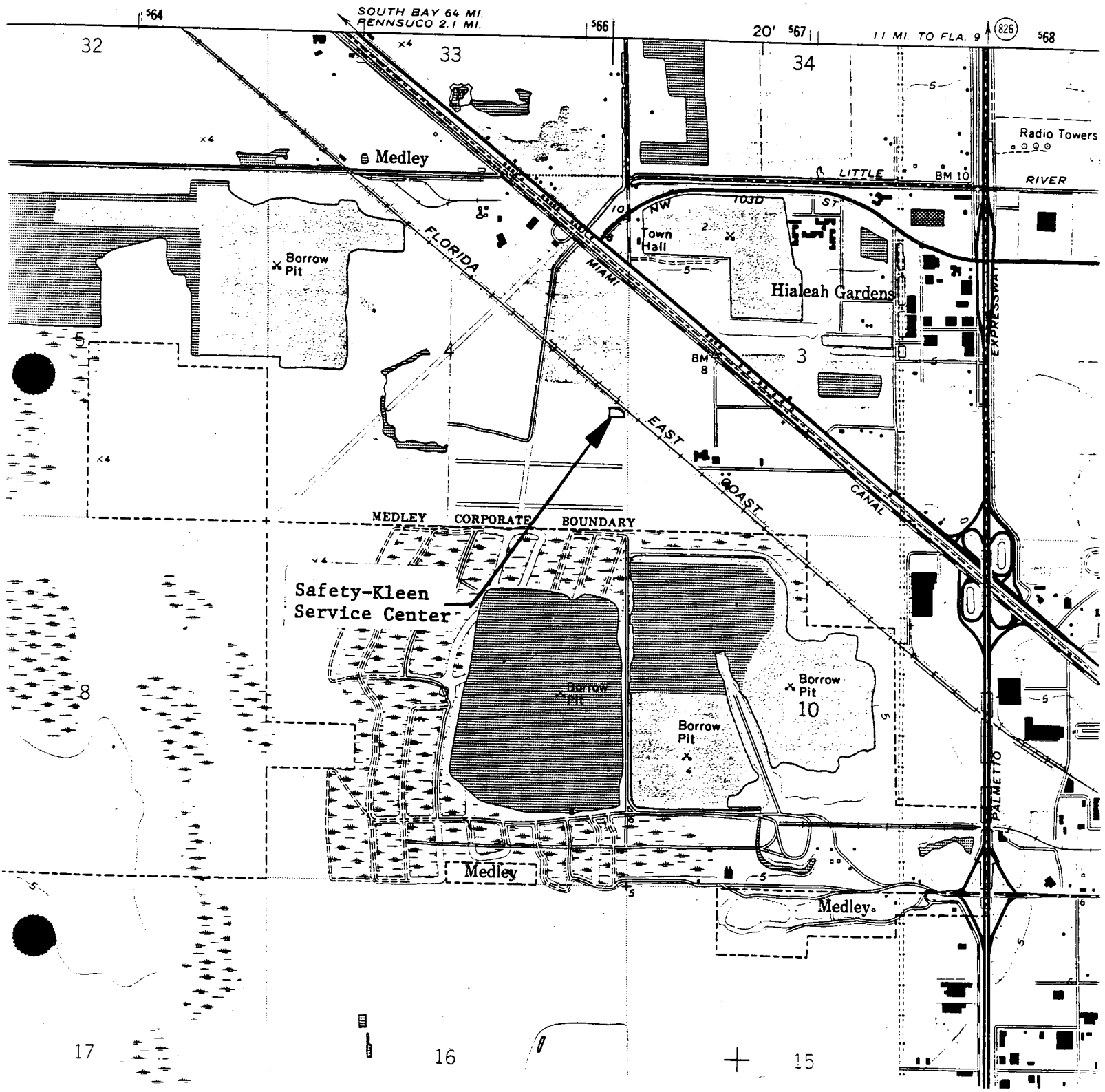
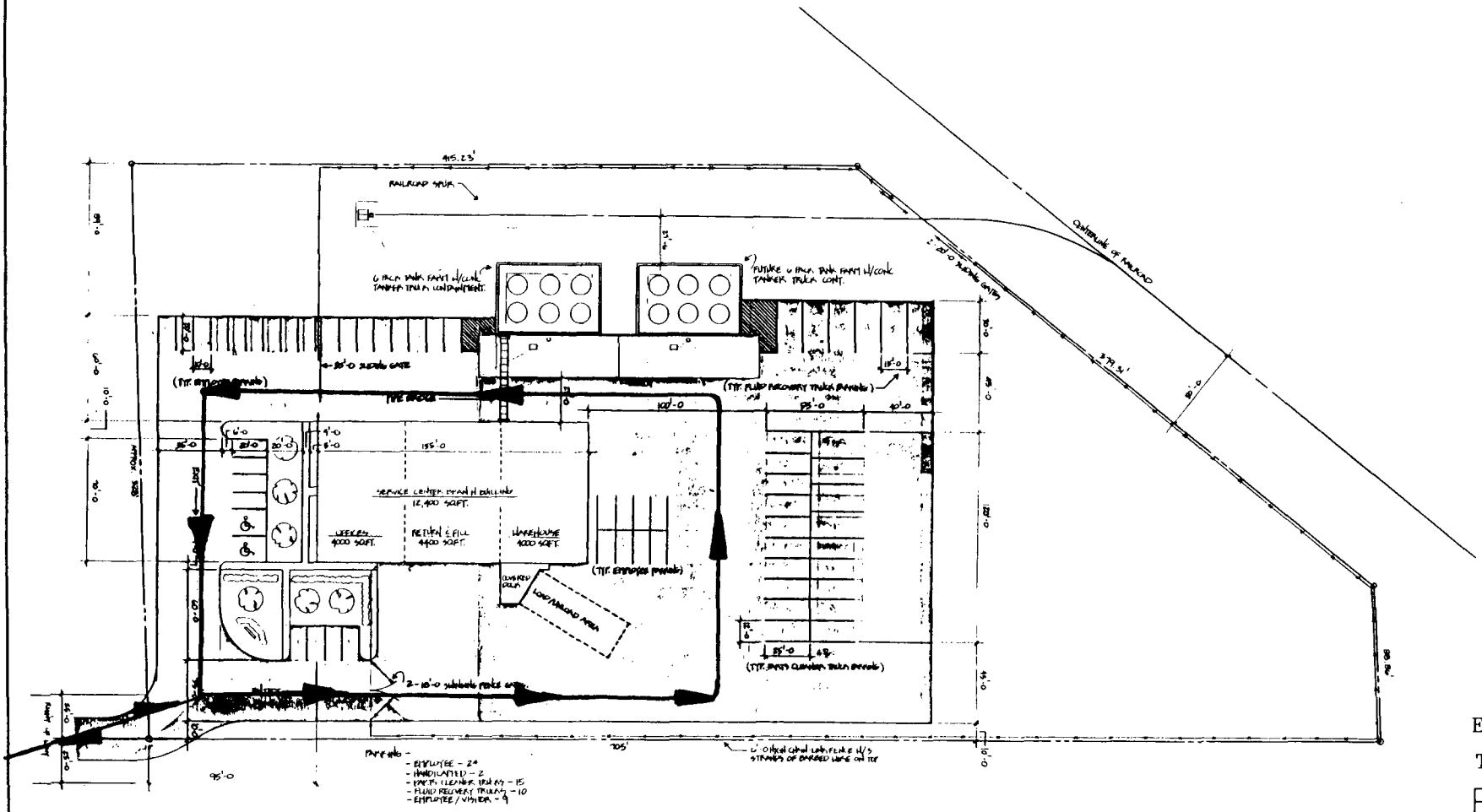


EXHIBIT I.B. 3-2

According to information obtained from the Florida Southeast Water Management District, information regarding water wells in this area have not been computerized (as other Water Management Districts). Information obtained from a site inspection indicate, that to the best of Safety-Kleen's knowledge, there are no known wells within a one-quarter mile radius of the facility.

EXHIBIT I.B. 3-3

This facility will be connected to the city water sewer system. The entire industrial park is currently under construction and plans showing how the sewer system will be developed are not finalized. Once these plans become available, they will be forwarded to your office upon receipt.



SITE PLAN

4.5 ACRES

Exhibit I.B. 3-3a

TRAFFIC PATTERN

NO.	DESCRIPTION	BY	DATE	APP.	DATE
1	REVISE ENTRY & PARKING	JHD			4-89

SITE PLAN (SPI)

SAFETY-KLEEN CORP.

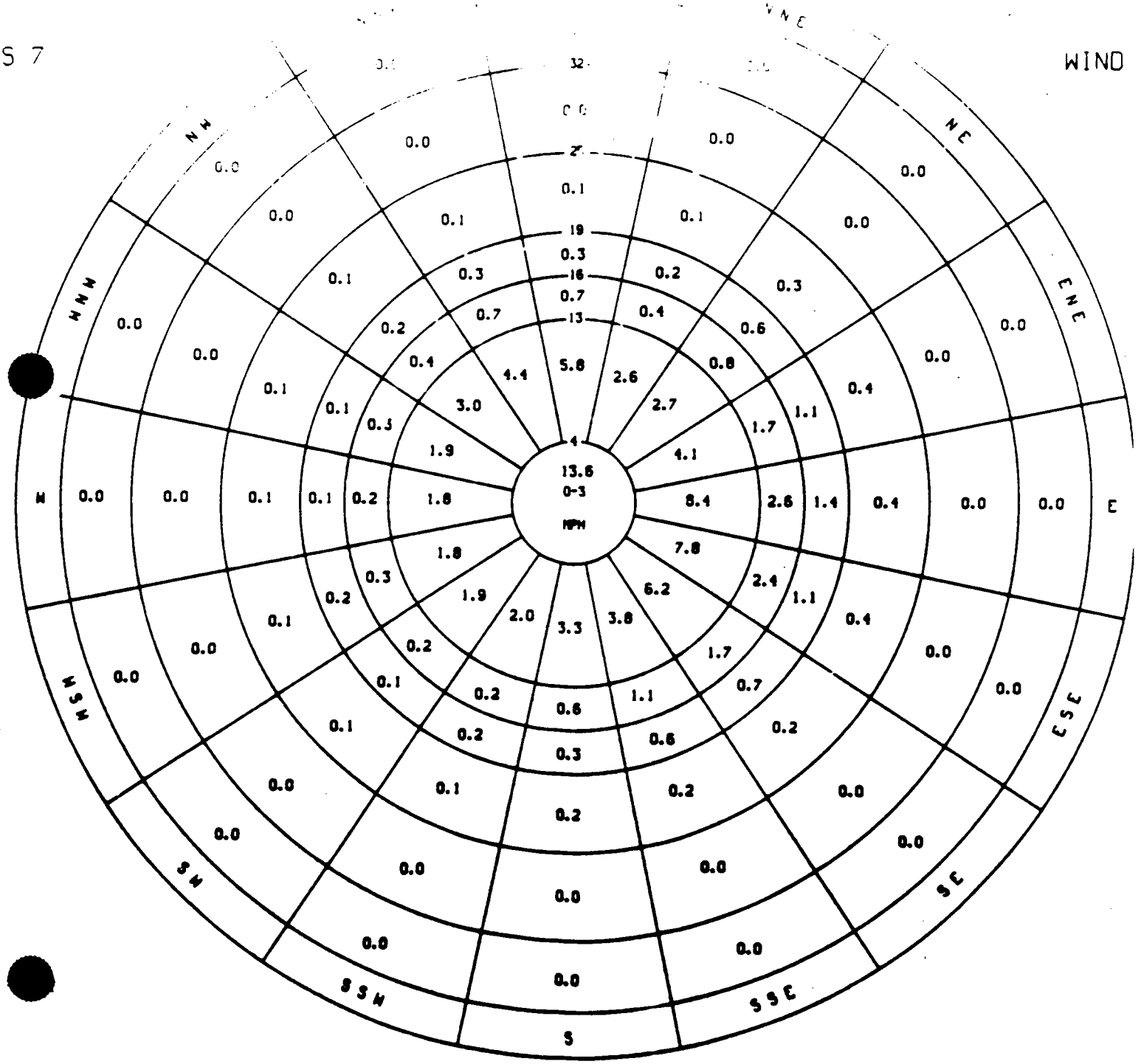
		SCALE 1" = 30'-0	DRAWN JHD
MIAMI, FL (3-097-02)		135535	

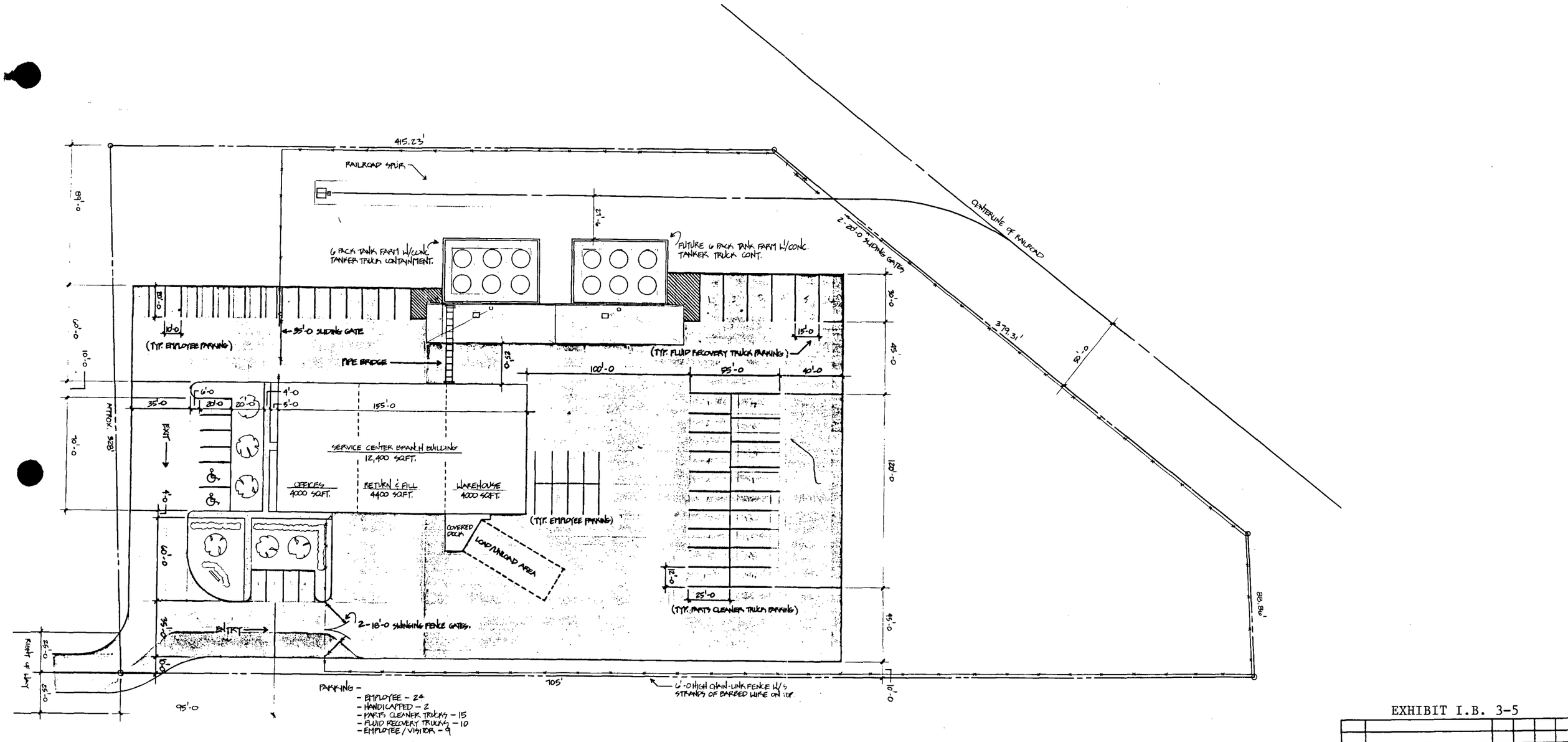
Exhibit I.B.3-4
Wind Rose

CEILING-VISI

S 7

WIND





SITE PLAN

4.5 ACRES

EXHIBIT I.B. 3-5

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
1	REVISE ENTRY & PARKING	JHD			9-21-89

REVISIONS

TITLE

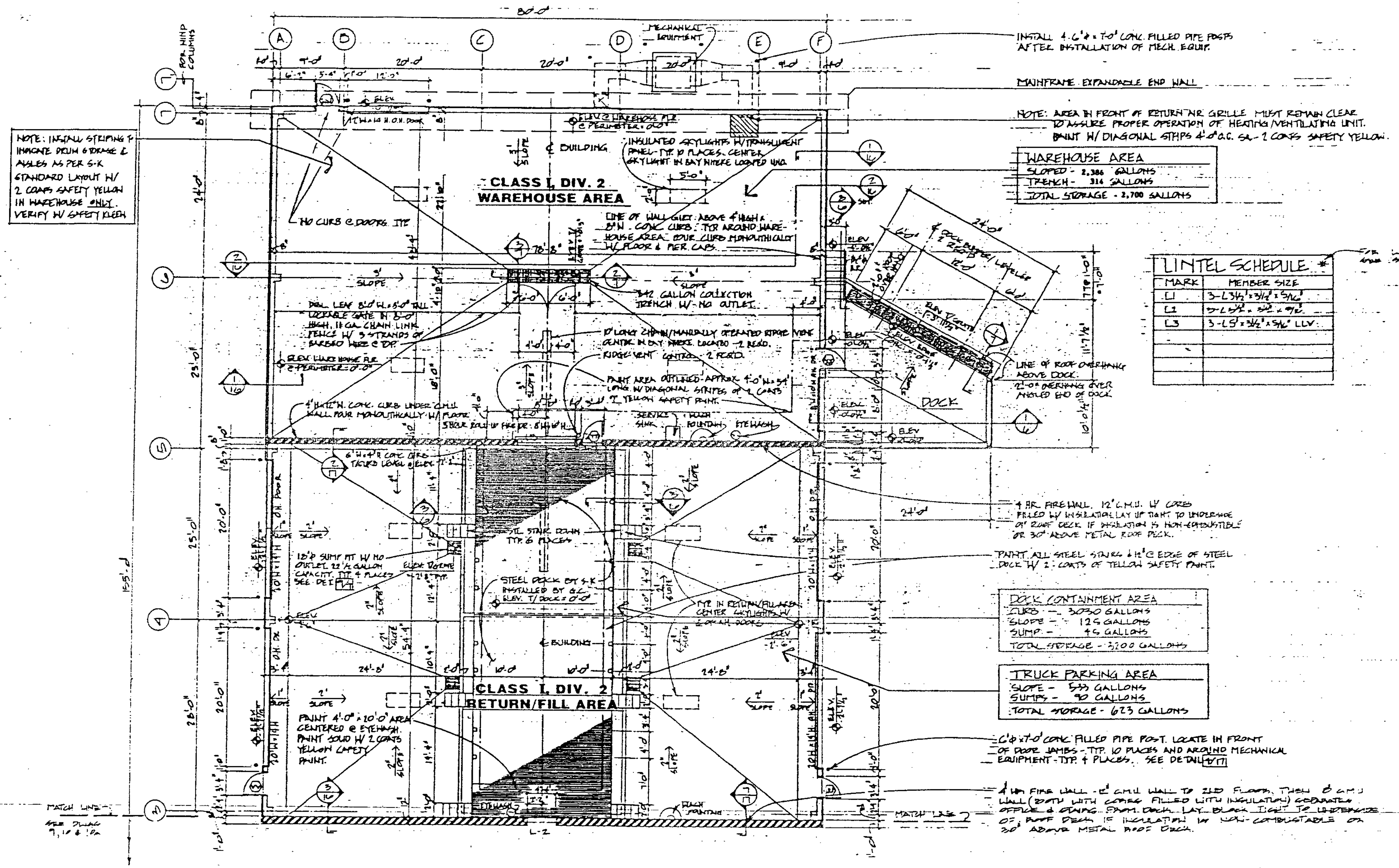
SITE PLAN

SAFETY-KLEEN CORP.

777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		1" = 30'-0	JHD	6-9-89

BRANCH	DRAWING NO.	REV.
MIAMI, FL (3-097-02)	D13535	



WAREHOUSE & RETURN / FILL AREA PLAN

SCALE: 1/8" = 1'-0"

REVISIONS

EXHIBIT I.B. 3-6

safety-kleen corp.

SERVICE CENTER W/ MID-DOCK

WAREHOUSE & RETURN / FILL AREA PLAN

7-14-89

FOR SERVICE CENTER BRANCH

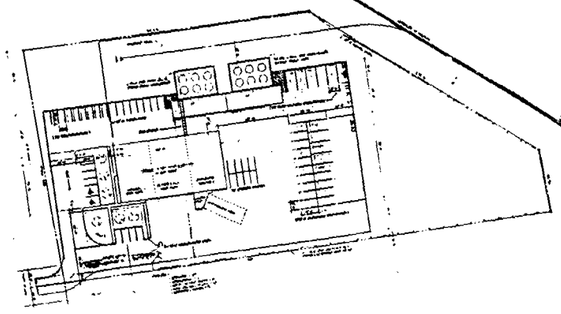
8

AMI

BM
8

EAST

COAST



designations, to add streets and street names, and to revise corporate limits.

To determine if flood insurance is available, contact an insurance agent or call the National Flood Insurance Program at (800) 638-6620.

APPROXIMATE SCALE IN FEET

2000 0 2000

NATIONAL FLOOD INSURANCE PROGRAM

FIRM
FLOOD INSURANCE RATE MAP

DADE COUNTY, FLORIDA
AND INCORPORATED AREAS

PANEL 75 OF 575
(SEE MAP INDEX FOR PANELS NOT PRINTED)

PANEL LOCATION

COMMUNITY-PANEL NUMBER
125098 0075 F

MAP REVISED:
NOVEMBER 4, 1987

EXHIBIT I.B. 5-1

Federal Emergency Management Agency

SEE CATCH BASIN SD 2.9 — FOR PARKING LOTS & AT CONE OF INFLUENCE

METROPOLITAN DADE COUNTY
PUBLIC WORKS DEPARTMENT

APPROVED 5/5/61

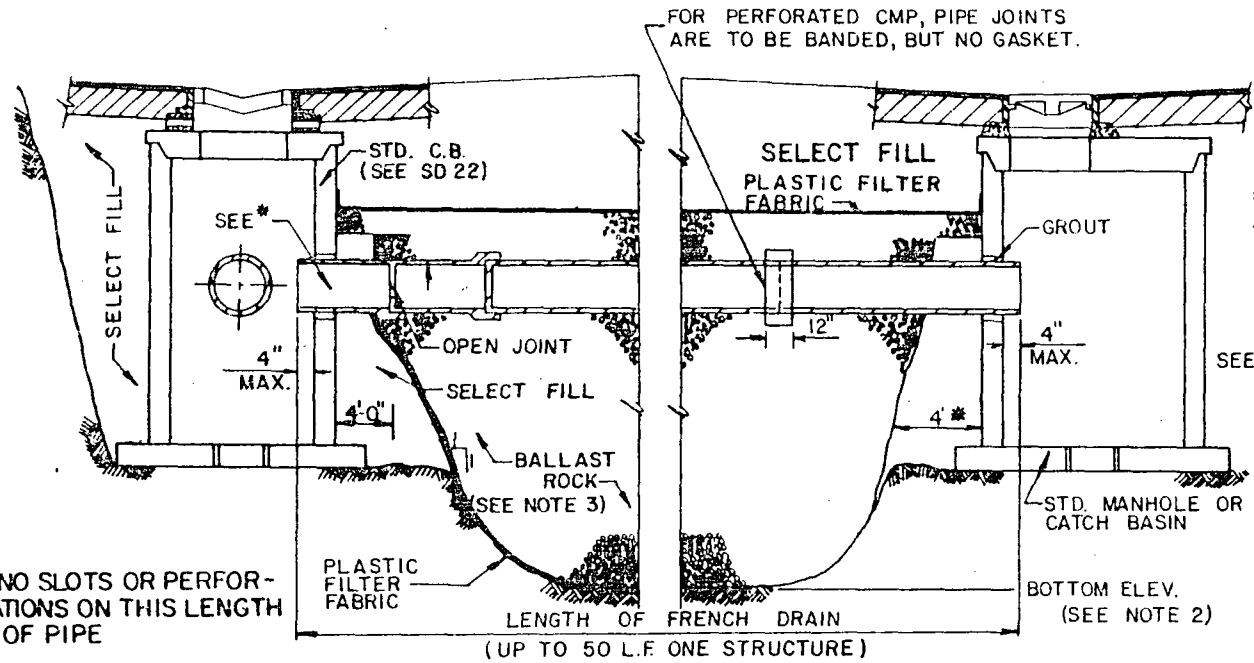
REVISED 5/21/81, 6/4/85, 7/7/88

STANDARD STORM DRAINAGE DETAIL

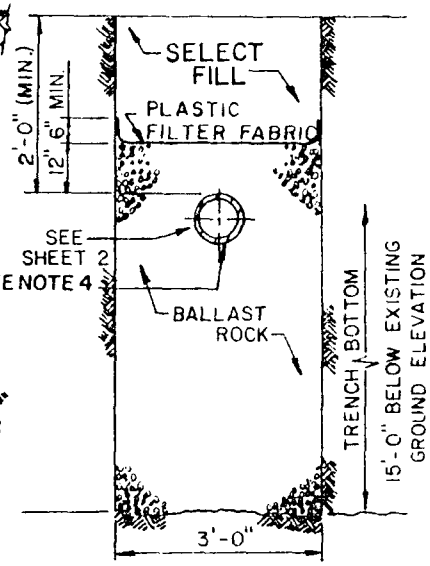
EXFILTRATION TRENCH

SD 1.1

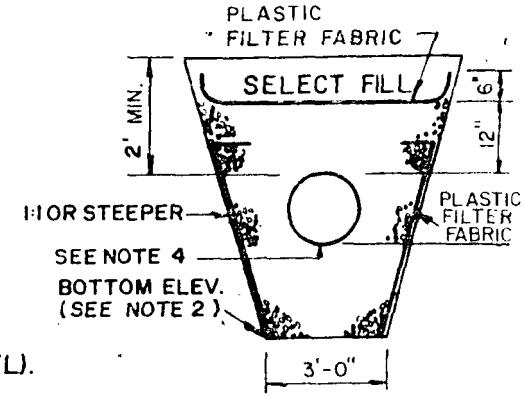
SHEET 1 OF 2



LONGITUDINAL SECTION



TRANSVERSE SECTION



ALT. TRANS. SECTION

MAY BE USED IN AREAS WHERE TRENCH WALLS WILL NOT STAND VERTICAL, OR WHERE CAVE IN BELOW THE WATER TABLE IS LIKELY TO OCCUR. TO BE USED AT THE ENGINEER'S DISCRETION.

NOTES:

1. PLASTIC FILTER FABRIC (AT EA. SIDE) SHALL BE USED IN SANDY AREAS AS NOTED ON PLANS AND/OR AS DIRECTED BY THE ENGINEER.
2. THE BOTTOM OF THE EXFILTRATION TRENCH SHALL BE 15'-0" BELOW EXISTING GROUND ELEVATION, UNLESS FIELD CONDITIONS WARRANT OTHERWISE.
3. AFTER THE BALLAST ROCK HAS BEEN PLACED TO THE PROPER ELEVATION, IT SHALL BE CAREFULLY WASHED DOWN WITH CLEAN WATER IN ORDER TO ALLOW FOR INITIAL SETTLEMENT THAT MAY OCCUR. IF IT DOES TAKE PLACE, ADDITIONAL BALLAST ROCK WILL BE ADDED TO RESTORE THE BALLAST ROCK TO THE PROPER ELEVATION, SO THAT THE EXFILTRATION TRENCH BE COMPLETED IN ACCORDANCE WITH THE DETAILS.
4. INVERT ELEVATION TO BE AS SHOWN IN W.C. 2.2 (AVG. OCTOBER GROUND WATER LEVEL).

ITEM	CROSS REF.	SPEC. REF.
DRAINAGE PIPE		SEC. 320
EXFILTRATION TRENCH		SEC. 360
DESIGN WATER TABLE	DES. MAN.	SEC. D4
BALLAST ROCK		SEC. 360
PV'MT RESTORATION	R-21.1	

NOTE: IF THIS DETAIL IS TO BE USED FOR PRETREATMENT OF STORMWATER RUN-OFF, THE INVERT OF PIPE TO BE AS SHOWN IN W.C. 2.2; IF PRETREATMENT HAS BEEN PROVIDED THRU OTHER MEANS THE INVERT OF PIPE CAN BE LOWER THAN SHOWN IN W.C. 2.2.

GENERAL NOTES FOR PIPE CULVERTS

THE CONTRACTOR HAS THE OPTION OF INSTALLING THE FOLLOWING PIPE TYPES:

A. CONCRETE – SLOTTED PIPE
B. CORRUGATED STEEL PIPE – BIT. COATED BOTH SIDES PERF. (SEE TABLE BELOW)
C. CORRUGATED ALUMINUM – (PERFORATED, SEE TABLE BELOW)
D. CORRUGATED METAL – SMOOTH-LINED PIPE

CORRUGATED STEEL & ALUMINUM PIPE CULVERTS			
PIPE DIAM. (inches)	CONVENTIONAL CMP	SMOOTH LINED	
		OUTER SHELL	LINER
	Approx. No. of $\frac{3}{8}$" Dia. Holes * (PER LIN. FT. OF PIPE)	No. of $\frac{3}{8}$" Dia. Holes (PER LIN. FT. OF PIPE)	No. of $\frac{5}{8}$" Dia. Holes (PER LIN. FT OF PIPE)
15	100	100	50
18	120	120	60
24	160	160	80
30	200	200	100
36	240	240	120
42	275	275	140
48	315	315	160
54	355	355	180
60	395	395	200
72	470	470	235
84	550	550	275

NOTE: PERFORATIONS SHALL BE UNIFORMLY SPACED AROUND THE FULL PERIPHERY OF THE PIPE TO WITHIN 4" OF EACH END OF EACH LENGTH OF PIPE. THE NUMBER OF PERFORATIONS PER LINEAR FOOT OF PIPE AND THE DIAMETER OF THE PERFORATIONS SHALL BE AS SHOWN ON THE ABOVE TABLE.

* 5/16 INCH DIAMETER HOLES MAY BE UTILIZED IN LIEU OF THE 3/8 INCH DIAMETER HOLES IF THE NUMBER OF HOLES IS INCREASED TO PROVIDE AN EQUAL CROSS SECTIONAL HOLE AREA. THE OTHER REQUIREMENTS REMAIN THE SAME.

ITEM	CROSS REF.	SPEC. REF.
EXFILTRATION TRENCH		SEC 360

METROPOLITAN DADE COUNTY PUBLIC WORKS DEPARTMENT	APPROVED 5/21/81	REVISED 6/4/86	STANDARD STORM DRAINAGE DETAIL EXFILTRATION TRENCH (PIPE CULVERT NOTES)	SD 1.1 SHEET 2 OF 3

METROPOLITAN DADE COUNTY
PUBLIC WORKS DEPARTMENT

APPROVED 1/30/81

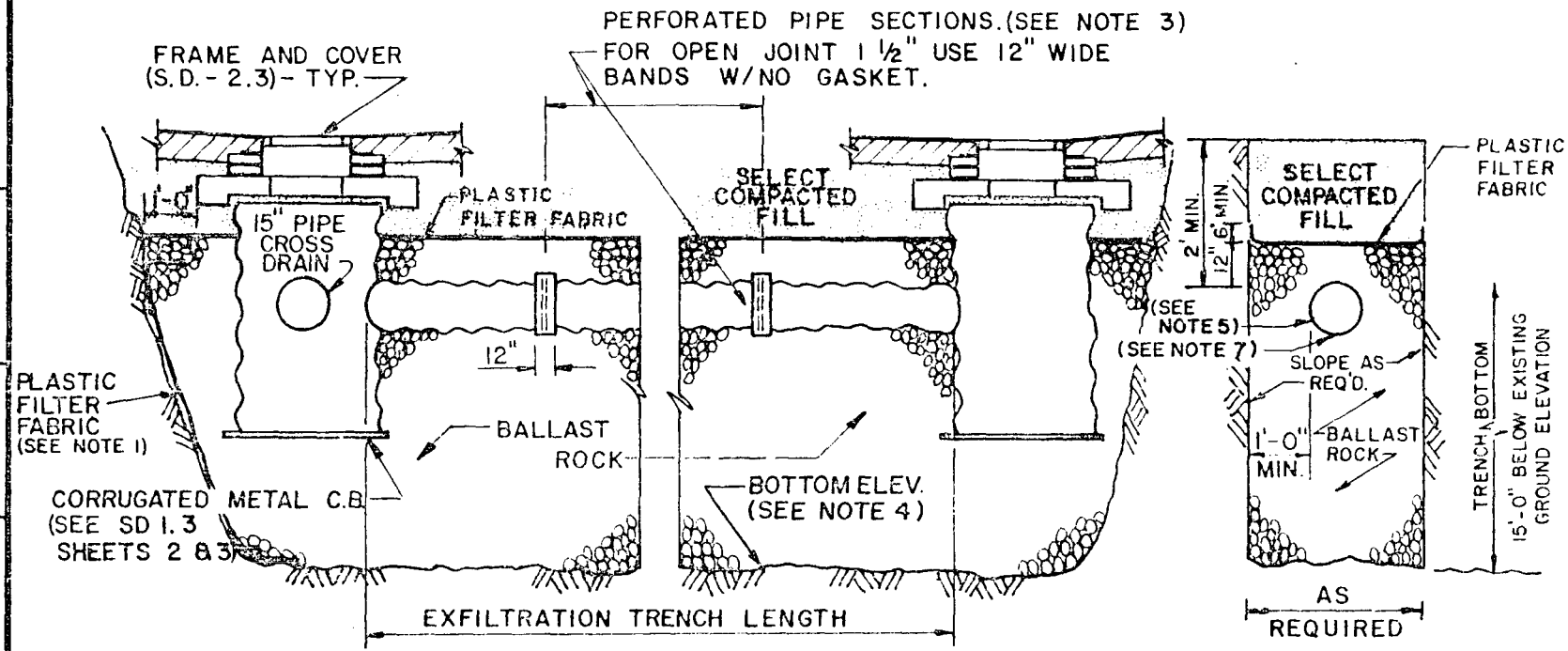
REVISED 6/4/86 7/7/88

STANDARD STORM DRAINAGE DETAIL

EXFILTRATION TRENCH FOR METAL CATCH BASIN

SD 1.1

SHEET 3 OF 3



LONGITUDINAL SECTION

TRANSVERSE SECTION

NOTES:

1. PLASTIC FILTER FABRIC, EACH SIDE, OVERLAPPED ON TOP, SHALL BE USED IN SANDY AREAS AS NOTED ON PLANS AND/OR AS DIRECTED BY THE ENGINEER.
2. THE CONTRACTOR HAS THE OPTION OF INSTALLING THE FOLLOWING PIPE TYPES:
   A. CORRUGATED STEEL – BITUMINOUS COATED BOTH SIDES (PERFORATED).
   B. CORRUGATED ALUMINUM (PERFORATED).
3. PERFORATIONS: ACCORDING TO AASTHO SPECIFICATIONS M 36-74 AND M 196-74.
4. EXFILTRATION TRENCH BOTTOM ELEVATION SHALL BE 15'-0" BELOW EXISTING GROUND ELEVATION, UNLESS FIELD CONDITIONS WARRANT OTHERWISE.
5. PIPES FROM 15" UP TO 24"Ø DIAMETER CAN BE USED.
6. THE INSIDE AND OUTSIDE OF ALL BRICK WALLS SHALL BE PLASTERED WITH 1:2 CEMENT MORTAR $\frac{1}{2}$" THICK
7. INVERT ELEVATION TO BE AS SHOWN IN W.C. 2.2 (AVG. OCTOBER GROUND WATER LEVEL)
8. WHEN SLAB COVERED TRENCH IS ALLOWED THEN INVERT OF PIPE CAN BE LOWER THAN OCTOBER LEVEL.

ITEM	CROSS REF.	SPEC. REF.
DRAINAGE PIPE		SEC. 360
EXFILT. TRENCH CONST.		SEC. 360
DESIGN WATER TABLE	DES. MAN	
BALLAST ROCK		SEC. 360
PAV'T RESTORATION	R-21.1	

E. R. BROWNELL & ASSOCIATES, INC.
Engineers - Land Surveyors
3152 Coral Way
MIAMI, FLORIDA 33145
(305) 446-3511

JOB SAFETY KLEEN #4402.1
SHEET NO. 1 OF 5
CALCULATED BY G. ZAMORA DATE AUG. 1, 19
CHECKED BY E.S LOFBERG DATE
SCALE

SAFETY - KLEEN CORP.

DRAINAGE CALCULATIONS

NW 96 ST. & NW 89 AVE.

MIAMI, FLORIDA

E. R. BROWNELL & ASSOCIATES, INC.
Engineers - Land Surveyors
3152 Coral Way
MIAMI, FLORIDA 33145
(305) 446-3511

JOB SAFETY KLEEN #44021
SHEET NO. 2 OF 5
CALCULATED BY G. ZAMORA DATE AUG 1, 1990
CHECKED BY E.S. LOFBERG DATE
SCALE

DESIGN DATA AND CRITERIA

1. DESIGN STORM: 5 YEAR FREQUENCY
2. FLOOD CRITERIA: ELEVATION 6.7
3. LOWEST PIPE INVERT TO SATISFY DERM REQUIREMENTS FOR FRENCH DRAINS

AVERAGE OCTOBER GROUND WATER LEVEL (W.C 2.2)	
INVERT OF 15" PIPE	3.0
15" PIPE	1.25
COVER OVER PIPE	2.00
LOWEST POSSIBLE RIM ELEVATION	6.25

4. PERCOLATION TEST BASED ON TRENCH TEST PERFORMED ON THE SITE BY SCHNEBLE-SHIGLIN & ASSOCIATES

TEST DATA RESULTS & CALCULATIONS

LENGTH = 10.0 FEET
WIDTH = 3.0 FEET
DEPTH TO WATER = 2.50 FEET
DEPTH BELOW WATER = 11.40 FEET
WATER INPUT = 1455 GALLONS
ELAPSED TIME WATER RUNNING = 4.00 MINUTES = 240 SEC
RISE IN WATER TABLE = 2.40 FEET
EXFILTRATION RATE: Q_{OUT} (CFS/FT)

$$= \frac{\text{INPUT VOL } (FT^3) - \text{VOL REMAINING ABOVE INITIAL } (FT^3)}{(\text{LENGTH OF TRENCH})(\text{TIME IN SEC PUMP RUNNING})}$$

$$= \frac{(1455\,GAL)\left(\frac{1\,FT^3}{7.48\,GAL}\right) - (10.0\,FT)(2.0\,FT)(2.40\,FT)}{(10.0\,FT)(240\,SEC)}$$

Q_{OUT} = 0.06 CFS/L.F.

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JOB SAFETY KLEEN #44021
SHEET NO. 3 OF 5
CALCULATED BY G. ZAMORA DATE AUG 1, 1990
CHECKED BY E.S LOFBERG DATE
SCALE

DRAINAGE CALCULATIONS

PROP INLET #1

AREA = 12254 SQ FT = 0.28 ACRES ±
C = 0.9
I = 6.7 IN/hr
Q = CiA = (0.9)(6.7)(0.28) = 1.69 C.F.S. ±
L = Q/Q$_{OUT}$ = 1.69 CFS / 0.06 CFS/L.F.
= 28 FT.
USING A SAFETY FACTOR OF 2 L = 56 FEET
USE L = 60 FEET

PROP INLET #2

AREA = 17,200 SQ. FT = 0.39 ACRES
C = 0.9
I = 6.7 IN/hr
Q = CiA = (0.9)(6.7)(0.39) = 2.35 C.F.S. ±
L = Q/Q$_{OUT}$ = 2.35 CFS / 0.06 CFS/L.F.
= 39 FT.
USING A SAFETY FACTOR OF 2 L = 78 FEET
USE L = 80 FEET

PROP INLET #3

AREA = 12875 FT^2 = 0.29 ACRES
C = 0.9
I = 6.7 IN/hr
Q = CiA = (0.9)(6.7)(0.29) = 1.75 CFS ±
L = Q/Q$_{OUT}$ = 1.75 CFS / 0.06 CFS/L.F.
= 29 FT.
USING A SAFETY FACTOR OF 2 L = 58 FEET
USE L = 60 FEET

E. R. BROWNELL & ASSOCIATES, INC.
Engineers - Land Surveyors
3152 Coral Way
MIAMI, FLORIDA 33145
(305) 446-3511

JOB SAFETY KLEEN #44021
SHEET NO. 4 OF 5
CALCULATED BY G. ZAMORA DATE AUG. 1990
CHECKED BY ESKOFBERG DATE
SCALE

PROP INLET #4

AREA = 16800 SQ FT. ≈ 0.39 ACRES
C = 0.9
I = 6.7 IN/hr
Q = CiA = (0.9)(6.7)(0.39) = 2.35 C.F.S. ±
L = Q/Q$_{OUT}$ = 2.35 CFS / 0.06 CFS/FT
= 39 FT

USING A SAFETY FACTOR OF 2 L = 78 FT.
USE L = 80 FEET

PROP INLET #5

AREA = 18900 SQ. FT. ≈ 0.43 ACRES
C = 0.9
I = 6.7 IN/hr
Q = CiA = (0.9)(6.7)(0.43) = 2.59 C.F.S. ±
L = Q/Q$_{OUT}$ = 2.59 CFS/0.06 CFS/FT
= 43 FT

USING A SAFETY FACTOR OF 2 L = 86 FT
USE L = 90 FEET

PROP. INLET #6

AREA = 19450 SQ. FT = 0.45 ACRES
C = 0.9
I = 6.7 IN/hr
Q = CiA = (0.9)(6.7)(0.45) = 2.71 C.F.S.
L = Q/Q$_{OUT}$ = 2.71 CFS / 0.06 CFS/FT
= 45 FT

USING A SAFETY FACTOR OF 2 L = 90 FT
USE L = 90 FEET

G. ZAMORA AUG. 1, 1990

Schwebke-Shiskin & Associates, Inc.

LAND PLANNERS • ENGINEERS • LAND SURVEYORS • ARCHITECTS • SOILS ENGINEERS

3240 CORPORATE WAY • MIRAMAR, FLORIDA 33025 • BROWARD 435-7010 • DADE 652-7010 • FAX 652-8284

TESTING DIVISION

TRENCH TEST

Client: BROWNELL & ASSOCIATES
SAFETY KLEEN

Project:

Test Hole #: 1
69691

Job #:

Date: JULY 13, 1990

TEST HOLE CONDITIONS:

Length = 10.00 ft. Width = 3.0 ft.

Ground Elevation = . ft.

Depth to Water = 2.50 ft.

Depth below Water = 11.40 ft.

SOIL CONDITIONS:

0.0	1.0	=	SAND
1.0	4.5	=	ROCK SAND FILL
—	—	=	
4.5	5.0	=	SAND
5.0	13.9	=	LIMEROCK
—	—	=	
—	.	=	.
—	.	=	.

REMARKS:

1) Total gal. in tanks = 2000

2) Total time to empty tanks = 5.5 MIN.

3) Pump Input = 333 G.P.M.

4) Test stablized at: DID NOT

5) Trench terminated at:
2.40 ft. or 4.0 min.

WATER RUNNING (rise)

Elapsed Time	Water Level	
0.00 minutes	0.00	feet
0.50 minutes	0.40	feet
1.00 minutes	0.80	feet
1.50 minutes	1.20	feet
2.00 minutes	1.50	feet
2.50 minutes	1.80	feet
3.00 minutes	2.00	feet
3.50 minutes	2.20	feet
4.00 minutes	2.40	feet
4.50 minutes	.	feet
5.00 minutes	.	feet
5.50 minutes	.	feet
6.00 minutes	.	feet
6.50 minutes	.	feet

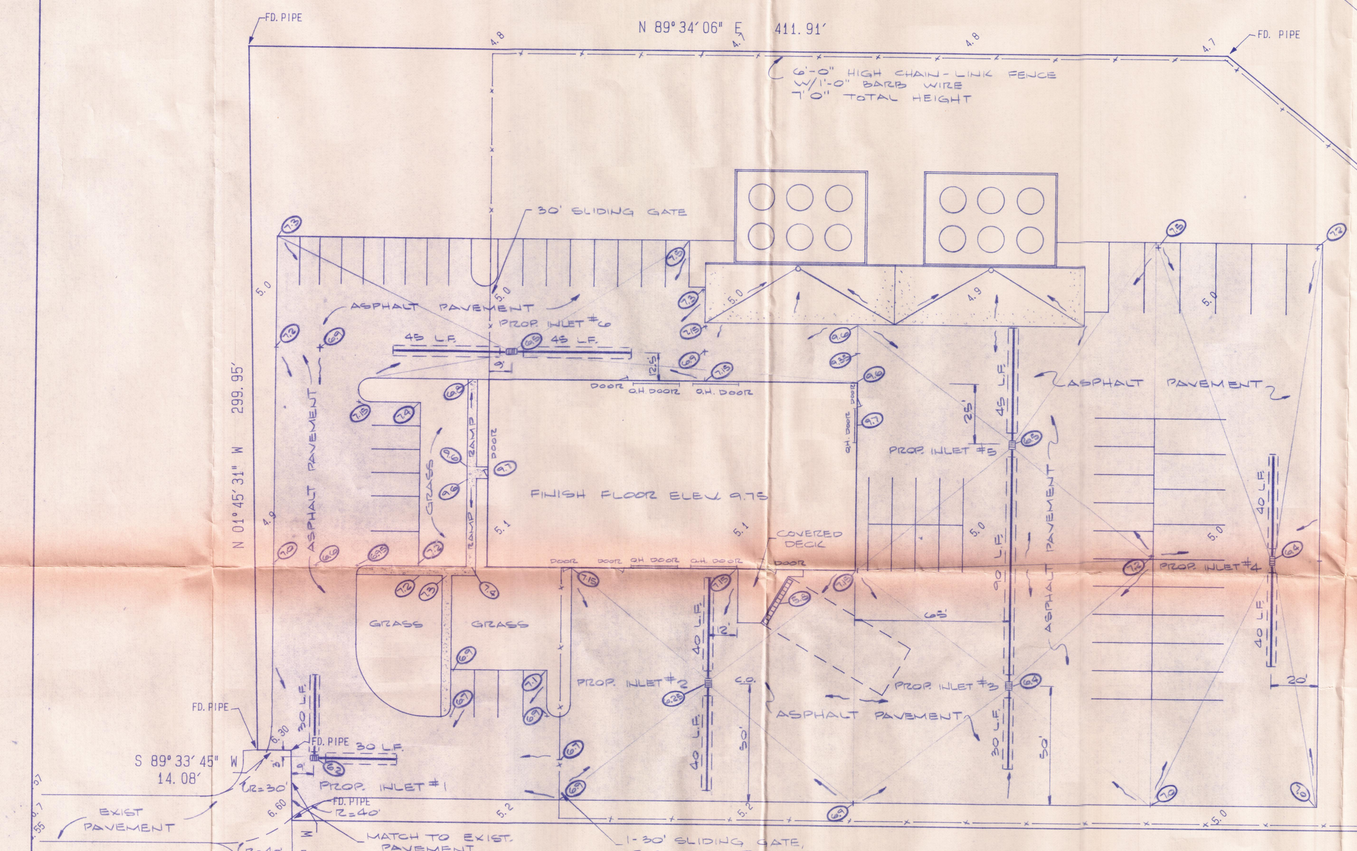
ADDITIONAL DROP OF 0.10 IN 3.0 MINUTES.

WATER OFF (fall)

Elapsed Time		Water Level	
0.00	min/sec.	0.40	feet
0.50	min/sec.	0.20	feet
1.00	min/sec.	0.30	feet
1.50	min/sec.	0.35	feet
2.00	min/sec.	0.40	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet
.	min/sec.	.	feet

Schwebke-Shiskin & Associates, Inc.

ALFONSO C. TELLO P.E. #32068

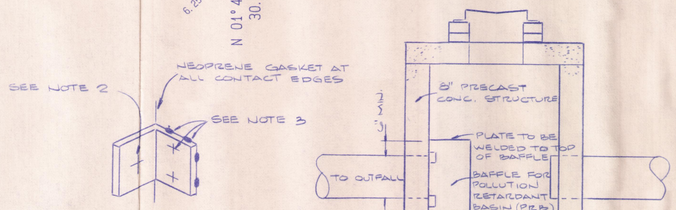


ENGINEER'S NOTES:

1. All materials and labor shall conform to Dade County Public Works standards and specifications, and to Florida Department of Transportation standards and specifications where appropriate.
2. Contractor shall verify acceptable utilities in the field by calling underground utility notification center 1-800-432-4770 prior to digging.
3. Fill shall be locally acceptable and suitable for fill purposes. Fill shall be compacted to 95% of Maximum density as determined by AASHTO T-180 test reports shall be subaitted to the architect and owner.
4. PAVEMENT SECTION: 1½" FDOT TYPE S-1 SURFACE COURSE, 2" BINDER COURSE, 8" LIMEROCK BASE.
5. Concrete shall have a minimum compressive strength of 4000 PSI in 28 days FOR BUILDING AND TANK FARM.
6. Elevations shown are referred to NGV Datum.
7. Any apparent discrepancies in the plans and field conditions shall be brought to the attention of the engineer before proceeding with the work.
8. Dade County Flood Criteria: Elevation 6.7 Fema Flood Zone "AH", Elevation 6
9. SEEPAGE STRUCTURES SHALL BE A FRENCH DRAIN (S.D. 1.1) WITH 8" PERFORATED CMP INVERT OF PIPE TO BE AT ELEVATION 3.0. BOTTOM OF TRENCH TO BE 18 DEEP TRENCH WIDTH TO BE 36". PROVIDE MASONRY PLUG AT END OF TRENCH.

5.4 INDICATES EXISTING ELEVATION

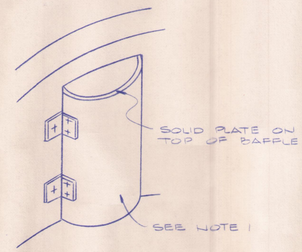
(5.7) INDICATES PROPOSED ELEVATION



BRACKET DETAIL

CATCH BASIN PER DCPWD DETAIL S.D. 2.6, MINIMUM SIZE 3.5 FT. BY 3.0 FT SQUARE.

TYPICAL CATCH BASIN



BAFFLE DETAIL

NOTES FOR P.R.B. BASIN

1. BAFFLE TO BE A SECTION OF CMP CUT IN HALF. USE ONE-HALF OF A 24" ϕ CMP
2. 3/8" GALVANIZED LAG BOLT IN LEAD SHIELD (TYP.)
3. WELD OR 2-1/2" THRU BOLTS (SS) GRATING SHALL BE OFFSET IF STRUCTURE IS USED AS OVERFLOW

STUART LOFBERG CERTIFICATE NO. 3179 STATE OF FLORIDA REGISTERED ENGINEER

No.	Date	Apvd.	J.N.	F.B.	Revision Description
1	9/21/90				COMMENTS PER M.H.

Professional Land Surveyor No.
Professional Engineer No. 3179
State of Florida

SAFETY-KLEEN CORP.
PAVING & DRAINAGE PLAN

E. R. BROWNELL & ASSOC., INC.
CONSULTING ENGINEERS
3152 Coral Way
LAND SURVEYORS
Miami, Florida, 33145

Drawn by: GZ	Ref.		Sheet 2 of 3
Des. by: GZ	J.N. 44021	F.B. FILE	Sk. No. P-423
Chk. by: TB	Scale: 1"= 30'	Date: JULY 1990	

N 89° 34' 06" E 411.91'

CENTERLINE F.E.C. RAILROAD R/W

S 50° 59' 27" E 379.31'

S 01° 45' 31" W 88.86'

N 01° 45' 31" W 299.95'

SERVICE CENTER BRANCH BUILDING

6" SAN. LATERAL

2" WATER SERVICE

N.W. 95 ST.

S 89° 33' 45" W 14.08'

EXIST. 8" SAN

6" LAT.

PROP. 2" METER

EXIST. 12" W.M.

EXIST. F.H.

97

N 01° 45' 31" W 30.00'

EXIST. SAN. MH.
RIM ELEV. 6.97
INV. ELEV. (W) 2.99
(E) 3.04
(S) 3.02

S 89° 33' 50" W 685.18'

NOTE:
UTILITY INFORMATION OBTAINED FROM TOWN OF MEDLEY WATER & SEWER DEPARTMENT. CONTRACTOR SHALL VERIFY UTILITIES IN THE FIELD PRIOR TO DIGGING.

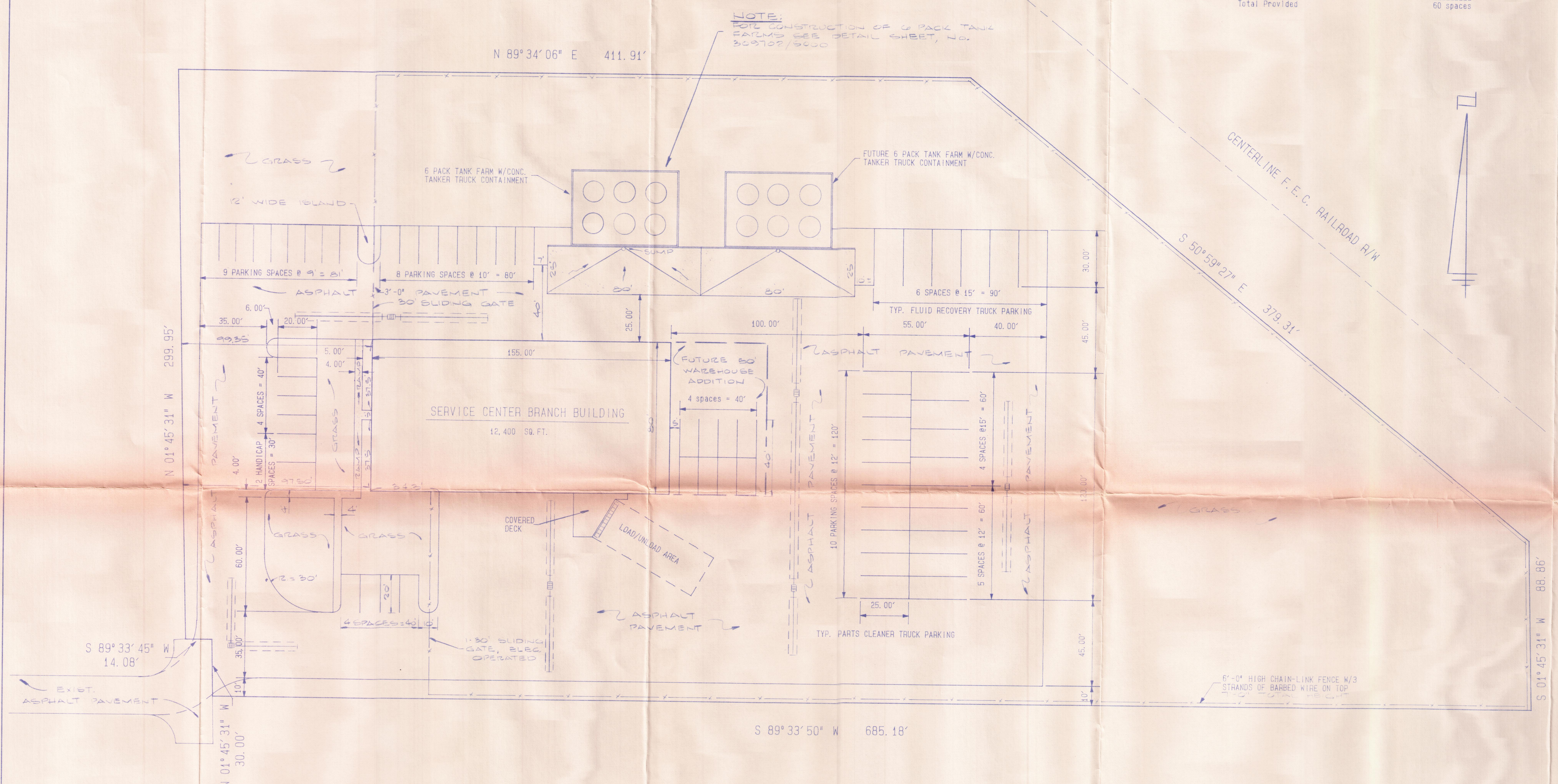
STUART LOFBERG CERTIFICATE NO. 3179 STATE OF FLORIDA

SAFETY-KLEEN CORP.
UTILITY PLAN

E. R. BROWNELL & ASSOC., INC.
CONSULTING ENGINEERS — LAND SURVEYORS
3152 Coral Way — Miami, Florida, 33145

No.	Date	Apvd.	J.N.	F.B.	Revision Description
					Professional Land Surveyor No.
					Professional Engineer No. 3179
					State of Florida

Drawn by: GZ	Ref.		Sheet 3 of 5
Des. by: GZ	J.N. 94021	F.B. FILE	Sk. No. M-1008
Chk. by: TB	Scale: 1" = 30'	Date: SEPTEMBER, 1994	



SITE DATA

LOT AREA

Total Land Area	195,596 sq. ft.
Lot Coverage	12,801 sq. ft.
Paved Area	96,215 sq. ft.
Landscape Area	86,580 sq. ft.

PARKING SPACES

Required	
Offices (4000 sq. ft.) 1/400 sq. ft.	10 spaces
Warehouse (8400 sq. ft.) 1/1000 sq. ft.	9 spaces
Total Required	19 spaces
Provided	
Employee/Visitors (10' x 20')	33 spaces
Handicapp (15' x 20')	2 spaces
Parts Cleaner Trucks (12' x 25')	15 spaces
Fluid Recovery Trucks (15' x 30')	10 spaces
Total Provided	60 spaces

ZONING LEGEND

Business, Industrial, Multiple Family Dev.

ZONING : M1

Height (to ridge of roof) ______
Net Land Area 195,596 SQ FT
Lot Coverage (everything under roof) 12,801 SQ FT

SETBACKS Front ______
Side ______
Side Street ______
Rear ______

Site to be filled to County flood criteria elevation N.G.V.D. or an elevation no less than the highest approved crown elevation of the road abutting the property.

Area adjacent to lake or canal to be graded so as to prevent direct overland discharge of stormwater into lake or canal.

Lot will be graded so as to prevent direct overland discharge of stormwater onto adjacent property. Applicant will provide certification prior to final inspection.

LOWEST FINISHED FLOOR ELEVATION

(Including basement)

District "AH" Elevation 6

Cty Flood Criteria 6.7 Crown of Road 6.7

DISTRICTS	C.H.H.	S.F.H.	OTHER
REQUIRED			
PROPOSED*			

LOWEST FLOOR AS-BUILT ELEVATION SURVEY IS REQUIRED BEFORE MAKING ANY INSPECTION ABOVE LOWEST FLOOR

Shall be _____ inches above finished floor

ANY APPLICABLE RESOLUTION_

NOTICE: In addition to the requirements of this permit, there may be additional restrictions applicable to this property that may be found in the Public Records of this County. Section 553.79(10), Florida Statutes, Effective 7/10/87

Applicant: will comply with Ordinance 80-90 (section 13-13.1) of the Metropolitan Dade County Code, - prior to starting construction.

Parking: open parking lots, parking for non-enclosed areas under or within buildings, will be lighted as required by section "8-C" of the Metropolitan Dade County Code.

Landscaping: all landscape areas will have a sprinkler system.

Note: All signs required in section 33 of Metropolitan Metropolitan Dade County Code are deleted from this plan and require separate plans, application and permits.

SAFETY-KLEEN CORP.
SITE PLAN

E. R. BROWNELL & ASSOC., INC.
CONSULTING ENGINEERS
LAND SURVEYORS
3152 Coral Way
Miami, Florida, 33145

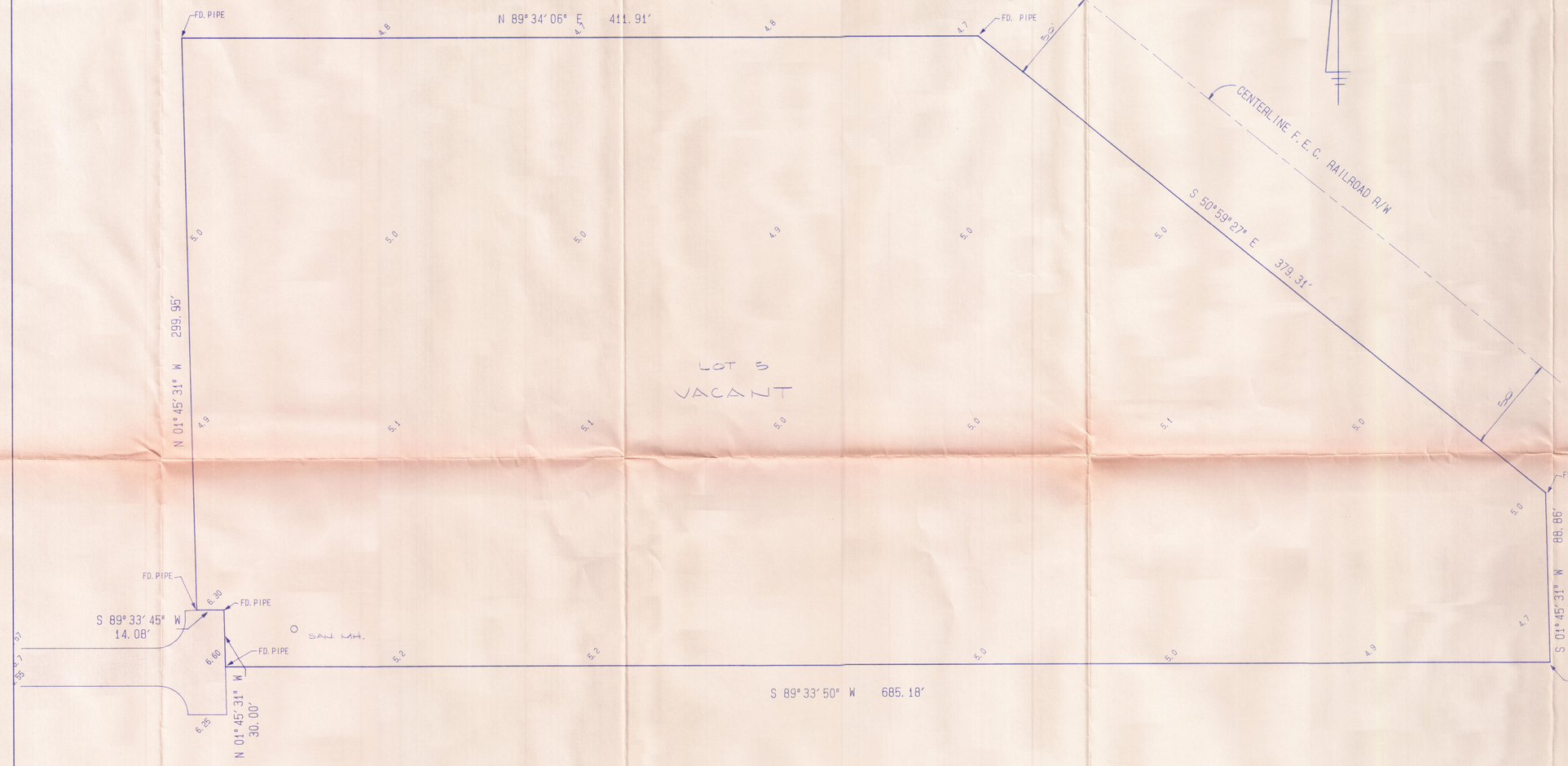
STUART LOFBERG CERTIFICATE No. 3179 STATE OF FLORIDA REGISTERED ENGINEER

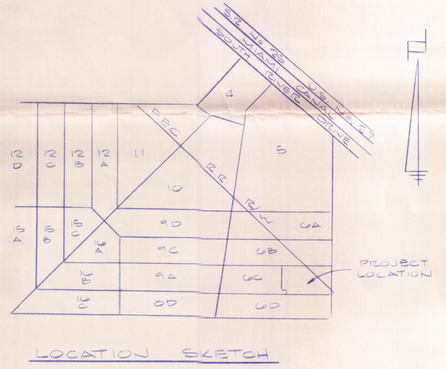
No.	Date	Apvd.	J.N.	F.B.	Revision Description
1.	9/21/90				COMMENTS PER M.H

Professional Land Surveyor No.
Professional Engineer No. 3179
State of Florida

Drawn by: GZ	Ref.		Sheet 1 of 3
Des. by: GZ	J.N. 44021	F.B. FILE	
Chk. by: TB	Scale: 1" = 30'	Date: JULY 1990	Sk. No. P-423

SKETCH OF BOUNDARY SURVEY





LOCATION SKETCH
SCALE: 1"=1000'

LEGAL DESCRIPTION:

That portion of the East 699.08 fee of Tract 6C, SUNNY GLADES FARM, according to the plat thereof as recorded in Plat Book 8 at Page 73, of the Public Records of Dade County, Florida, lying Southwesterly of the Southwesterly right-of-way line of the Florida East Coast Railroad, where the Easterly line of said Tract 6C is coincident with the Easterly line of the Southeast 1/4 of Section 4, Township 53 South, Range 40 East, Dade County, Florida, LESS the South 30.00 feet of the West 14.08 feet thereof for road right-of-way.

NOTES:

1. Elevations shown are referred to NGV Datum based upon Dade County Bench Mark No. N-519 located at NW 103 Street extension and U.S. Highway No. 27. Elevation 10.07 feet.
2. Bearings are based on the State Plane Coordinate System, Florida East Zone.

SURVEYOR'S CERTIFICATION:

This is to certify to the herein named firm and/or persons that the "Boundary Survey" of the herein described property is true and correct to the best of our knowledge and belief as recently surveyed and platted under our direction, also that there are no visible encroachments other than those shown, and that this "Boundary Survey" meets the Minimum Technical Standards set forth by the Florida Board of Land Surveyors pursuant to Chapter 472.027, Florida Statutes.

E. R. BROWNELL & ASSOCIATES, INC.

E. R. Brownell, President
Professional Land Surveyor #928
State of Florida

Reproductions of this drawing are not valid unless embossed with the surveyor's seal.

E. R. BROWNELL CERTIFICATE N 928 STATE OF FLORIDA PROFESSIONAL LAND SURVEYOR

SAFETY-KLEEN CORP.
SKETCH OF BOUNDARY SURVEY

E. R. BROWNELL & ASSOC., INC.
CONSULTING ENGINEERS — LAND SURVEYORS
3152 Coral Way — Miami, Florida, 33145

No.	Date	Apvd.	J. N.	F. B.	Revision Description

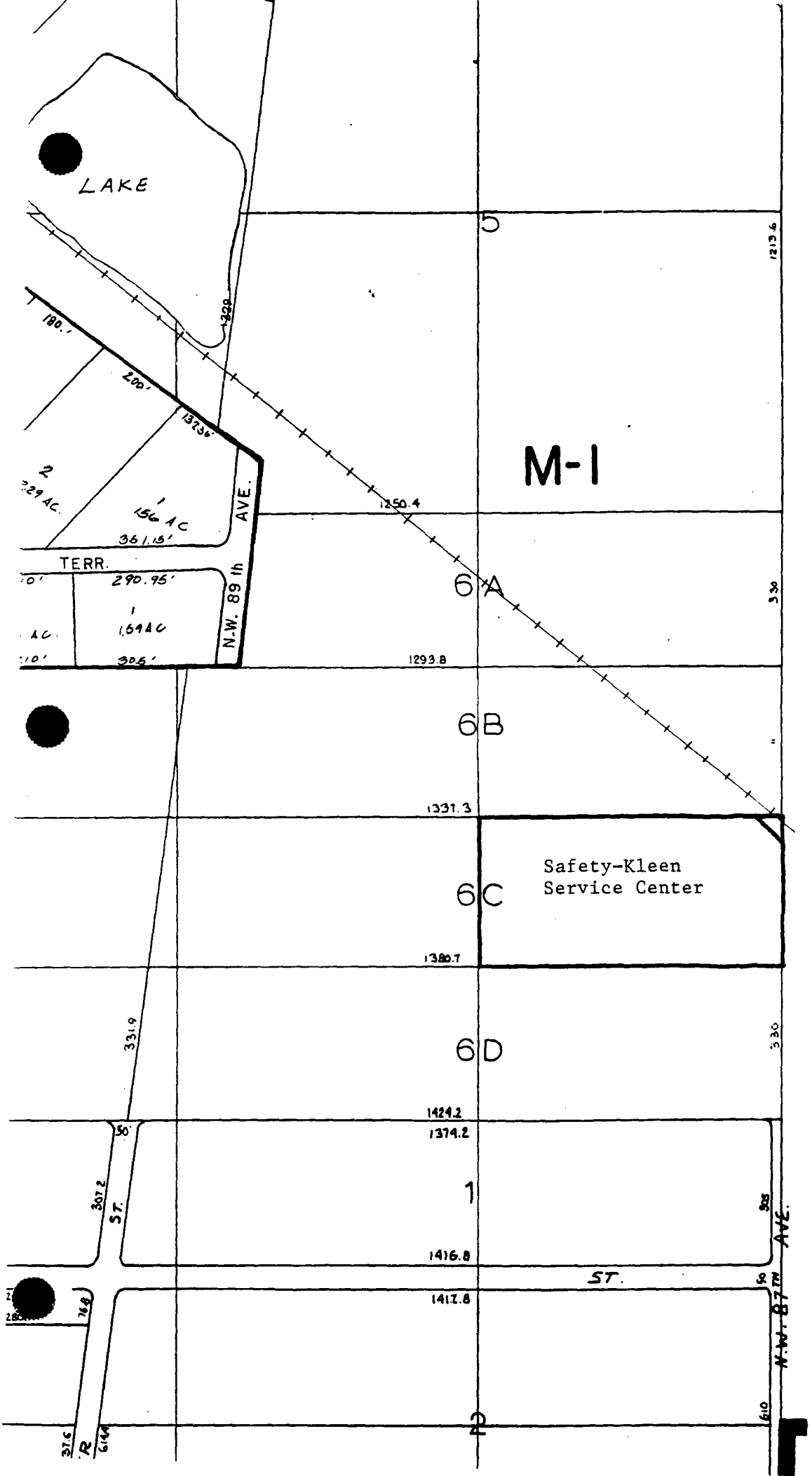
Professional Land Surveyor No. 928
Professional Engineer No.
State of Florida

Drawn by: GZ | Ref.
Des. by: GZ | J. N. 44021 | F. B. 685-34 | Sk. No. LS-1305
Chk. by: TB | Scale: 1"=30' | Date: JULY 1990

Sheet 1 of 1

ATTACHMENT I.C

LAND USE INFORMATION



ZONING MAP

MEDLEY

M-1	LIGHT MANUFACTURING INDUSTRIAL DISTRICT
M-3	HEAVY MANUFACTURING INDUSTRIAL DISTRICT
R-1	SINGLE FAMILY RESIDENTIAL DISTRICT
R-3	MULTIPLE FAMILY RESIDENTIAL DISTRICT

EXHIBIT I.C. 5-1

ATTACHMENT I.D

OPERATING INFORMATION

I.D.2.a DESCRIPTION OF THE BUSINESS

Safety-Kleen Corp. of Elgin, Illinois is an international, service-oriented company whose customers are primarily engaged in automotive repair and industrial maintenance. Since 1968, Safety-Kleen has been offering a leasing service for hydrocarbon and chlorinated solvents and small parts washing equipment. A unique feature of this business concept is that the solvent is produced through recycling the used solvent that is leased to the customers. Approximately two-thirds of the clean solvent leased has been previously used by the customers.

The Safety-Kleen parts washing equipment, together with the solvents, are leased to customers; the leasing charge includes regularly scheduled solvent changes and machine maintenance. The business is conducted from local service centers (sales branches) located in 45 states domestically that warehouse the products and equipment required to service the customers in their sales areas. On a regular basis, service representatives furnish clean solvent to the customers, pick up the used solvent, and ensure that the leased equipment is in good working order. In 1979, Safety-Kleen expanded their scope of operations to make their solvent leasing service available to owners of parts cleaning equipment, regardless of manufacturer, using Safety-Kleen's types of solvents.

Basically, Safety-Kleen handles three types of parts washer solvents: a mineral spirits solvent and old and new formulations of immersion cleaner. The old immersion cleaner solvent is labeled under the trade name of "Immersion Cleaner and Carburetor and Cold Parts Cleaner #609." It is a two-phase system consisting of an upper aqueous (water) layer and lower non-aqueous (solvent) layer. The water phase consists of water and Dresinate TX (sodium soap of tall oil). The solvent phase is composed of methylene chloride, orthodichlorobenzene, cresylic acid, and an amines additive. A new immersion cleaner is being marketed under the name #699 and will eventually replace the old immersion cleaner. It is a non-chlorinated solvent mixture.

The solvent is composed of heavy aromatic naphtha, N-methyl-2-pyrolidon dipropylene glycol methyl ether, monoethanolamine and oleic acid. It contains a maximum of 1 percent total chlorinated solvents. The solvents are distributed and collected by their service representatives. Drums are transported in specially-equipped, enclosed route trucks. Clean solvents are distributed from and used solvents returned to the service center where they are stored in separate tanks for the clean and used mineral spirits bulk storage. Warehouse space is dedicated for the storage of both clean and used immersion cleaner drums. Safety-Kleen leases parts washing equipment, including partially filled 16- and 30-gallon drums, which double as the solvent reservoir of the parts washer. During servicing, the quantity of used solvent removed from each machine ranges from 5 to 20 gallons. The mineral spirits are collected in 16- and 30-gallon red steel drums. The 609 Immersion Cleaner is housed in 16-gallon gray steel drums. A 16-gallon gray steel drum with a red band is used for 699 Immersion Cleaner. The perchloroethylene from dry cleaning operations is collected in 16-gallon black poly drums.

Periodically, a company truck is dispatched from one of Safety-Kleen's nationwide solvent recycle facilities to the service center to deliver a load of clean solvent and pick up a load of used solvent. Mineral spirits are transported in bulk tank trucks between the service centers and the recycle facilities. The Immersion Cleaner remain in the covered drums during transfer between the service centers and the recycle facilities. Approximately 97 percent of the solvent handled in the parts washer business is mineral spirits, while the remainder is immersion cleaner.

Safety-Kleen's solvent cycle is essentially a closed loop, moving from the service center to the customer, from the customer to the service center, from the service center to the recycle facility and then from the recycle 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 Safety-Kleen's solvent recycling facilities are disposed of in accordance with applicable laws and regulations.

This closed loop supplies 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 center is basically a temporary storage and transfer facility. By FDER definition, however, these centers are considered to be the waste generator.

Safety-Kleen also provides a dry cleaning waste reclamation service where drums 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 1986, a paint waste reclamation program was initiated to service automobile body repair businesses. Wastes containing various lacquer thinners and paints are collected in 5-gallon pails and in 16-gallon drums on the customer's premises. The sales representative collects these containers and stores them in the drum storage area of the warehouse. These wastes are periodically shipped to a reclaimer and there claimed solvent is distributed to Safety-Kleen customers for use as product.

In 1988, a nonhazardous waste oil collection service was initiated to service automotive service businesses. Waste oil is collected by a 3,500-gallon tanker truck which returns to the service center when full and stores the waste in one of the 20,000-gallon storage tanks. These wastes are periodically shipped to a Safety-Kleen oil re-refinery and the re-refined oil is distributed to Safety-Kleen customers for use as product. This waste is not currently regulated as a hazardous waste and is therefore not required to be permitted.

ID2.b and c **SPECIFICATIONS AND ANNUAL QUANTITIES OF HAZARDOUS WASTES**

In accordance with U.S. EPA Hazardous Waste Regulations, four 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 facility is considered to be an Ignitable Waste and (D001) a characteristic waste by TCLP;

2. The used chlorinated solvent, returned from customers in separate drums and remaining in the same drum for shipment to the recycle facility is considered to be a Listed Waste from Non-Specific sources (F002 and F004); and a characteristic waste by TCLP;

3. The used immersion cleaner #699, returned from customers in separate drums and remaining in the same drum for shipment to the recycle facility, is considered a characteristic waste by TCLP;

4. 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) a characteristic waste by TCLP; and

5. 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)and a characteristic waste by TCLP.

6. Paint waste is considered to be a listed waste from nonspecific sources (F003 and F005) or a characteristic waste by TCLP.

   TCLP waste codes which may apply to any of the waste streams may include D004 through D011; D018, D019, D021 through D030, and D032 through D043.

   A typical composition, and chemical physical analysis for each of the waste streams listed above are shown in the attached chemical analyses reports (Exhibits ID2-1 through ID2-10), based on existing data on these wastes generated from similar processes within Safety-Kleen's current and/or potential customers.

USED MINERAL SPIRITS

The clean mineral spirits solvent is labeled under the trade name of "Safety-Kleen 105 Solvent", so-named because of the flash point of the solvent being 105°F (minimum). Chemically, the solvent primarily consists of petroleum hydrocarbon fraction (the mineral spirits) with boiling points between 310°F and 400°F. Impurities, such as light aromatic hydrocarbons (LAHC) and chlorinated hydrocarbons, usually constitute less than one percent of the total volume. The mineral spirits constituted over 99.5 percent of the total volume of the solvent.

The used mineral spirits solvent consists primarily of mineral spirits solvent plus water, solid, oil, and grease picked up in the various degreasing operations. In most instances, no water is associated with the used solvent; however, at times, the water content may range from one percent to as much as 50 percent. The oily bottoms may range from 2 percent to 10 percent, by volume, in the used solvent.

Chemically, the composition of the solvent fraction in the used mineral spirits solvent is essentially the same as the clean solvent, as shown in analyses.

An estimated 243,000 gallons of used mineral spirits are expected to be shipped to a recycle center from this facility annually.

USED IMMERSION CLEANER

The clean chlorinated solvent is labeled under the trade name of "Immersion Cleaner and Carburetor and Cold Parts Cleaner #609." It is a two-phase system consisting of an upper aqueous (water) layer and lower non-aqueous (solvent) layer. The water phase consists of water and Dresinate TX (a sodium soap of tall oil). The solvent phase is composed of methylene chloride, orthodichlorobenzene, cresylic acid, and an amines additive.

A new "Immersion Cleaner and Carburetor and Cold Parts Cleaner #699" is also being leased. It is a heavy aromatic naphtha, N-methyl-2-pyrolidon dipropylene glycol methyl ether, monoethanolamine and oleic acid, and contains a maximum of 1 percent total chlorinated solvents.

The used immersion cleaner is basically unchanged from its clean state, except oil, grease, and other solids may be picked up during the various degreasing operations. The spent solvent is non-flammable. It is regarded as toxic because of the contents of various solvents.

It is anticipated that 5,500 gallons of used immersion cleaner will be stored at this facility annually.

USED MINERAL SPIRITS BOTTOM SLUDGE

This is material settled from used mineral spirits in the aboveground tanks. It contains basically soils, oil and grease, and some water picked up in the degreasing operations, together with a small amount of mineral spirits. Analyses have shown

that the sludge is an ignitable waste and might also be considered toxic using TCLP standards.

The sludge is removed from the aboveground tank periodically and shipped to Safety-Kleen's facility for reclamation.

USED MINERAL SPIRITS DUMPSTER MUD

This waste material is accumulated in the wet dumpsters when emptying the used mineral spirits from the drums into the aboveground storage tanks. The nature of this waste is similar to the used mineral spirits bottom sludge, except with some small metal parts and less mineral spirits. It is regarded as an ignitable waste and often is also considered a characteristic waste using TCLP standards.

The sludge in the dumpsters is cleaned out frequently. The waste is drummed and shipped to Safety-Kleen's facility for recycling. Approximately 150 drums (1,500 gallons) of dumpster sludge will be removed from this service center each year.

DRY CLEANING WASTES

Solvent used in dry cleaning of clothing is commonly tetrachloroethylene (or perchloroethylene). Hence, waste generated from dry cleaning operations contains various concentrations of the solvent. Basically, wastes generated by dry cleaning facilities are in the following forms.

1. Cartridge Filter: In addition to the construction materials consisting of steel, paper, clay, and carbon, the used cartridge retains solvent, oil and grease, and undissolved elements such as lint and soil. Solvent retained in the filter cartridge generally amounts to less than 50 percent of the total cartridge weight.

2. Muck: At some dry cleaning facilities, a mixture of powdered materials is used as the filter medium for the dry cleaning solvent, in lieu of the cartridge filter. This filter medium normally consists of diatomaceous earth and carbon. In addition to lint, soil, oil, and grease retained by this medium, between 40 and 50 percent by weight of the "muck" is absorbed solvent.

3. Still Residue: After filtration, the dry cleaning solvent is distilled by the dry cleaning machine to remove the dissolved materials from the used solvent. The dissolved materials (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.

PAINT WASTES

Paint wastes consist of various lacquer thinners (D001, F003, and F005) and paints (D006, D007, and D0098). The waste is collected in black 5-gallon pails and 16-gallon drums at the customer's place of ;business and the containers are then palletized and stored in the drum storage area of the warehouse. It is anticipated that this facility will ship 19,500 gallons of paint waste to a reclaimer annually. Analytical results for paint wastes are in Exhibit 2-5.

DESIGN CAPACITY

All wastes managed at this facility are stored either in a tank or in containers, as follows:

Waste	Storage Unit
Spent Mineral Spirits	A 20,000-gallon tank
Dumpster Sediment	
Spent Immersion Cleaner	6,912 gallons in containers
Dry Cleaner Wastes	
Paint Wastes	

EXHIBIT I.D. 2-1

MIAMI, FL.
3-097-91

LEXINGTON RECYCLE CENTER

INCOMING MINERAL SPIRITS														OUTGOING MINERAL SPIRITS											
							% VOLUME											% VOLUME							
1989 PERIOD DATE	ER & RC SAMPLE NO.	GALLONS	SOLV.	WATER	BOT.	F. FP	LAHC	MC	1,1,1	TRI.	TOL.	PERC.	MS	1989 PERIOD DATE	ER & RC SAMPLE NO.	GALLONS	F. FP	LAHC	MC	1,1,1	TRI.	TOL.	PERC.	MS
1																									
01-18	1630D	7000	94	1	5	P	.023	0	.040	0	.167	.104	99.666	01-17	1492C	7000	P	.026	0	.024	0	.078	.064	99.809
01-25	1654D	7000	87	1	12	P	.013	0	0	0	.122	.077	99.788	01-24	1510C	6500	P	.014	0	.021	0	.076	.077	99.812
2																									
02-13	1699D	7000	92	0	8	P	.009	0	0	0	.121	.096	99.773	02-13	1553C	6500	P	.011	0	.033	0	0.075	.114	99.767
02-22	1726D	7000	90	1	9	P	.011	0	0	0	.148	.101	99.740	02-21	1578C	4000	P	.022	0	.031	0	.117	.109	99.722
3																									
03-07	1756D	6000	89	0	11	P	.011	0	0	0	.133	.108	99.748	03-06	1606C	4000	P	.010	0	.028	0	.073	.078	99.812
03-21	1793D	7000	86	1	13	P	.012	0	0	0	.145	.092	99.752	03-20	1637C	7000	P	.013	0	.055	0	.085	.066	99.782
4																									
03-28	1810D	5000	87	2	11	P	.011	0	0	0	.132	.058	99.799	03-27	1651C	7000	P	.018	0	.032	0	.099	.098	99.752
04-12	1858D	7000	91	0	9	P	.010	0	0	0	.134	.083	99.773	04-11	1694C	3500	P	.013	0	.032	0	.085	.172	99.698
		NO		DIRTY										04-20	1717C	7000	P	.009	0	0	0	.084	0	99.907
5																									
04-24	1884D	7000	90	1	9	P	.009	0	0	0	.088	0	99.902					NO		CLEAN					
05-11	1936D	7000	91	1	8	P	.013	0	0	0	.102	.058	99.827	05-10	1768C	7000	P	.015	0	.041	0	.073	.067	99.803
10																									
05-22	1964D	7000				P	.014	0	0	0	.131	.075	99.780	05-21	1791C	7000	P	.013	0	.067	0	.078	.087	99.754
06-06	2000D	7000	(benzene0.013)			P	.024	0	0	0	.154	.089	99.720	06-05	1826C	6000	P	.013	0	.029	0	.088	.077	99.792
06-15			NO		DIRTY									06-15	1852C	7000	P	.015	0	0	0	.090	.073	99.822
7																									
06-19	2036D	7000	benzene0.015			P	.031	0	0	0	.157	.106	99.692					NO		CLEAN					
7-06	2074D	7000				P	.006	0	0	0	.110	0	99.884	06-30	1886C	7000	P	.019	0	0	0	093	.080	99.808
8																									
07-18	2107D	7000	(BENZENE 0.010)			P	.022	0	0	0	.158	.099	99.711	07-17	1917C	5000	P	.014	0	0	0	.072	.116	99.798
08-01	2146D	7000				P	.015	0	0	0	.092	0	99.892	07-31	1950C	4500	P	.012	0	0	0	.062	0	99.926
			NO		DIRTY									08-11	1980C	7000	P	.014	0	0	0	.075	.066	99.845
14	2180D	7000				P	.026	0	0	0	.121	.088	99.765					NO		CLEAN					
29	2219D	7000				P	.017	0	0	0	.133	.077	99.774	08-28	2015C	5000	P	.012	0	0	0	.085	.063	99.840
14	2262D	7000	(benzene 0.010			P	.025	0	0	0	.125	.084	99.756	09-13	2052C	7000	P	.016	0	0	0	.064	.063	99.857
28	2297D	7000				P	.023	0	.044	0	.149	.092	99.692	09-26	2084C	7000	P	.010	0	0	0	.060	0	99.930
05	2320D	7000				P	.015	0	0	0	.133	0	99.853	10-04	2100C	7000	P	.010	0	0	0	.054	0	99.937

EXHIBIT I.D. 2-1

MIAMI, FL.
3-097-91

LEXINGTON RECYCLE CENTER

INCOMING MINERAL SPIRITS														OUTGOING MINERAL SPIRITS											
							% VOLUME											% VOLUME							
1989 PERIOD DATE	ER & RC SAMPLE NO.	GALLONS	SOLV.	WATER	BOT.	F. FP	LAHC	MC	1,1,1	TRI.	TOL.	PERC.	MS	1989 PERIOD DATE	ER & RC SAMPLE NO.	GALLONS	F. FP	LAHC	MC	1,1,1	TRI.	TOL.	PERC.	MS
11																								
10-19	2352D	5500				P	.013	0	0	0	.111	0	99.876	10-18	2130C	7000	P	.013	0	0	0	.072	0	99.915
11-02	2390D	7000				P	.019	0	.052	0	.096	.080	99.742			NO CLEAN								
11-03	2393D	3000				P	.022	0	.032	0	.078	.071	99.796			NO CLEAN								

RESIDUALS MANAGEMENT TECHNOLOGY, INC.

LABORATORY REPORT

CLIENT: Safety Klean - DO Corporation DATE: 8-17-81

PROJECT #: 1038-L P.O. #: Verbal

SAMPLE #: 1376

SAMPLE DESCRIPTION: None available

Mineral Spirits Dumpster Mud

EP TOXICITY TEST

WEIGHT USED: 100.2 gms FINAL PH: 4.8 ACID USED: 45 mls

PARAMETER	RESULT	HAZARDOUS WASTE LIMITS
ARSENIC	0.008	5.0 mg/l
BARIUM	0.6	100.0 mg/l
CADMIUM	0.93	1.0 mg/l
CHROMIUM-TOTAL	<0.05	5.0 mg/l
LEAD	5.0	5.0 mg/l
MERCURY	0.0035	0.2 mg/l
SELENIUM	0.002	1.0 mg/l
SILVER	<0.02	5.0 mg/l
FLASH POINT	120°	140° F
pH	8.1	

Paul E. Duranceau

Paul E. Duranceau, Laboratory Director

All leaching tests and leachate analysis meet Environmental Protection Agency requirements as outlined in the May 19, 1980, Federal Register 40 CFR 261.

EXHIBIT I.D. 2-3

DIRTY INCOMING IMMERSION CLEANER COMPOSITE SAMPLE ANALYSIS

LEXINGTON RECYCLE CENTER

1989 DATE	MANIFEST #	SERVICE CENTER	# OF DRUMS	COMPOSITE SAMPLE DATE	SPECIFIC GRAVITY	NON VOLATILE RESIDUE %	CRESYLIC ACID %	FREE WATER %	MeCl %	1,1,1 %	Tri %	Tol %	Perc %	MS %	DCB %	BEN %
08-01	14608	HIGH POINT	97													
08-03	11245	TAMPA *	80													
	11947	ORANGE PARK	13													
	14332	GARDEN CITY	36													
	14610	HIGH POINT	109													
08-04	13985	ELORENCE	57	08-09-89	1.168	16	22	3.0	29.827	0.156	.034	.188	.527	12.106	19.114	0.019
08-07	13500	NORCROSS	68													
	-----	LEXINGTON	37													
08-08	14676	HUNTSVILLE	135													
	14674	HUNTSVILLE	127													
	13535	TAMPA	128	08-10-89	1.166	16	20	1.5	30.161	0.132	0.00	.150	.730	12.460	20.344	

* Spent immersion cleaner from the Florida service centers is shipped to the Tampa facility.

ABBREVIATIONS:

MeCl = methylene chloride
1,1,1 = 1,1,1-trichloroethylene
Tri. = trichloroethylene
Tol. = toluene
Perc. = perchloroethylene
MS = mineral spirits
DCB = dichlorobenzene
BEN = benzene

Date Sept -

TYPICAL CHEMICAL AND PHYSICAL ANALYSES FOR STILL RESIDUE

Solvent Sample Analysis - Summary Report

SK Sample # 3-955 Industrial Solvents Sales Sample # _____

Material Submitted as: Still Bottoms (Dry Cleaning)

Source or Origin: Arcade Drive Cleaners

(Plant#, Site or Complete Address)

Submitted by: M. Bernhardt

Sample Size 1 pt Represents 0.625 Gallons, in ☐ Drum ☐ Bulk

☐ On Hand ☐ Per Year ☒ Other 1 x wk (Per week, month, quarter, etc.)

Tests

API or Sp. Gr. @ 60°F. _____

Flash Point (ASTM D-56) _____

Boiling Point (ASTM D-86) _____

IBP _____ °F.

5 _____

10 _____

20 _____

30 _____

40 _____

50 _____

60 _____

70 _____

80 _____

90 _____

95 _____

EP 340

Distillate 99 vol %

Residue* 1 vol %

Water 0 vol %

ODOR

FIA

Aromatics _____

Saturates _____

Olefins _____

K-B _____

Other (Specify) _____

Solids _____

(Centrifuge, distillation, "Gram Sheet" definition, other) - specify:

*Type of Residue - oil

COMPOSITION, (VOL. %)	of total sample submitted (by distillation)	of solvent portion of distillate (by G.C.)
Perc	99%	99.5
IPA	0.6	0.5
Bottoms	0.4	
Water	0.0	

Comments:

Above material is water soluble

RECOMMENDED DISPOSITION:

Accept ☐ Reject ☐

Distribution:

Report by: B. Blair

Rev. 10/82

safety-kleen corp.
655 BIG TIMBER ROAD • ELGIN, ILLINOIS 60120
PHONE 312/697-8460

TECHNICAL SERVICE LABORATORY WORK REQUEST

(Complete All Applicable Blanks)

3-955

Date: May 9, 83

Project No.: ______

SUBMITTED BY: Wayne [illegible]

MATERIAL SUBMITTED: (Identify the sample or item and indicate its source or origin)
Still Bottoms from [illegible] Drive [illegible] Cleaners (Perc)

Sample Size ______ Represents — ☐ Drum ☐ Bulk .625 Gallons ☑ Per Month ☐ Per Year

SPECIFIC INFORMATION REQUESTED:

☐ SAFETY-KLEEN PRODUCT: (Explain, in detail - customer complaint, etc.)

☒ MISC. SOLVENTS: (NEW — Determine suitability for S-K use. SPENT or contaminated solvent or fuel — Determine suitability for S-K reclamation).

☒ OTHER MATERIALS: (New or Competitive product, or Miscellaneous items — tests to be performed or work to be done — List, in detail, information requested, i.e., performance evaluation, analyses, cost to duplicate, etc.)

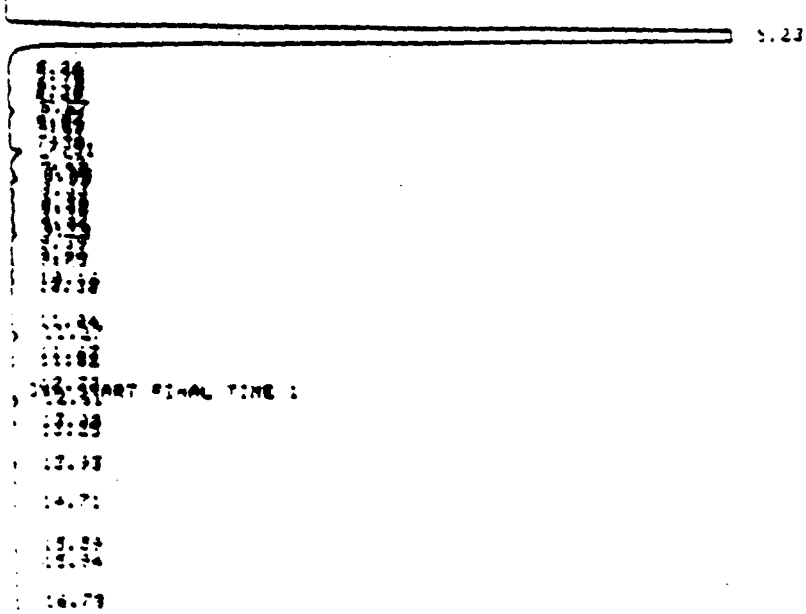
Identify Contaminants. Determine amount (%) of "Perc" that SK will recover

SAFETY-KLEEN CORP.

Sheet 3 of 3

2.61

OV: START PRGM RATE 1



RT: STOP RUN

HP3 5880A SAMPLER INJECTION @ 10:35 MAY 10, 1983
SAMPLE # : ID CODE :
27 3955

NORM %

RT	EXP RT	AREA	TYPE	WIDTH	CAL	AMOUNT	NAME
0.00		BASELINE @ START RUN = 0.10					
0.00		THRESHOLD @ START RUN = 4					
0.00		PEAK WIDTH @ START RUN = 0.04					
0.00		RT: REJECT - 500					
5.23	5.23	1751250.00 +	BV	--------	5	99.444	PERC
5.60		RT: AREA SUM - ON					
10.30		RT: AREA SUM - OFF					
16.00	17.03	41165.00	--	------	6	0.556	MS

MULTIPLIER = 0.4

DISTILLATE CONC OF SAMPLE LISTED BELOW
ID CODE 3955
HP3 5880A SAMPLER INJECTION @ 10:35 MAY 10, 1983
SAMPLE # : ID CODE :
27

NORM %

RT	AREA	TYPE	CAL	AMOUNT	NAME
5.23	1751250.00 +	BV	5	98.610	PERC
16.00	41165.00	--	6	1.390	MS

MULTIPLIER = 1

Safety-Kleen Corp.

Date 10/24/85

(3 Pages)

Solvent Sample Analysis - Summary Report

SK Sample # 3186 Industrial Solvents Sales Sample # _____

Material Submitted as: Dry Cleaning Filter Powder (Muck)

Source or Origin: T Mueller

(Plant#, Site or Complete Address)

Submitted by: T Mueller

Sample Size 2 qt Represents 4 Gallons, in ☑ Drum ☐ Bulk

☐ On Hand ☐ Per Year ☐ Other _____ (Per week, month, quarter, etc.)

Tests

API or Sp. Gr. @ 60°F. _____
Flash Point (ASTM D-56) _____
Boiling Point (ASTM D-86) _____
IBP _____ °F.
5 _____
10 _____
20 _____
30 _____
40 _____
50 _____
60 _____
70 _____
80 _____
90 _____
95 _____
EP _____

Distillate _____ vol %
Residue* _____ vol %
Water _____ vol %

ODOR

FIA

Aromatics _____
Saturates _____
Olefins _____
K-B _____
Other (Specify) _____

Solids _____ (Centrifuge, distillation, "Green Sheet" definition, other) - specify:

*Type of Residue -

COMPOSITION. (VOL. %)	of total sample submitted (by distillation) %wt	of solvent portion of distillate (by G.C.)
water	4.0	
MC	0.14	
MEK	0.13	
Tol	0.54	
Tol	0.13	
Dec	13.72	
xylene	0.21	
MAS	1.55	

Comments:

makes up MAS 0.44
3 gallons 29.94

RECOMMENDED DISPOSITION:

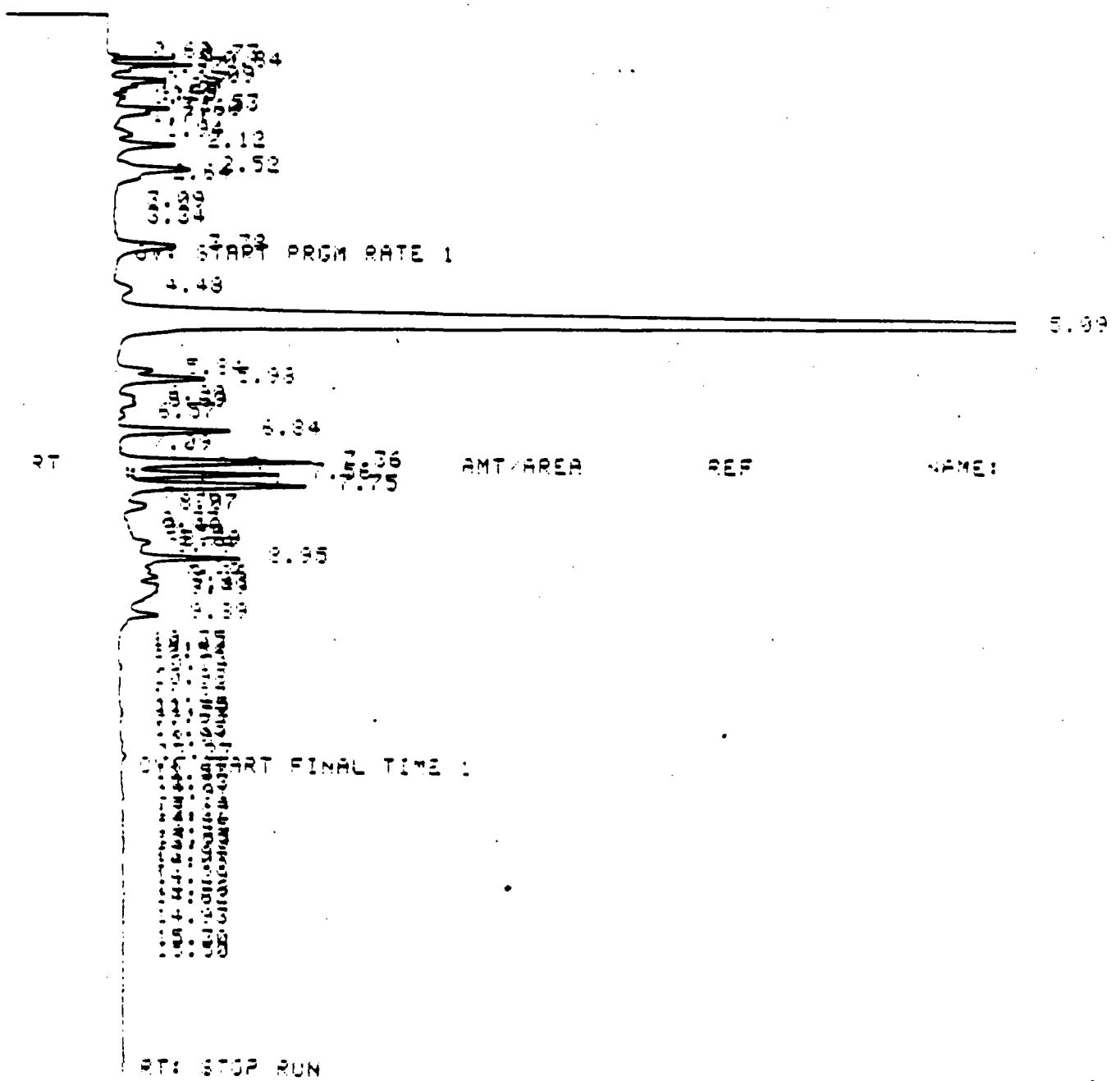
Accept ☐ Reject ☐

Distribution: T. Mueller, M. Levy

Report by: R Blair

Rev. 10/82

SAFETY-KLEEN CORP.



REPORT
??0A SAMPLER INJECTION @ 13:31 OCT 24, 1984
. # : ID CODE :
30 3186

% COMPENSATED ANALYSIS

EXP RT	AREA	TYP	WIDTH	CAL	AMOUNT	NAME
	BASELINE @ START RUN = 2.68					
	THRESHOLD @ START RUN = 4					
	PEAK WIDTH @ START RUN = 0.04					
	RP: REJECT + 500					
	1339.52	BV	-----		2.453E-03	
	6427.94	VV	0.025		1.177E-02	
	14479.70	VV	*------		2.651E-02	
	4492.74	VP	-----		8.227E-03	
	16956.00	PV	-----		3.105E-02	
1.16	5315.12	VV	-----	1	5.440E-02	MC
	2715.13	VP	-----		4.972E-03	
	2225.60	PV	-----		4.075E-03	
	635.25	VV	-----		1.163E-03	
	11682.40	BV	-----		2.139E-02	
	9766.30	VV	-----		1.788E-02	
	1391.06	VP	-----		2.547E-03	
1.96	8129.70	PV	*------	2	5.200E-02	111
	27457.30	VV	0.092		4.295E-02	
2.57	35808.00	VV	*------	3	0.185	TRI
	8795.83	VB	-----		1.611E-02	
	544.93	BP	-----		9.979E-04	
	1141.43	PV	-----		2.090E-03	
3.82	42268.30	VV	*0.159*	4.	7.440E-02	TOL
	13710.60	VV	-----		2.511E-02	
5.09	1?8210.00 +	VV	0.175*	5	4.304	PER
	RP: AREA SUM - ON					
	RP: AREA SUM + OFF					
6.49	74218.50	++	-----	7	0.120	XYLENE
	RP: AREA SUM - ON					
	RP: AREA SUM - OFF					
?.71	526315.00	++	-----	6	0.991	MS

.IER = 0.06

TEL NORM%
E # : ID CODE : MULTIPLIER :

195

KDM company

(512) 333-4011

May 21, 1986

LABORATORY ANALYSIS

WASTE STRFAM:	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%
		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_2O	1%
Acetone	13%
IPA	8%
M-E-K	5%
Lacquer Diluent	4%
MIBK	3%
Toluene	40%
Xylene	20%
EE Acetate	3%
Others	3%
	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:	H_2O	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	1.5%
		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:	H_2O	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	2%
		100%

ber
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 6152
●360 GLENWOOD AVENUE • EAST ORANGE, NEW JERSEY 07017 • (201) 673 4030

TO:

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

UNIT INFORMATION

TOWER NUMBER: 51177
LOCATION: ELGIN
UNIT ID: "WASTE PAINT
MFG AND FUEL TYPE: THINNER"
MODEL:
LUBE MFG:
LUBE NAME:
LUBE GRADE:

COMMENTS/RECOMMEND

TOTAL SULFUR, % - 0.0

TOTAL CHLORINE, % - 0.56

OPERATING INFORMATION

LAB NO.	SPECTRO NO.	DATE SAMPLED	OIL HRS./MI.	UNIT HRS./MI.	OIL ADDED	REPORT DATE
S-222	C9943	06/11/86				06/23/86

PHYSICAL DATA

% FUEL DILUTION	% SUSPENDED SOLIDS	% WATER	VISCOSITY	40°C 100°C	GRADE	SPECIAL TESTS
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

I.D.2-5

INTERPRETATIONS AND APPLICATION OF ANAYLSIS RESULTS

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.

SAFETY-KLEEN CORP. MATERIAL ACCEPTANCE SPECFICIATION	S-K Part No. 461
	Original Date April 8, 197
	Revision Date
	Supersedes Ne
Material: Safety-Kleen Solvent #105(MS)	Written by L. Dean Hufse
	Approved by A. A. Manteuffe

SCOPE

This specification covers a high flash, hydrocarbon solvent suitable for use in a degreasi application.

REQUIREMENTS

The solvent shall conform to the following requirements:

	Typical Values	Control Values	Test Method
API Gravity, 60° F.	46-51	-	ASTM D-287-67
Specific Gravity 60/60° F.	0.775-0.797	-	-
Pounds/Gallon	6.46 -6.64	-	-
Initial Boiling Point, ° F.	310-320	310 Min.	ASTM D-86-67
50% recovered, ° F.	340	-	-
End Point, ° F.	380-400	400 Max.	ASTM D-86-67
Kauri Butanol Value	34	-	-
Aniline Cloud Point, ° F.	144	150 Max.	ASTM D-1012-69
Flash Point, ° F., TCC	109	105 Min.	ASTM D-56-70
Saturates, %	90	-	-
Olefins, %	1	-	-
Aromatics, %	9-12	17.0 Max.	ASTM D-1319-70
Odor	Clean - Mild	Must be acceptable	-

All lots or deliveries with properties outside the maximum or minimum "control values" will be considered of unsuitable quality.

The solvent shall contain the following additives:

1. Approximately 0.0028 Wt. % of Liquid Oil Green Dye (7.9 fluid ounces per 1,000 gallons of solvent). (May be purchased from DuPont, Petroleum Chemicals Division.)

2. Anti-Static Additive to be added by supplier. Any one of the following:

   A. Shell ASA-3 - One part per million (1 ppm) minimum (Shell Chemical Company)
   B. Ashland AC-5 - Five parts per million (5 ppm) minimum (Ashland Chemical Company)
   C. Ethyl 48 - Five parts per million (5 ppm) minimum (Ethyl Corporation)

SAFETY-KLEEN CORP.
MATERIAL ACCEPTANCE SPECIFICATION

S-K Part No. 6631

Original Date June 24, 1977

Revision Date April 26, 1985

Supersedes August 20, 1979

Material: Immersion Cleaner &
Cold Parts Cleaner 609

Written by L. Dean Hufsey

Approved by

SCOPE

The specification covers a two-phase liquid product consisting of an aqueous layer on top and a chlorinated solvent, cresylic acid layer on the bottom for cleaning carburetors and metal parts. The ratio of the two liquids that are combined to for the cleaning product is 1.0 parts by volume of the aqueous layer and 4.0 parts by volume solvent layer.

COMPOSITION

Immersion Cleaner and Carburetor and Cold Parts Cleaner =609 products consist of the following materials:

WATER PHASE		
Water	16.840 Wt.%	20.00 Vol.%
SOLVENT PHASE		
Inhibitor 60S	0.389 Wt.%	0.5 Vol.%
Triethanolamine	0.474 Wt.%	0.5 Vol.%
Petroleum Sulfonate	7.389 Wt.%	8.5 Vol.%
Methylene Chloride	31.691 Wt.%	28.5 Vol.%
Orthodichlorobenzene	31.345 Wt.%	28.5 Vol.%
Cresylic Acid	11.872 Wt.%	13.5 Vol.%
	100.000 Wt.%	100.0 Vol.%

Immersion Cleaner and Carburetor
and Cold Parts Cleaner #609

REQUIREMENTS

	Typical Values	Control Values	Test Method
Color (solvent phase)	Clear, light amber liquid	Clear, light amber liquid	
Specific Gravity, 60/60°F	1.24	1.2300-1.2500	ASTM D-1298
Pounds/Gallon, 60°F	10.33	10.25-10.41	-
Caustic Extraction	-	19 Vol.% min. cresylic acid	(Lab. Std. method "Extraction of cresylic Acids from Immersion Cleaner Solvent" May 9, 1979)
Emulsifiability	The quick breaking emulsion shall have a light tan creamy appearance. After the water has split out, the water layer should amount to only 17-18 ml.		(Lab. Std. "Emulsifiability of Immersion Cleaner and water)

SAFETY-KLEEN CORP.

Recycled Perchloroethylene for Dry Cleaning

Specifications

Physical Test	Specification
Specific Gravity 20°C/20°C	1.61 - 1.63
Pounds Per Gallon	13.4
Appearance	Clear, Free of Sediment Suspended Material
Color, APHA	25 maximum
Water, PPM	50 maximum
Purity: Perchloroethylene by Volume % G.C.	99.5 minimum
Impurities: Other halogenated	.5% maximum
Other hydrocarbon	.5% maximum
Odor	Characteristic; no residual
Spot Test	No Spot or Stain
Nonvolatile Residue, ppm	50 maximum
Acid Acceptance	.02 maximum

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ANAL
SPEED(8)=6
ANAL 5
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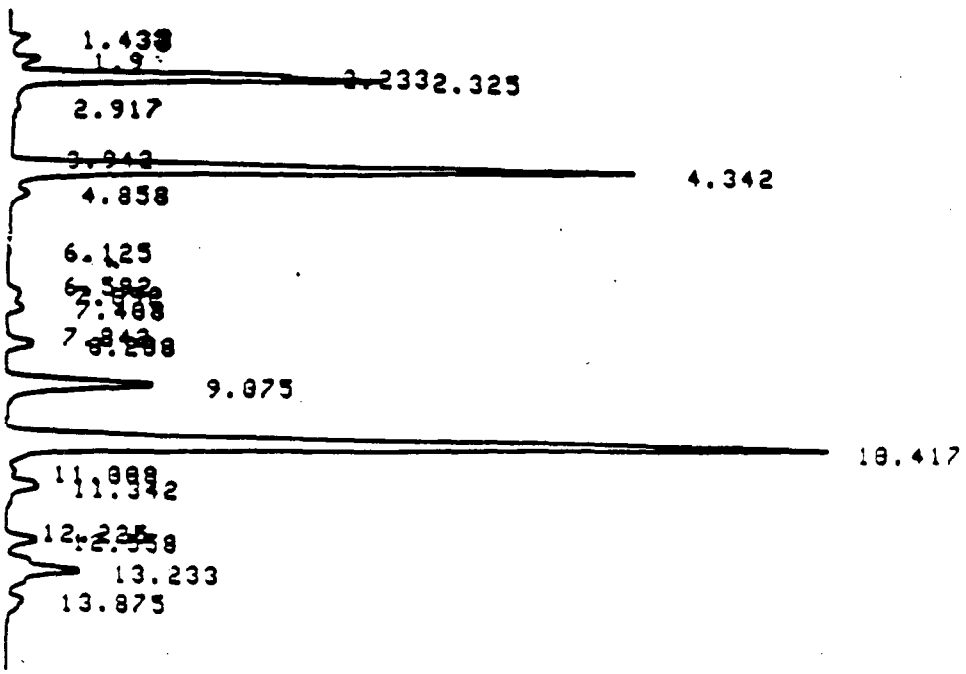


PKNO	TIME	AREA	MK	IDNO	CONC	NAME
1	2.233	41639	V		4.9381	ACETONE
2	2.325	86866	V		10.1985	ISOPROPYL ALCOHOL
3	4.342	228838			27.8884	METHYL ETHYL KETONE
4	9.875	64574			7.6457	METHYL ISOBUTYL KETONE
5	10.417	364216			43.1243	TOLUENE
6	11.342	14847			1.6632	n-BUTYL ACETATE
7	12.558	10277			1.2169	o-XYLENE
8	13.233	35716			4.2299	m- and p-XYLENE
	TOTAL	844573			100	

LACQUER THINNER COMPOSITION
Safety-Kleen Corp.

I.D.3 WASTE ANALYSIS REPORTS

Descriptions of the hazardous wastes handled at the facility are in section I.D.2. Waste analysis reports and product specifications are in Exhibits I.D.2-1 through I.D.2-9.

I.D.4 WASTE ANALYSIS PLAN

GENERAL

The used solvents are 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 ensure 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. If problems are noted, the machine is removed from the customer.

The dry cleaning wastes are collected from dry cleaning facilities where only a single chemical is handled at the facility and chances of cross contamination by other chemicals or wastes are minimal. In addition, each shipment from the dry cleaning facility will be manifested with signature of the owner (generator) for the type of materials contained in the drums.

All the materials collected at the Service Center and subsequently shipped to the Safety-Kleen recycle facility 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 safeguard, Safety-Kleen's personnel are instructed to inspect all materials before returning them to the service centers.

For these reasons, all waste analyses are performed at the recycle facility, as described in the following section, and only visual and physical inspection is conducted in conjunction with service center operations.

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 nonconforming material must not be accepted until an analysis has been done or the material must be rejected.

WASTE ANALYSES AT THE RECYCLE FACILITY

Analyses performed at the recycle facilities are undertaken to safeguard the recycling process and to assure the product quality. The following tables summarize a typical waste analysis plan at the recycle facility related to the hazardous materials returned from the service center:

Table I.D.4-1 Parameters and Rationale for Hazardous Waste Identification
Table I.D.4-2 Parameters and Test Methods
Table I.D.4-3 Methods Used to Sample Hazardous Wastes
Table I.D.4-4 Frequency of Analysis

In addition to the aforementioned analyses, TCLP analyses for all compounds, except pesticides, will be conducted every five years on all characteristic hazardous waste streams (example; used mineral spirits, 699 IC). Any compounds which are positively

TABLE I.D.4-1

PARAMETERS AND RATIONALE FOR HAZARDOUS WASTE IDENTIFICATION

Hazardous Waste	Parameter[a]	Rationale
1. Used Immersion Cleaner (609IC)	Methylene Chloride Orthodichlorobenzene Cresylic Acid	Formula contains these ingredients: F002 & Cresylic Acid F004
2. Used Immersion Cleaner (699IC)	TCLP	May contain these compounds
3. Used Mineral Spirits	Flash Point TCLP	Ignitable characteristics D001; may contain these compounds
4. Mineral Spirits Tank Bottom Sludge and Free Water	TCLP Flash Point	The sludge and free water may contain these compounds and the sludge has a flash point of 105° F (D001)
5. Mineral Spirits Dumpster Mud	TCLP Flash Point	The sludge and free water may contain these compounds and the sludge has a flash point of 105° F (D001)
6. Dry Cleaning Wastes	Perchloroethylene Trichlorotrifluoroethane Mineral Spirits	Contain ingredient of F002 or contains a hazardous constituent. Ignitable characteristics D001
7. Paint Wastes	TCLP	May contain ingredients of F003 or F005.

[a] TCLP Waste Codes: D004-D011, D018, D019, D021-D030, D032-D043.

TABLE I.D.4-2

PARAMETERS AND TEST METHODS

Parameter	Test Method	Reference
pH	pH Meter	ASTM Standard D1293-65
Flash Point	Tag closed cup tester	ASTM Standard D56-79
TCLP	Toxicity Characteristic Leaching Procedure	40 CFR 261, Appendix II
Hydrocarbons and Volatile Organics	Gas Chromatography (GC)	Modified Methods Based on "Test Methods for Evaluation of Solid Waste, Physical/Chemical Methods," SW-846, USEPA and ASTM Standards

TABLE I.D.4-3

METHODS USED TO SAMPLE HAZARDOUS WASTES

Hazardous Waste	Reference for Sampling	Sampler	Description of Sampling Method
1. Used Immersion Cleaner - 609IC	Sampling a drum "Samplers and Sampling Procedures for Hazardous Waste Streams," EPA/600/2-80/018	Test Methods for the Evaluation of Solid Waste Physical/ Chemical Methods, SW-846, USEPA	Representative composite sample using drum sampler
2. Used Immersion Cleaner - 699IC	Same as 1	Same as 1	Same as 1
3. Used Mineral Spirits	Sampling a tank "Samplers and Sampling Procedures for Hazardous Waste Streams," EPA/600/2-80/018	Same as 1	For tanks--Bomb sampler (similar to weighted bottle sampler)
4. Mineral Spirits, Tank Bottom Sludge, and Free Water	Same as 3	Same as 3	Same as 3
5. Mineral Spirits Dumpster Mud	Same as 1	Same as 1	Same as 1
6. Dry Cleaning Wastes	Same as 1	Same as 1	Same as 1
7. Paint Wastes	Same as 1	Same as 1	Same as 1

TABLE I.D.4-4

FREQUENCY OF ANALYSIS

Hazardous Waste	Frequency[a]
1. Used Immersion Cleaner 609	Gas chromatograph annually TCLP every five years
2. Used Immersion Cleaner 699	Gas chromatograph annually TCLP every five years
3. Used Mineral Spirits	Gas chromatograph annually Flash point annually
4. Mineral Spirits, Tank Bottom Sludge, and Free Water	Gas chromatograph annually TCLP every five years
5. Mineral Spirits Dumpster Mud	Gas chromatograph annually TCLP every five years
6. Dry Cleaning Wastes	Gas chromatograph annually TCLP every five years
7. Paint Wastes	Gas chromatograph annually TCLP every five years

[a] 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.

detected in the waste stream will be added to the parameter list for that waste stream on Table I.D.4-1.

I.D.5 TRAFFIC CONTROL AND VOLUMES

The non-building areas of the facility are paved with asphalt, concrete or gravel as noted on the site plan in Exhibit I.B.3-5. The majority of the vehicular traffic and loading/unloading operations occur at and near the return and fill area and it is paved with asphalt and concrete. Route 826 is the major access road to the facility. The access road is designed in accordance with engineering criteria appropriate for sustaining the traffic volume and loading for the industrial activities in this area. The vans that daily travel the routes between the service center and its customers use the two-lane road within the industrial park. The trucks dispatched from the recycle center to deliver and pick up fresh and used solvents perform these activities at the aboveground tank area. Traffic from this facility (about 15 route vans are based at this location) is not expected to have a major effect on local traffic conditions.

I.D.6 PROCEDURE FOR RECORDKEEPING

Shipments of the product and used solvents are handled by invoices. In addition, the quantities of used solvents shipped to the recycle center and those shipped from regulated generators to the service center are manifested. Manifest copies are kept at the service center and the recycle center for three years.

In accordance with 40 CFR 264.76. unmanifested waste reports will be submitted to the DER's office in West Palm Beach should a shipment be received without a manifest.

ATTACHMENT I.E

FACILITY SECURITY INFORMATION

I.E.1 SECURITY MEASURES

In accordance with 40 CFR 264.14, access to the facility is controlled using the following methods:

1. Entry to the drum storage and return and fill areas are controlled through a chainlink fence with gates and doors. All gates and doors are locked when the facility is not in operation.

2. Warning signs are posted at the entrances to the facility and every 50 feet on all sides of the fencing. They are marked "Danger - Unauthorized Personnel Keep Out" and are legible from twenty-five feet.

The combination of fencing with gates, doors and warning signs prevents unknowing entry and minimizes the potential for unauthorized entry of people or livestock into the facility. The gates must be closed when the facility is unoccupied.

I.E.2

CONTINGENCY PLAN AND EMERGENCY PROCEDURES

SAFETY-KLEEN CORP.

MEDLEY, FL SERVICE CENTER

EAST OF NW 89TH AVENUE AND NW 96TH STREET

GENERAL INFORMATION

The contingency plan and emergency procedures are designed to insure that Safety-Kleen is prepared to address emergency situations so as to prevent or minimize hazards to human health and the environment. Potential emergency situations include fire, explosion and any sudden or non-sudden release of hazardous material constituents to the air, soil, surface water, or ground water at the facility.

The provisions of the contingency plan are carried out immediately whenever there is a fire, explosion or release of hazardous materials which could threaten human health or the environment. This plan describes the actions facility personnel will take in response to an emergency.

The business activities carried on from the service center relate to the leasing and servicing of Safety-Kleen solvents and parts cleaning equipment. The clean solvents are distributed from and the used solvents are returned to the service center, where aboveground storage tanks and warehouse space are used for their storage.

The mineral spirits solvent is transported between the service center and customers in covered, 16-gallon and 30-gallon drums. Upon return to the service center, the used solvent is transferred from the drums into a wet dumpster (solvent return receptacle) where coarse solids in the mineral spirits are retained. The used mineral spirits in the wet dumpster is pumped into a 20,000-gallon aboveground tank for storage. It is picked up periodically by a bulk tanker truck from a Safety-Kleen recycle center which also delivers a load of product.

The solids in the wet dumpster are periodically removed, drummed, and stored in the drum warehouse for shipment to a recycle center.

The immersion cleaner remains in 16-gallon, covered drums at all times during transportation and storage. The solvent is not transferred to another container while being used by the customer or while in storage at the service center.

The dry cleaning wastes are collected in 30-, 16- or 20-gallon drums and are stored at the service center. The containers are managed like the immersion cleaner containers and are picked up periodically for reclamation at the recycle center.

Paint wastes are collected in 5-gallon and 16-gallon drums and are handled like the immersion cleaner.

Exhibits I.B.3-5 and I.B.3-6 show the basic site and floor plans, particularly, the locations of waste management facilities and emergency equipment.

EMERGENCY NOTIFICATION

The branch manager is the emergency coordinator and one of the sales representatives is his alternate. Exhibit I.E.2-1 includes the names, home addresses, and both office and home telephone numbers of the primary emergency coordinator and his alternate. There is always 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 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 agencies and response team members to be notified whenever there is an imminent or actual emergency are presented in Exhibit I.E.2-1 and a Telephone Notification Log is shown as Exhibit I.E.2-2. The assigned task(s) of each employee during an emergency are in Exhibit I.E.2-3.

ACTIONS OF THE EMERGENCY COORDINATOR

Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

a. activate internal or communication systems to notify all facility personnel (the relatively small size of this facility makes direct verbal communication the most expedient form of emergency notification in most cases);

b. notify appropriate state or local agencies with designated response roles if their help is needed; and

c. summon the primary emergency coordinator, if he is absent.

Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and extent of any contamination. Because of the limited types of chemicals in storage, the identification processes can be done visually.

The following is a procedure for assessing possible hazards to the environment and human health:

a. After identification of the character, source, amount and extent of a release, fire, or explosion, the emergency coordinator must decide whether the situation can be contained or cleaned up by plant personnel and equipment.

b. If a fire or explosion is determined to be beyond the capabilities of plant personnel or it is threatening neighboring establishments or population, assistance from a local emergency response agency shall be summoned immediately and an evacuation order be requested.

c. In case of a release outside of the containment area which is deemed immediately uncontainable or unrecoverable, a local emergency response agency and/or spill cleanup contractor will be called.

d. After termination of a fire or explosion, and containment and preliminary cleanup of a spill, the emergency coordinator shall evaluate whether residues in the form of gas or liquid have become airborn, seeped into the ground water, and/or flowed into surface water bodies.

e. The emergency coordinator shall request assistance to determine whether the escaped materials are potentially harmful and whether the receiving medium is or will

ultimately be a populated area, public water supply source, a private well or an environmentally sensitive area.

f. Additional steps shall then be taken to mitigate the potential impact on the environment and human health, in accordance with recommendations given.

If the emergency coordinator determines that the facility has had a release, fire, or explosion that could threaten human health or the environment outside the facility, the coordinator must report those findings as follows:

a. If the assessment indicates that evacuation of local areas may be advisable, the coordinator must immediately notify appropriate authorities. The coordinator must be available to help appropriate officials decide whether local areas should be evacuated; and

b. The coordinator must immediately notify the FDER--Southeast District, 1900 S. Congress Ave., Suite A, West Palm Beach, FL 33406, 407/964-9668, and the National Response Center 800/424-8802, by telephone.

The report must include:

(1) name and telephone number of notifier;
(2) name and address of facility;
(3) time and type of incident (e.g., release, fire);

(4) name and quantity of material(s) involved, to the extent known;
(5) the extent of injuries, if any; and
(6) the possible hazards to human health, or the environment outside the facility.

Assistance in assessing and responding to an emergency can be obtained by calling the 24-hour emergency number of Safety-Kleen's Environment, Health and Safety Department (708/888-4660).

During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste management areas at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.

If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, and ruptures in valves, pipes, or other equipment, wherever this is appropriate.

Immediately after an emergency, the emergency coordinator must provide for the treatment, storage, or disposal of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.

The emergency coordinator must ensure that, in the affected area(s) of the facility:

a. no waste that may be incompatible with the released material is treated or stored until cleanup procedures are completed; and

b. all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

The owner or operator must notify the appropriate state and local authorities that the facility is in compliance with the above paragraph before operations are resumed in the affected area(s) of the facility.

The operator must note the time, date, and details of any incident that requires implementation of the contingency plan. Within 15 days of the incident, he must submit a written report to the FDER--Southeast District, West Palm Beach, FL. The report must include:

a. name, address, and telephone number of the owner or operator;
b. name, address, and telephone number of the facility;
c. date, time, and type of incident (e.g., fire, explosion);
d. name and quantity of material(s) involved;

e. the extent of injuries, if any;

f. an assessment of actual or potential hazards to human health or the environment, where this is applicable; and

g. estimated quantity and disposition of recovered material that resulted from the incident.

POTENTIAL SPILL SOURCES

The following is a list of activities that have the potential for a small scale (one for which clean up assistance is not required) pollution incident:

a. Moving of drums - Every time a drum is moved, a chance exists that it may tip over or be dropped. To minimize the possibility of spillage of solvent, all drums must be covered before being moved.

b. Delivery truck drum transfer - Individual delivery drums contain from 5 to 20 gallons of waste, a quantity which can be contained by sorbent clay or pads and each vehicle is equipped with a hoist and hand cart to ease the movement of solvent on and off the truck. Clamp type lids are on drums during movement to prevent spills and each truck contains a shovel and enough sorbent material to contain a minor spill. The cargo must be secured with tie-down straps before transport.

c. Spills Inside Buildings - In the event of a spill indoors, the doors and windows should be opened to improve the ventilation in the area. Then, following the instructions on the Material Safety Data Sheet (Exhibits I.E.2-4 through I.E.2-7), the worker will enter the area wearing rubber gloves, boots, and/or respirator, collect the liquid and return it to storage. The cleanup is completed only when the workers have cleaned themselves and the emergency equipment with soap and water.

d. Spills on Concrete Pads - Concrete pads in loading and unloading areas are equipped with secondary containment. Under most spill conditions, the spill can be totally contained on the concrete surface and in the containment system. Upon containment, arrangements must immediately be undertaken to recover the material. Any soil that may be involved must be removed and treated as a hazardous waste.

e. Tank Spills or Leakage - Aboveground tanks are underlain by a concrete slab and surrounded by a 24" high concrete dike to contain any spilled or leaked solvent. The containment system has been sized in accordance with the regulations, and under most spill conditions, the solvent will be totally contained. Should a spill occur, arrangements must

be immediately undertaken to recover the material. In the event of a leak, tank repair or replacement will be initiated. Any soil that may be involved must be removed and treated as hazardous waste.

SPILL CONTROL PROCEDURES

If a harmful discharge occurs:

a. Stop the discharge if possible. Discharges from leaking containers can be stopped by immediately transferring the liquid to a good drum. It may be possible to stop discharges from tanks by manually closing valves. In the event of a tank failure, solvent will collect in the secondary containment.

b. Retain, contain or slow the flow of the solvent as much as possible, by diking with sorbent material or dirt. (Appropriate personal protective equipment should be worn). Collect contaminated soil with a shovel and drum it. Pump and mop up the liquid from the floor or pavement into a good drum. All drums must be properly stored. The area and equipment that comes in contact with the spill must be decontaminated with soap and water. All residues resulting from decontamination will be collected for proper disposal at licensed facilities.

Large volumes (in excess of 1,000 gallons) of free solvent (e.g., that which collects in the dike in the event of a tank failure) should be collected using a tanker truck.

c. If the spill escapes containment efforts, immediately call the emergency response team that specializes in spill cleanup (Exhibit I.E.2-1). Record the date, time and name of person taking the message. Call the primary emergency coordinator, if he is absent.

d. Immediately recover spilled solvent to the extent possible to reduce property and environmental damage using the equipment stored on site for such situations (Exhibit I.E.4-2) and call in emergency response contractors (Exhibit I.E.2-1). Start recovery operations immediately. In the event of a release which cannot be remediated using the methods described above, an appropriate long-term clean-up project must be agreed upon with the FDER.

e. After recovery of the spilled solvent, wash all contaminated impervious surfaces and equipment with soap and water. The residue, contaminated soils and waste waters must be removed and disposed of at licensed facilities. The recovered solvent will be sent to a Safety-Kleen recycle center for reclamation. Any equipment which cannot be decontaminated, and all rinse water, will be disposed of as hazardous waste.

f. Report any incident as soon as possible to Safety-Kleen's Environment, Health and Safety Department using the 24-hour telephone number: (708) 888-4660. If the Department does not respond within thirty minutes, call the National Response Center (telephone: (800) 424-8802) and the FDER--Southeast District, 1900 S. Congress Ave., West Palm Beach, FL 33406, 407/964-9668.

The person reporting a spill should be prepared to give his name, position, company name, address and telephone number. The person reporting should also give the nature of the material spilled (e.g. immersion cleaner) and, if possible, some estimate of the amount, and whether it is near a stream or could enter a stream by flowing through ditches or storm sewers.

If assistance is needed, the emergency coordinator should describe the containment status and specify any additional equipment needed. When reporting a spill, record the data and time of the call and the name of the person answering the call at the above number.

Spill prevention plans are reviewed with facility personnel every year and records of the training are kept at the facility.

Every spill must be recorded on the spill report telephone log and reviewed with facility personnel to prevent similar spills in the future. A copy of this report is sent to the Environment, Health and Safety Department.

Reports of emergency incidents will be reported to the FDER--Southeast District, 1900 S. Congress Ave., West Palm Beach, FL 33406, 407/964-9668. The report shall include:

(a) name, address, and telephone number of the owner of operator;

(b) name, address, and telephone number of the facility;

(c) date, time, and type of incident (for example, fire or explosion);

(d) name and quantity of materials involved;

(e) the extent of injuries, if any;

(f) an assessment of actual or potential hazards to human health or the environment, where this is applicable; and

(g) estimated quantity and disposition of recovered material that resulted from the incident.

FIRE CONTROL PROCEDURES

The building is sprinklered to extinguish fires. In case of a fire, immediately call the Fire Department. Immersion cleaner and dry cleaning wastes are not ignitable, but produce toxic gases

(phosgene) and hydrochloric acid at elevated temperatures (about 1200°F).

Center aisles must be available in drum storage areas to permit firemen to pass with firefighting equipment. Act quickly with a fire extinguisher to put out a small fire before it spreads. Call the police department and local hospital (Exhibit I.E.2-1) should an injury occur and/or order of on-lookers and traffic is to be maintained.

AVAILABILITY AND REVISION OF THE CONTINGENCY PLAN

This plan and all revisions to the plan are kept at the facility and regularly updated throughout the operating life of the facility. Copies of this document are provided to local authorities and organizations which may be called upon to provide emergency services. This plan and all revisions to the plan are made readily available to employees working at the facility. The plan is reviewed and updated, if necessary, whenever:

a. the facility license is modified to allow new process wastes to be stored or treated, or applicable regulations are revised;

b. the list or location of emergency equipment changes;

c. the facility changes in its design, construction, operation maintenance, or other circumstances in a way that

(1) materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or

(2) changes the response necessary in an emergency;

d. the names, addresses, or phone numbers of emergency coordinators change;

e. the employee assigned to each emergency task changes; or

f. the plan fails when implemented in an emergency.

ARRANGEMENTS WITH LOCAL AUTHORITIES

Arrangements have been made to familiarize the police department, fire department and local emergency response teams with the layout of the facility, properties of hazardous materials handled at the facility, their associated hazards, places where facility personnel normally work, entrances to and roads inside the facility, and possible evacuation routes.

A spill control contractor is identified in Exhibit 2-1.

Arrangements have been made to familiarize the local hospital with the properties of hazardous waste handled at the facility and the types of injuries or illnesses which would result from fires, explosions, or releases at the facility.

The following exhibits include copies of letters which have been transmitted to local authorities for emergency response in the event of an incident where public health or environment is threatened:

Exhibit I.E.2-8	Letter to Local Police Department
Exhibit I.E.2-9	Letter to Local Fire Department
Exhibit I.E.2-10	Letter to Local Hospital

EVACUATION PLAN

In an emergency, all persons are to be evacuated from the area by means of a verbal cry and they are to assemble across from the entrance drive to the facility. The emergency coordinator must insure that all personnel are accounted for and out of the area. Primary and alternate evacuation routes are shown in Exhibit I.E.2-11. Clearly marked exits exist in the warehouse and office area.

The fire deparment must be notified at the time of evacuation either from a safe on-site building or from a neighboring facility.

REQUIRED REPORTS

Copies of all reports of spills must be kept onsite until closure.

EXHIBIT I.E.2-1

EMERGENCY NOTIFICATION

Emergency Coordinators

Primary: Jorge Carvajal
14802 SW 69th St.
Miami, FL 33193
Home: (305) 386-1955
Office:

Alternate: Cary Alfonso
5230 SW 98th Ct.
Miami, FL 33165
Home: (305) 279-7902
Office:

Emergency Notification Phone Numbers

Safety-Kleen Environmental, Health and Safety Department
Telephone (708) 888-4660 (24-hour number)

National Response Center
Telephone (800) 424-8802

FDER-Southeast District, 1900 S. Congress Ave., West Palm Beach, FL 33406
(407) 954-9668

Emergency Team to be Notified

Metro Dade Fire Dept.
6000 SW 87th Ave.
Miami, FL 33173
911 or (305) 596-8000

Metro Dade Police Dept.
1850 NW 86th Ave.
Miami, FL 33166
911 or (305) 596-8000

Palmetto General Hospital
2001 W. 68th Street
Hialeah, FL 33016
(305) 823-5000

O.H. Materials Company
P.O. Box 551
Findley, OH 45840
(800) 537-9540
(Primary Clean-Up Contractor)

AMO Pollution Services, Inc.
P.O. Box 311B
Canonsburg, PA 15317
(800) 325-1398
(Secondary Clean-Up Contractor)

Ryckman's Emergency Action and
Consulting Team
P.O. Box 27310
St. Louis, MO 63141
(800) 325-1398
(Secondary Clean-Up Contractor)

EXHIBIT I.E. 2-2

SAFETY-KLEEN CORP.
Field Spill Report Form

Report all spills to the Safety-Kleen Environment, Health and Safety Dept. immediately.

1. Facility Number_____ Facility Location_____
2. Date of spill_____ Time_____ a.m./p.m.
3. Report from:_____ Title_____
4. Location of spill:_____
5. Material spilled:_____ Quantity_____
6. Any injuries or property damage? Yes or No If yes, explain._____
7. Cause of spill? (Explain in detail.)_____
8. Describe the scene in detail (including nearby surface water or sewer and distance, type of surface spilled on, was spill contained)._____
9. Describe clean-up action taken in detail. How much material was not recovered?_____
10. Person involved in incident._____
11. Vehicle #_____ Company_____
12. Accident resulted from activities involving (circle all that apply):

    SK Fleet Branch Personnel Outside Carrier Customer Other
13. List any emergency agencies at scene._____
14. Are there homes or businesses nearby? Yes or No Distance?_____
15. Notification:

	S-K Environment Dept. 1-800-669-5740 1-312-888-4660 (24 hr.)*	Nat'l Response Center 1-800-424-8802	State 1- - -
Date/time:			
Contact name:			
Comments rec'd:			
Report Number:			

16. Action taken to prevent recurrence._____

Use back of form if additional space is needed for any item.

17. Signature_____

After completing this form, file copy 1 in the Spill Incident File at the branch, and send copy 2 to the SK Environment, Health and Safety Department in Elgin and copy 3 to the Regional Environmental Engineer.

*NOTE: After 11/11/89 telephone number will be (708) 888-4660

500-08-06 (R/7/89)

Date Received by EHS_____

BRANCH SPILL INCIDENT FILE

SAFETY-KLEEN 105 PARTS WASHING SOLVENT
MATERIAL SAFETY DATA SHEET

SECTION I -- PRODUCT INFORMATION

Safety-Kleen Corporation - 777 Big Timber Road - Elgin, IL 60123
For Product/Sales Information Call 312/697-8460

EMERGENCY TELEPHONE	*MEDICAL:*	*TRANSPORTATION:*
These numbers are for emergency use only. If you desire non-emergency information about this product, please call the telephone number listed above.	**800/942-5969 or 312/942-5969** **RUSH POISON CONTROL CENTER** **CHICAGO, ILLINOIS (24 HOURS)**	**800/424-9300** **CHEMTREC**

IDENTITY (TRADE NAME): **SAFETY-KLEEN 105 PARTS WASHING SOLVENT**

SYNONYMS: **PETROLEUM DISTILLATES, PETROLEUM NAPHTHA**

SK PART NUMBER: **6617**

FAMILY/CHEMICAL NAME: **HYDROCARBON SOLVENT**

PRODUCT USAGE: **SOLVENT FOR CLEANING AND DEGREASING PARTS**

SECTION II -- HAZARDOUS COMPONENTS

NAME	SYNONYM	%	CAS NO.	OSHA PEL (ppm)	ACGIH TLV (ppm)
Mineral Spirits	Petroleum Distillates	99.5	8032-32-4	100 (Stoddard Solvent)	100 (Stoddard Solvent)
Dye (contains Xylene)		.003	1330-20-7	100 150 STEL	100 150 STEL
Anti-Static Agent (contains Xylene)		0.0001	1330-20-7	100 150 STEL	100 150 STEL
May contain chlorinated hydrocarbons as impurities:		< 5 (Total)			
Perchloroethylene			127-18-4	25	50 200 STEL
Methylene Chloride			75-09-2	500 1000(C)	50
1,1,1-Trichloroethane			71-55-6	350 450 STEL	350 450 STEL
Trichloroethylene			79-01-6	50 200 STEL	50 200 STEL

(C) = Ceiling Concentration

SECTION III -- PHYSICAL DATA

PHYSICAL STATE, APPEARANCE AND ODOR: Combustible liquid - clear, green, with characteristic hydrocarbon odor.

BOILING POINT: 310° - 400° F

MELTING POINT: Not Available

EVAPORATION RATE: (Butyl Acetate = 1) 0.1

PERCENT VOLATILE:	99.9%
VAPOR DENSITY:	4.9 (Air = 1)
VAPOR PRESSURE:	2 mm of Hg at 68° F.
SOLUBILITY IN WATER:	Negligible
pH:	Not Applicable
SPECIFIC GRAVITY:	0.775 to 0.795
MOLECULAR WEIGHT:	Approximately 142
VOLATILE ORGANIC COMPOUNDS:	795 g/L

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 105° F (TCC) (Minimum)

AUTOIGNITION TEMPERATURE: 473° F

CONDITIONS OF FLAMMABILITY: Materials must be moderately heated before ignition can occur.

FLAMMABLE LIMITS IN AIR - LOWER: 0.7% ***UPPER:*** 6.0%

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical, water (mist only).

FIRE FIGHTING PROCEDURES -- SPECIAL: NFPA 704 Rating 0-2-0

Keep storage tanks cool with water spray. Use self-contained breathing apparatus (SCBA).

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Decomposition and combustion products may be toxic. Heated tanks may rupture, explode or be thrown into the air. Vapors are heavier than air and may travel great distances to ignition source and flashback.

HAZARDOUS COMBUSTION PRODUCTS:

Thermal decomposition and burning may produce carbon monoxide.

SECTION V -- REACTIVITY DATA

STABILITY:	Normally stable even under fire exposure conditions and is not reactive with water. Normal firefighting procedures may be used.
INCOMPATIBILITY (CONDITIONS TO AVOID):	Strong oxidizing agents (e.g. chlorine, peroxides, strong acids).
HAZARDOUS POLYMERIZATION:	Not known to occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS:	Normally none; however, incomplete burning may yield carbon monoxide.

SECTION VI -- HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Skin and eye contact; inhalation.

HEALTH HAZARD DATA/SIGNS AND SYMPTOMS OF EXPOSURE:

ACUTE: ***Skin:*** Prolonged or repeated contact tends to remove skin oils, possibly leading to irritation and dermatitis. No significant skin absorption hazard.

Eyes: Contact may cause slight to moderate irritation. High vapor concentrations (> 500 ppm) are irritating to the eyes.

Inhalation: High concentrations of vapor or mist may be irritating to the respiratory tract, cause headaches, dizziness, nausea, impaired coordination, anesthesia and may have other central nervous system effects.

Ingestion: Low order of acute oral toxicity. May cause irritation of the throat, nausea, vomiting and symptoms of central nervous system depression. Aspiration into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possibly death.

CHRONIC: Prolonged and/or repeated contact may cause drying and cracking of the skin or dermatitis.

OTHER POTENTIAL HEALTH HAZARDS:

The impurities that may be present are not expected to add significantly to the effects of exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Individuals with pre-existing central nervous system dysfunction may have increased susceptibility to the effects of exposure. Contact with skin may aggravate pre-existing dermatitis.

CARCINOGENICITY: Perchloroethylene and methylene chloride are both listed by IARC and NTP as suspected carcinogens.

SECTION VII -- EMERGENCY AND FIRST AID PROCEDURES

EYES: For direct contact, flush eyes with water for 15 minutes lifting upper and lower lids occasionally. Consult physician if irritation or pain persists. If irritation or redness from exposure to vapors or mists develop, move victim away from exposure into fresh air.

SKIN: Remove contaminated clothing. Wash skin twice with soap and water. If irritation develops and persists, consult a physician.

INGESTION: If conscious, dilute with 4 to 8 ounces of water and seek immediate medical attention. DO NOT induce vomiting.

INHALATION: Remove to fresh air immediately. Use oxygen if there is difficulty breathing or artificial respiration if respiration has stopped. Do not leave victim unattended. Seek immediate medical attention if necessary.

SECTION VIII -- PRECAUTIONS FOR SAFE USE AND HANDLING

SPILL PROCEDURES: Remove all ignition sources. Ventilate area and avoid breathing vapors. For large spills, isolate area and deny entry. If possible, contain as a liquid for possible re-refining. Absorb onto sand or other absorbent material. Shovel into closable container for disposal. Wear protective equipment specified below. Contain away from surface waters and sewers.

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State, and local regulations. Contact Safety-Kleen regarding recycling.

HANDLING PRECAUTIONS: Avoid contact with eyes, skin or clothing. Use in well ventilated area and avoid breathing vapors or mists. Keep away from heat, sparks and open flames.

SHIPPING AND STORING

PRECAUTIONS: Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, grind or expose containers to flame or other sources of ignition. Keep container tightly closed when not in use and during transport.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco products. Launder contaminated clothing and clean protective equipment before reuse.

SECTION IX -- CONTROL MEASURES

VENTILATION: Provide local exhaust or general dilution ventilation as determined necessary to maintain concentrations of vapors or mists below applicable exposure limits. Where explosive mixtures may be present, systems safe for such locations should be used.

PROTECTIVE GLOVES: Use nitrile or neoprene gloves to prevent contact with skin.

EYE PROTECTION: Where there is likelihood of spill or splash, wear chemical goggles or faceshield. Contact lenses should not be worn.

RESPIRATORY PROTECTION: Use NIOSH-approved respiratory protective equipment when concentration of vapors or mists exceeds applicable exposure limit. Depending on the airborne concentration, use a respirator or gas mask with appropriate cartridges and canisters (for organic vapor with mist prefilter). A self-contained breathing apparatus (SCBA) is required for large spills and emergencies. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134 - Respiratory Protection.

OTHER PROTECTIVE EQUIPMENT: Wear solvent-resistant boots, apron or other protective clothing where spills and splashes are possible. A source of clean water should be available in work areas for flushing the eyes and skin.

SECTION X -- OTHER REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: Petroleum Naphtha

DOT CLASS: Combustible Liquid

DOT NUMBER: UN 1255

TSCA INVENTORY STATUS: Ingredients listed are reported in EPA TSCA Inventory

SECTION XI -- PREPARATION INFORMATION

PREPARED BY: SK Product Review Committee ***FORM NO.*** 900-14-001

ORIGINAL ISSUE DATE: July 20, 1989 ***REVISED:*** October 6, 1989 ***SUPERSEDES:*** July 20, 1989

IMMERSION CLEANER/CARBURETOR AND COLD PARTS CLEANER 609

MATERIAL SAFETY DATA SHEET

SECTION I -- PRODUCT INFORMATION

Safety-Kleen Corporation - 777 Big Timber Road - Elgin, IL 60123
For Product/Sales Information Call 312/697-8460

EMERGENCY TELEPHONE	*MEDICAL:*	*TRANSPORTATION:*
These numbers are for emergency use only. If you desire non-emergency information about this product, please call the telephone number listed above.	800/942-5969 or 312/942-5969 RUSH POISON CONTROL CENTER CHICAGO, ILLINOIS (24 HOURS)	800/424-9300 CHEMTREC

IDENTITY (TRADE NAME): **IMMERSION CLEANER/CARBURETOR AND COLD PARTS CLEANER 609**

SK PART NUMBER: **609, 6631, 50**

FAMILY/CHEMICAL NAME: **N/A**

PRODUCT USAGE: **REMOVING CARBON RESIDUE FROM PARTS**

SECTION II -- HAZARDOUS COMPONENTS

NAME	SYNONYM	%	CAS NO.	OSHA PEL (ppm)	ACGIH TLV (ppm)
Cresylic Acid	Mixed Cresols	11.9	1319-77-3	5 (Skin)	5 (Skin)
Petroleum Sulfonate	Surfactant Blend	7.4			
Contains:					
Hexylene Glycol			107-41-5	25(C)	25(C)
Diethylene Glycol			111-46-6	N/E	N/E
Methylene Chloride	Dichloromethane	31.7	75-09-2	500 1000(C)	50
Di-chlorobenzenes:					
(o-dichlorobenzene)	ODCB	10.5	95-50-1	50(C)	50(C)
(p-dichlorobenzene)		10.5	106-46-7	75 110 STEL	75 110 STEL
(m-dichlorobenzene)		10.5	541-73-1	N/E	N/E
Complex Amines	Rust Inhibitor	0.4			
Contains:					
Propargyl Alcohol			107-19-7	1 (Skin)	1 (Skin)
Isopropyl Alcohol			67-63-0	400 500 STEL	400 500 STEL
Triethanolamine	TEA	0.4	102-71-6	N/E	N/E
Water		16.8	7732-18-5	N/E	N/E

N/E = Not Established (C) = Ceiling Concentration

SECTION III -- PHYSICAL DATA

PHYSICAL STATE, APPEARANCE AND ODOR: Liquid - clear, dark amber, with aromatic odor. Two distinct layers comprise the product; top layer water, lower layer solvent.

BOILING POINT: 102° - 395° F

MELTING POINT: Not known

EVAPORATION RATE:	1.0 (Water = 1)
PERCENT VOLATILE:	Majority
VAPOR DENSITY:	Same as Water
VAPOR PRESSURE:	Same as Water
SOLUBILITY IN WATER:	Completely miscible in all proportions.
pH:	9-10 in water phase
SPECIFIC GRAVITY:	1.19 (Water = 1.0)
MOLECULAR WEIGHT:	Use molecular weights of individual components.
VOLATILE ORGANIC COMPOUNDS:	750 g/L

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

FLASH POINT:	Non-Flammable
AUTOIGNITION TEMPERATURE:	Not Known
CONDITIONS OF FLAMMABILITY:	Non-Flammable
FLAMMABLE LIMITS IN AIR - LOWER:	Non-Flammable ***UPPER:*** Non-Flammable
EXTINGUISHING MEDIA:	None Special
FIRE FIGHTING PROCEDURES - SPECIAL:	None; product is non-flammable. NFPA 704 Rating 3-2-0

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Although product is non-flammable, flames, welding arcs or other high temperature sources can cause decomposition. This decomposition can yield corrosive and toxic gases, vapors mists or fumes. Use a self-contained breathing apparatus (SCBA).

HAZARDOUS COMBUSTION PRODUCTS:

Although product is non-flammable, flames, welding arcs or other high temperature sources can cause decomposition. This decomposition can yield corrosive and toxic gases, vapors, mists or fumes (e.g. hydrogen chloride, phosgene, carbon monoxide, etc.)

SECTION V -- REACTIVITY DATA

STABILITY:	Normally stable.
INCOMPATIBILITY: (CONDITIONS TO AVOID)	Strong oxidizing agents (e.g. chlorine, peroxides, strong acids)
HAZARDOUS POLYMERIZATION:	Not known to occur under normal conditions.
HAZARDOUS DECOMPOSITION PRODUCTS:	Normally none; however, flames and welding arcs can produce corrosive and toxic gases, vapors and fumes (e.g. hydrogen chloride, phosgene, carbon monoxide).

SECTION VI -- HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation, skin and eye contact, skin absorption.

HEALTH HAZARD DATA/SIGNS AND SYMPTOMS OF EXPOSURE:

ACUTE: ***Skin***: Corrosive to living tissue and is rapidly absorbed through the skin causing systemic poisoning. Contact with unprotected skin can cause discoloration, irritation, blistering and slow healing chemical burns. Partial anesthetic properties may mask affects.

Eyes: Contact with liquid may cause severe chemical burns and produce permanent damage.

Inhalation: May result in severe respiratory irritation; gastrointestinal distress (nausea, vomiting), central nervous system depression (headache, drowsiness, dizziness, confusion) and tingling or numbness of the extremities. Severe exposures may lead to respiratory failure, coma and death.

Ingestion: May produce burning pain in the mouth and stomach, severe abdominal pain with nausea, vomiting, slow respiration and irregular pulse, and dark blue skin discoloration. Symptoms similar to those for inhalation also may occur.

CHRONIC: Exposure to high concentrations may lead to damage to the liver, kidneys and lungs. Contact with skin may cause dermatitis, gastrointestinal disorders and produce symptoms similar to those for inhalation.

OTHER POTENTIAL HEALTH HAZARDS:

Metabolism of methylene chloride may elevate carboxyhemoglobin levels.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing liver, kidney, lung or cardiovascular dysfunction may have increased susceptibility to the effects of exposure. Contact with skin may aggravate pre-existing dermatitis.

CARCINOGENICITY: Methylene chloride is listed by NTP and IARC as a suspected carcinogen. P-dichlorobenzene is listed by IARC as a suspected carcinogen.

SECTION VII -- EMERGENCY AND FIRST AID PROCEDURES

EYES: For direct contact, flush eyes with clean water for 15 minutes lifting upper and lower lids occasionally. Consult physician if irritation persists. If irritation or redness from exposure to vapors or mists develop, move victim away from exposure and into fresh air.

SKIN: Remove contaminated clothing. Wash skin twice with soap and water. If irritation develops and persists, consult a physician.

INGESTION: Aspiration hazard. If conscious, dilute with 4 to 8 ounces of water and seek immediate medical attention. DO NOT induce vomiting.

INHALATION: Remove to fresh air immediately. Use oxygen if there is difficulty breathing or artificial respiration if respiration has stopped. Do not leave victim unattended. Seek immediate medical attention if necessary.

SECTION VIII -- PRECAUTIONS FOR SAFE USE AND HANDLING

SPILL PROCEDURES: Ventilate area and avoid breathing vapors. Absorb spill with sawdust, oil absorbent or soda ash. Catch and collect for recovery as soon as possible. Shovel into closable container for disposal. Wear protective equipment specified below. Contain away from surface waters and sewers.

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State and local regulations. Contact Safety-Kleen regarding recycling.

HANDLING PRECAUTIONS: Keep away from heat, sparks and open flames. Use adequate ventilation. Avoid contact with skin, eyes and clothing. Avoid breathing vapors.

SHIPPING AND STORING PRECAUTIONS: Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, grind or expose containers to flame or other sources of ignition. Keep container tightly closed when not in use and during transport.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco products.

SECTION IX - CONTROL MEASURES

VENTILATION: Provide local exhaust or general dilution ventilation, as determined necessary, to maintain concentrations of vapors below applicable exposure limits.

PROTECTIVE GLOVES: Wear viton gloves to prevent skin contact.

EYE PROTECTION: Where there is a likelihood of contact with the face and/or eyes, wear a faceshield and chemical goggles. Contact lenses should not be worn.

RESPIRATORY PROTECTION: Use NIOSH-approved respiratory protective equipment when concentration of vapors exceeds applicable exposure limit. Depending on the airborne concentration, use a respirator or gas mask with appropriate cartridges or canisters (for organic vapors). A self-contained breathing apparatus (SCBA) is required for large spills and emergencies. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134 - Respiratory Protection.

OTHER PROTECTIVE EQUIPMENT: A source of clean water should be available in the work area for flushing eyes and skin. Wear solvent-resistant boots, apron or other protective clothing where spills or splashes are possible.

SECTION X -- OTHER REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: Compound, Cleaning Liquid

DOT CLASS: Corrosive Liquid

DOT ID NUMBER: NA1760

TSCA INVENTORY STATUS: Methylene Chloride, Triethanolamine, Water and O-dichlorobenzene are listed in the TSCA Inventory.

SECTION XI -- PREPARATION INFORMATION

PREPARED BY: SK Product Review Committee ***FORM NO.*** 900-14-002

ORIGINAL ISSUE DATE: July 20, 1989 ***REVISED:*** October 6, 1989 ***SUPERSEDES:*** July 20, 1989

SAFETY-KLEEN PERCHLOROETHYLENE
MATERIAL SAFETY DATA SHEET

SECTION I -- PRODUCT INFORMATION

Safety-Kleen Corporation - 777 Big Timber Road - Elgin, IL 60123
For Product/Sales Information Call 312/697-8460

EMERGENCY TELEPHONE	*MEDICAL:*	*TRANSPORTATION:*
These numbers are for emergency use only. If you desire non-emergency information about this product, please call the telephone number listed above.	**800/942-5969 or 312/942-5969** **RUSH POISON CONTROL CENTER** **CHICAGO, ILLINOIS (24 HOURS)**	**800/424-9300** **CHEMTREC**

IDENTITY (TRADE NAME): **SAFETY-KLEEN PERCHLOROETHYLENE**

SK PART NUMBER: **775, 778, 10778, 30778**

FAMILY/CHEMICAL NAME: **CHLORINATED HYDROCARBON**

PRODUCT USAGE: **DRY CLEANING SOLVENT**

SECTION II -- HAZARDOUS COMPONENTS

NAME	SYNONYM	%	CAS NO.	OSHA PEL (ppm)	ACGIH TLV (ppm)
Perchloroethylene (Stabilized)	1,1,2,2 - Tetra-chloroethylene	100	127-18-4	25	50 200 STEL

SECTION III -- PHYSICAL DATA

PHYSICAL STATE, APPEARANCE AND ODOR: Liquid - colorless, clear, mildly sweet liquid with mildly sweet odor.

BOILING POINT: 250° F

MELTING POINT: - 9° F

EVAPORATION RATE: 0.09 (Toluene = 1)

PERCENT VOLATILE: Approximately 100%

VAPOR DENSITY: 5.83

VAPOR PRESSURE: 13 mm Hg @ 20° C (Concentrate)

SOLUBILITY IN WATER: 0.015 mg/100 gm @ 25° C

pH: Not Applicable

SPECIFIC GRAVITY: 1.6 (Water = 1.0)

MOLECULAR WEIGHT: 164

VOLATILE ORGANIC COMPOUNDS: None

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: Non-Flammable

AUTOIGNITION TEMPERATURE: Not Applicable

CONDITIONS OF FLAMMABILITY: Non-Flammable

FLAMMABLE LIMITS IN AIR - LOWER: Non-Flammable ***UPPER:*** Non-Flammable

EXTINGUISHING MEDIA: Non-Flammable

FIRE FIGHTING PROCEDURES -- SPECIAL: NFPA 704 Rating 2-0-0

Self-contained breathing apparatus (SCBA) should be used by firemen in buildings where perchloroethylene is stored. Keep containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Concentrated vapors will decompose on contact with high intensity heat source and produce hydrogen chloride or phosgene.

HAZARDOUS COMBUSTION PRODUCTS:

Exposure to flames, an electric arc or other high energy sources will result in thermal decomposition forming toxic gases (e.g. phosgene and hydrogen chloride).

SECTION V -- REACTIVITY DATA

STABILITY: Stable under normal temperatures and pressures.

INCOMPATIBILITY (CONDITIONS TO AVOID): Open flames, hot surfaces, emissions from welding arcs. Strong alkalis and oxidizing materials. Reacts violently with barium, beryllium and lithium.

HAZARDOUS POLYMERIZATION: Does not normally occur under normal temperatures and pressures.

HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition produces phosgene and hydrogen chloride and other highly toxic substances.

SECTION VI -- HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation, skin and eye contact, skin absorption.

HEALTH HAZARD DATA/SIGNS AND SYMPTOMS OF EXPOSURE:

ACUTE:

Skin: May cause irritation, discomfort or pain. May be absorbed through the skin, although it is not expected to produce toxicity by this route.

Eyes: Contact with liquid may cause slight to moderate irritation resulting in pain, tearing and general inflammation.

Inhalation: May result in respiratory irritation, gastrointestinal distress (nausea, vomiting), central nervous system depression, headaches, drowsiness, dizziness, confusion, loss of coordination and equilibrium and more severe central nervous system effects at much higher concentrations. Overexposure can cause unconciousness and even death in extreme cases.

Ingestion: May produce irritation of the mouth and gastrointestinal tract and cause effects similar to those of "Inhalation". Aspiration into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possible death.

CHRONIC: Prolonged and repeated exposure to high concentrations may result in damage to the liver, kidneys and central nervous system. Prolonged or repeated contact with skin may cause skin to become reddened, rough and dry and may result in dermatitis.

OTHER POTENTIAL HEALTH HAZARDS:

Animals exposed to high levels have shown cardiac sensitization.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Individuals with pre-existing liver, kidney or central nervous system dysfunction may have increased susceptibility to effects of the exposure. Contact with skin may aggravate pre-existing dermatitis.

CARCINOGENICITY: Perchloroethylene is listed by OSHA, NTP and IARC as a suspected carcinogen.

SECTION VII -- EMERGENCY AND FIRST AID PROCEDURES

EYES: Flush eyes with water for 20 minutes lifting upper and lower lids occasionally. Consult physician if irritation persists. If irritation or redness from exposure to vapors or mists develop, move victim away from exposure and into fresh air.

SKIN: Remove contaminated clothing. Wash skin twice with soap and water. If irritation persists, consult a physician.

INGESTION: Aspiration hazard. If conscious, dilute with 4 to 8 ounces of water and seek immediate medical attention. DO NOT induce vomiting.

INHALATION: Remove to fresh air immediately. Use oxygen if there is difficulty breathing or artificial respiration if breathing has stopped. Do not leave victim unattended. Seek immediate medical attention if necessary.

SECTION VIII -- PRECAUTIONS FOR SAFE HANDLING AND USE

SPILL PROCEDURES: Isolate area and deny entry. Ventilate area and avoid breathing vapors. Absorb onto sand or other absorbent material. Shovel into closable container for disposal. Wear protective equipment specified below. Contain away from surface waters and sewers.

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State and local regulations. Contact Safety-Kleen regarding recycling.

HANDLING PRECAUTIONS: Do not get into eyes, on skin or clothing. Avoid breathing vapors. DO NOT smoke when using this product.

SHIPPING AND STORING PRECAUTIONS: Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, grind or expose containers to flame or other sources of ignition. Keep container tightly closed when not in use and during transport. Because vapors are much heavier than air, do not store in basements, pits or depressions without ventilation at floor level.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco products. Clothing which becomes soaked with solvent should be removed immediately and must not be worn until it is thoroughly laundered and dried.

SECTION IX -- CONTROL MEASURES

VENTILATION: Provide local exhaust or general dilution ventilation as determined appropriate to maintain concentrations of vapors below applicable exposure limits.

PROTECTIVE GLOVES: Wear solvent-resistant gloves, such as nitrile or neoprene rubber, to prevent contact with skin.

EYE PROTECTION: Use protective eyewear such as chemical goggles or faceshield to prevent contact from splash, spray or mist. Contact lenses should not be worn.

RESPIRATORY PROTECTION: Use NIOSH-approved respiratory protective equipment when concentration of vapors exceeds applicable exposure limit. Depending on the airborne concentration, use a respirator or gas mask with appropriate cartridges and canisters (for organic vapors). A self-contained breathing apparatus (SCBA) is required for large spills and emergencies. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134 - Respiratory Protection.

OTHER PROTECTIVE EQUIPMENT: A source of clean water should be available in work area for flushing eyes and skin. Wear boots, apron and other protective clothing as need to protect against contact with skin.

SECTION X -- OTHER REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: Perchloroethylene

DOT CLASS: ORM-A

DOT ID NUMBER: UN 1897

TSCA INVENTORY STATUS: All ingredients reported in EPA TSCA Inventory.

OTHER: State of California Safe Drinking Water and Toxic Enforcement Act (Proposition #65)

Warning: Perchloroethylene is known to the State of California to cause cancer.

California South Coast Air Quality Management District Rule 443.1:

Maximum Volatile Organic Carbon (VOC):	1620 grams/liter
VOC Vapor Pressure at 20° C:	13 mm Hg

SECTION XI -- PREPARATION INFORMATION

PREPARED BY: SK Product Review Committee ***FORM NO.*** 900-14-022

ORIGINAL ISSUE DATE: July 20, 1989 ***REVISED:*** October 6, 1989 ***SUPERSEDES:*** July 20, 1989

SAFETY-KLEEN LACQUER THINNER

MATERIAL SAFETY DATA SHEET

SECTION I -- PRODUCT INFORMATION

Safety-Kleen Corporation - 777 Big Timber Road - Elgin, IL 60123
For Product/Sales Information Call 312/697-8460

EMERGENCY TELEPHONE	*MEDICAL:*	*TRANSPORTATION:*
These numbers are for emergency use only. If you desire non-emergency information about this product, please call the telephone number listed above.	800/942-5969 or 312/942-5969 RUSH POISON CONTROL CENTER CHICAGO, ILLINOIS (24 HOURS)	800/424-9300 CHEMTREC

IDENTITY (TRADE NAME): SAFETY-KLEEN LACQUER THINNER

DRAFT

SK PART NUMBER: 5820, 5825

FAMILY/CHEMICAL NAME: N/A

PRODUCT USAGE: LACQUER THINNER

SECTION II -- HAZARDOUS COMPONENTS

NAME	SYNONYM	%	CAS NO.	OSHA PEL (ppm)	ACGIH TLV (ppm)
Toluene	Toluol	40-60	108-88-3	100 150 STEL	100 150 STEL
lene	Xylol	20-40	1330-20-7	100 150 STEL	100 150 STEL
Methyl Ethyl Ketone	MEK	15-35	78-93-3	200 300 STEL	200 300 STEL
Methyl Isobutyl Ketone	MIBK	5-15	108-10-1	50 75 STEL	50 75 STEL
Acetone	2-Propanone	2-10	67-64-1	750 1000 STEL	750 1000 STEL
Isopropanol	Isopropyl Alcohol	5-15	67-63-0	400 500 STEL	400 500 STEL
Methanol	Methyl Alcohol	2-10	67-56-1	200 250 STEL	200 250 STEL
Ethanol	Ethyl Alcohol	- 5	64-17-5	1000	1000
n-Butyl Acetate	Butyl Acetate	2-15	123-86-4	150 200 STEL	150 200 STEL
Isobutyl Acetate		2-15	110-19-0	150	150

SECTION III -- PHYSICAL DATA

PHYSICAL STATE, APPEARANCE AND ODOR: Liquid - colorless, clear, with a characteristic solvent odor.

BOILING POINT: 131 - 347° F

MELTING POINT: Not Applicable

EVAPORATION RATE: Slower than ether

PERCENT VOLATILE:	100%
VAPOR DENSITY:	2.0 (Air = 1)
VAPOR PRESSURE:	185 mm Hg @ 68° F
SOLUBILITY IN WATER:	Appreciable
pH:	Not Applicable
SPECIFIC GRAVITY:	~ 0.840 (Water = 1)
MOLECULAR WEIGHT:	Use molecular weight of individual components.
VOLATILE ORGANIC COMPOUNDS:	840 g/L

SECTION IV -- FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: < 20° F (TCC)

AUTOIGNITION TEMPERATURE: Not Available

CONDITIONS OF FLAMMABILITY: Normal temperatures and pressures.

FLAMMABLE LIMITS IN AIR - LOWER: 1.1% ***UPPER:*** 12.8%

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical, water (mist only)

FIRE FIGHTING PROCEDURES -- SPECIAL:

Water may be used to cool containers and firefighters. However, water could cause free solvent to float and spread fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Flammable liquid. All components are Class 1B with flash point below 73° F and boiling point above 100° F.

HAZARDOUS COMBUSTION PRODUCTS: Carbon Monoxide

SECTION V -- REACTIVITY DATA

STABILITY: Stable under normal temperatures and conditions.

INCOMPATIBILITY: (CONDITIONS TO AVOID) Heat sparks, flames, fire, strong oxidizing agents.

HAZARDOUS POLYMERIZATION: Not known to occur under normal conditions.

HAZARDOUS DECOMPOSITION PRODUCTS: Normally none. Incomplete burning may yield carbon monoxide.

SECTION VI -- HEALTH HAZARD DATA

PRIMARY ROUTES OF EXPOSURE: Inhalation, skin and eye contact.

HEALTH HAZARD DATA/SIGNS AND SYMPTOMS OF EXPOSURE:

ACUTE: ***Skin:*** Contact may cause irritation, dryness and cracking. Prolonged or repeated contact may remove skin oils, possibly leading to irritation and dermatitis. Material is readily absorbed through skin.

Eyes: Direct contact may cause severe irritation and temporary corneal damage. Vapors may cause noticeable redness, tearing, irritation and pain. Conjunctivitis may occur upon chronic exposure.

Inhalation: Can cause headache, dizziness, confusion, nausea, vomiting, irritation of the respiratory system and other central nervous system effects including unconsciousness in extreme cases.

Ingestion: Can cause burning of the mouth, throat and abdomen, nausea, vomiting, diarrhea, symptoms of the central nervous system depression, including weakness, dizziness, slow and shallow respiration, unconsciousness and convulsions. Aspiration into the lungs during ingestion or vomiting may cause mild to severe pulmonary injury and possible death.

CHRONIC: ***Inhalation:*** Prolonged overexposure may cause damage to the liver, kidney, spleen, lungs or nervous system.

OTHER POTENTIAL HEALTH HAZARDS:

Reports have associated prolonged and repeated occupational exposure to solvents with permanent brain and/or central nervous system damage. Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal. Observe all appropriate control measures.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

Individuals with pre-existing liver, kidney, spleen, lungs, skin or nervous system dysfunction may have increased susceptibility to the effects of the exposure. Contact with skin may aggravate pre-existing dermatitis.

CARCINOGENICITY: No components are known or suspected carcinogens.

SECTION VII -- EMERGENCY AND FIRST AID PROCEDURES

EYES: For direct contact, flush eyes with clean water for 15 minutes lifting upper and lower lids occasionally. Consult physician if irritation persists. If irritation or redness from exposure to vapors or mists develop, move victim away from exposure and into fresh air.

SKIN: Remove contaminated clothing. Wash twice with soap and water. If irritation develops and persists, consult a physician.

INGESTION: Aspiration hazard. If conscious, dilute with 4-8 ounces of water and seek immediate medical attention. DO NOT induce vomiting.

INHALATION: Remove to fresh air immediately. Use oxygen if there is difficulty breathing or artificial respiration if respiration has stopped. Do not leave victim unattended. Seek immediate medical attention if necessary.

SECTION VIII -- PRECAUTIONS FOR SAFE USE AND HANDLING

SPILL PROCEDURES: Remove all ignition sources. Isolate area and deny entry. If possible, contain as a liquid for possible recycling. Absorb onto sand or other absorbent material. Shovel into closable container for disposal. Wear protective equipment specified below. Contain away from surface waters and sewers.

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State and local regulations. Contact Safety-Kleen regarding recycling.

HANDLING PRECAUTIONS: Do not get into eyes, on skin or clothing. Avoid breathing vapors. DO NOT smoke when handling this product.

SHIPPING AND STORING PRECAUTIONS: Empty product containers may contain product residue. Do not pressurize, cut, heat, weld, grind or expose containers to flame or other sources of ignition. Keep container tightly closed when not in use and during transport.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eati drinking or using tobacco products.

SECTION IX - CONTROL MEASURES

VENTILATION: Provide local exhaust or general dilution ventilation as determined necessary, when concentrations of vapors exceed applicable exposure limits. Where explosive mixtures may be present, systems safe for such locations should be used.

PROTECTIVE GLOVES: To protect against contact with skin, wear nitrile gloves.

EYE PROTECTION: Where there is likelihood of eye contact, wear chemical goggles. Contact lenses should not be worn.

RESPIRATORY PROTECTION: Use NIOSH-approved respiratory protective equipment when concentration of vapors exceeds applicable exposure limit. Depending on the airborne concentration, use a respirator or gas mask with appropriate cartridges and canisters (for organic vapors). A self-contained breathing apparatus (SCBA) is required for large spills and emergencies. Selection and use of respiratory protective equipment should be in accordance with OSHA General Industry Standard 29 CFR 1910.134 - Respiratory Protection.

OTHER PROTECTIVE EQUIPMENT: A source of clean water should be available in the work area for flushing eyes and skin. Wear rubber apron or other protective clothing as needed to protect against spills or splash.

SECTION X -- OTHER REGULATORY INFORMATION

DOT PROPER SHIPPING NAME: Paint-Related Material

DOT CLASS: Flammable Liquid

DOT ID NUMBER: NA1263

TSCA INVENTORY STATUS: All components are listed in EPA TSCA Inventory.

SECTION XI -- PREPARATION INFORMATION

PREPARED BY: SK Product Review Committee ***FORM NO.*** 900-14-009

ORIGINAL ISSUE DATE: July 20, 1989 ***REVISED:*** ***SUPERSEDES:***

EXHIBIT I.E.2-3

EMPLOYEES' FUNCTIONS DURING AN EMERGENCY

	Title	Emergency Function
Jorge Carvajal	Branch Manager	Emergency Coordinator Notify Environment, Health and Safety Department Apply First Aid Notify Emergency Agencies, if necessary
Cary Alfonso	Branch Secretary	Alternate Emergency Coordinator Supervise Evacuation
Pedro Espinal	Sales Representative	Retain, contain or slow the flow of solvent
Arturo Morales	" "	Shut off electricity
Pedro Cordero	" "	
George Owen	" "	
George Miller	" "	
Marlon Bilbao	" "	
Mario Alfonso	" "	
Juan Formoso	" "	
Jose Perez-Mayo	" "	
Raul Rodriguez	Warehouseman	
Osvaldo Acosta	Warehouseman	

safety-kleen®

Certified Mail-Return Receipt Requested

January 17, 1990

Fire Chief
Metro Dade Fire Department
6000 SW 87th Ave.
Miami, FL 33173

Subject: Safety-Kleen Corp. (3-097-02)
Proposed Medley Service Center
East of NW 89th Ave. and NW 96th Street
Medley, FL 33166

Dear Sir:

Under terms of U.S. EPA Regulations 40 CFR 265, Safety-Kleen Corp. must make arrangements to familiarize local authorities with the layout of the proposed facility, places where facility personnel work, entrances to the facility and possible evacuation routes.

A copy of the Contingency Plan is enclosed for your files. It includes Material Safety Data Sheets for the solvents handled at the subject site: mineral spirits, carburetor cleaner, dry cleaning solvents and paint thinners. These documents describe the properties and associated hazards of the materials at the facility. A facility layout plan is also included to show where facility personnel normally work, entrances to the facility and possible evacuation routes.

If you have any questions or desire to visit our facility, please contact Mr. Jorge Carvajal at 305/591-9409.

Sincerely,

Rob Omiecinski

Rob Omiecinski
Environmental Permit Writer

RO/dfs

cc: J. Carvajal, Br. Mgr. (3-097-02)

777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708/697-8460 FAX 708/697-4295

Safety-Kleen®

Certified Mail-Return Receipt Requested

January 17, 1990

Police Chief
Metro Dade Police Department
1850 NW 66th Ave.
Miami, FL 33166

Subject: Safety-Kleen Corp. (3-130-01)
Proposed Sanford Service Center
East of NW 89th Ave. and NW 96th Street
Medley, FL 33166

Dear Sir:

Under terms of U.S. EPA Regulations 40 CFR 265, Safety-Kleen Corp. must make arrangements to familiarize local authorities with the layout of the proposed facility, places where facility personnel work, entrances to the facility and possible evacuation routes.

A copy of the Contingency Plan is enclosed for your files. It includes Material Safety Data Sheets for the solvents handled at the subject site: mineral spirits, carburetor cleaner, dry cleaning solvents and paint thinners. These documents describe the properties and associated hazards of the materials at the facility. A facility layout plan is also included to show where facility personnel normally work, entrances to the facility and possible evacuation routes.

If you have any questions or desire to visit our facility, please contact Mr. Jorge Carvajal at 305/591-9409.

Sincerely,

Rob Omiecinski

Rob Omiecinski
Environmental Permit Writer

RO:dfs

cc: J. Carvajal, Br. Mgr. (3-097-02)

777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708/697-8460 FAX 708/697-4295

Certified Mail-Return Receipt Requested

January 17, 1990

Hospital Administrator
Palmetto General Hospital
2001 W. 68th Street
Hialeah, FL 33016

Subject: Safety-Kleen Corp. (3-097-02)
Proposed Medley Service Center
East of NW 89th Ave. and NW 96th Street
Medley, FL 33166

Dear Sir or Madam:

Under terms of U.S. EPA Regulations 40 CFR 265, Safety-Kleen Corp. must make arrangements to familiarize local authorities with the layout of the proposed facility, places where facility personnel work, entrances to the facility and possible evacuation routes.

A copy of the Contingency Plan is enclosed for your files. It includes Material Safety Data Sheets for the solvents handled at the subject site: mineral spirits, carburetor cleaner, dry cleaning solvents and paint thinners. These documents describe the properties and associated hazards of the materials at the facility. A facility layout plan is also included to show where facility personnel normally work, entrances to the facility and possible evacuation routes.

If you have any questions or desire to visit our facility, please contact Mr. Jorge Carvajal at 305/591-9409.

Sincerely,

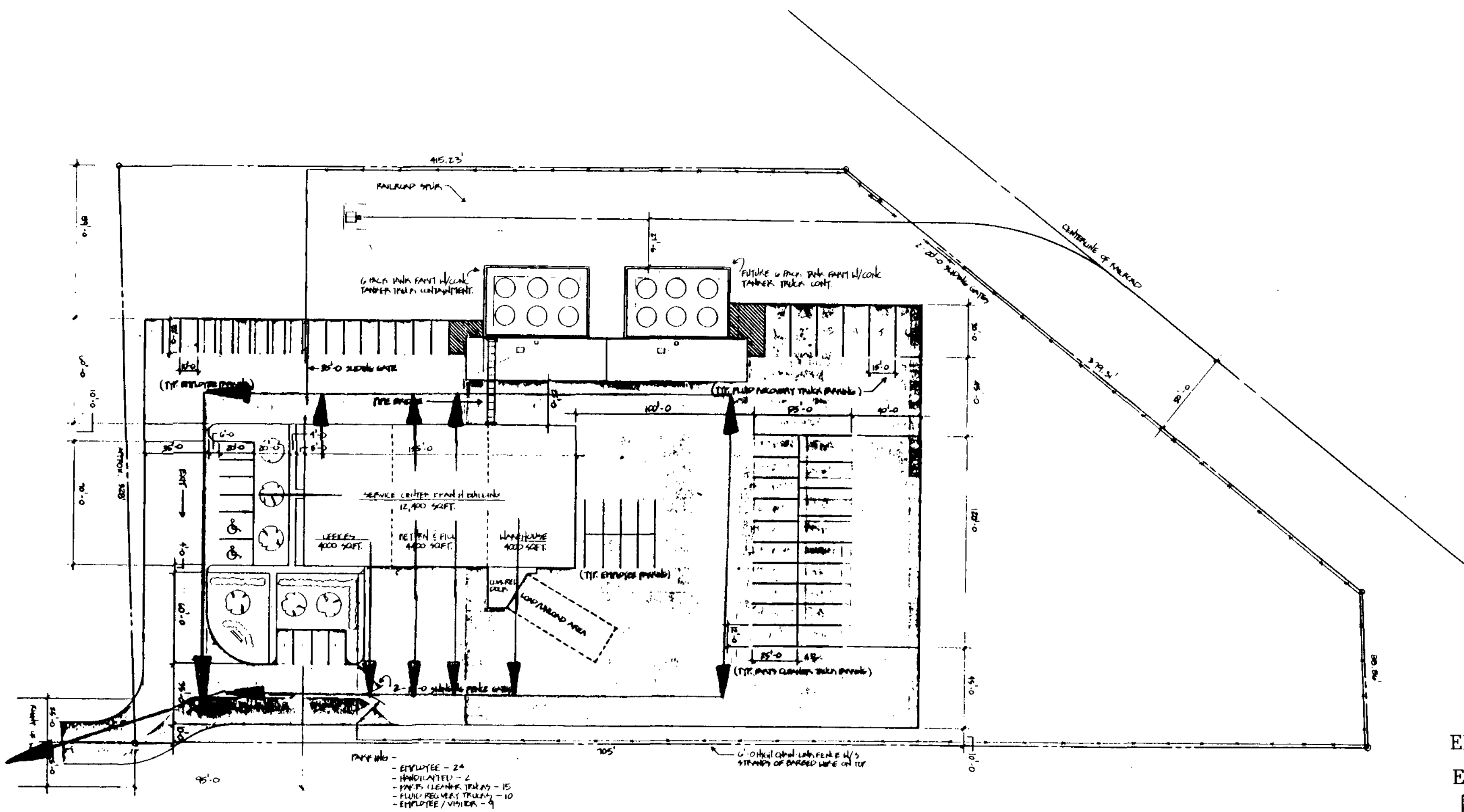
Rob Omiecinski

Rob Omiecinski
Environmental Permit Writer

RO:dfs

cc: J. Carvajal, Br. Mgr. (3-097-02)

777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708/697-8460 FAX 708/697-4295



SITE PLAN

EXHIBIT I.E. 2-11

EVACUATION ROUTES

1	REVISE ENTRY & PARKING	JHD	9-28-89

SITE PLAN (SP1)

SAFETY-KLEEN CORP.

SCALE	1" = 30'-0	JHD	6-9-89
MIAMI, FL (3-097-02)	D13535		

I.E.3.a PROCEDURE TO MITIGATE EQUIPMENT FAILURE AND POWER OUTAGES

Equipment failure will be mitigated using the procedure described in the contingency plan, should a release occur. Otherwise, use of failed equipment will be immediately discontinued and the equipment replaced.

In case of a power failure, all activities requiring the use of electricity must cease.

I.E.3.b UNLOADING OPERATIONS - DRUM STORAGE AREA

The immersion cleaner, dumpster sediment, dry cleaner wastes and paint wastes are always held in covered containers. Unless a drum is leaking, the drummed solvent is never transferred to another container. The drums containing the used solvents are returned to the service center and stored in a designated area before shipment to a reclaimer.

The unloading/loading areas and drum storage area are shown on Exhibit I.B.3-6. They occupy portions of the building which have sloped concrete floors and interceptor trenches which form a spill containment system. The system is free of cracks and gaps and the concrete has been sealed to rendor it impermeable. Spills are removed by a hand-held, portable electric pump (the COMS pump), wet-

dry vacuum cleaner or sorbent materials. The capacity of the containment system is designed to be greater than 10% of the total liquid storage capacity.

All drums are transported, moved, and stored in upright positions. Each route truck is equipped with an electric hoist to facilitate loading/unloading. In the warehouse area, the drums are moved with 2-wheel hand trucks or a pallet jack, and stacked. All drums are elevated on pallets to eliminate the possiblity 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 the specifications shown in Exhibits I.E.3-1 to I.E.3-5.

The drum storage facility has been designed to handle 6,912 gallons waste. Secondary containment in the drum storage area has a capacity of 2,700 gallons. This is significantly greater than 10% of total liquid storage in the area.

UNLOADING OPERATIONS - STORAGE TANK

The storage tank areas include two tank farms each containing six 20,000-gallon capacity aboveground steel tanks. Drummed mineral

spirits are only transferred, via the wet dumpster, into one designated 20,000-gallon aboveground storage tank. The other eleven tanks are used to store mineral spirits product, non-hazardous waste oil and perchloroethylene product.

The tanks are designed and constructed to be compatible with the materials stored in them. Typical construction and installation standards for the aboveground tanks are shown in Exhibits I.E.3-6 and

I.E.3-10. All tanks are vented in accordance with N.F.P.A. Standards and the tanks are equipped with high level alarms. The design and installation of the tank alarm system are shown in Exhibit I.E.3-8.

The aboveground tanks are protected by a 2' high concrete retaining dike. Therefore, no run-on or runoff will occur and no runoff collection management system is deemed necessary. Equipment used in the operation of the aboveground tanks for used mineral spirits will be liquid level gauges and automatic high level alarms. A suction pump on the tanker truck is used to withdraw the content from the tank. No other equipment or standby equipment are used in the operation of the aboveground tanks.

I.E.3.c PERSONAL PROTECTIVE EQUIPMENT

All personnel must wear the following when handling hazardous materials:

a. steel-toed boots

b. safety glasses

c. protective gloves

d. protective aprons

In addition, the following equipment must be readily available:

a. fire extinguisher

b. eyewash

c. first aid kit

d. sorbent material

e. shovel

f. hand-held pump

I.E.3.d-e PROTECTION OF WATER SUPPLIES

All waste handling and storage units are aboveground and have secondary containment. In addition, the drum storage area is enclosed to prevent rain water from coming in contact with the containers. Therefore, surface and ground waters will be protected from run on, run off and other releases.

I.E.3.f IGNITABLE WASTE HANDLING METHODS

The wastes stored at this facility are incompatible with strong oxidizers and reactive metals only. Since none of these are handled at this facility, it is not necessary to address the management of incompatible wastes. It should be noted that the wastes are compatible with each other.

The following is a list of fire prevention and minimization measures:

I. All wastes and products are kept away from ignitable sources--Personnel must confine smoking and open flames to remote areas, separate from any solvent (e.g., the office or locker room). The mineral spirits return and fill station and storage tanks and the container storage area are separate from the office area to minimize the potential for a fire to spread or injury to personnel to occur. In addition the warehouse is sprinklered to minimize the damage any fire will cause.

II. Ignitable wastes are handled so that they do not:

A. become subject to extreme heat or pressure, fire or explosion, or a violent reaction--The mineral spirits and paint wastes are stored in a tank or in drums, none of which are near sources of extreme heat, fire, potential explosion sources or subject to violent reactions. The tanks are vented and the

drums kept at room temperature to minimize the potential for pressure build-up.

B. produce uncontrolled toxic mists, fumes, dusts or gases in quantities sufficient to threaten human health--The vapor pressure of mineral spirits is low and it and the paint wastes are reactive with strong oxidizers and reactive metals only. Toxic mists, fumes, dusts or gases will not form in quantities sufficient to threaten human health since strong oxidizers are not handled at this facility and the solvent vaporization will be minimal under normal working conditions.

C. produce uncontrolled fires or gases in quantities sufficient to pose a risk of fire or explosion--See 'a' and 'b' above.

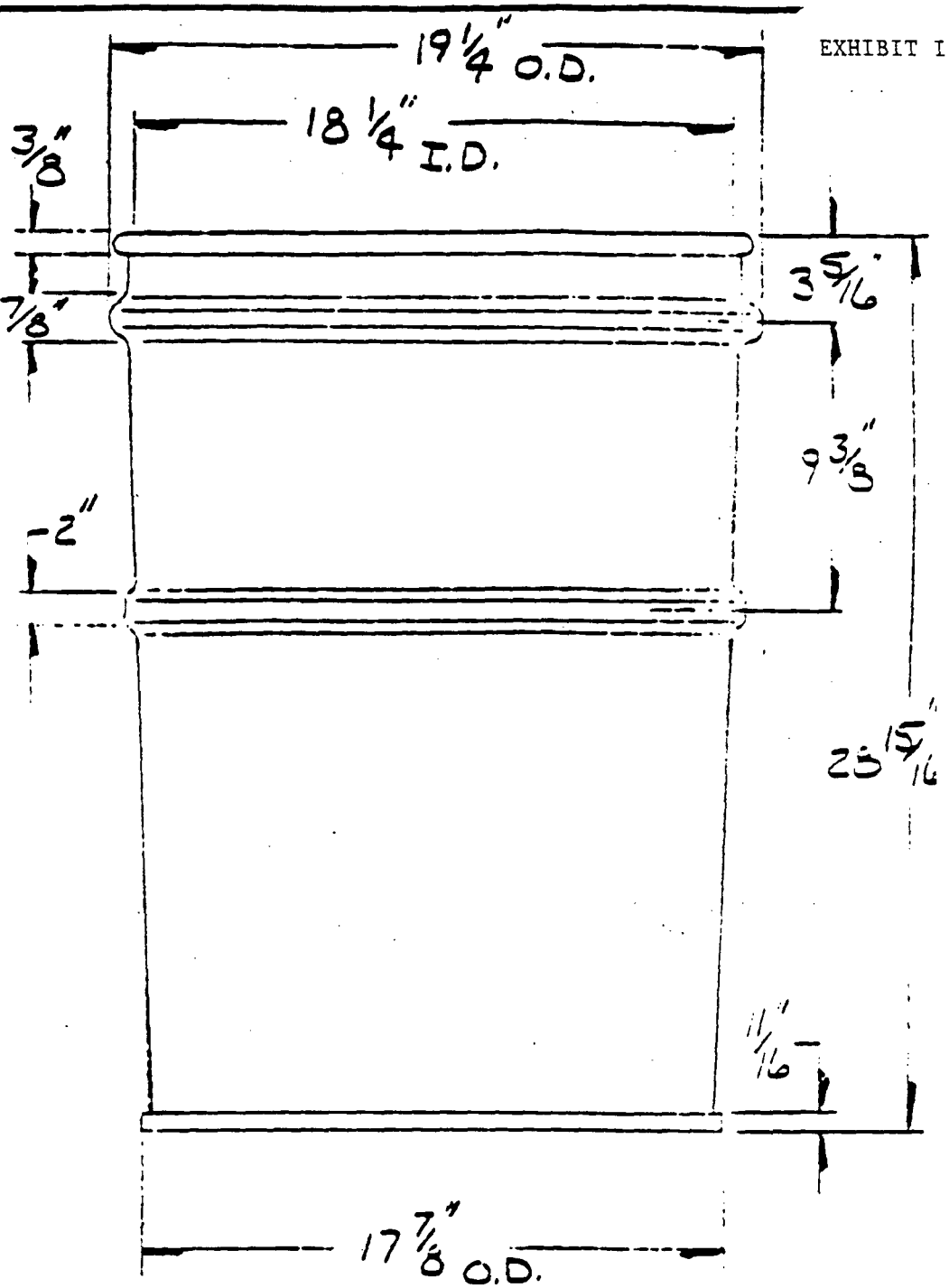
D. damage the structural integrity of the Safety-Kleen facility--The mineral spirits and paint wastes will not cause deterioration of the tank, drums or other structural components of the facility.

III. Adequate aisle space is maintained to allow the unobstructed movement of personnel, fire protection equipment, and decontamination equipment to any area of the facility operation in an emergency.

IV. "No Smoking" signs are posted in areas where solvents are handled or stored.

V. Fire extinguishers must be checked once per week and tested by the fire extinguisher company once per year.

EXHIBIT I.E. 3-1



NESTING DRUM, 30 GAL.

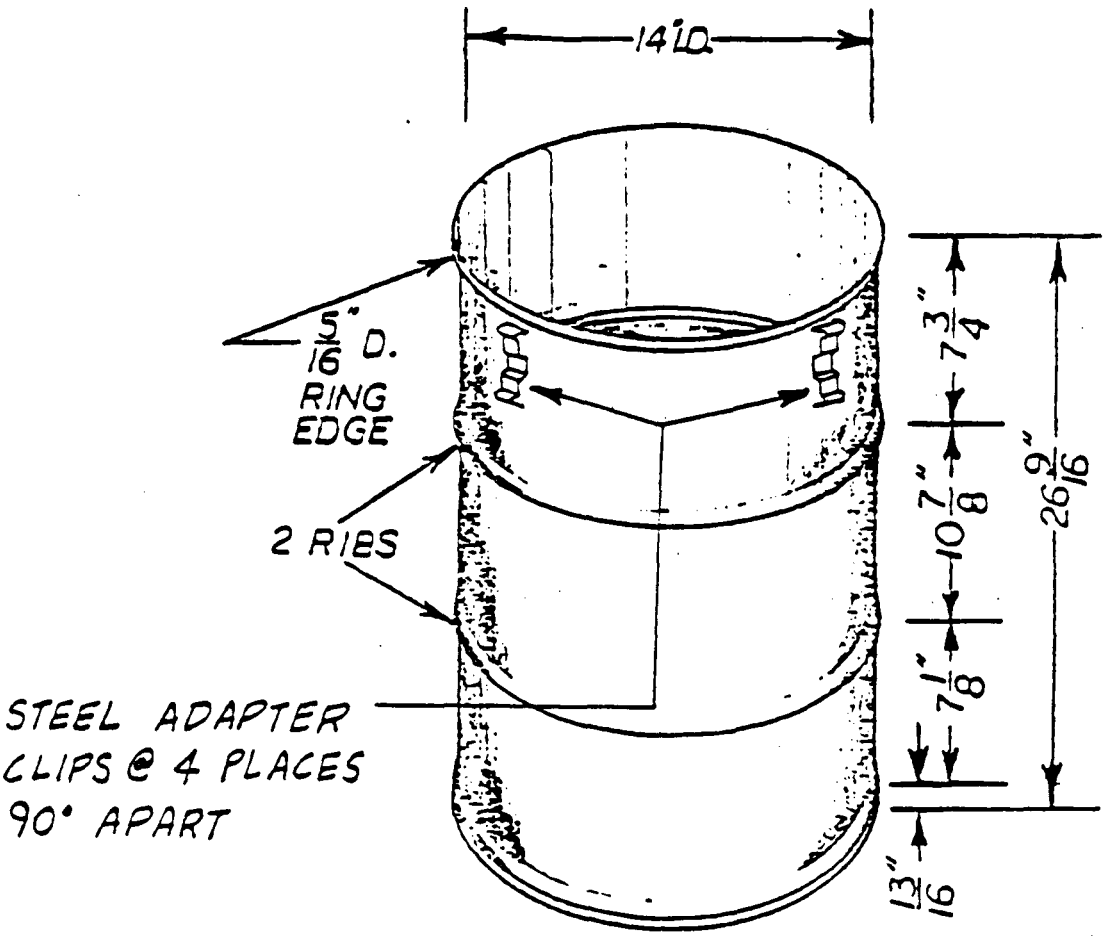
safety-kleen corp.

NOTES 1) MAT'L - 20 GA. (CRS)
(22 GA. CRS ALTERNATE)

2) LEAK PROOF - USE AIR TEST (7-16 PSI).

REVISIONS

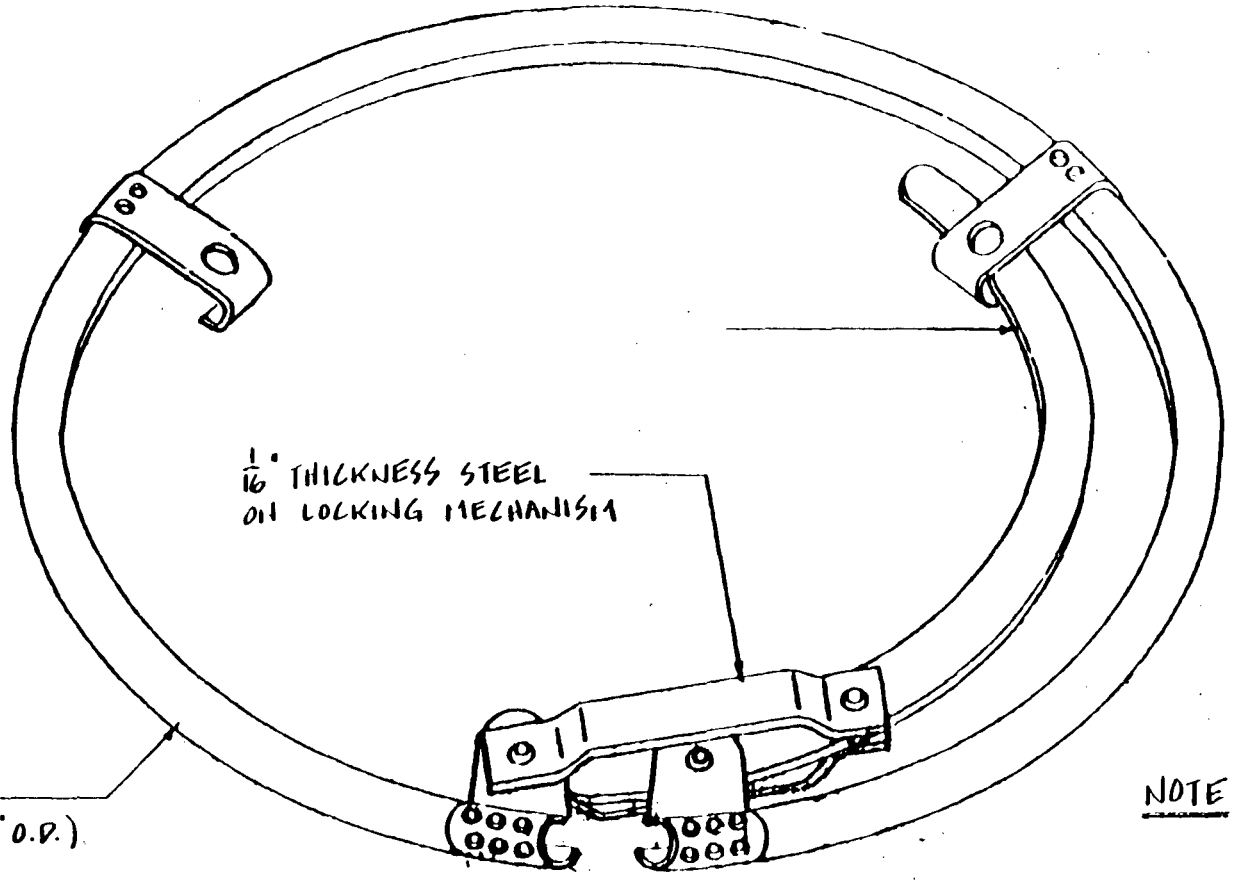
CONSTRUCTION SPECIFICATIONS
16 GALLON STEEL BARREL
PART NO. 3317



ADDITIONAL SPECIFICATIONS

1. No Bungs or Bungholes
2. Rust Preventive Coating Interior
3. Without Top Cover or Locking Ring
4. Open Head Top
5. Leak Proof - Airtest (7 Lb. pressure)
6. 20 Gauge Steel

2-23-71
100-11-07

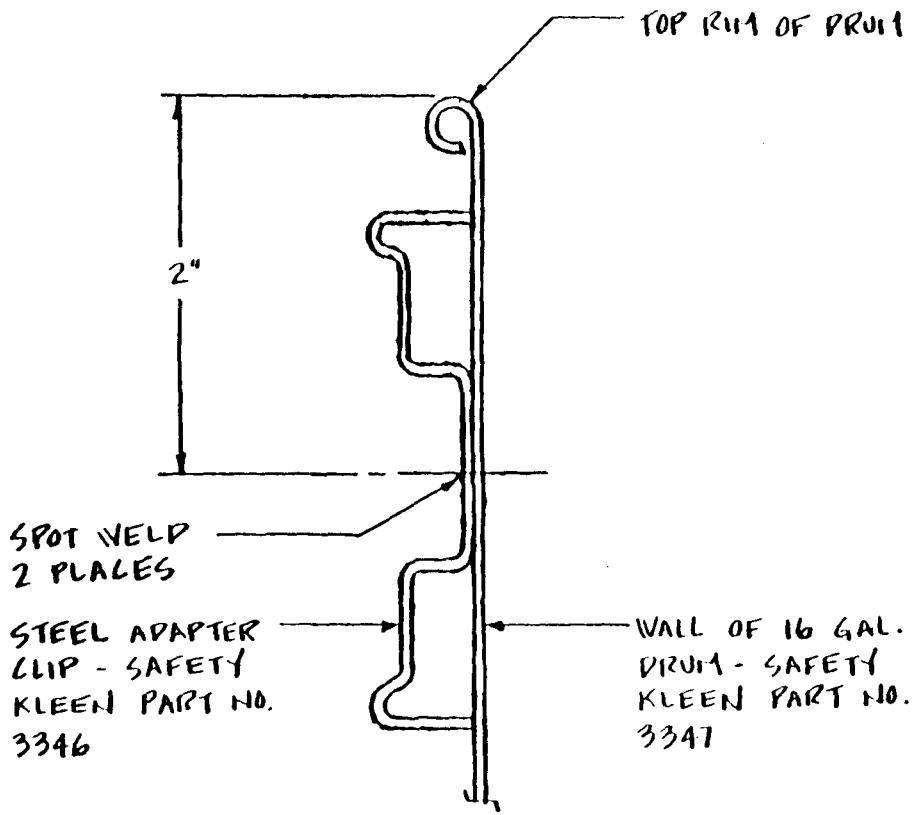


NOTE: ONE SHOP COAT OF SILVER PAINT

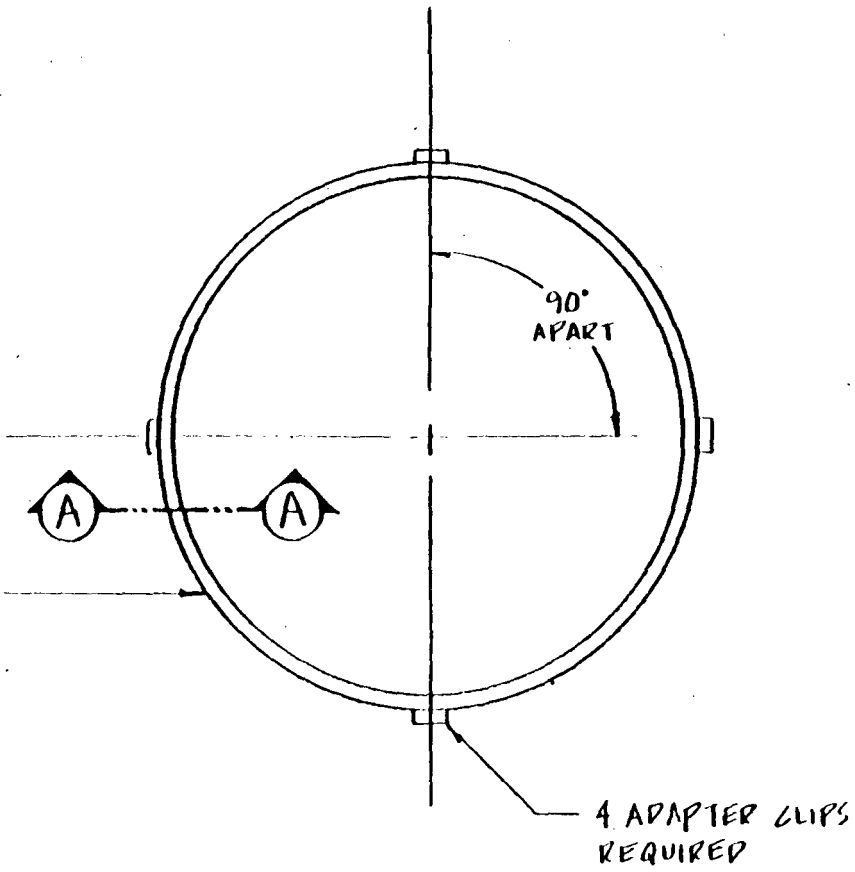
I.E. 3-2

• CLAMP RING FOR 16 GALLON DRUM DETAILS •

SAFETY-KLEEN [illegible] NO. 3319

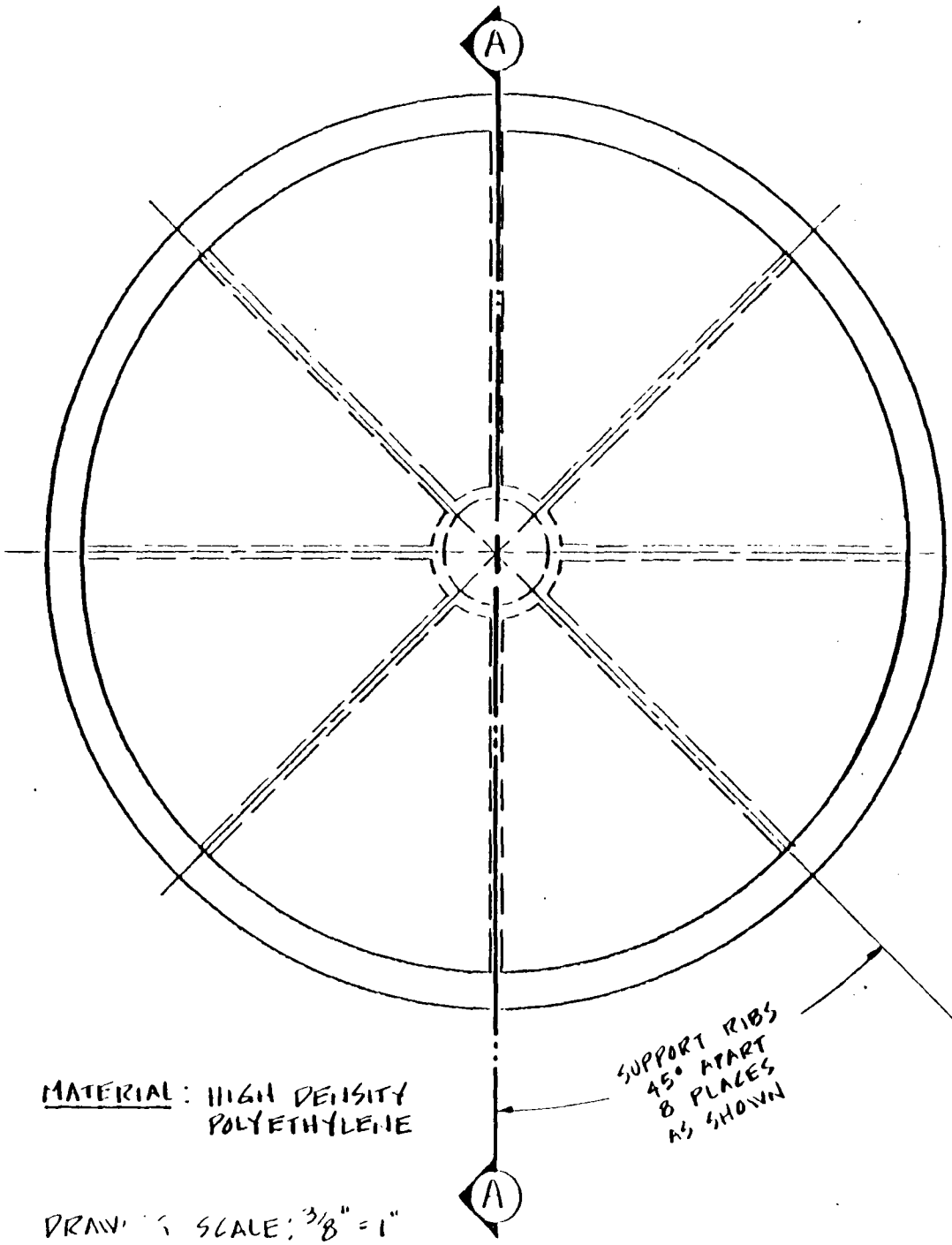


- SECTION A-A -
FULL SCALE



- TOP VIEW OF DRUM -

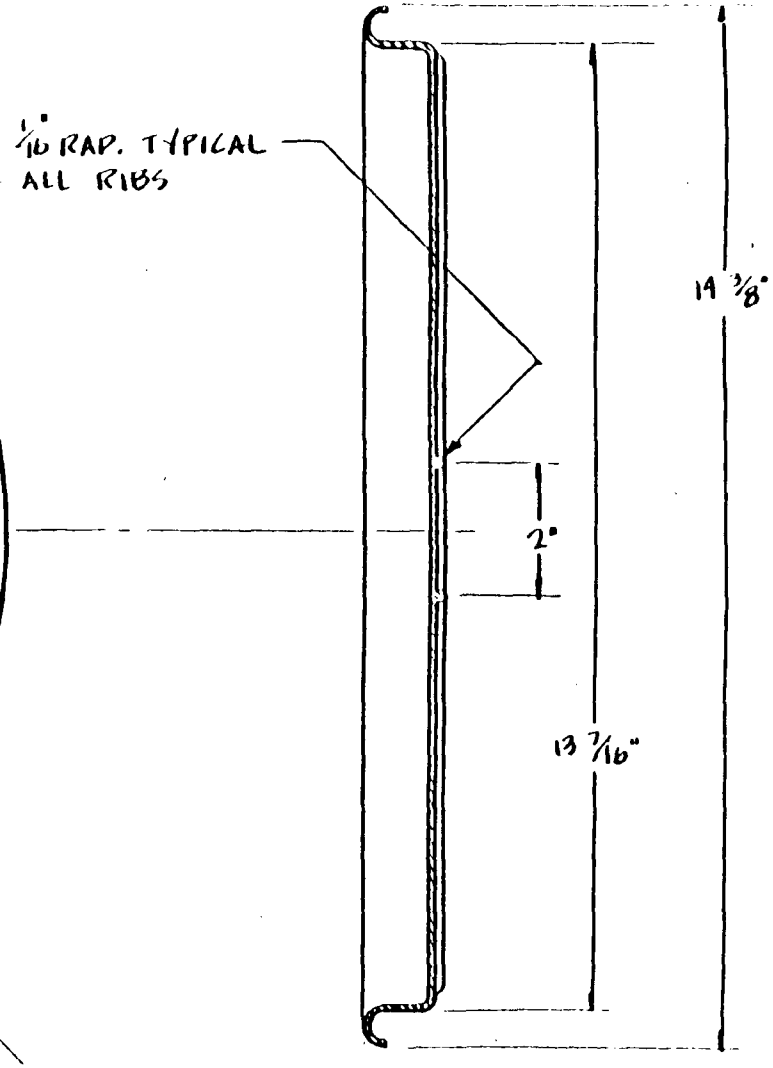
I.E. 3-2



SUPPORT RIBS 45° APART 8 PLACES AS SHOWN

MATERIAL: HIGH DENSITY POLYETHYLENE

DRAWING SCALE: 3/8" = 1"

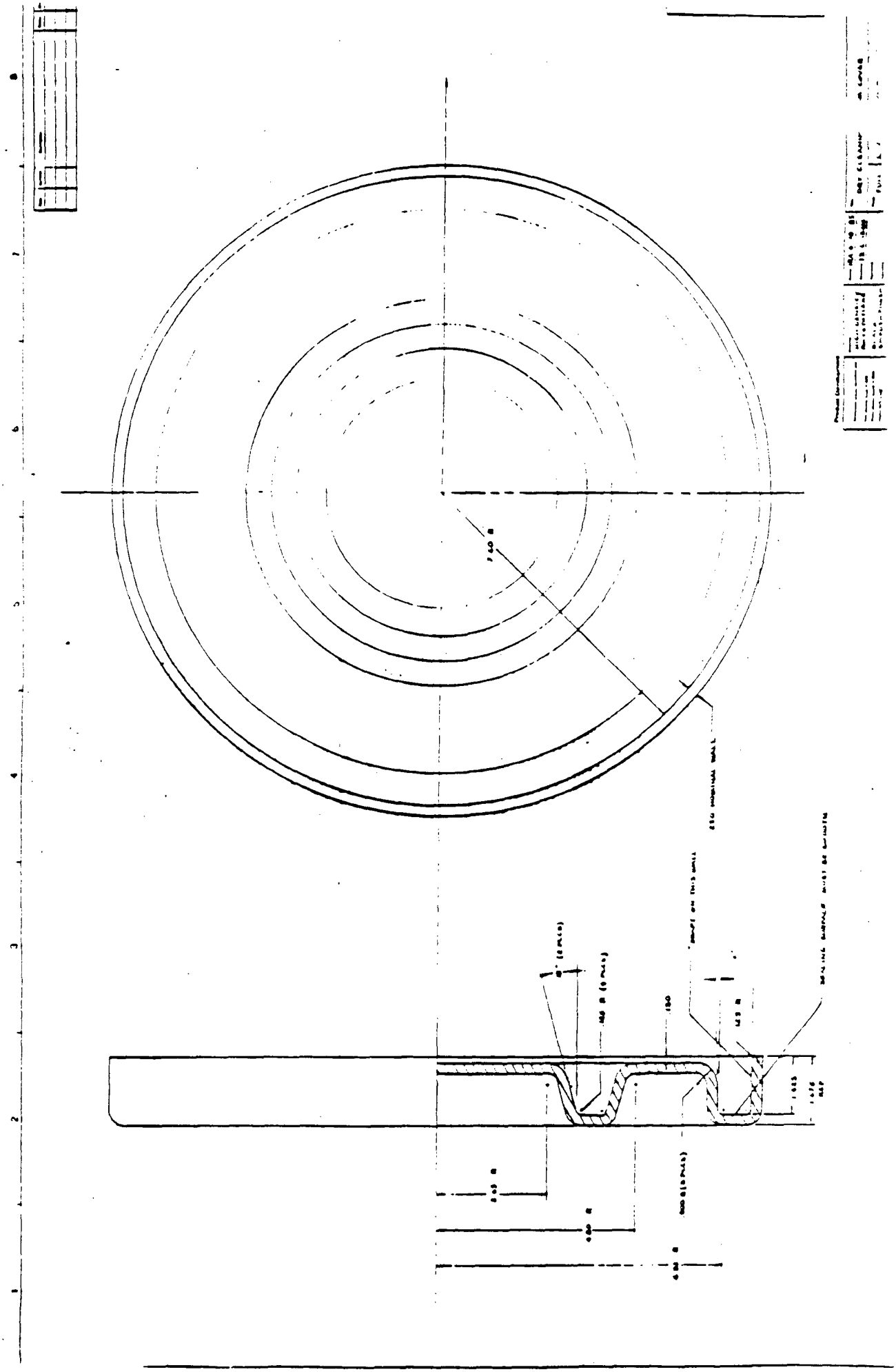


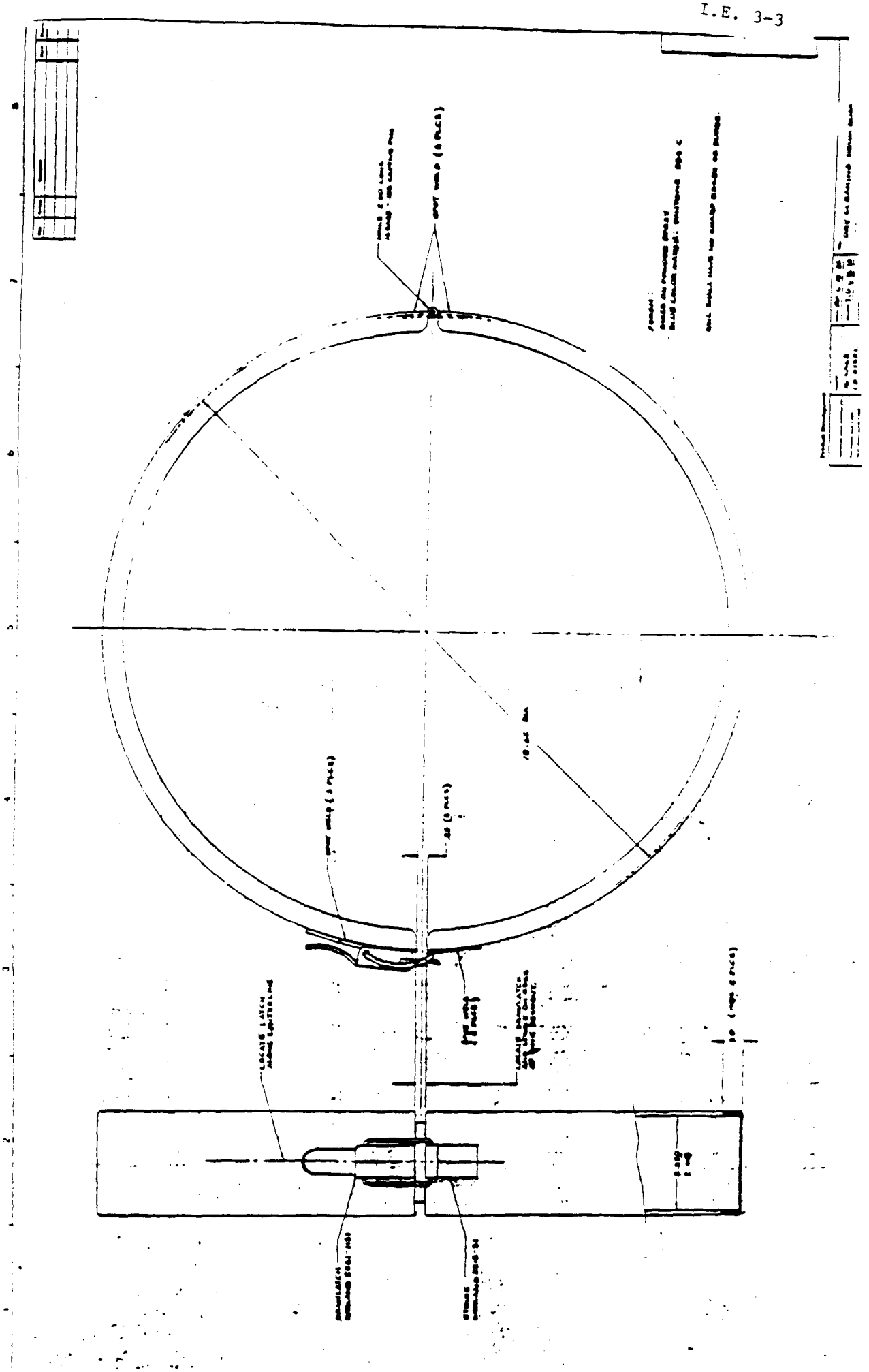
- SECTION A-A -

16 GAL. DRUM LID DETAILS
SAFETY-KLEEN PART NO. 3344

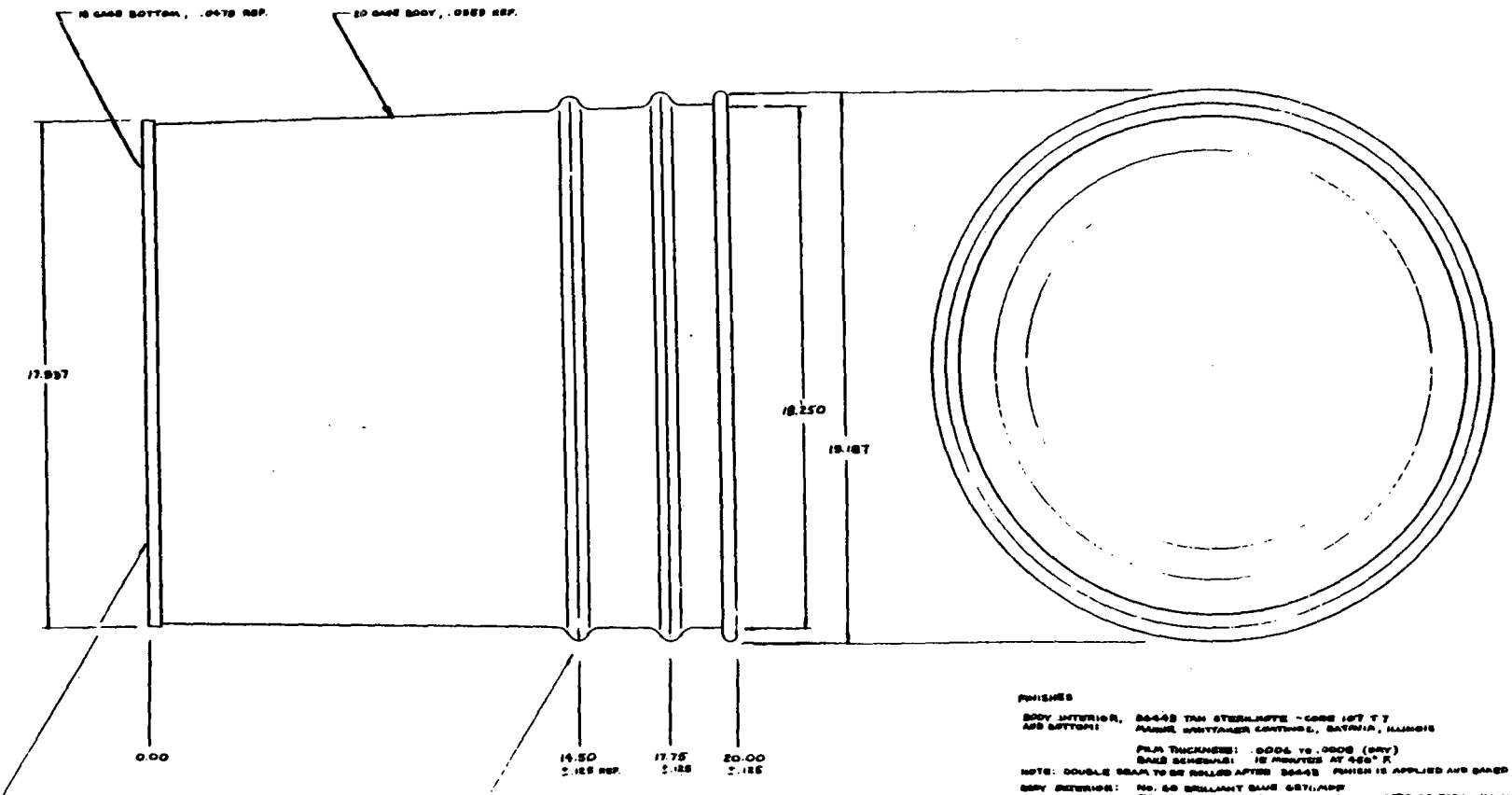
I.E. 3-2


Kleen Corporation





20-GALLON DRY CLEANING WASTE CONTAINER



FINISHES

BODY INTERIOR, AND BOTTOM: 56468 TAN STERILKOTE - CODE LOT T T
MANUF. VALENTINE COATINGS, BATAVIA, ILLINOIS

FILM THICKNESS: .0004 to .0008 (DRY)
BAKE SCHEDULE: 10 MINUTES AT 450° F.

NOTE: DOUBLE BEAM TO BE ROLLED AFTER 56468 FINISH IS APPLIED AND BAKED INTO ALL SURFACES OF BOTTOM AND INTERIOR OF BODY.

BODY EXTERIOR: No. 60 BRILLIANT BAKE 6871/MRP
MANUF. WILLIAMS - HAYWARD COATINGS, STICKNEY PARK, ILLINOIS

FILM THICKNESS: .001 NOMINAL (DRY)
BAKE SCHEDULE: 10 MINUTES AT 350° F.

SURFACE PREPARATION: DRUM BODY AND DRUM BOTTOM TO BE FABRICATED WITH STEEL RECEIVED CHEMICALLY CLEAN FROM THE MILL.

Product Development	C.R. STEEL	IRA N-5	FILTER DRUM
			603-014-100-41

Safety-Kleen Corporation, 777 Big Timber Road, Elgin, Illinois 60120

EXHIBIT I.E. 3-4

PAINT WASTE CONTAINER

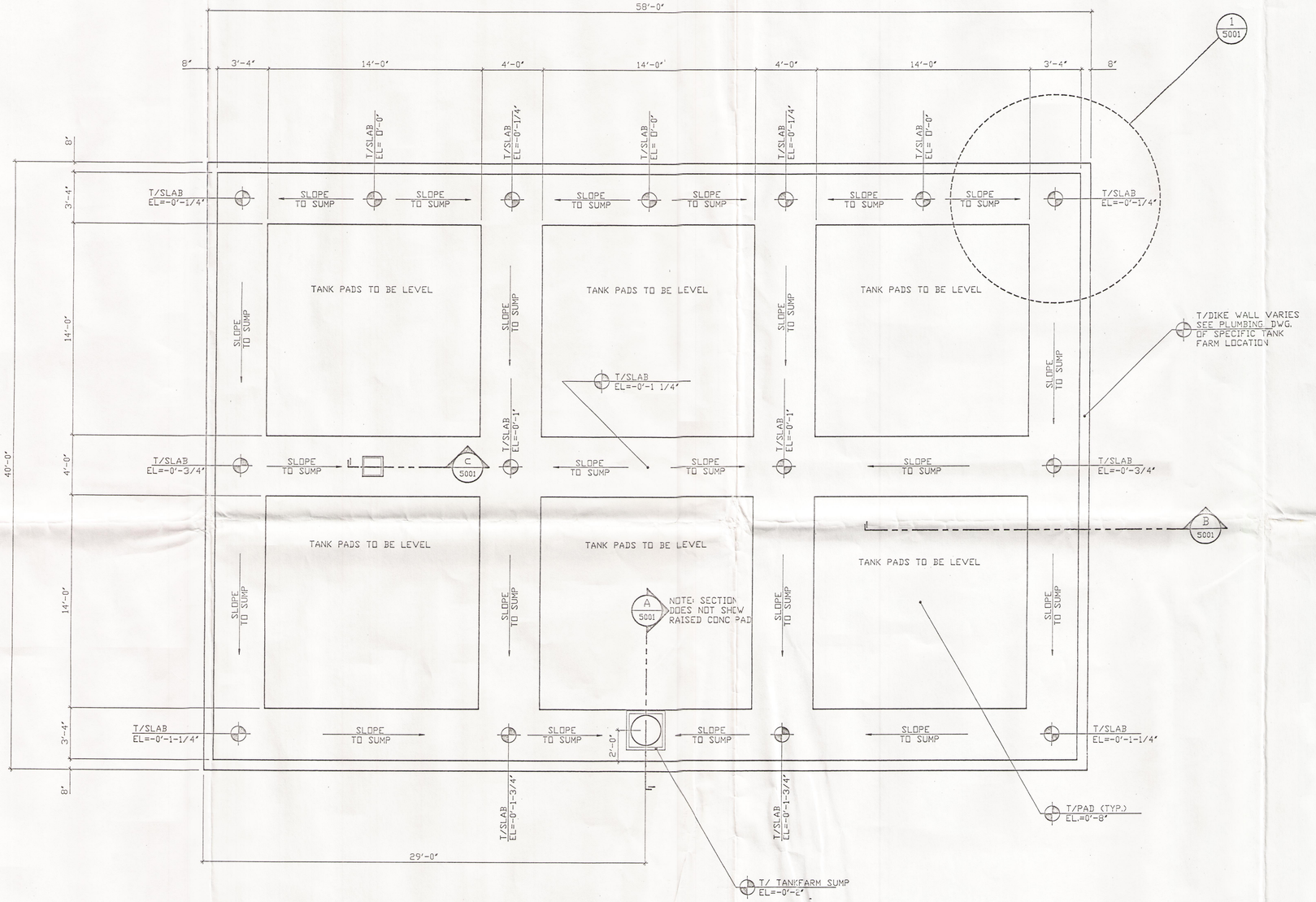
SPECIFICATIONS

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, 19 gage steel closed head drum, with 2" bung and 3/4" bung, per DOT17E
>
> 14-7/8" outer diameter x 26-7/8" high



GENERAL NOTES

1. MINIMUM SOIL BEARING CAPACITY TO BE 3000 PSF. SOIL TO COMPACTED TO A MINIMUM OF 95% OF STANDARD PROCTOR DENSITY AND UNIFORM OVER THE FOOTPRINT.
2. CONTRACTOR SHALL OBTAIN A COPY OF THE SOILS REPORT FROM S-K OR ENGR. FOR INSTRUCTIONS ON TANKFARM SOIL PREPARATION & DRAINAGE.
3. ALL CONCRETE AREAS TO BE COVERED WITH BURLAP AND KEPT CONTIUOUSLY MOIST FOR A MINIMUM OF THREE DAYS AFTER PLACEMENT AND FINISHING.
4. SLOPE CONCRETE FLOOR TO SUMP AS SHOWN ON PLAN. TANK PADS MUST BE PERFECTLY LEVEL.
5. TOP OF ALL EXPOSED CONCRETE WALL POURS TO BE SCREENED AND FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE.
7. DIKE CONTAINMENT FLOORS, WALLS AND TOP OF DIKE WALL TO BE COATED WITH TWO COATS OF SIKAGARD 62 MANUFACTURED BY SIKA CORP. OF LYNDHURST N.J. COATING SHALL HAVE A SLIP RESISTANT FINISH. ALL MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS FOR SURFACE PREPARATIONS AND APPLICATION SHALL BE STRICKLY FOLLOWED. ALLOW CONCRETE SUBSTRATE TO CURE AT LEAST 30 DAYS PRIOR TO APPLICATION OF COATING.
7. ALL CONCRETE TO HAVE A 1.5LB. MIXTURE OF FIBERS ADDED TO EVERY CUBIC YARED OF CONCRETE. FIBERS TO BE 100% VIRGIN POLYPROPYLENE, COLLATED, FIBRILLATED FIBERS FROM FIBERMESH CO. OF CHATTANOOGA, TN. OR APPROVED EQUAL. ALL MANUFACTURERS RECOMMENDATIONS AND SPECIFICATIONS SHALL BE STRICTLY FOLLOWED.
12. ALL CONCRETE WORK SHALL HAVE 4000 PSI MIN. COMPRESSIVE STRENGTH AT 28 DAYS AND 3% TO 5% AIR ENTRAINING ADMIXTURE. CONTRACTOR TO OBTAIN AND SUPPLY TESTING RESULTS OF CONCRETE CYLINDER TESTS.
14. SEE SITE SPECIFIC TANKFARM PLUMBING PLAN FOR DIKE WALL HEIGHT AND CONTAINMENT CALCULATIONS.

Exhibit I.E.3-6

NO.	DESCRIPTION	BY	CHK	APPR	DATE
1	REVISED & REDRAWN	MBH	-	-	110690

REVISIONS

TITLE

6 PACK TANKFARM CONC. PLAN

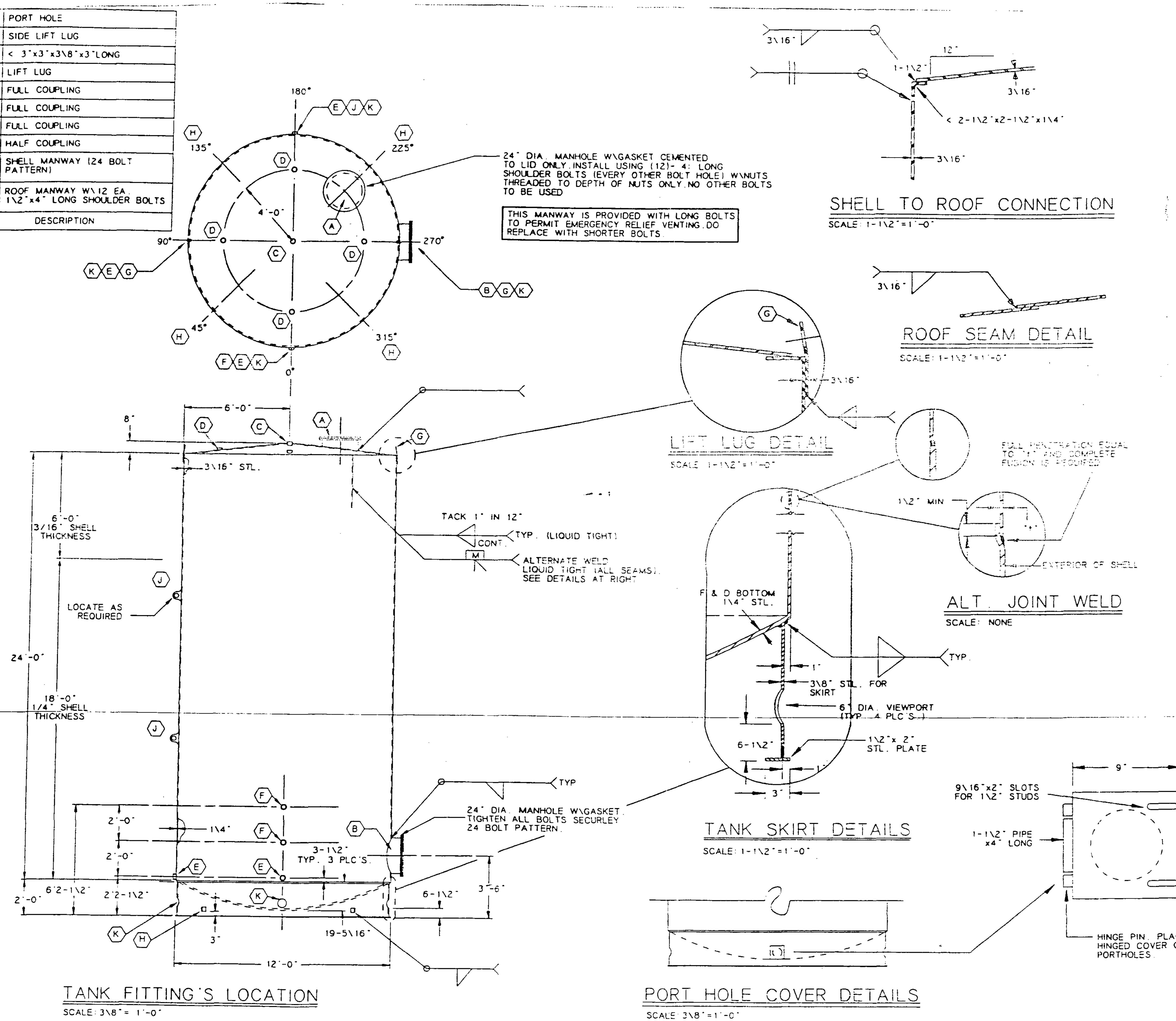
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	DP. APPR	DATE
1/4"= 1'-0"	MBH	-	-	-	11-6-90

SERVICE CENTER LOCATION: MEDLEY (MIAMI), FL.

SC-DWG-REV NO.: 309702-5000-01

MARK	QTY.	SIZE	DESCRIPTION
K	4	6"	PORT HOLE
J	2		SIDE LIFT LUG
H	4		< 3"x3"x3\8"x3"LONG
G	2		LIFT LUG
F	2	4"	FULL COUPLING
E	3	4"	FULL COUPLING
D	4	4"	FULL COUPLING
C	1	4"	HALF COUPLING
B	1	24"	SHELL MANWAY (24 BOLT PATTERN)
A	1	24"	ROOF MANWAY W\12 EA. 1\2"x4" LONG SHOULDER BOLTS



GENERAL NOTES

1) TEST PRESSURE TO BE 1-1\2 PSI AIR MIN. & 5 PSI MAX

2) CONSTRUCTION TO MEET "UNDERWRITERS LABORATORIES" REQUIREMENTS AND BE SO LABELED

3) ALL PERTINENT SAFETY REGULATIONS BOTH THE OWNER'S & "OSHA'S" SHALL BE ADHERED TO RIGIDLY. IN ADDITION ALL SAFETY PRECAUTIONS NOTED ON THE MANFACTURER'S PRODUCT DATA SHEETS AND LABELS SHALL BE OBSERVED FOR BOTH MATERIAL AND EQUIPMENT

4) INITALLY ALL SURFACES TO BE COATED SHALL BE PREPARED IN A WORKMANLIKE MANNER WITH THE OBJECTIVE OF OBTAINING A CLEAN, DRY AND PROPERLY PREPARED SUBSTRATE

5) BEFORE ANY SURFACE IS COATED, IT SHALL BE CLEANED CAREFULLY OF ALL DUST, DIRT, GREASE, LOOSE RUST, MILL SCALE, OLD PAINT, ETC.

6) ALL COATINGS SHALL BE APPLIED IN A WORKMANLIKE MANNER TO ACHIEVE THE SPECIFIED DRY MIL FILM BUILD, LEAVING A SMOOTH UNIFORM APPEARING FILM. SPRAY APPLICATION SHALL BE USED WHEREVER POSSIBLE

7) THE APPLICATION SHALL LEAVE NO SAGS, BRUSH MARKS OR OTHER DEFECTS

8) CLEAN-UP AND REMOVE ALL SAND AND DEBRIS FROM THE JOB WHEN COMPLETE.

9) SUPPORTING SKIRT SHALL BE PROTECTED BY MATERIALS HAVING A FIRE RESISTANCE RATING OF NOT LESS THAN 2 HRS. FIREPROOFING MATERIAL SHALL BE "ALBI CLAD 800" MANUFACTURED BY ALBI MFG., A DIVISION OF STAN CHEM, INC. OF EAST BERLIN, CT. OR APPROVED EQUAL BY THE OWNER. MATERIAL SHALL BE APPLIED IN STRICT ACCORDANCE WITH MFR'S. SPECIFICATIONS. FIREPROOFING SHALL BE INSTALLED IN FIELD BY OWNER

10) THE BOTTOM SHALL FLANGED & DISHED. THE DISH RADIUS SHALL EQUAL THE DIAMETER OF THE TANK & THE KNUCKLE RADIS NOT BE LESS THAN 6% OF THE DIAMETER OF THE TANK

PAINT SPECIFICATIONS

1) SURFACE PREPARATION:

COMMERCIAL BLAST CLEANING (MINIMUM) IN ACCORDANCE WITH "Steel Structures Painting Council Surface Preparation" SPECIFICATION SSPC-SP6, WITH A PROFILE OF 1.5 - 2.0 MILS

NOTE: MANUFACTURER'S INSTRUCTIONS MUST BE FOLLOWED WITHOUT EXCEPTION

2) PRIMER COAT -- APPLIED SAME DAY:

APPLY ONE COAT "SHERWIN WILLIAMS ZINC CLAD III", 3-4 MILS DRY, 6-8 MILS WET. ALLOW TO DRY 24 HOURS. ZINC CLAD III EPOXY ZINC CONSISTING OF 3 PARTS: BINDER PART A [illegible] CATALYST PART B #69V13 AND ZINC DUST PART F [illegible]

3) INTERMEDIATE COAT:

APPLY ONE COAT "SHERWIN WILLIAMS DTM" ACRYLIC GLOSS, B66 SERIES, COLOR NO. MC-64 SILVERY (LIGHT GREY) 3-4 MILS DRY, 8-10 MILS WET. (THIS IS CONTRASTING COLOR TO FINISH COAT) ALLOW TO DRY OVERNIGHT.

4) FINISH COAT:

APPLY ONE COAT "SHERWIN WILLIAMS DTM" ACRYLIC GLOSS, B66W101 (WHITE) SERIES, 3-4 MILS DRY, 8-10 MILS WET IN SELECTED COLOR.

NOTE:

COATING SYSTEM I REQUIRES MINIMUM SURFACE AND MATERIAL TEMPERATURES OF 50° - 55°F FOR PROPER CURING/DRYING. DO NOT APPLY OVER MOISTURE OF CONDENSATION

EXHIBIT I.E. 3-7

NO	DESCRIPTION	BY	CHKD	APPR	DATE
K	ADDED NOTES 3 THRU 8, ADDED PAINT SPEC. ADDITIONAL INFO [illegible]	RD			8/2/89
J	REVISED & REDRAWN ON COMPUTER	RD			5\22\89
I	MISC. REVISIONS	CB			3\89
H	ADDED NOTES	CS			2\17\89
G	ADDED NOTES	CS			2\17\89
F	ADDED NOTE 6	CS			1\30\86
E	ADDED & CHANGED DETAILS, NOTES	RLB			2\13\86
D	ADDED & CHANGED DETAILS REMOVED NOTE 6	RLB			1\23\86
C	ADDED DETAIL "A" & NOTES 5 & 6	RD			9\12\85
B	REVISED & REDRAWN	RD			8\22\85
A	RMV'D. 12K - 15K GAL. REF	RD			5\16\85

REVISIONS

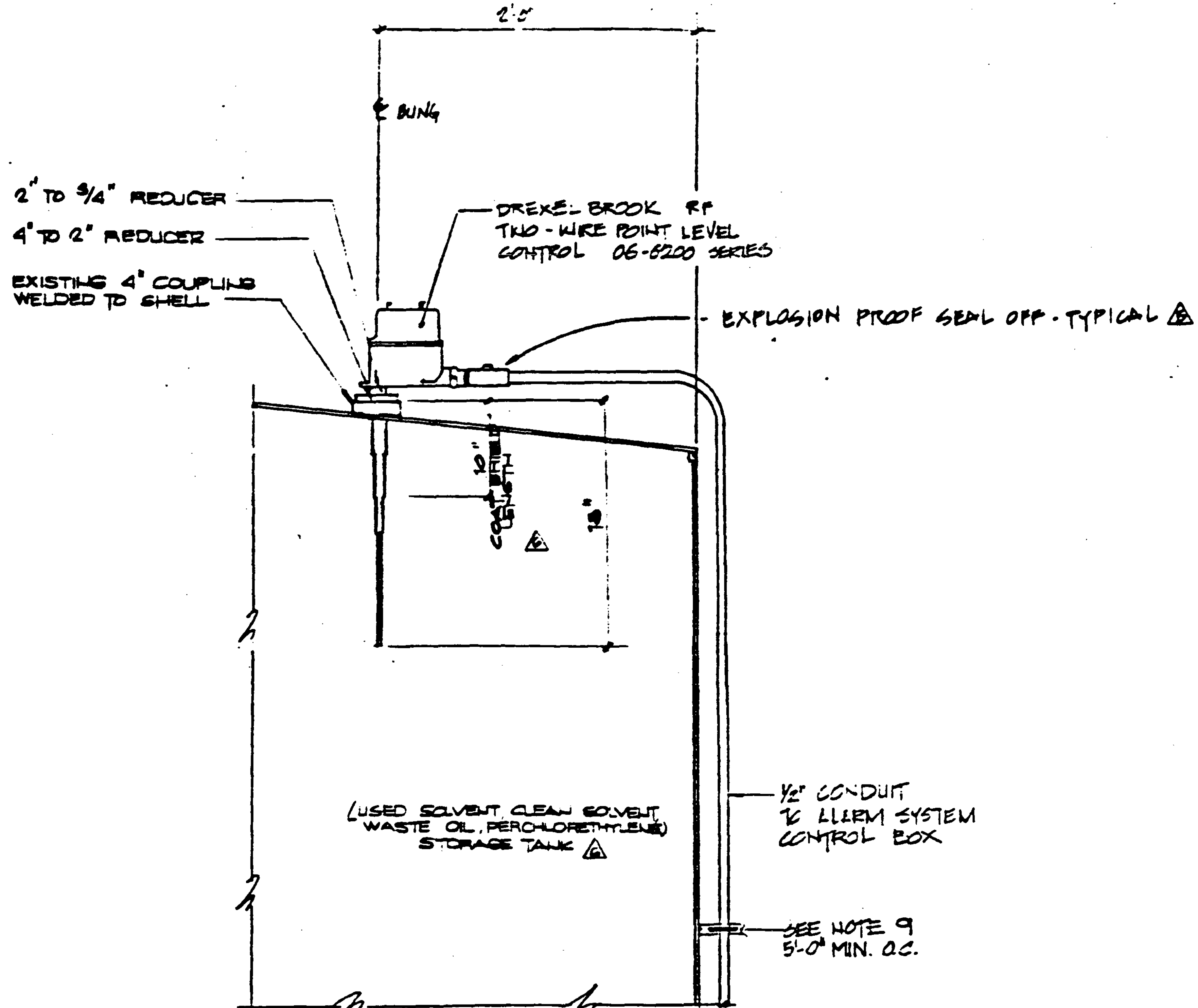
TITLE

20,000 GAL. 12'-0"
F. & D. TANK
FABRICATION DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

PROJ. ENG. APPR	OPERATIONS APPR	SCALE	DRAWN	DATE
		AS NOTED	RD	4\15\85

BRANCH	DRAWING NO.	REV
FOR BRANCH CONSTRUCTION OR IMPROVEMENT	D13073	K



ABOVEGROUND VERTICAL TANK INSTALLATION

GENERAL NOTES

1. POWER REQUIREMENT 13 TO 28 VDC
2. OUTPUT 4 - 10 ma (ALARM STATE)
   15 - 25 ma (NORMAL STATE)
3. OPERATING TEMP. -40°F TO +140°F
4. SHIELD-TO-GROUND LOADING: 25 ohm MIN. RESISTANCE
5. RFI EFFECT: LESS THAN 2 pf SHIFT IN OPERATING POINT FOR UNIT IN EXPLOSION-PROOF HOUSING FROM 5 W FIELD @ 27, 150, OR 450 mHz, AT A DISTANCE OF 5 FT. FROM EXPOSED CABLE OR SIGNAL WIRE.
6. FAIL-SAFE: SWITCHABLE OR EITHER LOW-LEVEL FAIL-SAFE (LLFS) OR HIGH-LEVEL FAIL SAFE (HLFS).
7. HOUSING: NEMA 12-WATERPROOF EXPLOSION PROOF FOR CLASS I GROUPS A, B, C, D, AND CLASS II GROUPS E, F, G DV, 1 OR 2.
8. SEE INDIVIDUAL SERVICE CENTER SITE PLANS FOR RELATIVE LOCATIONS OF THESE DETAILS.
9. CONTRACTOR TO SUPPLY & INSTALL CONDUIT SUPPORTS & BRACKETS AS REQUIRED.
10. THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORP. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED BY SAFETY-KLEEN
11. ALL ITEMS SHOWN WITH A SAFETY-KLEEN PART NUMBER WILL BE SUPPLIED BY SAFETY-KLEEN CORP. (e.g. SK-----)
12. IF INDIVIDUAL SERVICE CENTER CONDITIONS ARE NOT COVERED BY DETAILS SHOWN HERE, PLEASE CONTACT TECHNICAL SERVICES AT THE CORPORATE OFFICE FOR ASSISTANCE.
13. (4) CALCULATIONS FOR LENGTH OF PROBE INSIDE OF TANK ARE SET TO ACTIVATE THE ALARM AT THE 95% VOLUME LEVEL
14. (6) ALL CALIBRATION OF UNIT SHALL BE DONE IN ACCORDANCE WITH DREXELBROOKS RECOMMENDATIONS. CALIBRATION SHALL BE DONE AFTER ALL COMPONENTS OF SYSTEM ARE IN PLACE.
15. ALL TANKS SHALL BE GROUNDED PRIOR TO INSTALLATION OF ALARM SYSTEM.

EXHIBIT I.E. 3-8

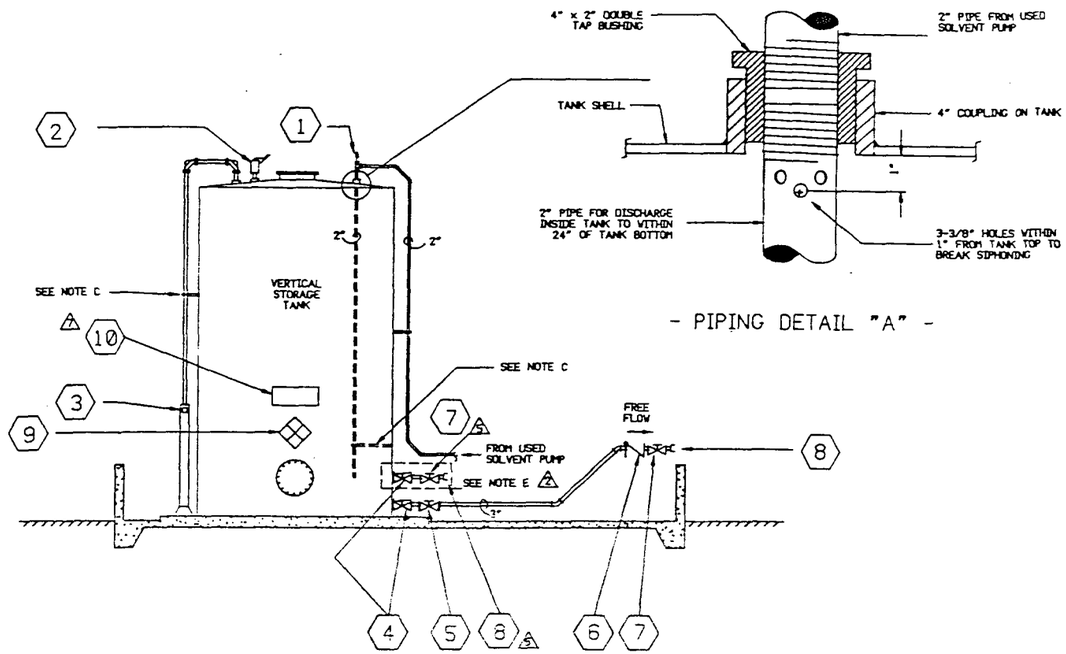
(6) ADD NOTES AND MODIFY THE DWG. ON VERT & HOR TANK INSTALLATION.	MA	7-23-91
(5) ADD "EXPLOSION PROOF SEAL OFF" NOTE	BLB	12-15-89
(4) CHANGED: PROBE DEPTH, NOTE 13	FLS	11-23-88

safety-kleen corp.
777 BIG TIMBER ROAD • ELGIN ILLINOIS 60123

HIGH LEVEL ALARM SYSTEM TRANSMITTER TO TANK INSTALLATION DETAILS

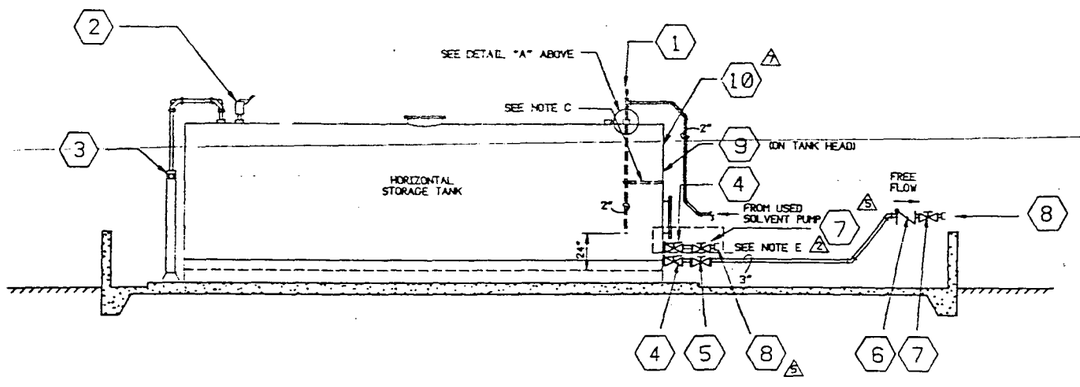
SCALE NONE			
DATE 6-22-88	(1) ADDED CHART & MISC. INFO.	RC	7/5/88
DRWN RD	(2) 16" Ø WAS 15"; 24" WAS 18"	ED	8/13/88
	(3) ADDED SEAL OFF	RD	

for: SERVICE CENTER BRANCH — D13102



VERTICAL INSTALLATION

- PIPING DETAIL "A" -



- HORIZONTAL INSTALLATION -

⚠5 NOTE: WHEN HORIZONTAL TANKS ARE USED A 3" NIPPLE IS REQUIRED BETWEEN THE INTERNAL EMERGENCY & GATE VALVE

- EQUIPMENT/FIXTURE SCHEDULE -

MARK	SIZE	DESCRIPTION	SK PART NO.	REMARKS
1	3/8"	3/8" AUTOMATIC VACUUM BREAKERS MORRISON BROS. FIG. 134-A	5274	—
2	3"	3" SCREWED PRESSURE/VACUUM VENT MORRISON BROS. FIG. 548 (2 OZ. PRESSURE - 1 OZ. VACUUM)	5339	—
3		TANK GAUGE - MOORMAN BROS. MODEL NO. 7-S	5277	SEE INSTALLATION DETAILS ON SAFETY-KLEEN DWG. A1#243
4	3"	3" INTERNAL EMERGENCY VALVE MORRISON BROS. FIG. 272-HD w/212°F FUSIBLE LINK	5287	SEE INSTALLATION DETAILS ON SAFETY-KLEEN DWG. C11302 ⚠5
5	3"	3" DUCTILE IRON GATE VALVE w/ROUND FLANGED ENDS - MORRISON BROS. FIG. 234-01	5276	SEE INSTALLATION DETAILS ON SAFETY-KLEEN DWG. C11302 ⚠5
6	3"	3" BRONZE CHECK VALVE - MORRISON BROS. FIG. 246-A	5286	—
7	3"	3" BRONZE GATE VALVE - MORRISON BROS. FIG. 235-B LOCKING TYPE	5285	—
8	3"	3" ALUMINUM CAMLOCK QUICK COUPLING - MORRISON BROS. MALE ADAPTOR PART F w/DUST CAP & CHAIN	5264	COUPLING TO BE INSTALLED SIX (6) INCHES ABOVE DIKE WALL
⚠4 9	—	NFPA MATERIAL IDENTIFICATION PLACARD	2452	DISPLAY IN PLAIN SIGHT ABOVE DIKE WALL
⚠4 10	—	"COMBUSTIBLE-KEEP FIRE AWAY" SIGN	81287	DISPLAY IN PLAIN SIGHT ABOVE DIKE WALL

- GENERAL NOTES -

(A) THIS DRAWING SUPERCEDES SAFETY-KLEEN CORP. DRAWINGS C10235 & C10236.

(B) SEE INDIVIDUAL SERVICE CENTER SITE PLANS FOR TANK DIMENSIONS AND RELATED INFORMATION AND ALSO LOCATION AND ARRANGEMENT OF THESE PIPING DETAILS.

(C) ALL PIPING TO BE SCHEDULE 40 GALVANIZED AND BE SUPPORTED EVERY 6ft RUNNING FEET - CONTRACTOR TO SUPPLY ALL BRACKETS, CLAMPS, ETC. AS REQUIRED FOR SUPPORTING PIPE - ALL EXPOSED THREADS AT JOINTS TO BE PAINTED WITH A RUST RESISTANT EXTERIOR GRADE PAINT. PIPING SUPPORT HARDWARE TO BE UNISTRUT BRAND OR APPROVED EQUIVALENT.

(D) ALL DIRECTION CHANGES IN DIRTY SOLVENT LINES TO BE MADE USING A COMBINATION OF 45° ELBOWS OR LONG SWEEP 90° ELBOWS.

⚠3⚠1 (E) THIS INSTALLATION TO BE MADE WHERE NEW TANKS ARE TO BE INSTALLED AT ANY LOCATIONS PRONE TO FREEZING. SEE INSTALLATION DETAILS ON SAFETY-KLEEN DWG. C11302.

⚠5 (F) ALL ITEMS WITH SAFETY-KLEEN PART NO. REFERENCES WILL BE SUPPLIED TO CONTRACTOR.

EXHIBIT I.E. 3-9

NO.	DESCRIPTION	BY	CHKD	APPD	DATE
⚠8	ADDED NOTE	C.S.			6/13/88
⚠7	CHANGED PART NO. 5273 TO 5338	J.S.H.			5/4/88
⚠6	ADDED "COMBUSTIBLE" SIGN	R.D.			1/27/88
⚠5	REV. GEN. NOTES NO. SYSTEM TO LETTERS	C.S.			3/28/87
⚠4	REMOVED 3" PLUG-ADDED VALVE/CAMLOCK	V.L.J.			3/28/85
⚠3	ADDED ITEM 9 TO SCHEDULE & DWG.	V.L.J.			11/5/84
⚠2	ADDED NOTE F	V.L.J.			10/23/84
⚠1	REVISED DETAIL IN NOTE E SHOWN ON DWG.	V.L.J.			12/5/83

REVISIONS

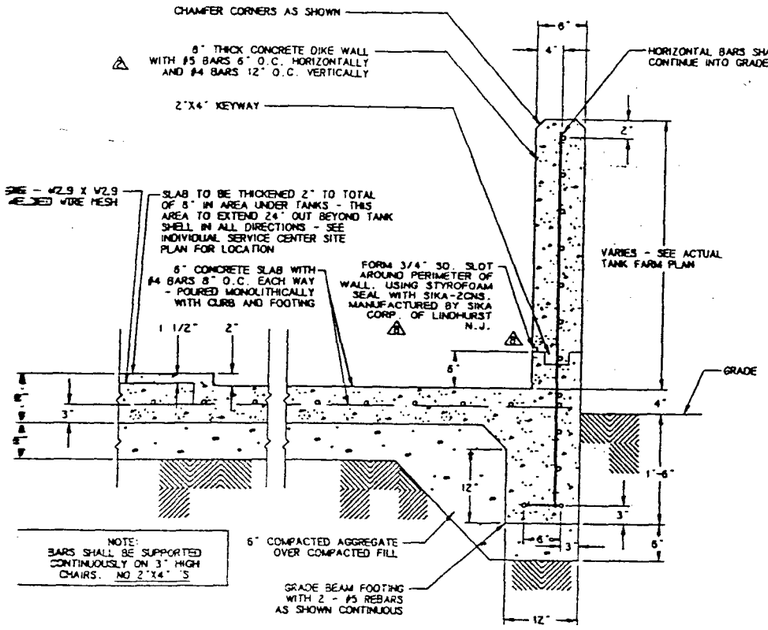
TITLE: USED SOLVENT STORAGE TANK INSTALLATION DETAILS

SAFETY-KLEEN CORP.
777 GST TYRONE ROAD, ELGIN, ILLINOIS 60120 PHONE 708/697-8460

PROCESS APPR. | OPERATIONS APPR. | SCALE: NTS | DRAWN: R.E. | DATE: 2/22/84

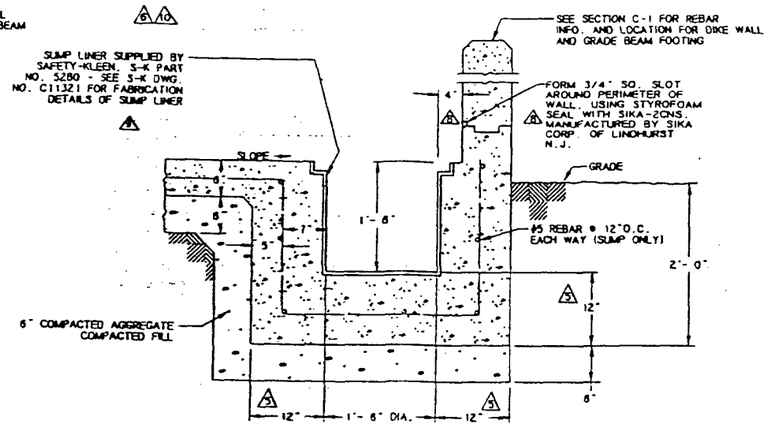
FOR BRANCH SERVICE CENTER

DRAWING NO. D11234 | REV.



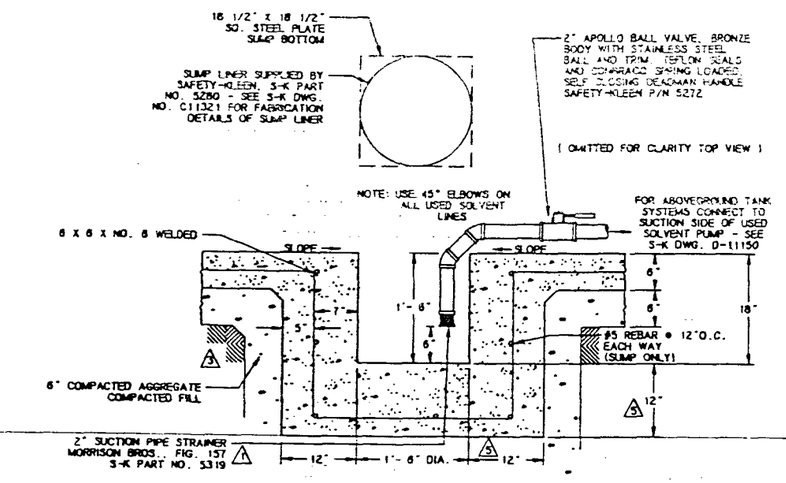
C1 SECTION C-1: TANK SLAB & DIKE WALL CONSTRUCTION DETAIL

SCALE: 1"=1'-0"



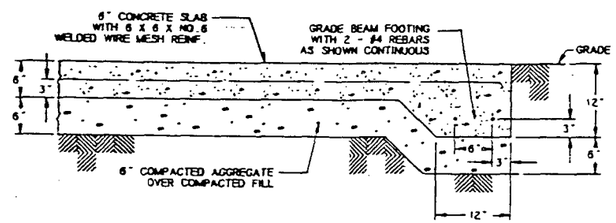
C3 SECTION C-3: TANK FARM SUMP CONSTRUCTION DETAIL

SCALE: 1"=1'-0"



C4 SECTION C-4: RETURN & FILL AREA SUMP CONSTRUCTION DETAIL

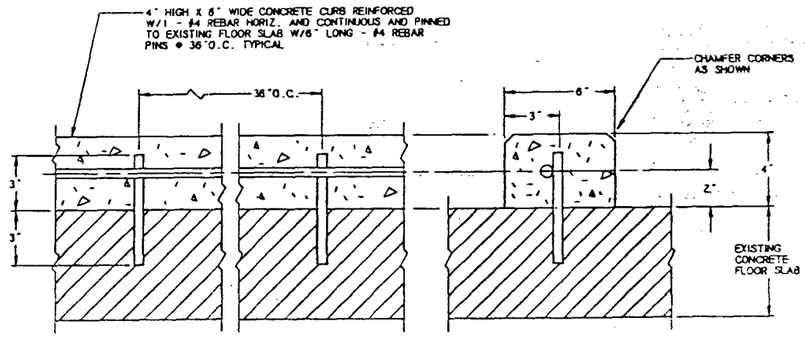
SCALE: 1"=1'-0"



C2 SECTION C-2 : SLAB CONSTRUCTION DETAIL

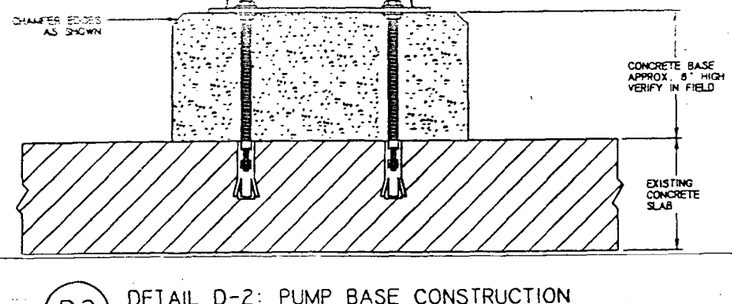
SCALE: 1"=1'-0"

NOTE: FOR AREAS WHERE CURBING IS TO BE INSTALLED, FLOOR SURFACE TO BE CLEANED AND SCRUB W/50-50 ACID SOLUTION IN PREPARATION FOR EPOXY BONDING AGENT. BONDING AGENT TO BE W.R. MEADOWS INTRALOK ACRYLIC LATEX OR APPROVED EQUAL AND TO BE APPLIED PRIOR TO POURING CURB.



D1 DETAIL D-1: CURB CONSTRUCTION

SCALE: 3" = 1'-0"



D2 DETAIL D-2: PUMP BASE CONSTRUCTION

SCALE: 3"=1'-0"

GENERAL NOTES

1. THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORP. ANY REPRODUCTION DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT BY SAFETY-KLEEN OR AS SAFETY-KLEEN MAY AGREE IN WRITING
2. THIS DRAWING SUPERCEDES SAFETY-KLEEN DRAWINGS C10240, C10962, D10507, AND D10955
3. SEE INDIVIDUAL SERVICE CENTER PLANS FOR LOCATIONS OF THESE DETAILS
4. CONCRETE TO OBTAIN 3,000 PSI STRENGTH IN 28 DAYS
5. ALL ITEMS WITH SAFETY-KLEEN PART NO. REFERENCES WILL BE SUPPLIED TO CONTRACTOR.
6. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI-301-84 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS". ALL CONCRETE SHALL HAVE Fc=3,000 PSI. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE 5-7% AIR ENTRAINMENT. COARSE AGGREGATE SHALL CONFORM TO NO. 57 IN ACCORDANCE WITH ASTM C-33.
7. ALL CONCRETE AREAS TO BE COVERED WITH BURLAP AND KEPT CONTINUOUSLY MOIST FOR A MINIMUM PERIOD OF THREE DAYS IMMEDIATELY AFTER PLACEMENT & FINISHING.
8. SLOPE ALL CONCRETE SLABS TO SUMP AS SHOWN ON PLAN. (RAISED SLAB UNDER TANKS TO BE LEVEL).
9. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL OR COMPACTED FILL. MINIMUM SOIL BEARING PRESSURE TO BE 2,500 PSF.
10. TOP OF ALL EXPOSED CONCRETE WALL POURS TO BE SCREENED AND FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE.
11. SUMPS TO BE TESTED BY CONTRACTOR WITH WATER AT FULL HEIGHT FOR A PERIOD OF 24 HOURS. WITH NO LEAKAGE ALLOWED.
12. ALL FLOORS AND SUMPS SHALL BE COATED WITH TWO COATS OF SIKAGARD 62, MANUFACTURED BY SIKA CORP. LYNDHURST, N.J. OR CONCRESIVE 1325, MANUFACTURED BY ADHESIVE ENGINEERING CO. SAN CARLOS, CA. COATING SHALL HAVE A SLIP-RESISTANT FINISH PER MANUFACTURER'S SPECIFICATIONS. MANUFACTURER'S RECOMMENDATIONS FOR SURFACE PREPARATION AND APPLICATION SHALL BE STRICTLY FOLLOWED. ALLOW CONCRETE SUBSTRATE TO CURE AT LEAST 30 DAYS PRIOR TO APPLICATION OF COATING.

EXHIBIT I.E. 3-10

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
1	RMV'D. MESH FROM SECT. C3	RD			4/14/
2	ADDED 3/4" SLOT & LABEL C-1 & C-3	BD			3/7/
3	REVISED SECTION C-1	RD			1/5/
4	ADDED COUPLING NOTE	RD			9/29/
5	THICKENED CONC. IN SUMP SECT. "3 C-3 & C-4	RD			9/22/
6	RMV'D 2" DRAIN LINE & BALL VALVE/S	RD			9/15/
7	RMV'D U.S. DRAIN LINE FROM SUMP DET. C-4	RD			8/9/
8	VERT. BAR SPACING WAS 48"	WLJ			9/23/
9	ADDED NOTE 5 & PIPE STRAINER	WLJ			9/23/

8H1
3/7/89 JS

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
10	ADDED NOTES 6 THRU 12	RD			1/27/
11	REVISED DRAIN PLUG SHOWED CORRECTED VERSION OF SUMP TRAINING SUPPORT	RD			6/20/88

TITLE: TYPICAL CONCRETE CONSTRUCTION DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

FROM: ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		AS SHOWN	NWO-PSG	12/16/

BRANCH FOR SERVICE CENTER BRANCH — DRAWING NO. D11322 — REV. J

safety-kleen

November 9, 1990
DDD 90-135

SIKA CORP.
201 Polito Avenue
Lindhurst, NJ 07071
Attn: Edwin Diaz

Subject: Testing of Sikadur 51 NS-SL and Sika Guard 51

Dear Mr. Diaz,

Please provide Safety-Kleen Corp. with a certification letter demonstrating that your products, Sikadur 51 NS-SL and Sika Guard 62, when used to seal concrete floors are compatible with and resistant to the following chemicals:

1. Mineral spirits
2. Perchloroethylene
3. Methylenechloride
4. Cresylic acid
5. Orthodichlorobenzene
6. Trichlorotrifluoroethane

Please forward the test information to:

Safety-Kleen Corp.
O'Hare Technical Center
P.O. Box 92050
Elk Grove Village, IL 60009-2050
Attn: Daniel D. Dowling

Thank you in advance for your cooperation. If you have any questions or comments please feel free to call at 312/694-2700 ext. 7044.

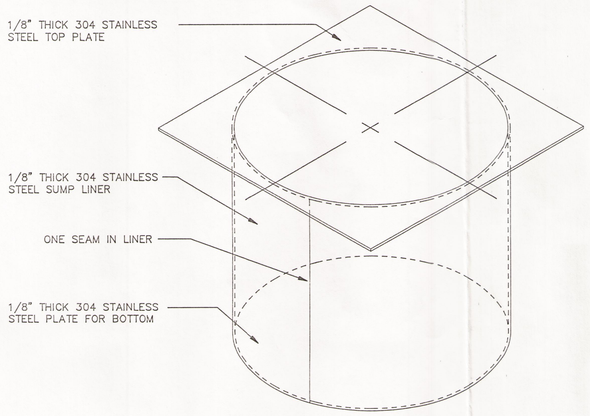
Sincerely,

Daniel Dowling

DANIEL D. DOWLING
Project Manager
Branch Constr. & Maint.

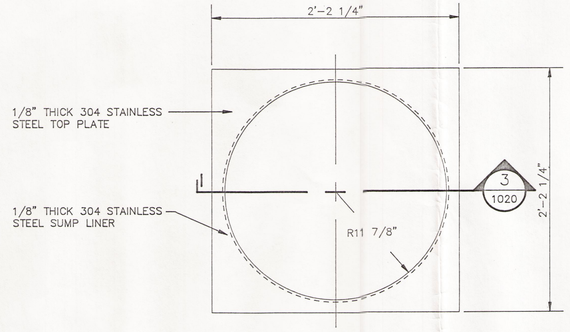
DDD:bjr

cc: William Heyn
Melissa Hlabasko
Ellen Jurczak
Jack Krivec
Cindy Norton - **ERM South**



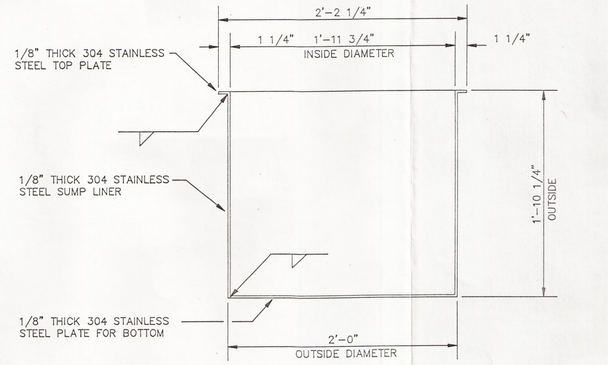
1 SUMP LINER

NOT TO SCALE



2 SUMP LINER PLAN

NOT TO SCALE

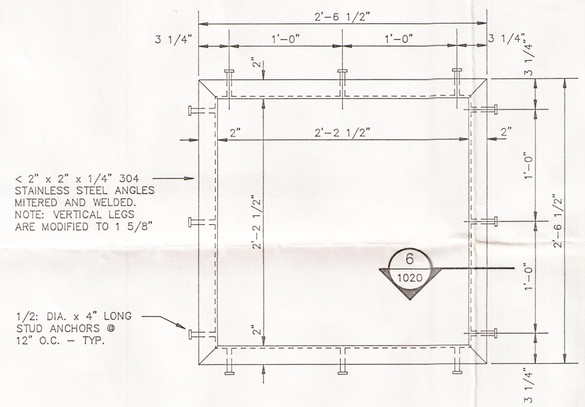


3 SUMP LINER SECTION

NOT TO SCALE

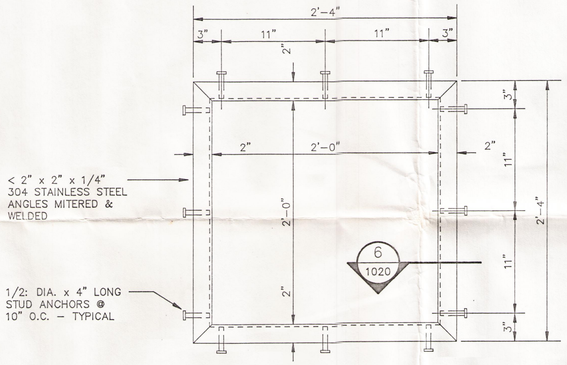
GENERAL NOTES

THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORPORATION. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT BY SAFETY-KLEEN OR AS SAFETY-KLEEN MAY AGREE IN WRITING.



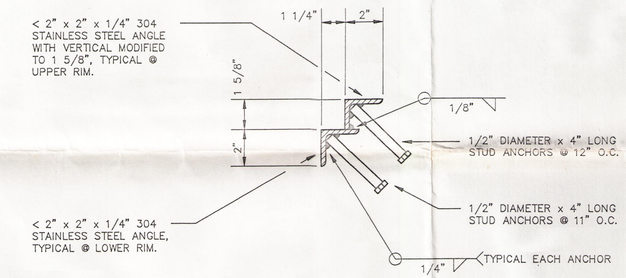
4 UPPER SUMP RIM DETAIL

SCALE: 1 1/2" = 1'-0"



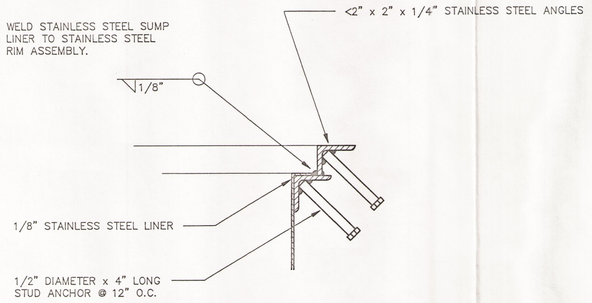
5 LOWER SUMP RIM DETAIL

SCALE: 1 1/2" = 1'-0"



6 SUMP RIM DETAIL

SCALE: 3" = 1'-0"



7 LINER AND RIM ASSEMBLY DETAIL

SCALE: 3" = 1'-0"

NO.	DESCRIPTION	BY	CHK	APPR	DATE

REVISIONS

TITLE

24" DIAMETER STAINLESS STEEL SUMP LINER FABRICATION

SAFETY-KLEEN CORP.

777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS SHOWN	JHD	-	-	WOH	9-25-90

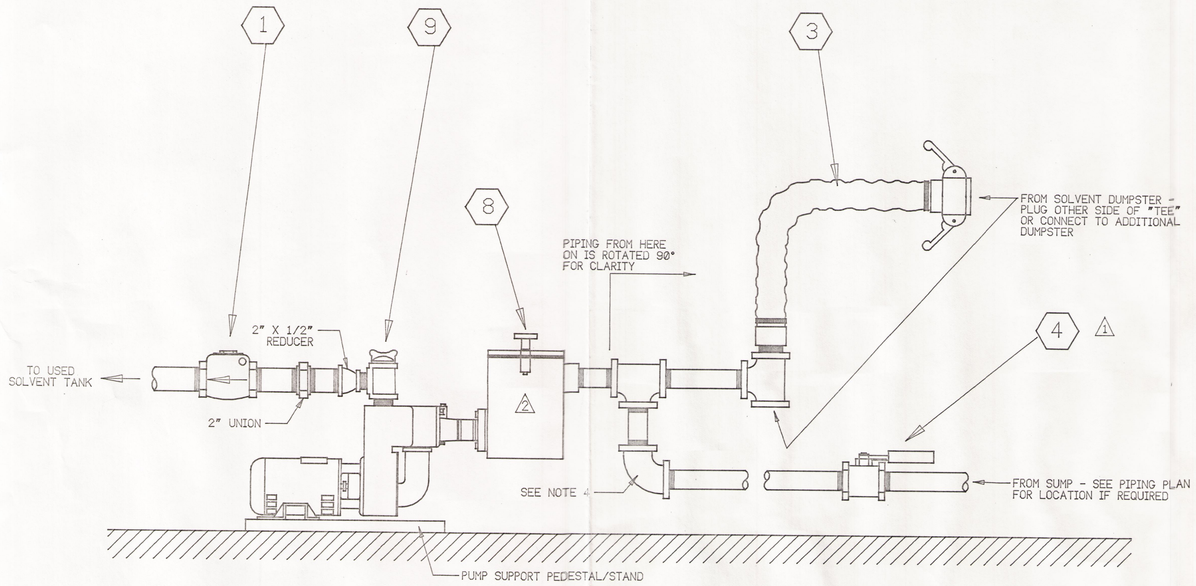
SERVICE CENTER STANDARDS

FABRICATION

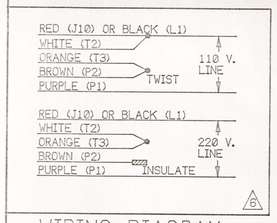
STD-DWG-REV NO.

STD-1020-00

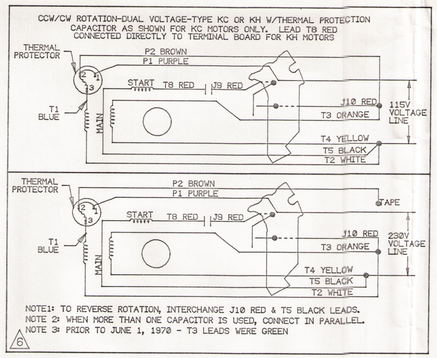
Exhibit I.E.3-12



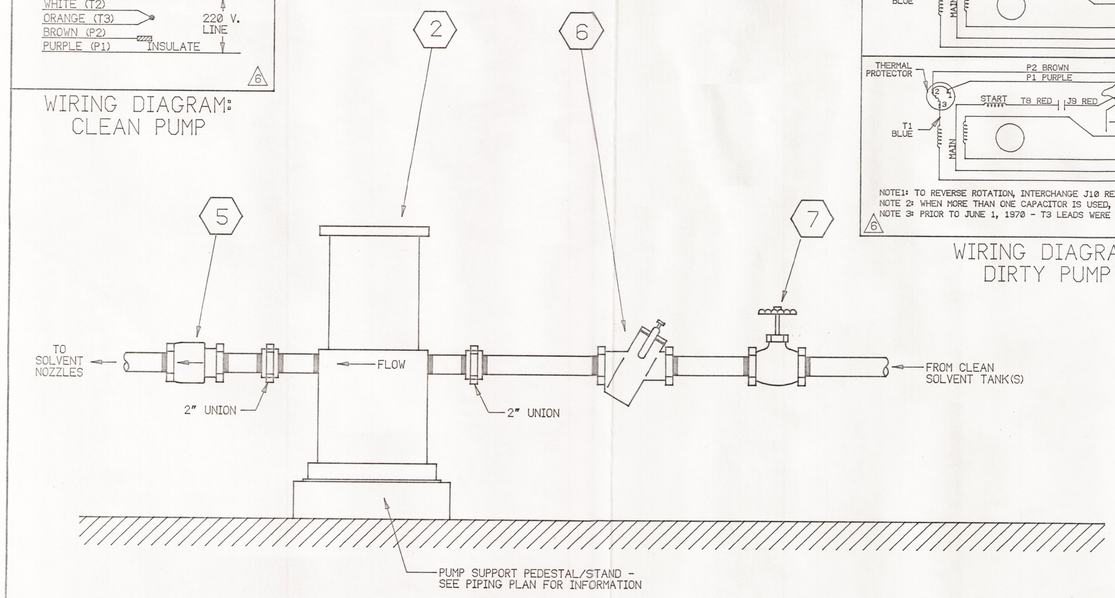
USED SOLVENT PUMP INSTALLATION



WIRING DIAGRAM: CLEAN PUMP



WIRING DIAGRAM: DIRTY PUMP



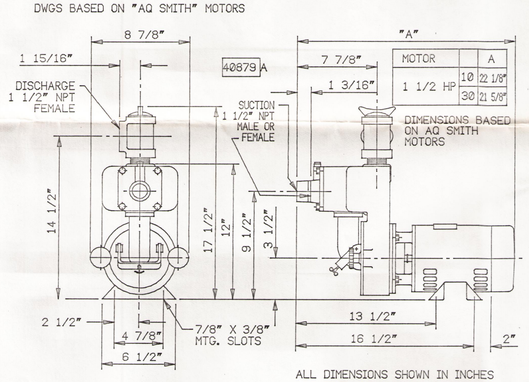
CLEAN SOLVENT PUMP INSTALLATION

EQUIPMENT / FIXTURE SCHEDULE

MARK	SIZE	DESCRIPTION	SK PART NO.	REMARKS
1	2"	2" BRONZE CHECK VALVE - MORRISON BROS. FIG. 248-A	5288	
2	2"	2" MARLOW PUMP - 20 EVP 10A 1 HP EXPLOSION PROOF MOTOR W/JUNCTION BOX - VITON FITTED	5240	SEE SPECIFICATION DETAILS ON SAFETY-KLEEN DWG. A11118 BELOW
3	2"	2" DUMPSTER HOSE ASSEMBLY	5234	SEE SAFETY-KLEEN DWG. D10452 FOR DETAILED INFORMATION
1 4	2"	2" APOLLO BALL VALVE, BRONZE BODY W/STAINLESS STEEL BALL & TRIM. TEFLON SEALS & CONBRACO SPRING LOADED SELF CLOSING DEADMAN HANDLE	5272	
5	2"	2" BACK PRESSURE VALVE VERTICAL TYPE WITH 6 PSI SPRING SETTING - MORRISON BROS. FIG. 158-B/PR (15 P.S.I. OPEN)	5268	FOR ABOVEGROUND TANK INSTALLATION ONLY
6	2"	2" LINE STRAINER W/TOP CLEAN-OUT W/#20 MESH MORRISON BROS. FIG. 286	5269	
7	2"	2" BRONZE GATE VALVE MORRISON BROS. FIG. 235	5236	
2 8	2"	2" MARLOW SUCTION STRAINER ASSEMBLY MODEL 2B10X W/STAINLESS STEEL BASKET W/#10 PERFORATIONS	5313	FLANGED DISCHARGE PORT OF STRAINER SERVES AS UNION ON SUCTION SIDE OF PUMP
9	1 1/2"	1 1/2" MARLOW PUMP - 1 1/2HR49EC, SINGLE PHASE, EXPLOSION PROOF, BUNA FITTED, SELF PRIMING CENTRIFUGAL	5330	SEE DETAIL BELOW LEFT

PUMP UNITS WITH OPEN MOTORS
1 1/2HR49EC

DWGS BASED ON "AQ SMITH" MOTORS

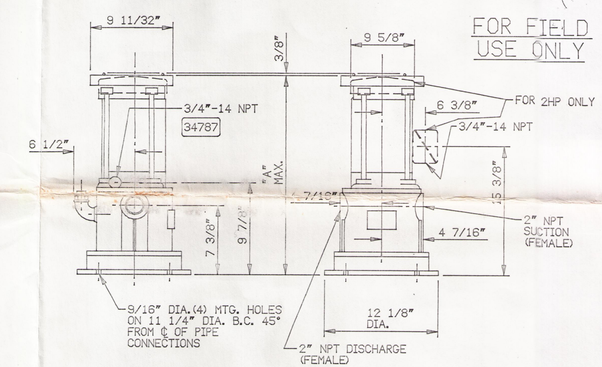


ALL DIMENSIONS SHOWN IN INCHES

THESE DIMENSIONS NOT TO BE USED FOR CONSTRUCTION PURPOSES WITHOUT FORMAL FACTORY APPROVAL.

GENERAL NOTES

1. THIS DRAWING SUPERCEDES SAFTY-KLEEN CORP. DRAWING A1118
2. SEE INDIVIDUAL SERVICE CENTER SITE & PIPING PLANS FOR LOCATIONS & ARRANGEMENT OF THESE DETAILS.
3. FOR UNDERGROUND TANK INSTALLATIONS, A 90° CHECK VALVE MORRISON BROS. FIG. 137 OR APPROVED EQUAL SHOULD BE INSTALLED AT TOP OF TANK ON CLEAN PUMP SUCTION LINE (CLEAN TANKS ONLY).
4. ALL PIPING TO BE 2" SCHEDULE 40 GALVANIZED UNLESS OTHERWISE SPECIFIED. ALL CHANGES OF DIRECTION IN DIRTY SOLVENT PIPING TO BE ACCOMPLISHED USING EITHER (2)-45° ELBOWS OR (1)-LONG RADIUS 90° ELBOW.
5. THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORP. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT BY SAFETY-KLEEN OR AS SAFETY-KLEEN MAY AGREE IN WRITING.
6. ALL ITEMS WITH SAFETY-KLEEN PART NO. REFERENCES WILL BE SUPPLIED TO CONTRACTOR.



GENERAL NOTES

1 MODEL TO BE USED BY SAFETY-KLEEN CORP. - MODEL 20 EVP-10A, 1 HP - 2" WITH EXPLOSION PROOF MOTOR W/JUNCTION BOX & VITON FITTED, SINGLE PHASE 60 CYCLE 115/230V.

2 SEE INDIVIDUAL SERVICE CENTER SITE PLANS FOR LOCATION OF THE INSTALLATION.

S-K PART NO.	G.E. EXPL. PROOF MOTORS				
	HP	PHASE	CYCLE	A	
5240		1	60	20 13/32"	115/230

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
6	ADDED W.D.'S FOR CLEAN & USED PUMPS	RD			9/6/88
5	ADDED NEW PUMP FOR DIRTY SOLVENT TO VIEW & TABLE; ADDED PUMP SPEC.'S	RD			4/18/86
4	ADDED NOTE 6	WLJ			10/23/84
3	ADDED PUMP SPECS - DWG A11118	WLJ			5/3/84
2	ADDED ITEM (8) & ADDED TO NOTE (4)	WLJ			2/21/84
1	CHANGED ITEM (4) TO NEW TYPE VALVE	WLJ			2/19/83

REVISIONS

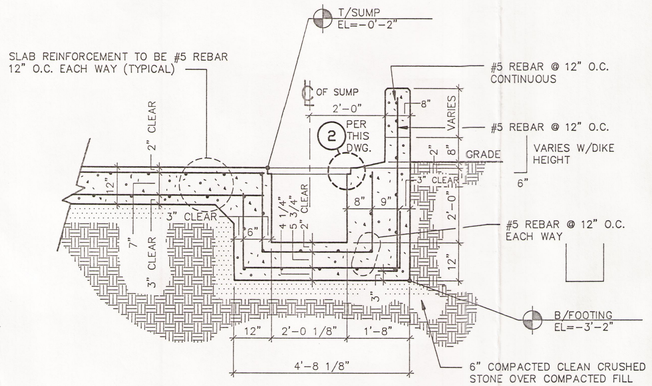
TITLE: SOLVENT PUMP PIPING INSTALLATION DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		NTS	NWD-PBG	2/24/89

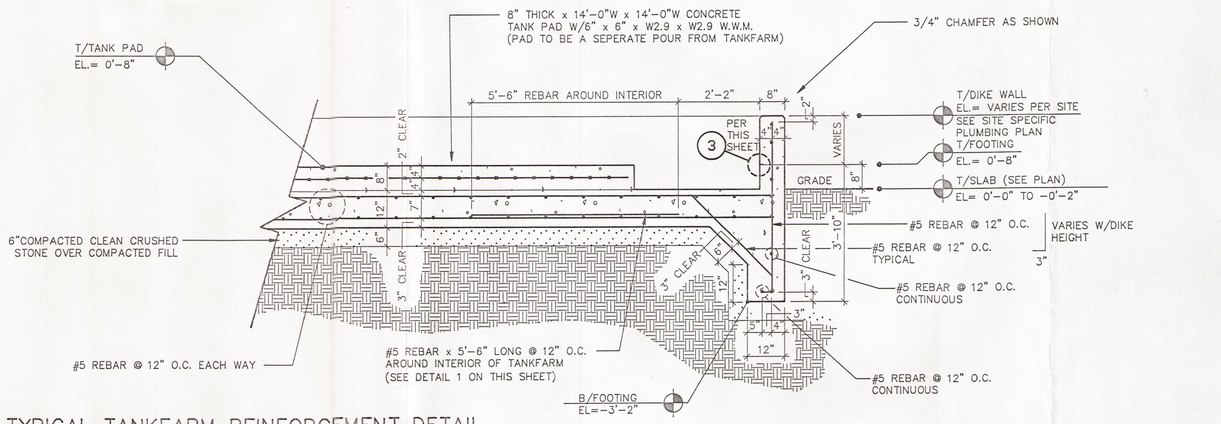
BRANCH: FOR SERVICE CENTER BRANCH | DRAWING NO.: D11150 | REV.: 6

Exhibit I.E.3-13
BJS
2/24/89 PBG



A TANKFARM SUMP SECTION

SCALE: 1/2" = 1'-0"



B TYPICAL TANKFARM REINFORCEMENT DETAIL

SCALE: 1/2" = 1'-0"

GENERAL NOTES

1.) PRIOR TO PLACEMENT OF REINFORCING STEEL, THE CONTACT SURFACE WILL HAVE ALL LOOSE MATERIALS REMOVED.

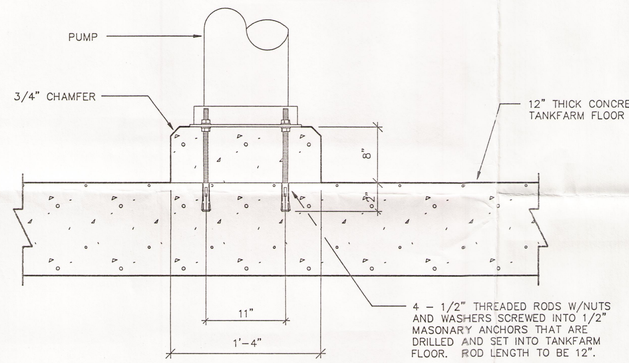
2.) ALL REBAR TO BE EPOXY COATED.

3.) ALL REBAR TO BE GRADE 60 BILLET STEEL CONFORMING TO ASTM-615 SPECIFICATIONS.

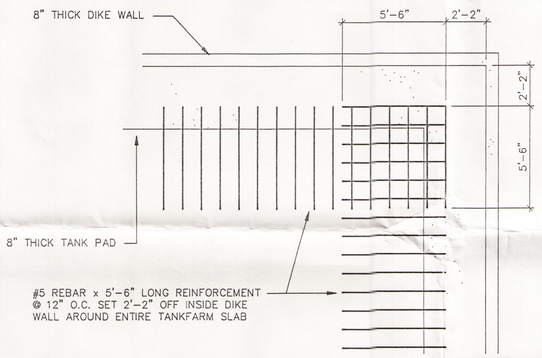
4.) MINIMUM CONCRETE COVER FOR REINFORCEMENT TO BE 3" FOR CONCRETE CAST AGAINST SOIL, AND TO BE 2" FOR CONCRETE EXPOSED TO WEATHER.

5.) SUMP TO BE TESTED BY CONTRACTOR WITH WATER AT FULL HEIGHT FOR A PERIOD OF 24 HOURS WITH NO LEAKAGE ALLOWED. THIS TEST IS TO BE CONDUCTED BEFORE AND AFTER INSTALLATION.

NOTE:
FOR PUMP BASE PLACEMENT SEE
SITE SPECIFIC TANKFARM PLUMBING
PLAN.

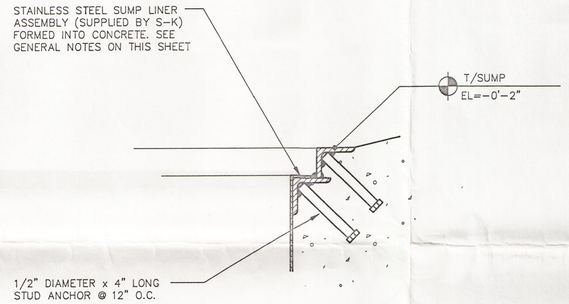


C TANKFARM PUMP BASE SECTION



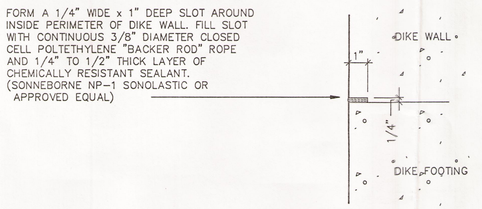
1 TANKFARM REINFORCEMENT DETAIL

SCALE: 1/4" = 1'-0"



2 TANKFARM SUMP DETAIL

SCALE: 3" = 1'-0"



3 DIKE WALL TO FOOTING DETAIL

SCALE: 3" = 1'-0"

NO.	DESCRIPTION	BY	CHK	APPR	DATE

REVISIONS

TITLE

TANKFARM SECTIONS/DETAILS

SAFETY-KLEEN CORP.

777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
AS SHOWN	JHD	-	-	WDH	11-6-90

SERVICE CENTER STANDARDS

MEDLEY (MIAMI), FL.

STD-DWG-REV NO.

309702-5001-00

RESPONSE 5

I.E.4 INSPECTION OF WASTE MANAGEMENT FACILITIES

The purpose of the inspection plan is to establish a procedure and schedule for the systematic monitoring and inspection of hazardous waste management areas and other material management facilities to insure proper operation and maintain compliance. The branch manager or his designate is responsible for carrying out the inspections of all hazardous waste management facilities in accordance with the following procedure and schedule.

Daily inspections of container storage areas consist of the following:

a. Physically examine the container (drum) storage area to verify that there have been no leaks which have occurred since the last inspection.
b. Verify that there are no drums that have been damaged or rusted to the point of near leakage.
c. Replace or adjust damaged, missing or loose fasteners.
d. Examine and verify that all container identification, dates, loading data, hazardous waste labels are attached and current.
e. Inspect containment areas to detect signs of deterioration and failure of the containment system such as cracks, breakage, settlement, spillage.
f. Check container placement and stacking such as aisle space, height and stability of stacks.

Daily inspections of aboveground tank system consist of the following:

a. Check the automatic high level alarm. In addition, using the gauge, measure the liquid level of the solvent in the aboveground tanks in inches to double check the proper functioning of the automatic alarm system and to determine any unexpected deviation in data or a sudden drop in the liquid level.

b. Inspect solvent dispensing hoses, connections and valves for any leaks, damage or wear that could cause a leak to develop.

c. The hose and unloading pipe should be drained so that all of the solvent is returned to storage.

d. Valves should be inspected for proper seat. Stem leaks from worn glands and warped valve bodies should be repaired. If the valve cannot be repaired, replace the unit.

e. Pumps should be inspected for packing leaks and cool, quiet operation.

f. The inspection of solvent return receptacle (wet dumpster) consists of the inspection for leaks and excess dumpster mud build-up.

The tanks will be periodically inspected and tested. This inspection and testing will involve withdrawal of contents, a squeegie cleaning, visual inspection, and performance of a leak detection test. Frequency and method of future inspection and testing will be determined based upon results of prior evaluations.

INSPECTION OF EMERGENCY AND SPILL CONTROL EQUIPMENT

A weekly inspection of fire extinguishers must be performed to insure that the tag date has not expired and the units are properly charged and accessible. The unit must be inspected by a fire extinguisher supplier on a yearly basis.

Weekly inspection of eye wash stand must be performed to assure accessibility and operation. The inventory of first aid kit must also be checked on a weekly basis.

There must be a weekly check of the supply of spill control equipment (absorbent material) and the conditions and inventory of other emergency equipment (gloves, aprons, eye protection, respirators and other personal protective equipment).

INSPECTION OF TRANSPORTATION EQUIPMENT

The purpose of this inspection plan is to establish a procedure and schedule for the systematic monitoring and inspection of the route trucks to insure proper operation and safety of the equipment.

The branch manager or his designate is responsible for the daily inspection of each route vehicle to insure the proper operation of brakes, lights, turn signals, emergency flashers and wipers. Trucks dispatched from recycle center should also be noted for their operation.

Daily inspection of safety equipment such as sorbent, eyewash, fire extinguisher, first aid kit, and reflector kits on the route vehicles must be performed.

Any equipment that is inoperative or unavailable shall be immediately repaired or replaced.

VERIFICATION OF THE SITE SECURITY AND INSPECTION RECORDS

The facility security (gates, locks) is inspected weekly for any evidence of sticking, corrosion, or uncommon activity. The fence itself is checked for deterioration, gaps under it and broken wire ties.

A copy of the facility inspection plan described in the earlier subsections of this chapter is in Exhibit I.E.4-1. This exhibit provides a record for the inspection-related activities. These records verify that the facility inspection is properly carried out and corrective actions, when necessary, are taken.

CORRECTIVE ACTION

Any discrepancies or deficiencies found during the facility inspection must be corrected expediently to insure that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or an accident has already occurred, remedial

action must be taken immediately. The branch manager of the service center has the overall responsibility for remedying any discrepancies found during the facility inspection.

AVAILABLE EQUIPMENT AND COMMUNICATION

Due to the small size of the facility, routine communication is usually accomplished by voice; however, an intercom is also available. Telephones are used in case of a spill or fire emergency to summon assistance. Emergency telephone numbers are posted by each phone in the office. Included with these phone numbers is the 24-hour emergency number to the Corporate Environment, Health and Safety Department in Elgin, Illinois. See Exhibits I.B 3-5 and I.B.3-6 for locations of telephones, fire extinguishers, the first aid kit, and the emergency eyewash. Other emergency response equipment is kept in a small storage area inside the warehouse near the return and fill dock; the equipment includes mops and bucket, soap, shovels, and spill sorbent pads. Rubber gloves, boots, pumps, and wet/dry vacuum cleaner are stored in an emergency supply area near the drum storage area. Exhibit I.E.4-2 summarizes the type, quantity, storage location, and capabilities of all the emergency equipment available at this service center. The city water supply is accessible for domestic use, decontamination, and fire fighting. Adequate aisle space is provided in the drum storage area for ease of movement in an emergency situation.

The equipment available at the service center for emergency situations is adequate for most cases. Emergency situations may require the assistance of local or special emergency response teams or cleanup contractors. The facility is constructed and operated in accordance with National Fire Protection Association (NFPA) standards and applicable local ordinances. Applicable health and safety standards are also observed at the service center. Air quality surveys conducted by independent industrial hygienists at various service centers have shown that the air quality is within Threshold Limit Values (TLV) as specified by OSHA and no respirator or special protection unit is required.

RESPONSIBILITY FOR PREPAREDNESS AND PREVENTION PLAN

The training of employees for this plan's implementation is the responsibility of the branch manager and the corporate staff. The training program is described in the Personnel Training Plan (Section I.E.5)

INSPECTION LOG SHEET FOR: Daily Inspection of STORAGE TANK SYSTEM

INSPECTOR'S NAME/TITLE: _____ I.E.4-1

INSPECTOR'S SIGNATURE: _____

	MON	TUES	WED	THURS	FRI
DATE:(M/D/Y)					
TIME:					

STORAGE TANKS:
(TANKS MUST NEVER BE MORE THAN 95% FULL!)

Volume in Product Tank (in./gal.)					
Volume in Second Product Tank (in./gal.)					
Volume in Waste Tank (in./gal.)					
Volume in Second Waste Tank (in./gal.)					

Tank Exterior	A* N	A N	A N	A N	A N

If 'N', circle appropriate problem: rusty or loose anchoring, lack of grounding, wet spots, discoloration, leaks, distortion, other: _____

High Level Alarms	A N	A N	A N	A N	A N

If 'N', circle appropriate problem: malfunctioning "Power On" light, malfunctioning siren/strobe light, other: _____

Volume Gauges	A N	A N	A N	A N	A N

If 'N', circle appropriate problem: disconnected, sticking, condensation, other: _____

CONTAINMENT AREA (Tank Dike):

Bottom and Walls	A N	A N	A N	A N	A N

If 'N', circle appropriate problem: cracks, debris in dike, open drums in dike, ponding/wet spots/stains, deterioration, displacement, leaks, other: _____

Self-closing Drain Valve	A N	A N	A N	A N	A N

If 'N', circle appropriate problem: open, leaks, other: _____

Rigid Piping and Supports	A N	A N	A N	A N	A N

If 'N', circle appropriate problem: distortion, corrosion, paint failure, leaks, other: _____

OBSERVATIONS, COMMENTS, DATE AND NATURE OF ANY REPAIRS: _____

*A = ACCEPTABLE

N = NOT ACCEPTABLE

(IF AN ITEM IS NOT APPLICABLE, ENTER 'N/A' AFTER IT AND DRAW A LINE THROUGH THE 'ACCEPTABLE/NOT ACCEPTABLE' ROW)

INSPECTION LOG SHEET FOR: Daily Inspection of STORAGE TANK SYSTEM

I.E.4-1

INSPECTOR'S NAME/TITLE: _____

INSPECTOR'S SIGNATURE: _____

	MON	TUES	WED	THURS	FRI
TRANSFER PUMPS AND HOSES					
Pump Seals	A* N	A N	A N	A N	A N
If 'N', circle appropriate problem: leaks, other: _____					
Motors	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: overheating, other: _____					
Fittings	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: leaks, other: _____					
Valves	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: leaks, sticking, other: _____					
Hose Connections and Fittings	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: cracked, loose, leaks, other: _____					
Hose Body	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: crushed, cracked, thin spots, leaks, other: _____					
RETURN AND FILL STATION					
Wet Dumpster	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: excess sediment buildup, leaks, rust, split seams, distortion, deterioration, excess debris, other: _____					
Secondary Containment	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: excess sediment/liquid, leaks, deterioration, distortion, excess debris, other: _____					
Loading/Unloading Area	A N	A N	A N	A N	A N
If 'N', circle appropriate problem: cracks, ponding/wet spots, deterioration, other: _____					

OBSERVATIONS, COMMENTS, DATE AND NATURE OF ANY REPAIRS: _____

*A = ACCEPTABLE

N = NOT ACCEPTABLE

(IF AN ITEM IS NOT APPLICABLE, ENTER 'N/A' AFTER IT AND DRAW A LINE THROUGH THE 'ACCEPTABLE/NOT ACCEPTABLE' ROW)

INSPECTION LOG SHEET FOR: Daily Inspection of DRUM STORAGE AREA – A log must be completed for each storage area.

DESCRIPTION OF AREA (e.g., metal shelter, northeast corner of warehouse, etc.): _____

PERMITTED STORAGE VOLUME: _____ I.E.4-1

INSPECTOR'S NAME/TITLE: _____

INSPECTOR'S SIGNATURE: _____

	MON	TUES	WED	THURS	FRI
DATE:(M/D/Y)					
TIME:					
CONTAINERS:					
Number/Volume* of M.S. Waste Drums:					
Number/Volume of I.C. Waste Drums:					
Number/Volume of Dry Cleaning Waste Drums:					
Number/Volume of Dry Cleaning Waste Boxes:					
Number/Volume of Paint Waste Drums:					
Number/Volume of Paint Waste Pails:					
TOTAL VOLUME (IN GALLONS):					
A**N	A N	A N	A N	A N	A N

If 'N', circle appropriate problem: Total volume exceeds the amount for which the facility is permitted, other: _____

Condition of Drums/Boxes A N A N A N A N A N

If 'N', circle appropriate problem: missing or loose lids, missing, incorrect or incomplete labels, rust, leaks, distortion, other: _____

Stacking/Placement/Aisle Space A N A N A N A N A N

If 'N', circle appropriate problem: different from Part B Floor Plan, containers not on pallets, unstable stacks, other: _____

CONTAINMENT:

Curbing, Floor and Sump(s) A N A N A N A N A N

If 'N', circle appropriate problem: ponding/wet spots, deterioration (cracks, gaps, etc.), displacement, leaks, other: _____

Loading/Unloading Area A N A N A N A N A N

If 'N', circle appropriate problem: cracks, deterioration, ponding/wet spots, other: _____

OBSERVATIONS, COMMENTS, DATE AND NATURE OF ANY REPAIRS: _____

* To calculate total volumes, use the following: M.S., I.C., D.C. and paint waste drums hold 16 gallons; D.C. boxes hold 10 gallons and paint waste pails hold 5 gallons.

**A = ACCEPTABLE

N = NOT ACCEPTABLE

(IF AN ITEM IS NOT APPLICABLE, ENTER 'N/A' AFTER IT AND DRAW A LINE THROUGH THE 'ACCEPTABLE/NOT ACCEPTABLE' ROW)

INSPECTION LOG SHEET FOR: Weekly Inspection of SAFETY AND EMERGENCY EQUIPMENT, SECURITY DEVICES AND MISCELLANEOUS EQUIPMENT

INSPECTOR'S NAME/TITLE: _____

INSPECTOR'S SIGNATURE: _____

DATE OF INSPECTION (Month/Day/Year): _____

TIME OF INSPECTION: _____

SAFETY AND EMERGENCY EQUIPMENT

Fire Extinguishers: A* N

If 'N', circle appropriate problem: overdue inspection, inadequately charged, inaccessible, other: _____

Eyewash and Shower: A N

If 'N', circle appropriate problem: disconnected malfunctioning valves, inadequate pressure, inaccessible, malfunctioning drain leaking, other: _____

First Aid Kit: A N

If 'N', circle appropriate problem: inadequate inventory, other: _____

Spill Cleanup Equipment: A N

If 'N', circle appropriate problem: inadequate supply of sorbent, towels and/or clay, inadequate supply of shovels, mops, empty drums, wet/dry vacuum, other: _____

Personal Protection Equipment: A N

If 'N', circle appropriate problem: inadequate supply of aprons, gloves, glasses, respirator, other: _____

SECURITY DEVICES:

Gates and Locks: A N

If 'N', circle appropriate problem: sticking, corrosion, lack of warning signs, fit, other: _____

Fence: A N

If 'N', circle appropriate problem: broken ties, corrosion, holes, distortion, other: _____

MISCELLANEOUS EQUIPMENT:

Dry Dumpster: A N

If 'N', circle appropriate problem: rust, corrosion, split seams, distortion, deterioration, excess debris, liquids in unit, other: _____

OBSERVATIONS, COMMENTS, DATE AND NATURE OF ANY REPAIRS: _____

---

*A = ACCEPTABLE

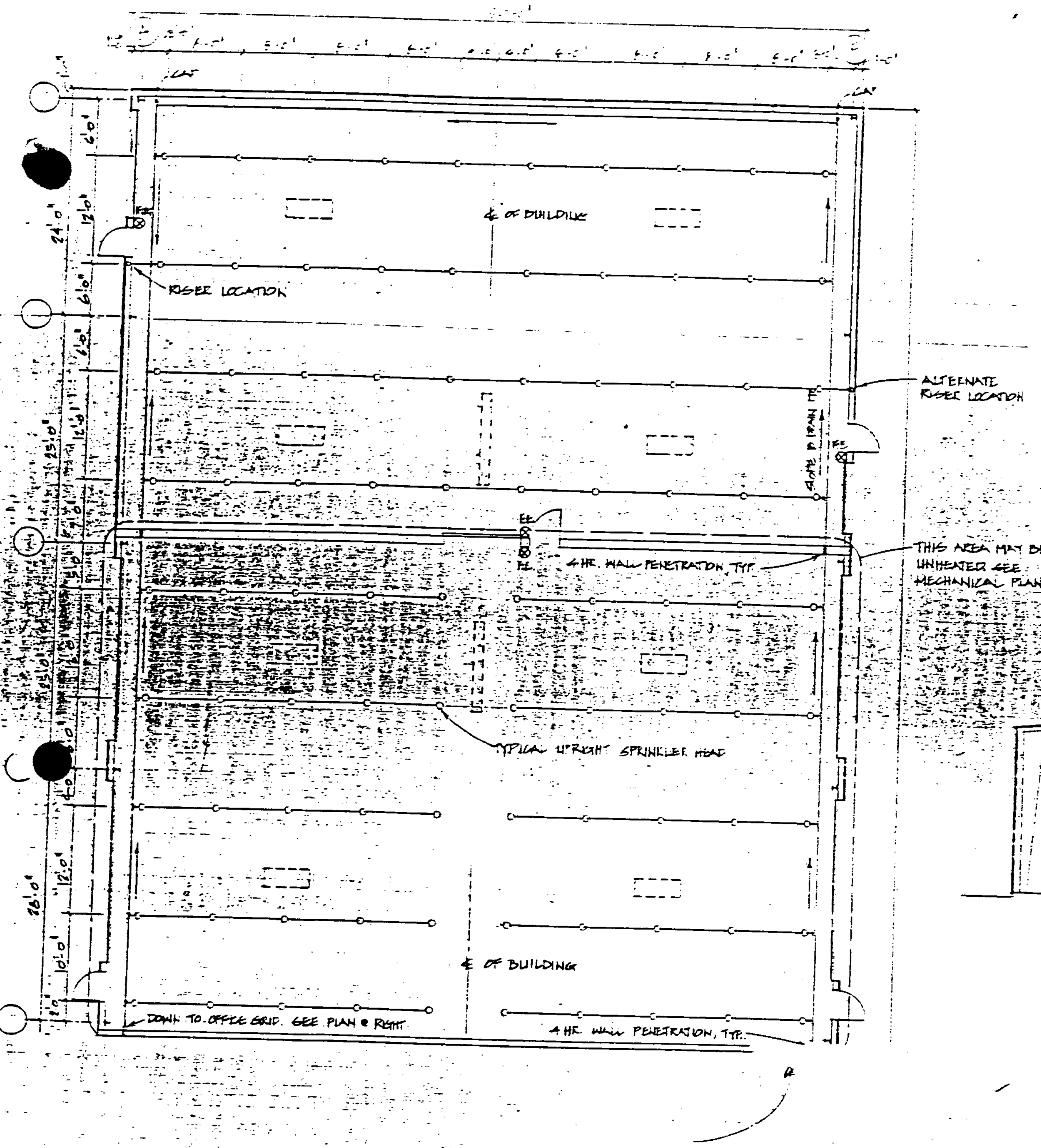
N = NOT ACCEPTABLE

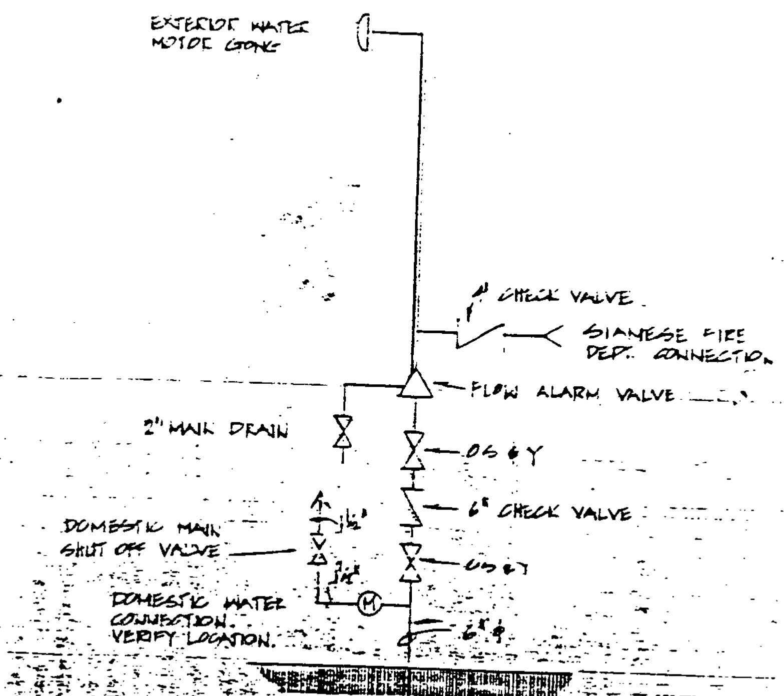
(IF AN ITEM IS NOT APPLICABLE, ENTER 'N/A' AFTER IT AND DRAW A LINE THROUGH THE 'ACCEPTABLE/NOT ACCEPTABLE' ROW)

ATTACHMENT I.E.4-2

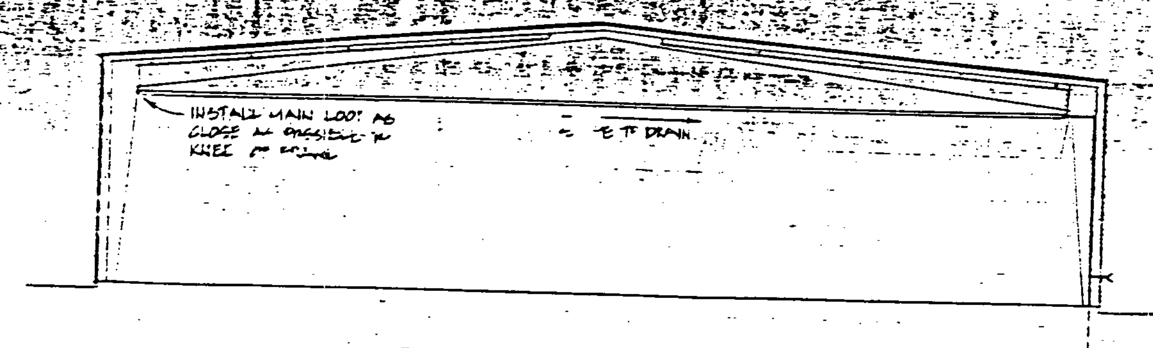
EMERGENCY RESPONSE EQUIPMENT

Description	Type/Capacity	Location	Quantities
Fire Extinguisher	ABC (10 lb.)	Warehouse	3
Eyewash	Fountain	Warehouse	1
First Aid		Warehouse	1
Telephone	Standard	Managers Office	1
Telephone	Standard	Secretary's Desk	1
Telephones	Standard	Warehouse	2
Gloves	Rubber	Emergency Equip. Area	1 pr.
Boots (optional)	Rubber	Emergency Equip. Area	1 pr.
Protective Clothing	Apron	Emergency Equip. Area	1/employee
Eye Protection	Goggles/Safety Glasses	Emergency Equip. Area	1 pr.
Sorbent Material	Oil Absorbing	Emergency Equip. Area	1 bale
Shovel	Standard	Emergency Equip. Area	1
Mop & Bucket	Standard	Emergency Equip. Area	1
Pump	Handheld,Electric	Emergency Equip. Area	1
Wet/Dry Vacuum	Portable,Electric	Emergency Equip. Area	1
Water	For Firefighting	Office & Warehouse	N/A





RISER DIAGRAM



BUILDING SECTION

SCALE: 1/8" = 1'-0"

[illegible]

1. INSTALLATION, DESIGN, CALCULATIONS, AND INSPECTION SHALL CONFORM TO NFPA 13 ALONG WITH ALL STATE AND LOCAL CODES AND/OR REQUIREMENTS.
2. ALL PIPE SIZES NOT INDICATED SHALL BE SELECTED BY FIRE PROTECTION CONTRACTOR ONCE WATER SUPPLY CHARACTERISTICS ARE ESTABLISHED.
3. THIS DRAWING IS SCHEMATIC ONLY. FIRE PROTECTION CONTRACTOR SHALL COORDINATE WITH OTHER CONTRACTORS EXACT LOCATION OF PIPING SO AS TO ELIMINATE ALL CONFLICTS IN ROUTING.
4. WAREHOUSE AREA - EXTRA HAZARD OCCUPANCY
OFFICE AREAS - LIGHT HAZARD OCCUPANCY
5. HYDRAULIC CALCULATIONS TO BE COMPLETED BY FIRE PROTECTION CONTRACTOR, AND SUBMITTED TO THE ARCHITECT/ENGINEER, SAFETY-KLEEN CORP. AND THE STATE FIRE OFFICIAL AFTER WATER CHARACTERISTICS HAVE BEEN ESTABLISHED.
6. SERVICE CENTER AND MEZZANINE TO HAVE RELIABLE MODEL G UPRIGHT BRONZE - TEMP. 212°F SPRINKLER HEAD OR APPROVED EQUAL.
7. OFFICE TO HAVE RELIABLE MODEL G PENDANT MOUNT - TEMP. 165 DEGREE SPRINKLER HEAD OR APPROVED EQUAL.
8. MINIMUM SPRINKLER HEIGHT AT MEZZANINE TO BE [illegible] AFF. IF MEZZANINE IS COMPLETED PER PHASE II CONSTRUCTION USE SAME LAYOUT AND INSTALL PENDANT MOUNT PER NOTE 6.

⊗ F.E. FIRE EXTINGUISHER (7 TOTAL) 10# ABC SAFETY-KLEEN PART 44004. ALSO INSTALL FIRE EXTINGUISHER SIGN AT THIS LOCATION S-K PART # [illegible] AT 120" AFF.

⊠ NO SMOKING SIGN S-K PART # [illegible] INSTALLED AT 120" AFF.

GAS PROTECTION GENERAL INFORMATION
(SUPPLIED BY SAFETY-KLEEN CORP.)

[illegible] ANALYTICAL INSTRUMENTS [illegible]
THREE CHANNEL [illegible] GAS ANALYSIS SYSTEM, INCLUDES THREE DETECTOR HEAD ASSEMBLIES.
- RANGE: RANGE 1 - 0-100% LEL (METHANE)
- SENSOR TYPE: CATALYTIC HEAD
- SAMPLE TEMPERATURE: 0 - 50°C
- AMBIENT TEMPERATURE: 0 - 50°C
- READOUT DEVICE: ANALOG METER
- AREA CLASSIFICATION: GENERAL PURPOSE CONTROL UNIT; CLASS I, DIVISION 1, GROUP D ANALYSIS UNIT
- UTILITIES REQUIRED: OPERATING VOLTAGE 120 VAC, 60HZ

ALARM SYSTEM COST BY SAFETY-KLEEN CORP. INSTALLED THROUGH LOCAL ALARM SERVICES AGENT.

ONE (1) DIGITAL DIALER WITH BACK-UP BATTERY	ONE (1) SIREN
ONE (1) DUAL PHONE LINE MODULE.	ONE (1) WATERFLOW DEVICE, [illegible]
ONE (1) SIREN DRIVE	TWO (2) SHUT-OFF VALVE DEVICES - OS&Y

PRELIMINARY PLANS
PRELIMINARY LAYOUTS SHOULD BE SUBMITTED FOR REVIEW TO THE AUTHORITY HAVING JURISDICTION BEFORE ANY EQUIPMENT IS INSTALLED OR REMODELED, IN ORDER TO AVOID ERROR OR SUBSEQUENT MISUNDERSTANDING. ANY MATERIAL DEVIATION FROM APPROVED PLANS WILL REQUIRE PERMISSION OF THE AUTHORITY HAVING JURISDICTION.
PRELIMINARY LAYOUTS SHOULD SHOW:
(a) NAME OF OWNER AND OCCUPANT
(b) LOCATION, INCLUDING STREET ADDRESS
(c) POINT OF COMPASS
(d) CONSTRUCTION AND OCCUPANCY OF BUILDING
(e) BUILDING HEIGHT IN FEET
(f) FIRE WALLS, FIRE DOORS, LARGE UNPROTECTED FLOOR OPENINGS, AND BLIND SPACES.
(g) SPACING OF SPRINKLERS, NUMBER OF SPRINKLERS IN EACH STORY OR FIRE AREA AND TOTAL NUMBER OF SPRINKLERS, NUMBER OF SPRINKLERS ON EACH RISER AND OF EACH SYSTEM BY FLOORS. TOTAL AREA PROTECTED BY EACH SYSTEM ON EACH FLOOR. TOTAL NUMBER OF SPRINKLERS ON EACH DRY-PIPE SYSTEM OR PRE-ACTION OR DELUGE SYSTEM, AND IF EXTENSION TO PRESENT EQUIPMENT, NUMBER OF SPRINKLERS ON RISER PER FLOOR, SPRINKLERS ALREADY INSTALLED.
(h) WEIGHT OR CLASS, AND SIZE AND MATERIAL OF ANY PROPOSED UNDERGROUND PIPE

WORKING PLANS
WORKING PLANS SHALL BE DRAWN TO AN INDICATED SCALE, ON SHEETS OF UNIFORM (22" X 34") SIZE, WITH PLAN OF EACH FLOOR, MADE SO THAT THEY CAN BE EASILY DUPLICATED, AND SHALL SHOW THE FOLLOWING DATA:

(a) NAME OF OWNER AND OCCUPANT
(b) LOCATION INCLUDING STREET ADDRESS
(c) POINT OF COMPASS
(d) CEILING CONSTRUCTION
(e) FULL HEIGHT CROSS SECTION
(f) LOCATION OF FIRE WALLS
(g) LOCATION OF PARTITIONS
(h) OCCUPANCY OF EACH AREA OR ROOM

APPROVAL OF SPRINKLER SYSTEMS
THE INSTALLER SHALL PERFORM ALL REQUIRED ACCEPTANCE TESTS, COMPLETE THE CONTRACTOR'S MATERIAL AND TEST CERTIFICATE(S), AND FORWARD THE CERTIFICATE(S) TO THE AUTHORITY HAVING JURISDICTION PRIOR TO ASKING FOR APPROVAL OF THE INSTALLATION. A COPY MUST ALSO BE FORWARDED TO THE PROJECT ENGINEER AT SAFETY-KLEEN CORP.

WHEN THE AUTHORITY HAVING JURISDICTION DESIRES TO BE PRESENT DURING THE CONDUCT OF ACCEPTANCE TESTS, THE INSTALLER SHALL GIVE ADVANCE NOTIFICATION OF THE TIME AND DATE THE TESTING WILL BE PERFORMED.

REVISIONS

EXHIBIT I.E. 4-3

safety-kleen corp.
777 BIG TIMBER ROAD • ELGIN, ILLINOIS 60123

80' x 155' x 20' SERVICE CENTER W/ MIDDOCK
SCHEMATIC SPRINKLER PLAN: WAREHOUSE AND MID-DOCK

AS SHOWN
7-19-89

FP1

I.E.5 PERSONNEL TRAINING

ABSTRACT

OBJECTIVE: The purpose of training is to familiarize employees with environmental regulations, records and emergency procedures so they can perform their jobs in the safest and most efficient manner possible. The program is designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment and emergency systems.

TIME OF TRAINING

JOB TITLE	Prior to Starting Work	On the Job	Annually	When Regulations and/or Procedures Change
Branch Manager	X		X	X
Branch Facility Manager	X	X	X	X
Branch Secretary		X	X	X
Sales Representative	X	X	X	X
Warehouseman		X	X	X

OUTLINE OF TRAINING PROGRAM

Each employee is trained to operate and maintain the facility safely, and to understand hazards unique to his job assignment. New branch managers must complete an introductory training program before starting their jobs, with annual review and update thereafter. The exhibits which follow contain information on service center personnel and trainers, job descriptions, training outlines and training record forms.

ORGANIZATION STRUCTURE AND JOB DESCRIPTIONS

Environmental compliance and training of branch employees is the responsibility of the branch manager. The Environment, Health and Safety Department, in turn, provides a training program to be executed annually. Job descriptions for branch personnel are in Exhibit I.E.5-2.

Branch Manager

The branch manager is ultimately responsible for the operations at the service center. The sales representatives, secretary and warehouseman report to the branch manager and he, in turn, must provide the training and materials necessary for the branch employees to execute their duties. With respect to environmental compliance, the branch manager must:

a. keep the service center clean and orderly;

b. execute or designate an employee to execute the daily inspection, keep a written log and remediate any problems;

c. know the potential hazards of the material and wastes handled on site;

d. identify potential spill and fire sources and be able to execute the contingency plan;

e. inform all employees of their environmental responsibilities;

f. act as emergency coordinator and notify the proper authorities during an emergency, remediate the situation to the best of his abilities, and submit necessary reports to the corporate office; and

g. maintain all environmental records (such as manifests, training records and spill reports) on file.

Environment, Health and Safety Department

Safety-Kleen's Environment, Health and Safety (EHS) Department operates out of the corporate office in Elgin, Illinois. Each regional environmental engineer who works in this department is responsible for compliance of the service centers in a given geographic area of the country. The EHS Department must:

a. provide a training program which addresses the requirements of environmental regulations and corporate policy;

b. notify the proper authorities, oversee remedial actions and submit a written report to the state after an emergency situation has occurred;

c. assure that environmental permits are submitted and updated as required; and

d. manage any environmental compliance issues which exceed the resources available at the service center level.

DESCRIPTION OF THE TRAINING PROGRAM

Employee training is accomplished using classroom, videotape, written and on-the-job methods. The EHS Department prepares a training program for employees and they must provide documentation that the program has been executed.

An employee is trained prior to starting or as soon as he or she begins working, (depending on his or her position), and annually thereafter. Training program outlines are in Exhibits I.E.5-4 and I.E.5-5.

Training of New Branch Managers

New managers are trained for several weeks before they begin their new positions. This training is both in situ and classroom modes. While being trained at a designated "training facility", a new manager reviews all

environmental records and learns the recordkeeping requirements. These records include: manifests, personnel records, training records, facility inspection records, and spill reports.

The training culminates in four weeks of training at his new facility, at least one day of which is devoted to environmental training with his regional environmental engineer. At least eight hours consists of an introduction to environmental law and a review of the Part B, including the Waste Analysis Plan, Preparedness and Prevention Plan, Contingency Plan, Training Plan and Closure Plan. This training is outlined in Exhibit I.E.5-4.

Additional time is spent reviewing past environmental compliance at the branch manager's facility and regulations unique to his state are discussed as well.

Training of New Branch Facility Managers

Branch facility managers report to branch managers and are responsible for administrative operations at branches.

New branch facility managers are trained for twelve weeks before they begin their new positions. This training is both in situ and classroom modes. While being trained at the branch at which he or she will be stationed, a new branch facility manager reviews all environmental records and learns the recordkeeping requirements. These records include:

manifests, personnel records, training records, facility inspection records, and spill reports.

Three weeks of training takes place at Safety-Kleen's corporate headquarters. This training includes an introduction to environmental law (including the Resource Conservation and Recovery Act) health and safety issues, emergency response and inventory (including waste) reconciliation methods.

Additional time is spent reviewing past environmental compliance at the branch facility manager's site and regulations unique to his or her state are discussed as well.

Training of New Branch Secretaries

Branch secretaries are trained in the proper recordkeeping procedures as soon as they begin working for Safety-Kleen. While they are not usually responsible for preparing the documentation, they must check it for accuracy and completeness and then process or file it as required. Additional training is overseen by the branch manager and is done within six months of starting. It includes the items listed in the Introductory and Annual Training Topics for Branch Employees (Exhibit I.E.5-5) which are explained in company-produced videotape presentations on emergency response, shipping documents (including manifests), drum labels and other safety and environmental compliance issues. In addition, the contingency plan must be reviewed with the branch manager within the first two weeks of the secretary starting work.

Training of New Sales Representatives

New sales representatives are trained in situ for two weeks during which they are introduced to manifests, facility inspection records and training records. A sales representative may also be trained as the designate for performing the facility inspection. Additional training is in the form of videotape presentations and a review of the contingency plan. The contingency plan must be reviewed with the branch manager before the sales representative formally begins his new position and annually thereafter. All items listed in the Introductory and Annual Topics Training for Branch Employees (Exhibit I.E.5-5) must be explained within six months of starting.

Training of New Warehousemen

A warehouseman is trained to maintain the service center and assist the other branch employees in their tasks. He may be a designate for the facility inspection and must be trained by the branch manager as such. Within two weeks of the warehouseman's starting, the branch manager must review the contingency plan with him, and within six months he must review the items listed in the Introductory and Annual Training Topics for Branch Employees (Exhibit I.E.5-5).

Annual Training

On an annual basis, employees are trained using a program prepared and updated annually by the EHS Department. It includes updates on environmental regulations, an in-depth review of the contingency plan and a review of RCRA inspection criteria.

All service center employees must annually review the items listed in the Introductory and Annual Topics for Branch Employees. This review is in the form of videotapes and a review and discussion of the storage facility permit application. In addition, periodic memoranda on changes in environmental regulations are issued by the EHS Department and must be read and discussed by all branch personnel.

TRAINING RECORDS

All training must be documented using the record forms in Appendix G. The records must be kept on file at the facility until closure.

EXHIBIT I.E. 5-1

LIST OF BRANCH EMPLOYEES

EMPLOYEE	POSITION
Jorge Carvajal	Branch Manager
Vacant	Branch Facility Manager
Cary Alfonso	Branch Secretary
Pedro Espinal	Sales Representative
Arturo Morales	" "
Pedro Cordero	" "
Goerge Owen	" "
George Miller	" "
Marlon Alfonso	" "
Juan Formoso	" "
Jose Perez-Mayo	" "
Raul Rodriguez	Warehouseman
Osvaldo Acosta	Warehouseman

EXHIBIT I.E. 5-2

JOB DESCRIPTIONS

BRANCH MANAGER

JOB DESCRIPTION

The Branch Manager has overall responsibility for the facility operations and maintenance, and directs sales activities within a certain geographic area defined by the Corporate Marketing Department. He is responsible for the proper operations and profitability of the service center.

REPORTS TO:

Regional Manager of Sales

QUALIFICATION:

Minimum high school graduate with Safety-Kleen sales experience.

PRINCIPAL RESPONSIBILITIES:

1. Plan, direct, and monitor activities of Sales Representatives.
2. Training of branch facility managers, sales representatives, and other branch personnel.
3. Assist or accompany sales representatives during their sales activities, when necessary.
4. Tabulate daily sales and inventory figures and report them to the corporate offices.
5. Maintain adequate inventory of solvents, allied products, and equipment.
6. Carry out corporate policies and standards regarding facilities, equipment operation and maintenance.
7. Insure the regular inspection of the facility and equipment, and the implementation of any necessary repairs or remedial actions.
8. Represent Safety-Kleen Corp. in local community affairs and public relation activities.
9. Coordinate with corporate Technical Services and Environment, Health, and Safety Departments and implement necessary actions or plans for regulatory compliance.
10. Be able to act as the primary emergency response coordinator.

BRANCH FACILITY MANAGER

JOB DESCRIPTION

The Branch Facility Manager has overall responsibility for the administrative aspects of the service centers operations and maintenance. He or she is responsible for the proper preparation, distribution and filing of records related to environmental compliance and for insuring the environmental compliance of the service center.

REPORTS TO:

Branch Manager

QUALIFICATION:

Minimum high school graduate with Safety-Kleen employment experience.

PRINCIPAL RESPONSIBILITIES:

1. Plan, direct, and monitor activities of those preparing records and/or overseeing an operation related to environmental regulation compliance.

2. Training of branch personnel in proper recordkeeping techniques.

3. Tabulate daily waste inventory figures and record them on the operating log.

4. Maintain adequate records related to environmental regulation (e.g., manifests, personnel training records, operating log, etc.).

5. Carry out corporate policies and standards regarding environmental compliance.

6. Inspect facility and equipment regularly, and implement necessary repairs or initiate remedial actions.

7. Represent Safety-Kleen Corp. in inspections by the state regulatory agency.

8. Coordinate with corporate Technical Services and EHS Departments and implement necessary actions or plans for regulatory compliance.

9. Be able to act as an alternate emergency response coordinator.

BRANCH SECRETARY

JOB DESCRIPTION

Performs duties to assist the branch manager, sales representatives, and customers with billing, scheduling and recordkeeping. Performs secretarial duties at the branch.

REPORTS TO:

Branch Manager

QUALIFICATION:

Attended high school

PRINCIPAL RESPONSIBILITIES:

1. Maintain records in an orderly manner.
2. Assist sales representatives in scheduling services.
3. Insure that all hazardous waste manifests are complete, and manage distribution and filing of copies.
4. Maintain Personnel Training Record files.
5. Maintain Facility Inspection Records.
6. Answer customer inquiries.
7. Manage customer billing.
8. Perform other related duties as assigned.

SALES REPRESENTATIVE

JOB DESCRIPTION

The Sales Representative is charged with the responsibility of generating new business and servicing established accounts within a certain defined geographic area.

REPORTS TO:

Branch Manager

QUALIFICATION:

Minimum high school graduate

PRINCIPAL RESPONSIBILITIES:

1. Maintain his route truck and replenish his products on the truck before beginning his route sales.

2. Contact potential customers for the purpose of selling Safety-Kleen services and allied products.

3. Exchange used solvents with fresh solvent and replenish the inventory of Safety-Kleen's products for existing customers.

4. Make minor repairs of Safety-Kleen's parts washer equipment or lease new equipment to the customer.

5. Prepare the necessary paper work for each service, and bill or credit the customer, as necessary.

6. At the end of each day, return the truck to the branch for cleaning and maintenance, and summarize the day's activities so the branch manager can tabulate the daily figures and forward them to the corporate office.

WAREHOUSEMAN

JOB DESCRIPTION

Performs duties to assist the sales representatives in loading and unloading the trucks. Performs janitorial duties at the warehouse.

REPORTS TO:

Branch Manager

QUALIFICATION:

Attended high school.

PRINCIPAL RESPONSIBILITIES:

1. Maintain warehouse in clean and orderly manner.
2. Assist sales representatives in loading trucks and replacing solvent.
3. Refurbish drums as needed.
4. Park or move trucks as needed.
5. Stock inventory.
6. Replenish trucks with inventory.
7. Perform other related duties as assigned.

EXHIBIT I.E. 5-3
(7 pages)

RESUME

RICHARD PEOPLES

Position: Environmental Manager, Service Centers
Safety-Kleen Corp.

Education: M.A., Zoology, Indiana University ('69)

B.A., Zoology, Indiana University ('72)

Employment Experience:

Environmental Manager, Service Center
Safety-Kleen Corp.
Elgin, Illinois (1988-Present)

Environmental Scientist, Regional Manager -
Superfund Contract, Black & Veatch Consultants
Kansas City, MO (1987-1988)

Assistant Director of Utilities
City of Bloomington Utilities, Bloomington, Indiana
(1972-1987)

Additional Training:

Branch Facility Manager Trainer (1989)

Certified Hazardous Materials Manager Training - Master Level
(1986)

RESUME

THOMAS R. HEATON

Position: Regional Environmental Engineer - New England
Environment, Health and Safety Department - Safety-Kleen Corp.

Education: M.S., Department of Technology & Human Affairs, Sever Institute of Technology, Washington University, St. Louis, MO (1978).

B.S., Zoology & Environmental Affairs, Butler University, Indianapolis, IN (1976).

Employment Experience:

Regional Environmental Engineer
Safety-Kleen Corp.
(1986 - Present)

Senior Environmental Specialist, Borden Inc., Columbus, OH, Nov. (1980 - Sept. 1986)

Environmental Scientist, Ohio Environmental Protection Agency, Nov. (1978 - Nov. 1980)

Additional Training:

Massachusetts Environmental Issues Workshop, Associated Industries of Massachusetts,
Worcester, MA (1989)

Underground Storage Tank Management, Ohio Petroleum Council, Worthington, OH (1986)

Groundwater Contamination Seminar, Center for Energy and Environmental Management (CEEM), Schaumburg, IL (1984)

RESUME

JAY LANAHAN

Position: Regional Environmental Engineer - South Central
Safety-Kleen Corp.

Education: M.S. Industrial Microbiology, Univ. of Houston (1987)

B.S. Marine Biology, Texas A & M Univ. (1981)

Employment Experience:

Regional Environmental Engineer
Safety-Kleen Corp.
(August, 1988 - present)

Mgr. Technical Affairs
Evans Cooperage Company
(May, 1987- July, 1988)

Hazardous Waste Specialist
Texas Water Commission
(April, 1984 - May, 1987)

Additional Training:

Registered Public Health Sanitarian - State of Texas

Oil Spill Control Course -
Texas A & M University Engineering Extension (1985)

RESUME

PAUL D. PEDERSON

Position: Regional Environmental Engineer - Great Lakes
Safety-Kleen Corp.

Education: Bachelors of Chemical Engineering, University of Minnesota (1983)

Employment Experience:

Regional Environmental Engineer
Safety-Kleen Corp.
(July, 1986 - Present)

Application Engineer
Dale Electronics
(1983 - 1986)

Additional Training:

SARA Emergency Planning Workshop;
Pannell, Kerr, Forster
(October, 1987)

Fundamentals of Groundwater Contamination;
Geraghty and Miller
(March, 1987)

RESUME

IVETTE SANTANA

Position: Regional Environmental Engineer - New York and New Jersey
Safety-Kleen Corp.

Education: M.S. Environmental Science, New Jersey Institute of Technology (1989-present)

B.S. Biology, College of Saint Elizabeth, Convent Station, NJ (1985)

Employment Experience:

Regional Environmental Engineer
Safety-Kleen Corp.
(Jan., 1989 - Present)

Compliance Officer
Solvent Recovery Services
(1987 - 1989)

Approvals Manager
Kramer Environmental
(1985 - 1986)

Research Assistant
Method Development-HPLC
Intech Biolabs
(1984 - 1985)

Additional Training:

Right-To-Know Seminar - 1989

Hazmat-Environmental Compliance Seminar - 1986

Professional Supervising - 1986

RESUME

JEFFREY E. SIMPSON

Position: Regional Environmental Engineer - West Central
Safety-Kleen Corp.

Education: B.S. Engineering and Public Policy (B.S. EPP)
Washington University, St. Louis, Missouri (May, 1980)

Employment Experience:

Environmental Engineer
Safety-Kleen Corp., May, 1980 - Present

Employed as an Environmental Engineer with responsibility for handling Environmental Affairs in 8 states. Includes training of employees, preparation of contingency plans and regulatory affairs.

Additional Training:

Conducted training of Regional Managers, August, 1986

Hazardous Waste Incineration Today, sponsored by Georgia Institute of Technology, February 13-14, 1986

1984 Hazardous Material Spills Conference, sponsored by Association of American Railroads/Bureau of Explosives, Chemical Manufacturers Association, U.S. Coast Guard, U.S. EPA, April 9-12, 1984

RESUME

ROBERT WACHSMUTH

Position: Regional Environmental Engineer - Western Region
Safety-Kleen Corp.

Education: B.S. Civil Environmental Engineering,
Michigan Technological University (1976)

Employment Experience:

Environmental Engineer,
Safety-Kleen Corp., January 18, 1982 - Present

Senior Environmental Engineer, Ecology and Environment
June 1, 1980 - January 15, 1982

Project Engineer, Aquatechnics, Inc.
September, 1978 - June, 1980

Project Engineer, RJN Environmental Associates, Inc.
March, 1978 - September, 1978

Designer, Illinois Central Gulf Railroad
November, 1976 - March, 1978

Junior Engineer, Dames & Moore
April, 1976 - November, 1976

Training Experience:

Underground Tank Storage of Hazardous Materials
Sacramento, California in August, 1984

NEW BRANCH MANAGER TRAINING

Program for Regional Environmental Engineer branch visit -

1. Review of Part B Permit
   - Part A Application
   - Waste Analysis Plan
   - Preparedness and Prevention Plan
   - Contingency Plan
   - Training Plan
   - Closure Plan and Financial Requirements

2. Review of Transportation Licensing

3. Review of Environmental Compliance Guidance and Corporate Policy Manual

4. Conduct Detailed Facility Inspection with Branch Manager
   - Identify deficiencies requiring branch attention
   - Identify problems requiring Technical Services assistance
   - Review actual vs. permitted waste storage capacities

5. File Review
   - Manifests and Land Ban Notices
   - Training Files
   - Spill Report File
   - Community Right-to-Know Files
   - Inspection Records
   - Operating Log

6. Contingency Plan Training Session with Branch Manager and All Alternate Emergency Coordinators
   - Include Spill Simulation and Response
   - Update the Emergency Information and Local Authority Notifications

7. Health and Safety
   - OSHA 200 Reporting
   - Hazard Communication Program

8. Review Branch Specific Manifesting Procedures and Customer ID # Compliance

9. Review of Past Agency Inspections and Other Past Branch Compliance-related Issues

10. Environmental Training for Branch Personnel
    - Requirements for Content and Frequency
    - Conducting Training Sessions
    - Recordkeeping

Notes to Regional Engineers:

- Be prepared with examples and extra copies of all forms in case the branch is missing them.
- Spend time at the beginning of visit reviewing Environmental files for potential missing information or problems.
- Use several short quizzes covering the major topics as a review and documentation of the training session. A training record form should also be completed.
- Provide copies of your recent memos concerning environmental compliance at the branch or in the state. Branch copies may be missing.
- Provide Safety-Kleen part numbers for equipment (sorbents, signs, etc.) that may be missing at the branch.

INTRODUCTORY AND

ANNUAL TRAINING TOPICS FOR BRANCH EMPLOYEES

A. Environmental Regulation Update

B. Part A Application

C. Waste Analysis Plan

D. Preparedness and Prevention Plan

E. Contingency Plan and Emergency Procedure

F. Training

G. Closure

H. Inspections

I. Manifesting

J. Spill Simulation and Spill Reports

Note: Employees may not work in unsupervised positions until they have received emergency response training (Items E and J). Employees must be completely trained, in all the items listed above, within six months of starting and annually thereafter.

EHS TRAINING TOPIC LOG

Employee Name and No.: _____

Branch Location and No. _____

Date Hired: _____ Position: _____

Note: Employees may not work in unsupervised positions until they have received emergency response training. Employees must be completely trained, in all the items listed above, within six months of starting and annually thereafter.

Certification by the employee that training has been received obligates the employee to discharge his duties in accordance with the training provided. Failure to comply with the requirements established during the training program may result in civil or criminal penalties against the employee.

	TRAINING TOPIC*	DATE COMPLETED	SIGNATURE
1.	_____		
	_____	_____	_____
2.	_____		
	_____	_____	_____
3.	_____		
	_____	_____	_____
4.	_____		
	_____	_____	_____
5.	_____		
	_____	_____	_____
6.	_____		
	_____	_____	_____

* The training topic and training method should be described thoroughly. For example: "Safety Training Part III - Preventing Injuries and Illnesses (Videotape)", "Respirator Fit Testing and Training (written weekly training topic)", "Contingency Plan in Part B (reviewed with regional environmental engineer)", etc.

ATTACHMENT I.F

CLOSURE AND FINANCIAL RESPONSIBILITY INFORMATION

I.F.1 INTRODUCTION

Safety-Kleen Corp. has constructed each service center with the intent that it will be a long term facility for the distribution of Safety-Kleen products. There is no onsite disposal activity at any plant and hence there is no disposal capacity to be exhausted that will necessitate closure of a facility. Based on current business and facility conditions, this facility is expected to remain in operation beyond the year 2025.

In the event that some presently unforseen circumstance(s) would result in the termination of operations and permanent closure or sale of the facility, the following closure plan is designed to identify the steps necessary to completely close the facility at any point during its intended life, and should be used for the tank, drum storage area and ancillary equipment.

It is intended that all closures will be complete and final with removal of waste and decontamination of the facility and associated equipment, to eliminate need for maintenance after closure and chance of escape of hazardous waste constituents into the environment.

Procedures described in this closure plan are also applicable to the cleaning up of spills and repair/decontamination of the facility or equipment.

An anticipated closure schedule is in Exhibit I.F.1-1. An anticipated maximum waste inventory for the facility is presented in the following section.

MAXIMUM INVENTORIES OF WASTES

a. Drum Storage Area -

One 4,000 sq. ft. area with a sloped floor and collection sump. The maximum volume stored is 6,912 gallons (432 16-gallon drums).

b. Solvent Return and Fill Shelter -

One 4,400 sq. ft. structure, with three solvent return receptacles (wet dumpsters) and other ancillary equipment. Each dumpster can hold 375 gallons of waste (1,125 gallons total).

c. Aboveground Storage Tank -

A 20,000-gallon steel tank for the storage of used mineral spirits solvent (D001, D006, D008).

CLOSURE PROCEDURE

1. Drum Storage Area

a. The drum storage area contains drums of used immersion cleaner, mineral spirits dumpster mud, dry cleaning wastes and paint wastes.

b. At closure all the drums will be removed and shipped to a reclaimer, implementing proper packaging, labeling and manifesting procedures. The used solvents will be reclaimed and the drums will be cleaned for reuse.

c. The concrete floor and spill containment areas will be cleaned with detergent solution.

d. The wash water and all other wastes generated in the closure process, after testing whether it is hazardous, will be properly disposed of.

e. The final rinsate must be sampled and analyzed for mineral spirits and volatile organic compounds to determine the effectiveness of the cleaning.

2. Solvent Return and Fill Shelter Area

a. This area is used to return the used mineral spirits to the storage tank.

b. Closure of the solvent return receptacle (wet dumpster) will be made prior to the cleaning and removal of the storage tank.

c. At closure, the sediment in the dumpster ("dumpster mud") will be cleaned out and drummed, labeled, and manifested for proper disposal at permitted facilities.

d. The dumpster and the dock area will be thoroughly rinsed with clean mineral spirits followed by detergent solution.

e. The rinsing fluids are discharged through the appurtenant piping system into the storage tank, which will be subjected to a separate closure procedure as described below.

f. The final rinsate must be analyzed for mineral spirits and volatile organic compounds to determine the effectiveness of the cleaning.

g. The cleansed dumpster and dock structure will be reused by Safety-Kleen, or scrapped.

h. Three surface soil samples (one from beneath each dumpster) must be collected and analyzed for mineral spirits and volatile organic compounds.

i. Any contaminated soil must either be removed and properly disposed of or the contamination eliminated using an alternate method (e.g., soil venting).

3. Aboveground Tank and Associated Piping

a. OUTLINE - To safely clean and decommission aboveground storage tank:

(1) Expose doorways or cut openings to provide access to each tank.

(2) Remove remaining material from tanks and ship the materials to a reclaimer.

(3) Rinse, scrape and squeegee tank interiors.

(4) Disconnect and cap all appurtenant piping.

(5) Disconnect and cap all appurtenant pumping equipment.

(6) Remove tanks and appurtenant equipment for final disposition.

(7) Transport and dispose of all other waste material generated during the project.

b. PHASE I - OPEN THE TANK

(1) Access to aboveground tanks is obtained by opening manways.

(2) Prior to opening the tanks the personnel should have full face respiratory protection and protective clothing. Once the tanks have been opened they will be provided with positive ventilation. The tanks will then be inspected to determine the approximate quantity and physical conditions of the remaining material.

c. PHASE II - REMOVING WASTE AND CLEANING TANK

(1) Before removing the waste from the tank, all piping and appurtenant equipment will be flushed first with clean mineral spirits followed by detergent solution.

(2) The method to remove the waste material from the tanks will depend on the physical properties and quantities of that material. Prior to any person entering the tank, an effort will be made to remove as much liquid and sludge as possible.

(3) Subsequent to vacuuming the majority of the material from the tanks, it may be necessary to use a high pressure wash system using clean solvent and detergent solution to rinse residual material from the walls and bottom of the tanks. The evacuated material and the rinse solution will be shipped to a reclaimer for reclamation. The quantity of wash fluid used will be kept to a minimum in order to limit the amount of unnecessary material.

(4) Storage tanks are considered confined spaces (i.e., spaces open or closed having a limited means of egress in which poisonous gases or flammable vapors might accumulate or an oxygen deficiency might occur).

(5) Confined space entry requires special operating procedures:

(a) Tanks are to be washed, neutralized and/or purged (where flammable atmosphere is present) prior to being entered.

(b) Supply valves must be closed and "tagged" and bleeder valves left open; or supply piping should be disconnected.

(c) Pumps or motors normally activiated by automatic controls shall be operated manually to be sure they have been disconnected. Instrument power switches should be tagged "Off".

(d) In tanks where flammable vapors may be present, all sources of ignition must be removed.

(e) All tanks must be tested for flammable vapors, toxic gases or oxygen deficiency in that order as applicable. The results of such tests should be displayed on the job site.

[1] In all tank entering situations, an oxygen deficiency test shall be performed prior tank entry.

[2] Under circumstances where "hot work" (welding, burning, grinding, etc.) is to be performed in or on the vessel, a test for combustible gases shall be taken. This is referred to as a "flash test".

[3] In most circumstances, flash tests and oxygen deficiency tests will be performed by the supervisor of the area in which the work is being done.

[4] Under any conditions where there exists a possibility (no matter how remote) of toxic vapors being present in the tank to be entered, the supervisor will arrange to have the air tested.

(f) There must be a set of wristlets or a rescue harness and sufficient rope at the job site to effect a rescue. Any other rescue equipment considered necessary must also be on the job site.

(g) Workers should wear a rescue harness if entering a tank with a large enough opening to easily effect a rescue. In tanks with small openings, only

wristlets may be used. (However, in cases where there are agitator shafts, drums or other hazards in which the man's life-line would be entangled and the supervisor in charge feels that wearing the lifeline may entrap a man and increase the hazard, the wearing of a harness or wristlets may be eliminated.)

(h) A constant source of fresh air must be provided to insure a complete change of air every few minutes. In cases of short term entry for inspection or removal of objects, an air mask is recommended. In cases of long term entry (generally for repair) the use of an air mover should be considered.

(i) When a ladder is required to enter a tank, the ladder must be secured and not removed while anyone is in the vessel. In cases where a rigid ladder could become an obstacle, a chain ladder may be used.

(j) Adequate illumination must be provided.

[1] A flashlight or other battery operated light must also be on hand to provide illumination for safety exit in the event of an electrical power failure.

[2] In any tank used to store flammable liquids, explosion-proof lighting must be used.

(k) All electrical equipment to be used inside the tank must be in good repair and grounded.

(l) Others working in the immediate area shall be informed of the work being done; and they shall inform the watcher or supervisor immediately of any unusual occurrence which may make it necessary to evacuate the tank.

(6) The Standby Observer/System:

(a) Men working inside a confined space must be under the constant observation of a fully instructed standby observer.

(b) Before anyone enters the tank, the standby observer will be instructed by the person in charge of the entry that:

[1] An entry authorization must be obtained from the person in charge by anyone entering the tank.

[2] A rescue harness or wristlets must worn be on the job.

[3] He (the observer) must know the location of the nearest:

[a] Telephone (with emergency numbers posted).

[b] Safety Eyewash/Shower.

[c] Fire Extinguisher.

[d] Oxygen Inhalator.

[4] For all "hot work" inside a tank, the standby observer must be instructed how to shut down welding/burning equipment.

[5] As long as anyone is inside the vessel, the standby observer must remain in continuous contact with the worker. HE IS NOT TO LEAVE THE JOB SITE EXCEPT TO REPORT AN EMERGENCY.

[6] UNDER NO CIRCUMSTANCES SHOULD THE STANDBY OBSERVER ENTER THE VESSEL. If the worker(s) in the tank becomes ill or injured, the standby observer is to put in effect the emergency plan described in the attached Standard Operating Procedure.

[7] The standby observer still DOES NOT ENTER THE TANK until help is available.

(c) After being instructed in his responsibilities, the standby observer will sign an instruction form indicating his understanding.

(7) Welding and Burning Within a Tank

(a) All welding and burning equipment must be provided with a shutoff under control of the standby observer; and the watcher must be shown how to shut off the equipment if it becomes necessary.

(b) Welding and burning equipment will only be taken into a tank immediately prior to its use and must be removed from the tank immediately after the job is finished.

(c) For all "hot work" inside a tank, a properly executed flame permit, if needed, must be displayed at the job site.

(d) Standard welding and burning safety precautions will always be followed.

(8) The final rinsate must be analyzed for mineral spirits and volatile organic compounds to determine the effectiveness of the cleaning.

d. PHASE III - REMOVE TANK

(1) Disconnect and cap all appurtenant piping.

(2) Disconnect and decontaminate all appurtenant pumping equipment.

(3) The vessels shall be removed and reused by Safety-Kleen or cut up and sold as scrap.

(4) Six surface soil samples (one from beneath each tank) must be collected and analyzed for mineral spirits and volatile organic compounds.

(5) Contaminated soil surrounding the tank, when it exists, shall be removed and properly disposed of or an alternate means (e.g., soil venting) used to eliminate contamination.

e. PHASE IV - BACKFILLING AND REGRADING

(1) Backfill any excavation with previously excavated material using proper compaction.

It may be necessary to add additional backfill with proper compaction if necessary. The material must be of clean materials and easily compacted in place.

(2) Regrade the site to proper topography.

(3) Remove and dispose of non-useable debris.

FACILITY CLOSURE SCHEDULE AND CERTIFICATION

1. Safety-Kleen may amend the closure plan at any time during the active life of the facility. (The active life of the facility is that period during which wastes are periodically received.) Safety-Kleen shall amend the plan any time changes in operating plans or facility design affect the closure plan or whenever there is a change in the expected year of closure of the facility. The plan must be amended within 60 days of the changes.

2. Safety-Kleen shall notify the State authority at least 180 days prior to the date closure is expected to begin, except in cases where the facility's permit is terminated or if the facility is otherwise ordered by judicial decree or compliance order to cease receiving wastes or to close. The date when Safety-Kleen "expects to begin closure" should be within 90 days after the date on which Safety-Kleen expects to receive the final volume of wastes.

3. Within 90 days of receiving the final volume of hazardous wastes, or 90 days after approval of the closure plan, if that is later,

Safety-Kleen shall remove from the site, all hazardous wastes in accordance with the approved closure plan. The Regional Administrator may approve a longer period if Safety-Kleen demonstrates that:

The activities required to comply with this paragraph will, of necessity, take longer than 90 days to complete; or

The following requirements are met:

- The facility has the capacity to receive additional wastes;

- There is a reasonable likelihood that a person other than Safety-Kleen will recommence operation of the site;

- Closure of the facility would be incompatible with continued operation of the site; and Safety-Kleen has taken and will continue to take all steps to prevent threats to human health and the environment.

4. Safety-Kleen shall complete closure activities in accordance with the approved closure plan and within 180 days after receiving the final volume of wastes or 180 days after approval of the closure plan, whichever is later.

5. When closure is completed, all facility equipment and structures shall have been properly disposed of, or decontaminated by removing all hazardous waste and residues.

6. When closure is completed, Safety-Kleen shall submit to the certification by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

MEDLEY, FLORIDA SERVICE CENTER
CLOSURE COST ESTIMATE

1. CLOSURE OF DRUM STORAGE AREA - Remove and return drums to a reclaimer, clean the drum storage area, and dispose of wash water generated.

a.	2 Truck Dr. $17.56/hr. x 8 hrs.	$ 280.96
	2 Trucks $500 lump sum	500.00
	Hauling cost = 2 trucks x 180 miles x $1.75/mile =	630.00
b.	Clean drum storage area	
	Crew:	
	1 Foremen $18.30/hr. x 10 hrs. =	183.00
	1 Laborer ($17.00/hr. & $3.00/hr. hazard pay) x 10 hrs. =	200.00
c.	Dispose of wash water 700 gallons x $0.12/gallon =	84.00
d.	Dispose of used solvents - 432 drums x $30.00/drum	12,960.00
e.	Testing for contamination 2 samples x $230.00/each	460.00
	Total Drum Closure Cost =	$15,298.00

2. CLOSURE OF RETURN AND FILL STATION - Remove, package and dispose of sediment, clean the dumpster and dock area, remove dumpster and dock structure for reuse.

a.	1 Truck $250 lump sum	$ 250.00
	Hauling Cost = 30 miles x $1.75/mile	52.50
	1 Truck Dr. $17.56/hr. x 8 hrs. =	140.48
	Crew:	
	1 Foreman $18.30/hr. x 4 hrs. =	73.20
	1 Laborer ($17.00/hr. & $3.00/hr. hazard pay) x 4 hrs. =	80.00
b.	Clean Dumpster and Dock Area	
	Crew:	
	1 Foreman $18.30/hr. x 16 hrs. =	292.80
	1 Laborer ($17.00/hr. & $3.00/hr. hazard pay) x 16 hrs. =	320.00
	Use of high pressure water for one day =	400.00
c.	Disposal of wash water 1000 gallons x $0.12/gallon =	120.00

d. Dispose of dumpster mud
21 55-gallon drums x $300/drum = 6,300.00

e. Testing for contamination
3 samples x $75 each = 225.00

f. Torch, disassemble, and remove dumpster and dock

Crew:

1 Foreman $18.30/hr. x 16 hrs. =	292.80
2 Laborers $17.00/hr. x 16 hrs. =	578.00
Equipment $5.20/hr. x 8 hrs. =	41.60
1 Truck Dr. $17.56/hr. x 2 hrs. =	35.12
Total Dock Closure Cost =	$ 9,202.00

3. TANK CLOSURE - Open, remove contents of, clean, remove, and dispose of, one 20,000-gallon aboveground storage tank.

Phase I - Remove Contents and Clean

1. Ship contents to a reclaimer.

Crew:

3 Truck Dr. $17.56/hr. x 8 hrs. =	$ 421.44
3 Trucks $750 lump sum	750.00
Tank size = 20,000 gal. ÷ 7,500 gal/truck = 3 trucks	
3 trucks x 80 miles x 1.75/mile =	420.00
Reclamation cost ($0.30/gal.)	6,000.00

2. Squeegie Clean Tank

Crew:

1 Foreman $18.30/hr. x 24 hrs. =	439.20
1 Laborer ($17.00/hr. & $3.00/hr. hazard pay) x 24 hrs. = 480.00	

3. Use of high pressure water for two days 800.00

4. Disposal and transportation of wash water
(4,000 gallons @ $0.12/gallon) = 480.00

5. Transportation of wastewater
1,250 miles x $1.75/mile = 2,187.50

6. Analysis of rinsate sample 200.00

Total - Phase I $12,178.00

Phase II - Remove and Dispose of Tank

1. Disconnect and Remove Appurtenant Equipment

Crew:		
1 Foreman $18.30/hr. x 8 hrs. =		$ 146.40
2 Laborers $17.00/hr. x 8 hrs. =		272.00

2. Torch Tank

Crew:		
1 Foreman $18.30/hr. x 8 hrs. =		146.40
1 Laborer $17.00/hr. x 8 hrs. =		136.00

3. Remove Tank

Crew:		
1 Foreman	$18.30/hr. x 2 hrs. =	36.60
4 Laborers	$16.80/hr. x 2 hrs. =	134.40
1 Backhoe	$28.97/hr. x 2 hrs. =	57.94
1 Oiler	$25.47/hr. x 2 hrs. =	50.94
1 Truck Dr.	$17.56/hr. x 2 hrs. =	35.12
Equipment	$200 Lump Sum =	200.00
	Total Phase II =	$1,216.00

Phase III - Backfilling, Regrading, Soil Testing

1. Test for soil contamination
   Six samples @ $230 each $1,380.00

2. Regrading

Crew:		
1 F.E. Loader	$27.38/hr. x 1 hr. =	27.38
Equipment	$ 2.00/c.y. x 10 c.y. =	20.00
	Total - Phase III =	$1,427.00

Summary of Closure Cost for one 20,000-gallon tank:

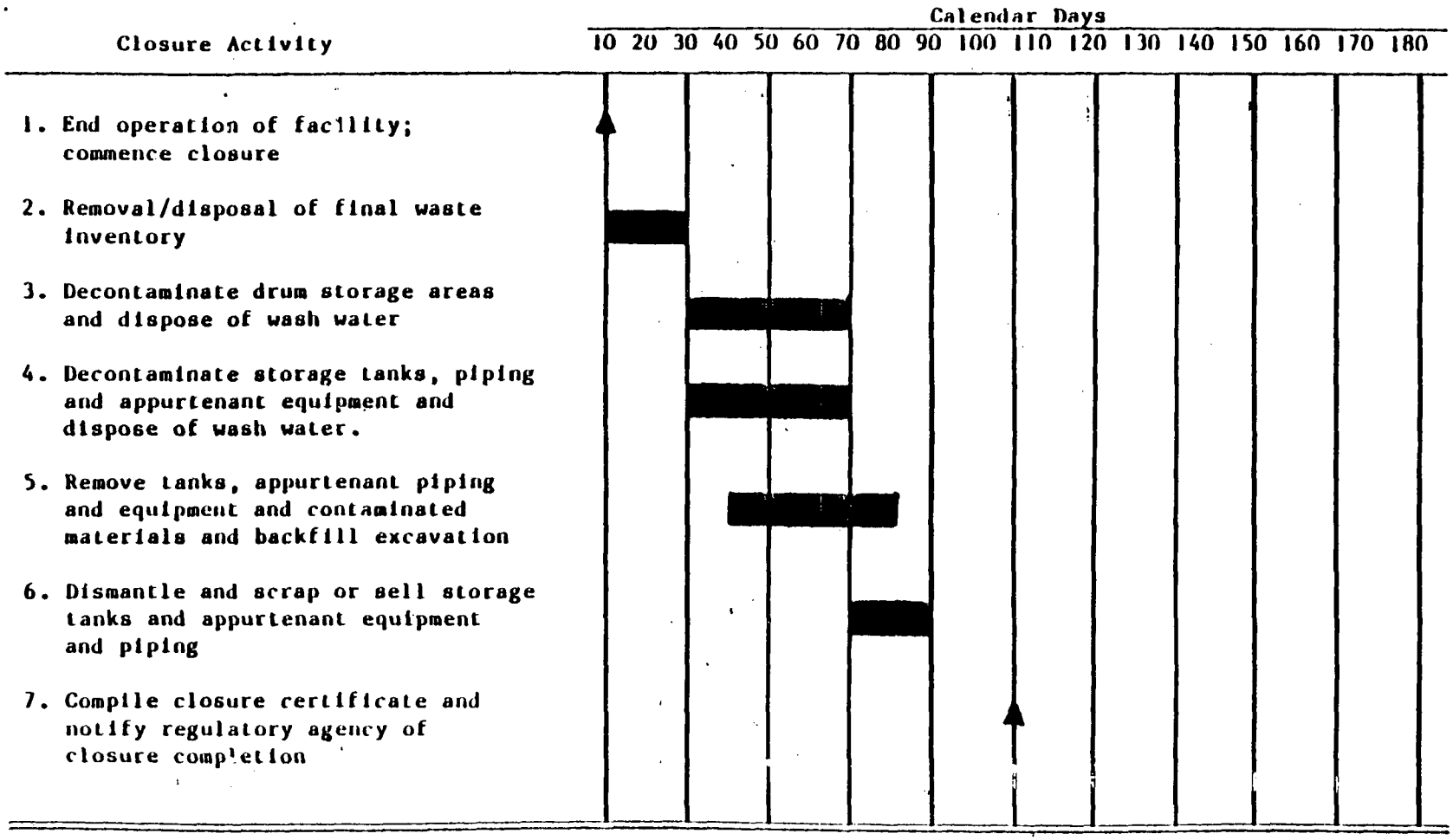
Phase I =	12,178
Phase II =	1,216
Phase III =	1,427
	$14,821

4. PE CERTIFICATION - $ 1,500.00

5. TOTAL CLOSURE COST:

One 20,000-gallon tank =		$14,821
Drum storage area =		15,298
Dock and dumpster area =		9,202
P.E. certification =		1,500
	1988 Total	$40,821
	1988 Inflation Factor (1.034%)	422
	1989 Total	$41,243

CLOSURE SCHEDULE



I.F.2 FINANCIAL ASSURANCE FOR CLOSURE

Safety-Kleen Corp. is the operator of the Medley, Florida Service Center. The cost for closure of the facility as estimated in section I.F.1 is assured through the use of a letter of credit specified in Subpart H of 40 CFR Part 264. Exhibit I.F.2-1 shows the letter.

The Northern Trust Company
International Services

I.F 2-1

125 South Wacker Drive
Chicago, Illinois 60675
TELEPHONE: (312) 630-6000
S.W.I.F.T. ADDRESS: CNORUS44

IRREVOCABLE LETTER OF CREDIT

L/C NO. S235957 DATE: AUGUST 04, 1989

SECRETARY, FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION
TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

WE HEREBY ESTABLISH OUR IRREVOCABLE STAND-BY LETTER OF CREDIT NUMBER S235957 IN YOUR FAVOR, AT THE REQUEST AND FOR THE ACCOUNT OF SAFETY-KLEEN CORP., 777 BIG TIMBER ROAD, ELGIN, IL 60120 UP TO THE AGGREGATE AMOUNT OF (U. S. DOLLARS ONE MILLION THREE HUNDRED EIGHTEEN THOUSAND EIGHT HUNDRED AND 00/100) US$1,318,800.00 UPON PRESENTATION OF:

(1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT NO. S235957, AND

(2) YOUR SIGNED STATEMENT READING AS FOLLOWS: "I CERTIFY THAT THE AMOUNT OF THE DRAFT IS PAYABLE PURSUANT TO REGULATIONS ISSUED UNDER AUTHORITY OF THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 AS AMENDED, AS AMENDED, AS ADOPTED BY REFERENCE IN SECTION 17-30.180, FLORIDA ADMINISTRATIVE CODE."

THIS LETTER OF CREDIT IS EFFECTIVE AS OF AUGUST 4, 1989 AND SHALL EXPIRE ON AUGUST 3, 1990 BUT SUCH EXPIRATION DATE SHALL BE AUTOMATICALLY EXTENDED FOR A PERIOD OF ONE YEAR ON AUGUST 3, 1990 AND ON EACH SUCCESSIVE EXPIRATION DATE, UNLESS, AT LEAST 120 DAYS BEFORE THE CURRENT EXPIRATION DATE, WE NOTIFY BOTH YOU AND SAFETY-KLEEN CORP. BY CERTIFIED MAIL THAT WE HAVE DECIDED NOT TO EXTEND THIS LETTER OF CREDIT BEYOND THE CURRENT EXPIRATION DATE. IN THE EVENT YOU ARE SO NOTIFIED, ANY UNUSED PORTION OF THE CREDIT SHALL BE AVAILABLE UPON PRESENTATION OF YOUR SIGHT DRAFT FOR 120 DAYS AFTER THE DATE OF RECEIPT BY BOTH YOU AND SAFETY-KLEEN CORP., AS SHOWN ON THE SIGNED RETURN RECEIPTS.

WHENEVER THIS LETTER OF CREDIT IS DRAWN ON UNDER AND IN COMPLIANCE WITH THE TERMS OF THIS CREDIT, WE SHALL DULY HONOR SUCH DRAFT UPON PRESENTATION TO US, AND WE SHALL DEPOSIT THE AMOUNT OF THE DRAFT DIRECTLY INTO THE STANDBY TRUST FUND OF SAFETY-KLEEN CORP. IN ACCORDANCE WITH YOUR INSTRUCTIONS.

(CONTINUED)

The Northern Trust Company
International Services

125 South Wacker Drive
Chicago, Illinois 60675
TELEPHONE: (312) 630-6000
S.W.I.F.T. ADDRESS: CNORUS44

I.F.2-1

L/C NUMBER: S235957 PAGE NUMBER: 02

WE CERTIFY THAT THE WORDING OF THIS LETTER OF CREDIT IS INDENTICAL TO THE WORDING SPECIFIED IN 40 CFR 264.151(D) AS ADOPTED BY REFERENCE IN SECTION 17-30.180, FLORIDA ADMINISTRATIVE CODE, AS SUCH REGULATIONS WERE CONSTITUTED ON THE DATE SHOWN IMMEDIATELY BELOW.

DATE: AUGUST 04, 1989

THIS CREDIT IS SUBJECT TO THE UNIFORM CUSTOMS AND PRACTICE FOR DOCUMENTARY CREDITS,1983 REVISION,I.C.C.,PUBLICATION NO.400.

CHARLES W. GERLACH, JR.
OPERATIONS OFFICER

ALICE BLUDER
PRO-CASHIER

STATE OF FLORIDA

HAZARDOUS WASTE FACILITY STANDBY TRUST FUND AGREEMENT

TRUST AGREEMENT, the "Agreement," entered into as of August 9, 1989 by and between Safety-Kleen Corp., a Wisconsin corporation, the "Grantor," and Old Kent Bank - Chicago, incorporated in the State of Illinois the "Trustee."

WHEREAS, the Florida Department of Environmental Regulation, "FDER," an agency of the State of Florida, has established certain regulations applicable to the Grantor, requiring that an owner or operator of a hazardous waste management facility shall provide assurance that funds will be available when needed for closure and/or post-closure care of the facility,

WHEREAS, the Grantor has elected to establish a trust to provide all or part of such financial assurance for the facilities identified herein,

WHEREAS, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee,

NOW, THEREFORE, the Grantor and the Trustee agree as follows:

Section 1. Definitions. As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

(c) The term "FDER" means the Florida Department of Environmental Regulation, an Agency of the State of Florida or any successor thereof.

Section 2. Identification of Facilities and Cost Estimates. This Agreement pertains to the facilities and cost estimates identified on attached Schedule A.

Section 3. Standby Trust. This Trust shall remain dormant until funded with the proceeds from the Letter of Credit as listed on Schedule B. The trustee shall have no duties or responsibilities beyond safekeeping this Document. Upon funding this Trust shall become active and be administered pursuant to the terms of this instrument.

Section 4. Establishment of Fund. The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of the FDER. The Grantor and the Trustee intend that no third party of access to the Fund except as herein provided. The Fund is established initially as consisting of the property, which is acceptable to the Trustee, described in Schedule B attached hereto. Such property an any other property subsequently transferred to the Trustee is referred

to as the Fund, together with all earnings and profit thereof, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor, any payments necessary to discharge any liabilities of the Grantor established by the FDER.

Section 5. Payment for Closure and Post-Closure Care. The Trustee shall make payments from the Fund as the FDER Secretary shall direct, in writing, to provide for the payment of the costs of closure and/or post-closure care of the facilities covered by this Agreement. The Trustee shall reimburse the Grantor or other persons as specified by the FDER Secretary from the Fund for closure and post-closure expenditures in such amounts as the FDER Secretary shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as the FDER Secretary specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 6. Payments Comprising the Fund. Payments made to the Trustee for the Fund shall consist of cash or securities acceptable to the Trustee and shall consist solely of proceeds from the Letter of Credit.

Section 7. Trustee Management. The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiary and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the facilities, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2.(a), shall not be acquired or held, unless they are securities or other obligations of the Federal or a State government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the Federal or a State government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

(iv) The Trustee shall invest the fund as a single unit adding income to principal on a regular basis. All payments out of the fund shall be out of the principal balance.

Section 8. Commingling and Investment. The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et. seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 9. Express Powers of Trustee. Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and delivery any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depositary with other securities deposited therein by another person, or to deposit to arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the Federal or a State government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 10. Taxes and Expenses. All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 11. Annual Valuation. The Trustee shall annually, at least 30 days prior to the anniversary date of establishment of the Fund, furnish to the Grantor and to the Secretary of the FDER a statement confirming the value of the Trust. Any securities in the Fund shall be valued at market value as of no more than 60 days prior to the anniversary date of establishment of the fund. The failure of the Grantor to object in writing to the Trustee within 90 days after the statement has been furnished to the Grantor and the FDER Secretary shall constitute a conclusively binding assent by the Grantor, barring the Grantor from asserting any claim or liability against the Trustee with respect to matters disclosed in the statement.

Statement 12. Advice of Counsel. The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any question arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 13. Trustee Compensation. The Trustee is authorized to charge against the principal of the Trust its published Trustee fee schedule in effect at the time services are rendered.

Section 14. Successor Trustee. The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor Trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then consisting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in a writing sent to the Grantor, FDER Secretary, and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 10.

Section 15. Instructions to the Trustee. All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Exhibit A or such other designees as the Grantor may designate by amendment to Exhibit A. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by the FDER Secretary to the Trustee shall be in writing, signed by the FDER SEcretary, or the designee, and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or the FDER hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or the FDER, except as provided for herein.

Section 16. Amendment of Agreement. This Agreement may be amended by an instrument in writing executed by the Grantor, the Trustee, and the FDER Secretary, or by the Trustee and the FDER Secretary if the Grantor ceases to exist.

Section 17. Irrevocability and Termination. Subject to the right of the parties to amend this Agreement as provided in Section 16, this Trust shall be irrevocable and shall continue until terminated at the written agreement of the Grantor, the Trustee, and the FDER Secretary, or by the Trustee and the FDER Secretary, if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 18. Immunity and Indemnification. The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or the FDER Secretary issued in accordances with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor or from the Trust Fund, or both, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its defense in the event the Grantor fails to provide such defense.

Section 19. Choice of Law. This Agreement shall be administered, construed, and enforced according to the laws of the State of Florida.

Section 20. Interpretation. As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each Section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

IN WITNESS WHEREOF the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 264.151(a)(1), as adopted by reference in Section 17-30.180, Florida Administrative Code, as such regulations were constituted on the date first above written.

SAFETY KLEEN CORP.

by Lawrence M. Rudnick

Treasurer
(Title)

Attest:

Marian G. Bellis

(Title) Asst. Sec.

[Seal]

OLD KENT BANK - CHICAGO

By _____
Deborah L. Brown, Vice President

Attest: _____
Asst Vice President
(Title)

[Seal]

CERTIFICATION OF ACKNOWLEDGEMENT FOR
HAZARDOUS WASTE FACILITY STANDBY TRUST FUND AGREEMENT

State of Illinois

County of Kane

On this date, August 8, 1989, before me personally came Laurence Rudnick to me known, who, being by me duly sworn, did depose and say that he resides at 777 Big Timber, that he is Treasurer of Safety-Kleen Corp., the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation, and that he signed his name thereto by like order.

Susan C. Gosse
Signature of Notary Public

OFFICIAL SEAL
SUSAN C. GOSSE
NOTARY PUBLIC, STATE OF ILLINOIS
My Commission Expires May 12, 1990

Schedule "A"

This agreement demonstrates financial assurance for the following cost estimate for the following facility:

EPA/DER I.D. No. of Facility	Name of Facility	Address of Facility	Cost Estimates For Which Financial Assurance Is Being Demonstrated by This Agreement	
FLD 000776757	3-097-01	16086 S.W. 4th Avenue Bldg. B Delray Beach, FL 33444	Closure Post-Closure Total	$ -0- $659,400 $659,400
FLD 049557408	3-163-01	4701 North Manhattan Tampa, FL 33614	Closure Post-Closure Total	$ -0- $659,400 $659,400

SCHEDULE "B"

The fund is established initially as consisting of the following property:

$1,318,800 (one million three hundred eighteen thousand eight hundred dollars) as evidenced by Letter of Credit No.S235957, dated 08/04/89 with Florida Dept. of Environmental Regulation as beneficiary.

LCSCHEDB

EXHIBIT A

The following persons are authorized to issue written orders, requests, and instructions for the Grantor to the Trustee as stated in Section 15 (INSTRUCTION TO THE TRUSTEE) of the Standby Trust Agreement:

Safety-Kleen Corp. By: _____

_____

Laurence M. Rudnick, Treasurer

or

Scott E. Fore, Vice President

_____

I.F.3 LIABILITY INSURANCE

In accordance with the liability requirements of 40 CRF 264.147, Safety-Kleen Corp. has acquired insurance coverage for sudden accidental occurrences arising from operations of the service center facility. Exhibit I.F.3-1 presents the Hazardous Waste Facility Liability Endorsement from the National Union Fire Insurance Company of Pittsburgh, Pennsylvania. The coverage from this insurance policy is in the amount of $2 million per occurrence with an annual aggregate of $2 million; this combined coverage exceeds the minimum required in 40 CFR 264.147 for the protection of the environment and the health, safety and welfare of the people of the State of Florida.

STATE OF FLORIDA

HAZARDOUS WASTE TRANSPORTER CERTIFICATE OF LIABILITY INSURANCE

1. National Union Fire Insurance Company,
[Name of Insurer]
(the "Insurer"), of Pittsburgh, Pennsylvania
[Address of Insurer]
hereby certifies that it has issued liability insurance covering bodily injury and property damage including environmental restoration for sudden accidental occurrences to Safety-Kleen Corp.,
[Name of Insured]
(the "Insured"), of 777 Big Timber Road, Elgin, IL 60123
[Address of Insured]
in connection with the insured's obligation to demonstrate financial responsibility under Florida Administrative Code Rule 17-30.170. The coverage applies at:

EPA/DER I.D. No.	Name	Address
ILD051060408	Safety-Kleen Corp.	777 Big Timber Rd. Elgin, IL 60123

(If coverage is for multiple facilities identify each facility insured.)

This insurance is primary and the company shall not be liable for amounts in excess of $ 2,000,000 for each accident, exclusive of legal defense costs. The coverage is provided under policy number RMGLA 4595931, issued on October 1, 1988. The effective date of
[Date]
said policy is October 1, 1988.
[Date]

This insurance is excess and the company shall not be liable for amounts in excess of $_____ for each accident in excess of the underlying limit of $_____ for each accident, exclusive of legal defense costs. The coverage is provided under policy number _____, issued on _____. The effective date of
[Date]
said policy is _____.
[Date]

2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:

(a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.

(b) The Insurer is liable for the payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the insured for any such payment made by the Insurer.

(c) Whenever requested by the Secretary (or designee) of the Florida Department of Environmental Regulation (FDER), the Insurer agrees to furnish to the Department a signed duplicate original of the policy and all endorsements.

(d) Cancellation of the insurance, whether by the Insurer or the insured and any other termination of the insurance (e.g., expiration, non-renewal), will be effective only upon written notice and only after the expiration of thirty-five (35) days after a copy of such written notice is received by the Secretary of the FDER as evidenced by certified mail return receipt.

(e) The Insurer shall not be liable for the payment of any judgment or judgments against the Insured for claims resulting from accidents which occur after the termination of the insurance described herein, but such termination shall not affect the liability of the Insurer for the payment of any such judgment or judgments resulting from accidents which occur during the time the policy is in effect.

I hereby certify that the Insurer is licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more States including Florida.

Bernard M. Dunne
[Signature of Authorized Representative of Insurer]

Bernard M. Dunne
[Type name] [Social Security Number]

Vice President
[Title]

Authorized Representative of

National Union Fire Insurance Company
[Name of Insurer]

222 South Riverside Plaza, Chicago, IL 60606
[Address of Representative]

I.F.4 LAND BAN NOTIFICATION/CERTIFICATION FORMS

In accordance with 40 CFR 268.7, Safety-Kleen will provide notification/certification for wastes banned from landfills as follows:

1. Printing the Notice language on the manifests - such as for core-business customers to branch shipments; or

2. Special forms for each regularly handled waste types (e.g., MS, IC, perc, freon, paint waste); or

3. A general form that must be completed for unique or non-standard waste streams.

The Notice is required paperwork for the streams handled by Safety-Kleen. Shipments lacking the proper Notice will not be accepted by any Safety-Kleen facility. When a shipment with the proper Notice is received, the Notice is kept in the files of the receiving facility with the manifest or with the pre-print if a manifest is not used.

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 receipt 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 30-, 16- and 20-gallon drums. Paint wastes are stored in 5-gallon and 16-gallon drums. These containers are managed similar to the used immersion cleaner drums and contents within the drums will not be transferred or processed at the service center. They are not removed from the containers until receipt by a reclaimer.

The drum storage area as shown on Exhibit II-1 occupies a portion of a building area which has a sloped concrete floor and interceptor trench which form a 2,700 gallon spill containment system:

Volume of sloped floor = 1/3 (base x height)
= 1/3 (78'8" x 48'8" x 3") x 7.481 gal/cf
= 2,386 gal.

Volume of trench = 12' x 1'9" x 2' x 7.481 gal/cf
= 314 gal.

The concrete floor is sloped three inches to the central, closed trench. The concrete is sealed with a chemical resistant compound and 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 capacity of the containment system is designed to be greater than 10% of the total liquid storage capacity in the drum storage area. Since the characteristics of the stored wastes are known, no quantitative analyses are performed for the materials stored in the containment area.

All containerized wastes are sent to a reclaimer. Any materials that can not be effectively reclaimed are 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 sediment drums, dry cleaning and paint waste containers are moved either with 2-wheel hand trucks and stacked by hand or with a pallet jack or forklift. All drums will be elevated on pallets to eliminate the possiblity 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 the specifications in Exhibits I.E.3-1 through I.E.3-5.

The drum storage area has adequate secondary containment capacity (2,700 gallons) for handling the 6,912 gallons (432 16-gallon drums or the equivalent) of waste to be stored.

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

The drum storage area is located indoors and containment system consists of a sloped concrete floor and a sump which prevent both run-on and run-off.

II.B.2. WASTE COMPATIBILITY

The used mineral spirits, immersion cleaner, dry cleaning and paint wastes are not incompatible with each other, or with other materials handled at this facility as far as reactivity is concerned. However, they are the primary source of feed stock for regenerating the clean solvents. Separation of the used solvents is a standard practice at the service center.

All material stored at the service center is managed in accordance with local fire protection code and fire department recommendation. All ignitable wastes in containers are stored 50 feet from the property line.

Drum storage configurations are shown of Exhibit II-3.

II.B.3 INCOMPATIBLE WASTES

See above, Section II.B.2., eighth paragraph.

II.B.4 PROCEDURES FOR LEAKING CONTAINERS

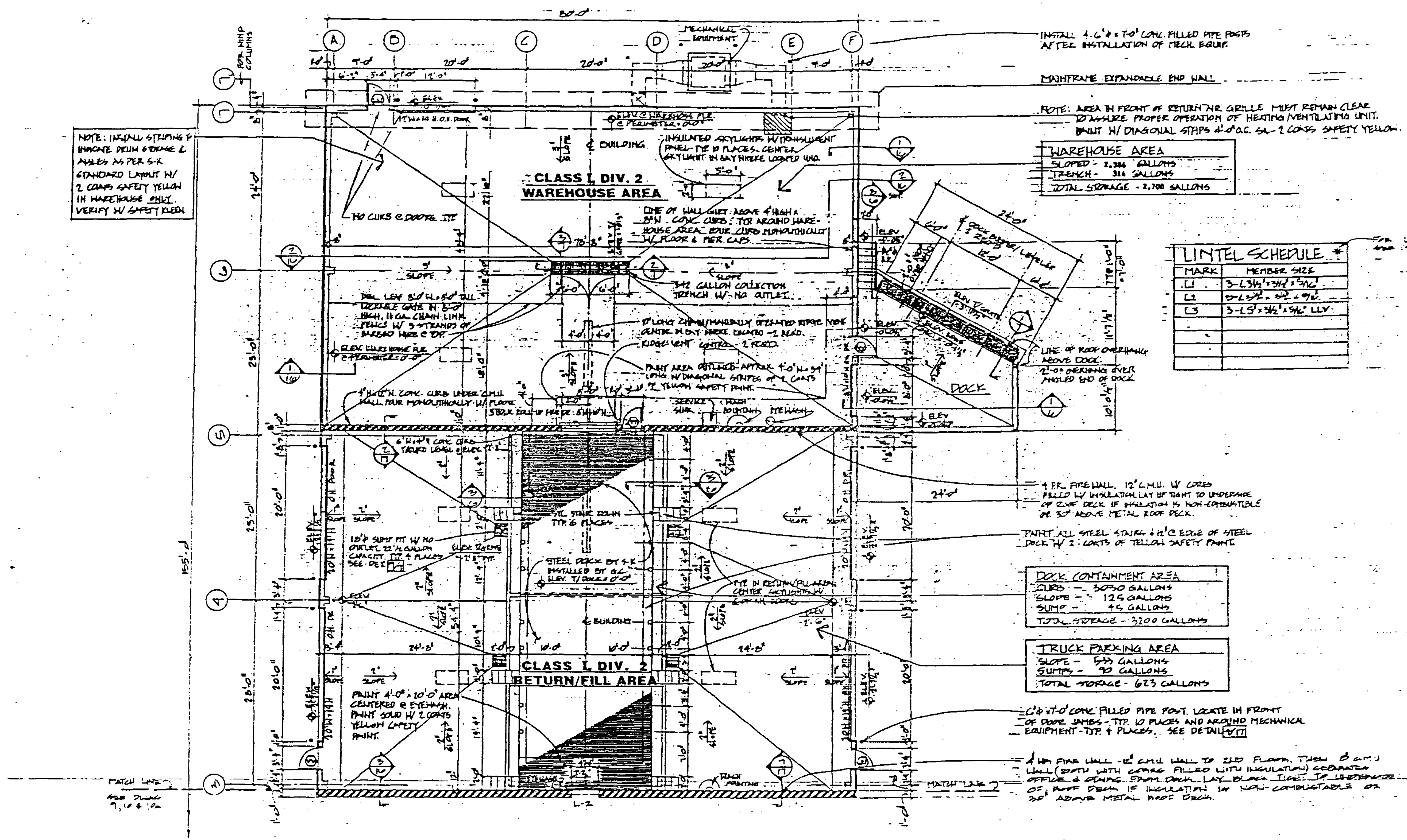
Specific procedures for inspection and management of leaking containers are presented in section I.E.4.

II.B.5 INSPECTION PROCEDURES

See Section I.E.4.

II.B.6 CLOSURE PLAN

A closure plan for the entire facility is presented in Section I.F.


CLASS I, DIV. 2
WAREHOUSE AREA
CLASS I, DIV. 2
RETURN/FILL AREA
DOCK
MAINFRAME EXPANDABLE END WALL
INSTALL 4-6" ø x 7'-0" CONC. FILLED PIPE POSTS AFTER INSTALLATION OF MECH. EQUIP.
NOTE: AREA IN FRONT OF RETURN AIR GRILLE MUST REMAIN CLEAR TO ASSURE PROPER OPERATION OF HEATING/VENTILATING UNIT. PAINT W/ DIAGONAL STRIPS 4'-0" O.C. W/ 2 COATS SAFETY YELLOW.
WAREHOUSE AREA
SLOPED - 2,386 GALLONS
TRENCH - 314 GALLONS
TOTAL STORAGE - 2,700 GALLONS
LINTEL SCHEDULE
MARK | MEMBER SIZE
L1 | 3-L3½" x 3½" x 5/16"
L2 | 3-L3½" x 3½" x 5/16"
L3 | 3-L5" x 3½" x 5/16" LLV
DOCK CONTAINMENT AREA
CURB - 3030 GALLONS
SLOPE - 125 GALLONS
SUMP - 45 GALLONS
TOTAL STORAGE - 3200 GALLONS
TRUCK PARKING AREA
SLOPE - 533 GALLONS
SUMPS - 90 GALLONS
TOTAL STORAGE - 623 GALLONS
NOTE: INSTALL STRIPING & IMMOBILE DRUM STORAGE & AISLES AS PER S-K STANDARD LAYOUT W/ 2 COATS SAFETY YELLOW IN WAREHOUSE ONLY. VERIFY W/ SAFETY KLEEN
4 HR. FIRE WALL, 12" C.M.U. W/ CORES FILLED W/ INSULATION, LAY UP TIGHT TO UNDERSIDE OF ROOF DECK IF INSULATION IS NON-COMBUSTIBLE OR 30" ABOVE METAL ROOF DECK.
PAINT ALL STEEL STAIRS & H.C EDGE OF STEEL DOCK W/ 2 COATS OF YELLOW SAFETY PAINT.
6" ø x 7'-0" CONC. FILLED PIPE POST. LOCATE IN FRONT OF DOOR JAMBS - TYP. 10 PLACES AND AROUND MECHANICAL EQUIPMENT - TYP. 4 PLACES. SEE DETAIL
LINE OF ROOF OVERHANG ABOVE DOCK.
MATCH LINE
80'-0"
155'-0"

WAREHOUSE & RETURN / FILL AREA PLAN

SCALE: 1/8" = 1'-0"

REVISIONS

EXHIBIT II-1

safety-kleen corp.

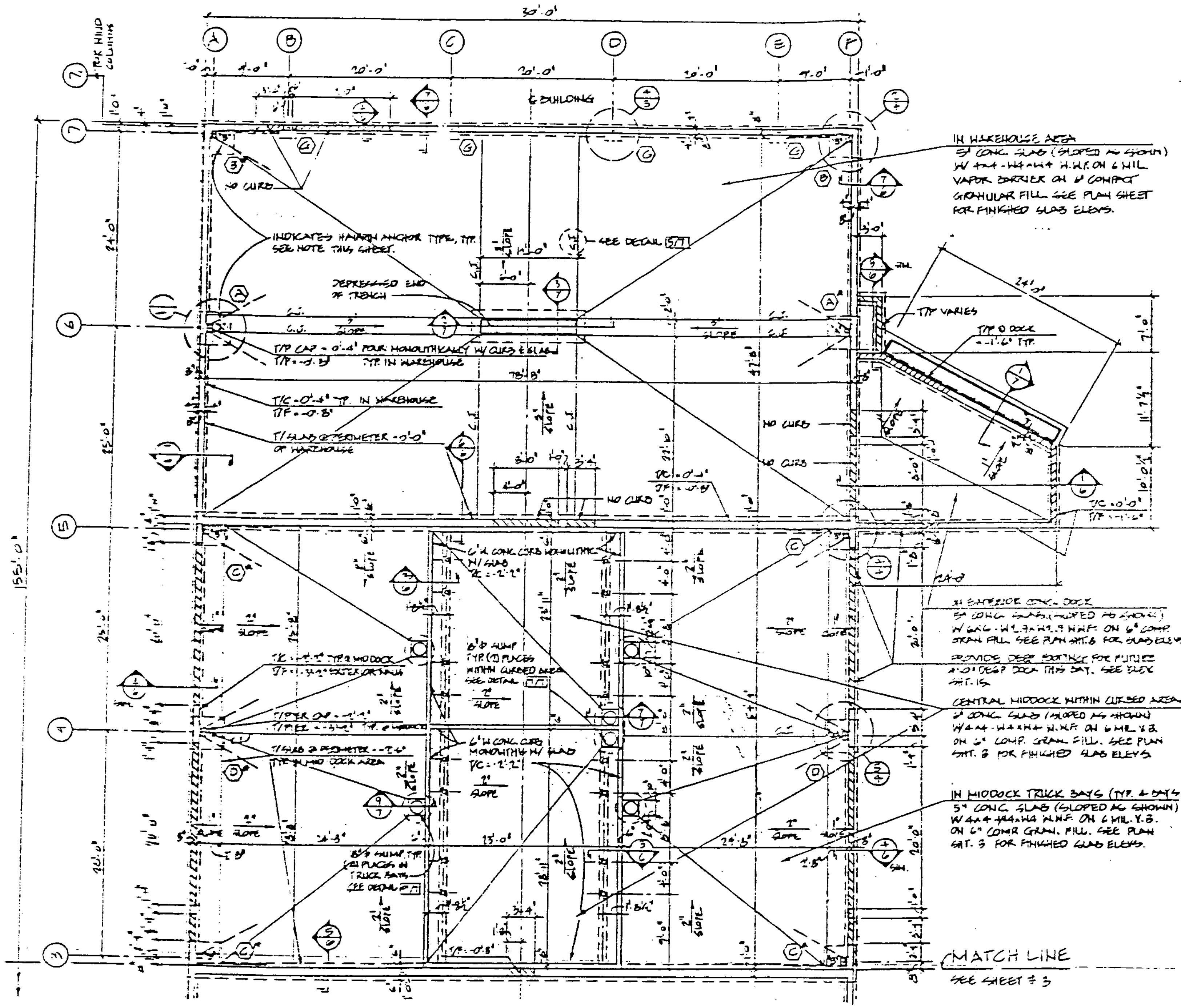
80 x 155, 20' SERVICE CENTER W/ MID-DOCK

WAREHOUSE & RETURN / FILL AREA PLAN

7-14-90

FOR SERVICE CENTER BRANCH

8



(WAREHOUSE & MID-DOCK)

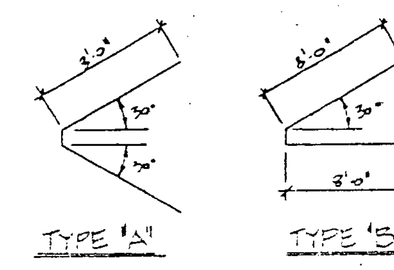
FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

NOTE:

CONTRACTOR SHALL OBTAIN HORIZONTAL THRUST FROM METAL BUILDING MANUFACTURER. THEN FURNISH AND INSTALL A MINIMUM OF 1-#5 HAIRPIN ANCHOR PER MAIN BUILDING CLEARSPAN COLUMN. SUBMIT ALL INFORMATION TO ARCHITECT FOR APPROVAL. SEE FOUNDATION PLAN FOR HAIRPIN "TYPE" REQUIRED.

#3 - 4.4 K (TENSION)
#4 - 8.0 K
#5 - 12.4 K
#6 - 17.6 K
#7 - 24.0 K



HAIRPIN NOTE

FOUNDATION NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 301-84 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS." ALL CONCRETE SHALL HAVE F'c =3000 PSI. ALL CONCRETE EXPOSED TO WEATHER SHALL HAVE 5%-7% AIR ENTRAINMENT. COARSE AGGREGATE SHALL CONFORM TO NO. 57 IN ACCORDANCE WITH ASTM C-33.
2. ALL CONCRETE FLOORS TO BE COVERED WITH BURLAP AND KEPT CONTINUOUSLY MOIST FOR A MINIMUM PERIOD OF THREE DAYS. FOLLOW ACI RECOMMENDATIONS FOR COLD WEATHER CONCRETE PLACEMENT.
3. FURNISH AND INSTALL HAIRPIN ANCHORS PER MANUFACTURERS SPECIFICATIONS. SEE NOTE AND HAIRPIN TYPES THIS SHEET.
4. SLOPE ALL CONCRETE SLABS TO SUMP, TRENCHES, FLOOR DRAINS, AND AWAY FROM BUILDING AS SHOWN ON PLAN.
5. PROVIDE 1/4" X 1" SAW CUT CONTROL JOINTS @ 20' MAXIMUM SPACING EACH WAY (U.N.). INSTALL 3/8" DIA. SONOFOAM MFG. BY SONNEBORN USING EPOXY CEMENT. LET FULLY CURE AND FILL FLUSH WITH SIKAFLEX 2C-SL SELF LEVELING POLYURETHANE CAULK. SEE DETAIL 5/7 SAW CUTS TO BE INSTALLED WITHIN 12 HOURS OF CONCRETE PLACEMENT.
6. SEE ELEVATIONS FOR LOCATION OF STEPPED FOOTINGS.
7. ALL FOOTINGS SHALL BEAR ON UNDISTURBED SOIL. MINIMUM SOIL BEARING PRESSURE TO BE 3000 PSF.
8. TOP OF ALL EXPOSED CONCRETE WALL POURS TO BE SCREEDED AND FINISHED PERFECTLY LEVEL FOR PROPER ARCHITECTURAL APPEARANCE. SEE FOUNDATION DETAILS AND ELEVATIONS.
9. STEEL GRATING TO HAVE A SPAN WIDTH OF 2'-0" W/ 1-1/2" X 3/8" STEEL BARS AND 4" CROSS BAR SPACING CONFORMING TO "KLEMP" CORP. HEAVY DUTY STEEL WELDED GRATING (SYMBOL KWHD 19-4-66) OR EQUAL. SEE TRENCH DETAILS.
10. TRENCHES AND SUMPS TO BE TESTED BY CONTRACTOR WITH WATER AT FULL HEIGHT FOR A PERIOD OF 24 HOURS WITH NO LEAKAGE ALLOWED.
11. ALL FLOORS AND SUMPS IN AREA BOUNDED BY COLUMN LINES A - F, 3 AND 7 SHALL BE COATED WITH TWO COATS OF SIKAGARD 62 MANUFACTURED BY SIKA CORPORATION, LYNDHURST, N.J. OR CONCRESIVE 1305 MANUFACTURED BY ADHESIVE ENGINEERING COMPANY, SAN CARLOS, CA. COATING SHALL HAVE A SLIP RESISTANT FINISH PER MANUFACTURERS SPECIFICATIONS. SLIP RESISTANT FINISH NOT REQUIRED UNDER STEEL [illegible]. MANUFACTURERS RECOMMENDATIONS FOR SURFACE PREPARATION AND APPLICATION SHALL BE STRICTLY FOLLOWED. ALLOW CONCRETE SUBSTRATE TO CURE AT LEAST 30 DAYS PRIOR TO APPLICATION OF COATING.

LEGEND

⬡ - PIER/FOOTING TYPE. SEE DETAILS ON SHEETS

* - INDICATES SIMILAR PIER/FOOTING TYPE AS SHOWN ON SHEETS. FOUNDATION PLAN REFLECTS ACCURATE ORIENTATION.

REVISIONS

EXHIBIT II-2

safety-kleen corp.

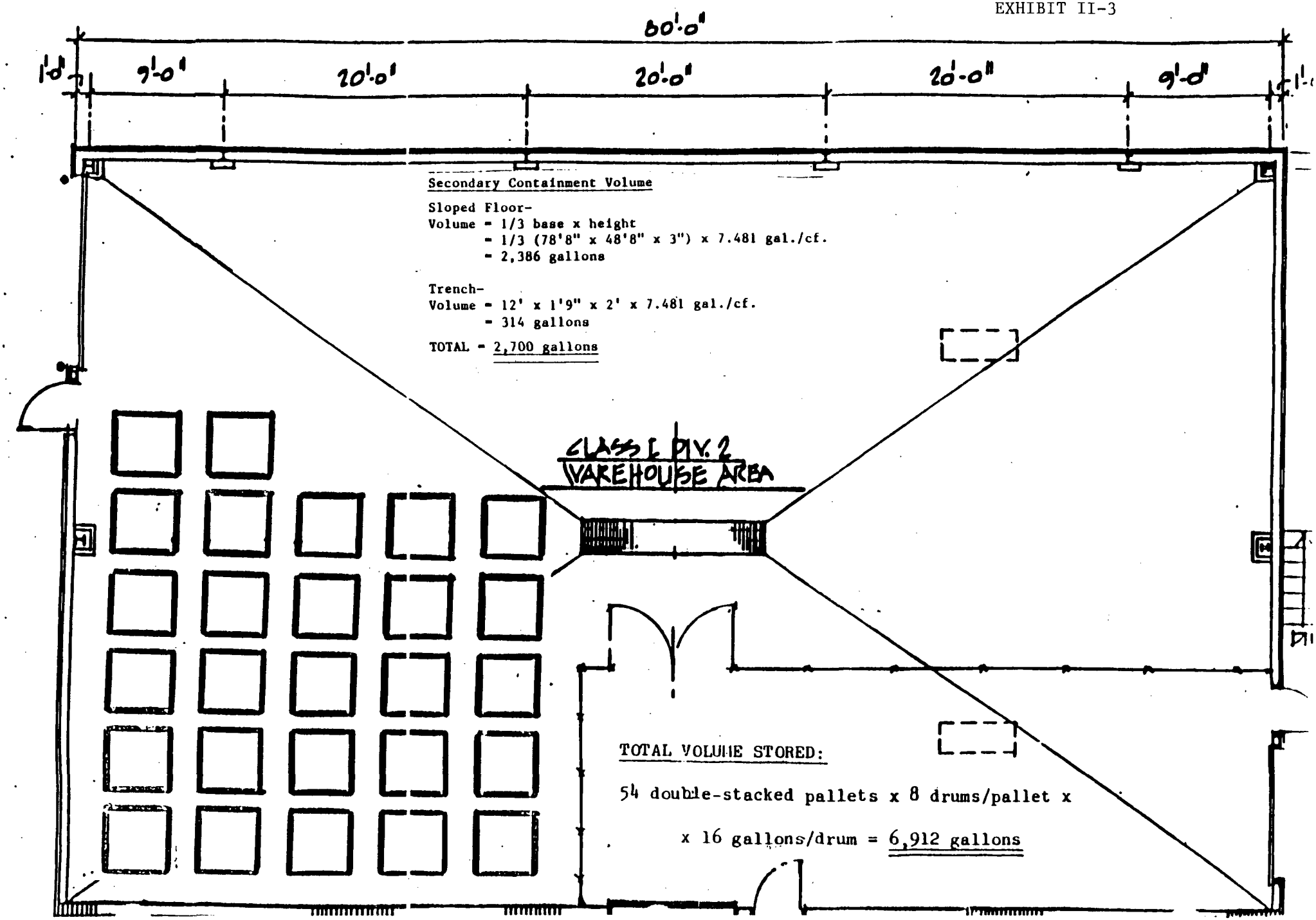
[illegible] SERVICE CENTER W/ MID-DOCK
WAREHOUSE & MID-DOCK FOUNDATION PLAN

2

AS SHOWN
7-14-89
MHL

SK SERVICE CENTER BRANCH:

EXHIBIT II-3


80'-0"
1'-0"
9'-0"
20'-0"
20'-0"
20'-0"
9'-0"
1'-0"
Secondary Containment Volume
Sloped Floor-
Volume = 1/3 base x height
= 1/3 (78'8" x 48'8" x 3") x 7.481 gal./cf.
= 2,386 gallons
Trench-
Volume = 12' x 1'9" x 2' x 7.481 gal./cf.
= 314 gallons
TOTAL = 2,700 gallons
CLASS I DIV. 2
WAREHOUSE AREA
TOTAL VOLUME STORED:
54 double-stacked pallets x 8 drums/pallet x
x 16 gallons/drum = 6,912 gallons

PART III

TANK STORAGE

III.A.1 MATERIAL COMPATIBILITY

The facility includes two tank farms each containing six aboveground steel tanks. Used mineral spirits in drums is transferred into one designated 20,000-gallon tank via the wet dumpster. The used solvent is transported, by bulk shipment, to the recycle center. Another 20,000-gallon tank is used to store mineral spirits product and three 20,000-gallon tanks are used to store non-hazardous waste oil. One 20,000-gallon tank is used to store perchloroethylene product. The second tank farm is for future use to store mineral spirits product, non-hazardous waste oil and perchloroethylene product.

Mineral spirits solvent is compatible with the mild steel tank structure; in fact, mineral spirits is often used as a light hydrocarbon coating to prevent rusting of metal parts. Mineral spirits has a specific gravity less than water (0.8) and any water will accumulate in the bottom of the tank. There is the potential for corrosion of the tank at the mineral spirits/water interface; however, the material is pumped from the bottom of the tank so corrosion is minimized.

The tanks are vented (at the top, to the atmosphere) to prevent pressure buildup. There are no flammable vapors and this design will prevent accidental ignition of any vapors (see Exhibit I.E.3-9).

III.A.2 TREATMENT PROCESSES

There are no treatment processes at this facility.

III.B.1 TANK DESIGN AND OPERATION PROCEDURES

The tanks are designed and constructed to be compatible with the materials stored in them. Typical construction and installation standards for the aboveground tank systems are shown in Exhibits I.E.3-6 through I.E.3-10. All tanks are vented in accordance with N.F.P.A. Standards, and the tanks are equipped with high level alarms. "No Smoking" signs are posted on the entrances to the tank farm and return and fill station. The design and installation of the tank alarm system are shown in Exhibit I.E.3-8.

All tanks are aboveground and are underlain by a 54'-8" x 38'-8" x 6" concrete slab, surrounded by a 24" concrete dike. Secondary containment calculations are on Exhibit I.E.3-6. The dike has been sealed with a chemical resistant coating. Therefore, no surface runon or precipitation would be in contact with the wastes stored at the site and no runoff collection and management system is deemed necessary. Gauges are used to measure liquid levels in tanks and a float switch-activated automatic high level alarm (which consist of a stobe light and siren) will signal the tank's being 95% full. This alarm allows an operator more than two minutes to stop operations and avoid overfilling the tank. A

suction pump or the tanker truck is used to withdraw the contents from the tank. No other equipment or standby equipment is used in the operation of the aboveground tanks. The secondary containment under the tanks and return and fill station must be cleaned within 24 hours of a spill.

Material which collects in the tank dike and return and fill station can be removed using a "wet/dry" vacuum, sorbents and, if necessary, a tanker truck. The dike meets the requirements of 40 CFR 264.193 (see exhibit I.E.3-6).

III.B.2 INSPECTION PROCEDURES

See Section I.E.4. In addition to daily inspections, tanks must be cleaned, inspected internally and leak tested every five years.

III.B.3 CLOSURE PLAN

See Section I.F.

NOTE:
ALL PIPE JOINT CONNECTIONS BEYOND THIS POINT (OUTSIDE CONTAINMENT AREA) BETWEEN CONTAINMENT AREAS ARE TO BE WELDED - FOR DISTANCE, REFER TO SITE PLAN.

"A" LINE FROM 140" TREE SOLVENT

2" SOLVENT LINE TO USED SOLVENT STORAGE TANK (SEE SITE PLAN)

2" SOLVENT LINE TO FRESH SOLVENT STORAGE TANK (SEE SITE PLAN)

3'-0" x 10'-0" O.H. DOOR

6" WIDE BY 6" HIGH CONC CURB

RAISED 3'± CURBS (10'-0" x 24'-0" TOTAL = SEE S-K DRWGS. 011927 & 011928 — CUT & DIS OF DOCK AS REQUIRED TO FIT WING BETWEEN CONCRETE WALLS)

CONTRACTOR TO FILL IN OPENING W/ 3'± CONC. TO MATCH EXISTING (TYP 2 PLACES)

SOLVENT LINES TO BE MOUNTED ON OVERHEAD SUPPORTS EQUALLY SPACED TOTAL 3'-0" APART. SOLVENT LINES ELEVATION TO BE SAME AS FROM TANK FARM SEE S-K DRW #3

6" WIDE BY 6" HIGH CONCRETE CURB

CONTRACTOR TO SUPPLY & INSTALL STEEL STAIRS & HAND RAILS (2 PLACES)

18" SUMP

CURB & SLAB IN RETURN & FILL AREA TO BE FINISHING POWER TROWEL SMOOTH

6" WIDE x 6" HIGH CONCRETE CURB

SOLVENT DISPENSER TREE (140")

INSTALL DOCK PLATES & TOWELL LEVELER BY SPECIALTY METAL DOCK MFG. SEE S-K DRW'S (1) & (2) FOR DETAILS

VEHICLE DUMPSTERS (SUPPLIED BY SEE S-K DRWG. 010450)

SLANT PET STA DRWG. 011327 POINT C4

PUMP FOR USED SOLVENT SEE S-K DRWG. 011150 FOR PLUMBING, PUMP SKID PER S-K DRWG. 011327 DETAIL D

6" CONCRETE BLOCK WALL (4 HR. FIRE RATED)

SOLVENT DISPENSER TREE (140")

A B C D E F

3 4 5

DOCK PLAN — RETURN & FILL AREA

SCALE 1/4" = 1'-0"

EXHIBIT III-1

safety-kleen corp.

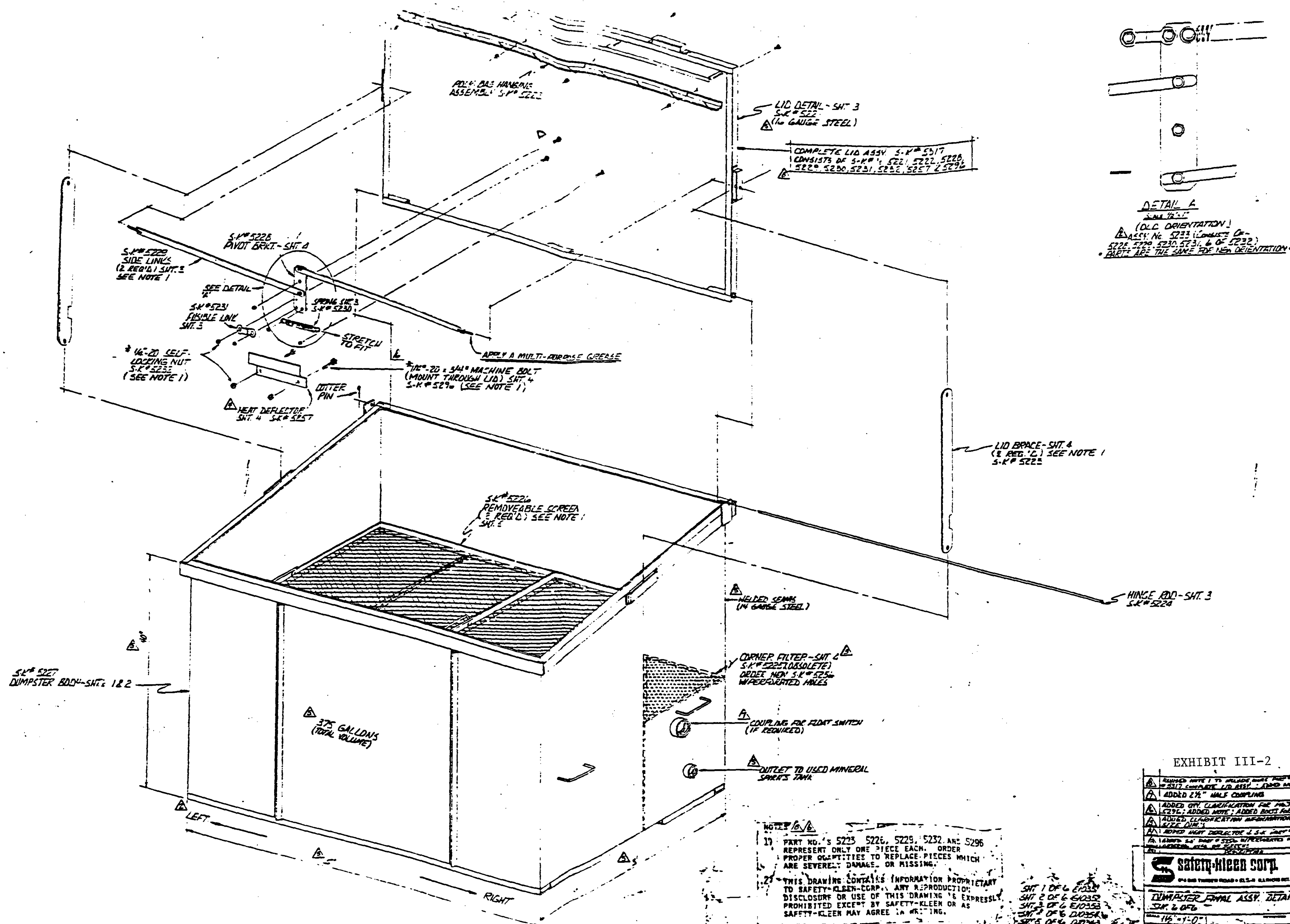
80'x155'x20' SERVICE CENTER

DOCK PLAN (RETURN & FILL AREA) P4

AS NOTED

30A 20

EXHIBIT III-2



NOTES:

1) PART NO.'s 5223, 5226, 5229, 5232 AND 5296 REPRESENT ONLY ONE PIECE EACH. ORDER PROPER QUANTITIES TO REPLACE PIECES WHICH ARE SEVERELY DAMAGED OR MISSING.

2) THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORP. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT BY SAFETY-KLEEN OR AS SAFETY-KLEEN MAY AGREE IN WRITING.

SHT 1 OF 6 E10351
SHT 2 OF 6 E10352
SHT 3 OF 6 E10353
SHT 4 OF 6 D10354
SHT 5 OF 6 D10363
SHT 6 OF 6 D10450

ADDED 2½" HALF COUPLING

ADDED HEAT DEFLECTOR & S-K PART # 5257

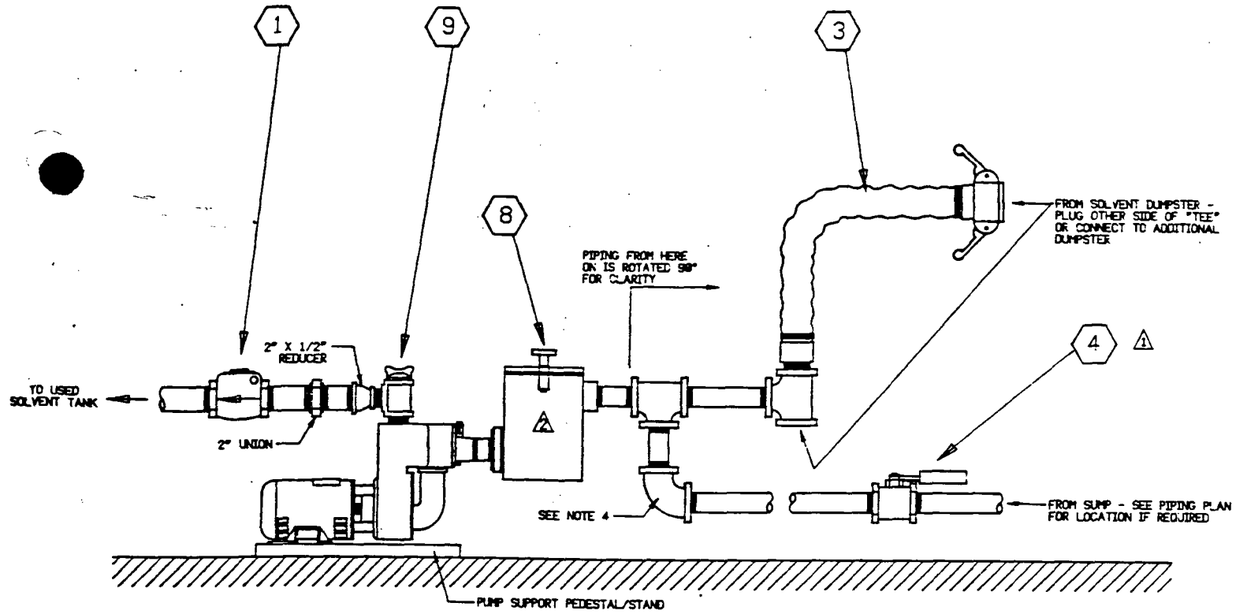
safety-kleen corp.

DUMPSTER FINAL ASSY. DETAILS S-K# 52..

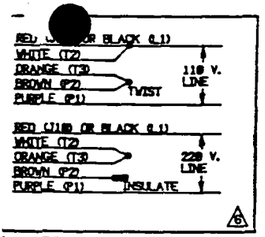
SHT. 6 OF 6

1½" = 1'-0"

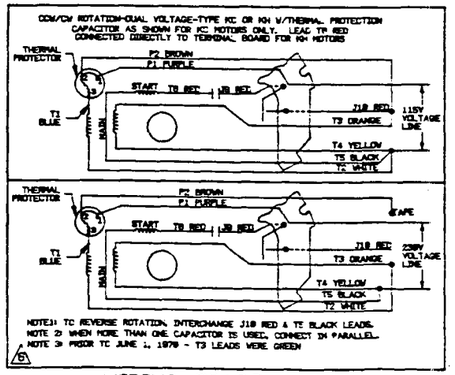
10-5-81



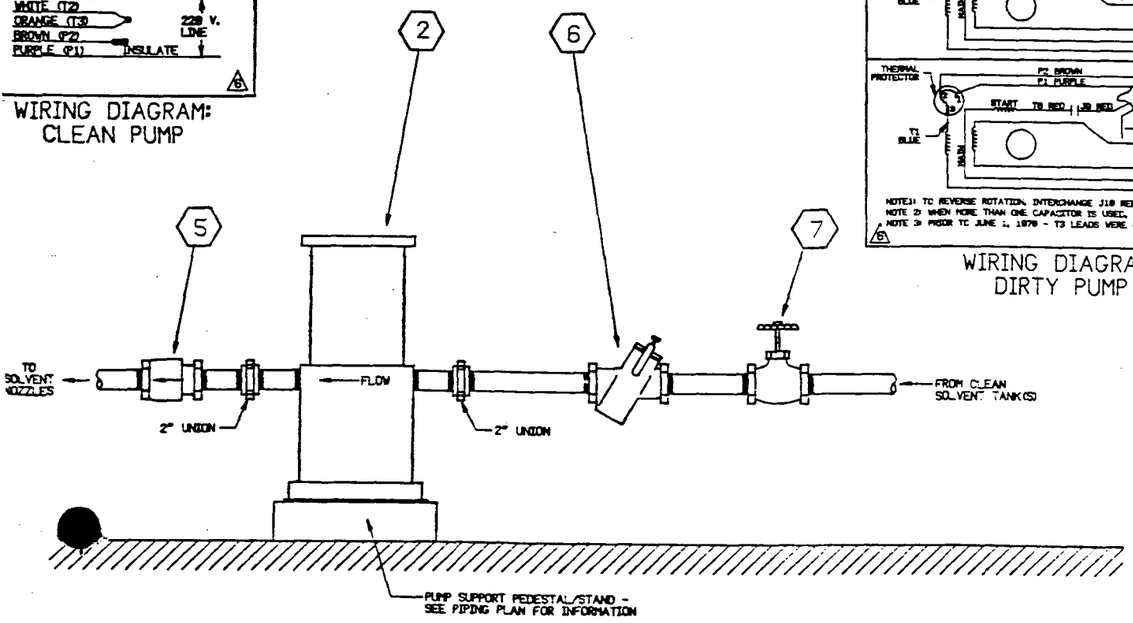
USED SOLVENT PUMP INSTALLATION



WIRING DIAGRAM: CLEAN PUMP



WIRING DIAGRAM: DIRTY PUMP



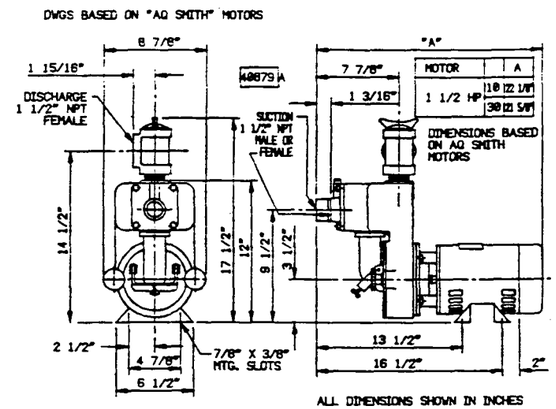
CLEAN SOLVENT PUMP INSTALLATION

EQUIPMENT / FIXTURE SCHEDULE

MARK	SIZE	DESCRIPTION	SK PART NO.	REMARKS
1	2"	2" BRONZE CHECK VALVE - MORRISON BROS. FIG. 246-A	5288	
2	2"	2" MARLOW PUMP - 20 EVP 10A 1 HP EXPLOSION PROOF MOTOR W/JUNCTION BOX - VITON FITTED	5240	SEE SPECIFICATION DETAILS ON SAFETY-KLEEN DWG. A11118 BELOW
3	2"	2" DUMPSTER HOSE ASSEMBLY	5234	SEE SAFETY-KLEEN DWG. D10452 FOR DETAILED INFORMATION
⚠1 4	2"	2" APOLLO BALL VALVE, BRONZE BODY W/STAINLESS STEEL BALL & TRIM. TEFLON SEALS & CONBRACO SPRING LOADED SELF CLOSING DEADMAN HANDLE	5272	
5	2"	2" BACK PRESSURE VALVE VERTICAL TYPE WITH 6 PSI SPRING SETTING - MORRISON BROS. FIG. 158-B/PR (15 P.S.I. OPEN)	5268	FOR ABOVEGROUND TANK INSTALLATION ONLY
6	2"	2" LINE STRAINER W/TOP CLEAN-OUT W/#20 MESH MORRISON BROS. FIG. 286	5269	
7	2"	2" BRONZE GATE VALVE MORRISON BROS. FIG. 235	5236	
⚠2 8	2"	2" MARLOW SUCTION STRAINER ASSEMBLY MODEL 2810X W/STAINLESS STEEL BASKET W/#10 PERFORATIONS	5313	FLANGED DISCHARGE PORT OF STRAINER SERVES AS UNION ON SUCTION SIDE OF PUMP
9	1 1/2"	1 1/2" MARLOW PUMP - 1 1/2HR4SEC. SINGLE PHASE. EXPLOSION PROOF, BUNA FITTED, SELF PRIMING CENTRIFUGAL	5330	SEE DETAIL BELOW LEFT

PUMP UNITS WITH OPEN MOTORS
1 1/2HR4SEC

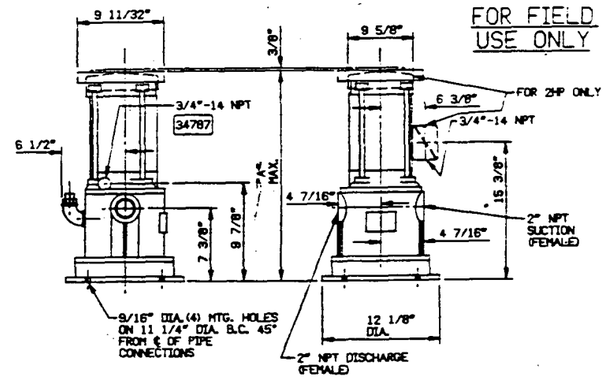
DWGS BASED ON "AO SMITH" MOTORS



ALL DIMENSIONS SHOWN IN INCHES

THESE DIMENSIONS NOT TO BE USED FOR CONSTRUCTION PURPOSES WITHOUT FORMAL FACTORY APPROVAL.

FOR FIELD USE ONLY



GENERAL NOTES

1. MODEL TO BE USED BY SAFETY-KLEEN CORP. - MODEL 20 EVP-10A, 1 HP - 2" WITH EXPLOSION PROOF MOTOR W/JUNCTION BOX & VITON FITTED, SINGLE PHASE 60 CYCLE 115/230V.
2. SEE INDIVIDUAL SERVICE CENTER SITE PLANS FOR LOCATION OF THE INSTALLATION.

SK PART NO.	G.E. EXPL. PROOF MOTORS				
	HP	PHASE	CYCLE	A	
5240		1	60	20 13/32"	115/230

GENERAL NOTES

1. THIS DRAWING SUPERCEDES SAFTY-KLEEN CORP. DRAWING A1118
2. SEE INDIVIDUAL SERVICE CENTER SITE & PIPING PLANS FOR LOCATIONS & ARRANGEMENT OF THESE DETAILS.
3. FOR UNDERGROUND TANK INSTALLATIONS, A 90° CHECK VALVE MORRISON BROS. FIG. 137 OR APPROVED EQUAL SHOULD BE INSTALLED AT TOP OF TANK ON CLEAN PUMP SUCTION LINE (CLEAN TANKS ONLY).
4. ⚠ ALL PIPING TO BE 2" SCHEDULE 40 GALVANIZED UNLESS OTHERWISE SPECIFIED. ALL CHANGES OF DIRECTION IN DIRTY SOLVENT PIPING TO BE ACCOMPLISHED USING EITHER (2)-45° ELBOWS OR (1)-LONG RADIUS 90° ELBOW.
5. THIS DRAWING CONTAINS INFORMATION PROPRIETARY TO SAFETY-KLEEN CORP. ANY REPRODUCTION, DISCLOSURE OR USE OF THIS DRAWING IS EXPRESSLY PROHIBITED EXCEPT BY SAFETY-KLEEN OR AS SAFETY-KLEEN MAY AGREE IN WRITING.
6. ⚠ ALL ITEMS WITH SAFETY-KLEEN PART NO. REFERENCES WILL BE SUPPLIED TO CONTRACTOR.

EXHIBIT III-3

REV.	DESCRIPTION	BY	CHKD	APP
⚠6	ADDED W.D.'S FOR CLEAN & USED PUMPS	RD		
⚠5	ADDED NEW PUMP FOR DIRTY SOLVENT TO VIEW & TABLE; ADDED PUMP SPEC'S	RD		
⚠4	ADDED NOTE 6	W.J		
⚠3	ADDED PUMP SPEC - DWG A11118	W.J		
⚠2	ADDED ITEM (8) & ADDED TO NOTE (4)	W.J		
⚠1	CHANGED ITEM (4) TO NEW TYPE VALVE	W.J		

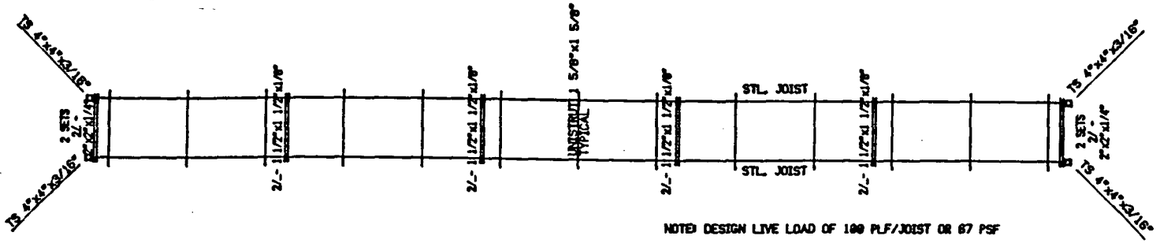
REVISIONS

TITLE: SOLVENT PUMP PIPING INSTALLATION DETAILS

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN
		NTS	

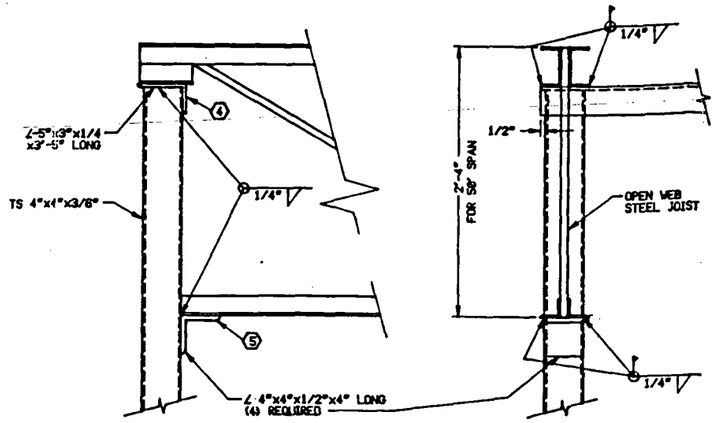
BRANCH FOR SERVICE | DRAWING NO. D11150



NOTE: DESIGN LIVE LOAD OF 100 PLF/JOIST OR 67 PSF

PLAN

SCALE: 1/4" = 1'-0"



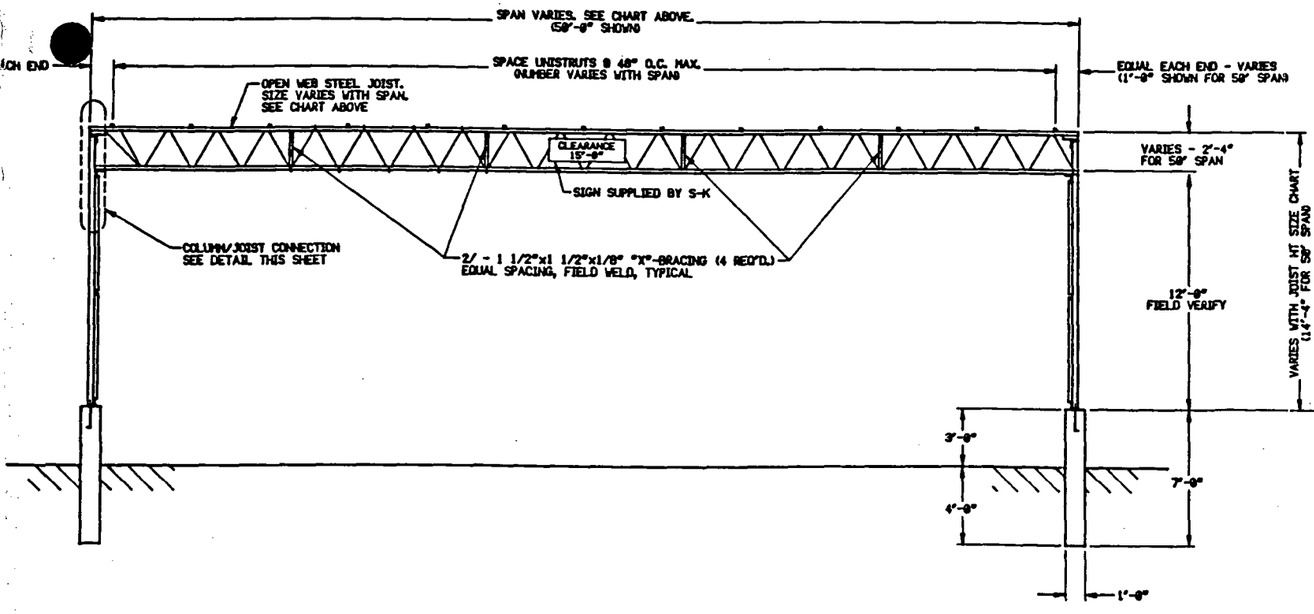
COLUMN/JOIST CONNECTION DETAIL

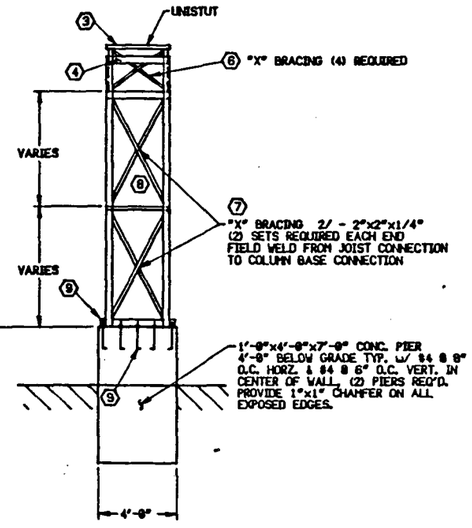
SCALE: 1 1/2" = 1'-0"

STEEL JOIST CHART	
SPAN	STEEL JOIST SERIES
8' - 30'	18 K 3
31' - 40'	24 K 4
41' - 50'	28 K 7
51' - 60'	30 K 11

PARTS LIST

PART	QTY.	DESCRIPTION
1	2	STEEL JOIST - SEE CHART ABOVE FOR SIZE
2	4	TS 4 x 4 x 3/16 TUBULAR COLUMN
3	VARIES w/SPAN	UNISTRUT 1 5/8" x 1 5/8" x 3'-4" LONG
4	2	∠ - 5" x 3" x 1/4" x 3'-5" LONG
5	4	∠ - 4" x 4" x 1/2" x 4" LONG
6	8	∠ - 1 1/2" x 1 1/2" x 1/8" (FIELD MEASURE FOR LENGTH)
7	8	∠ - 2" x 2" x 1/4" (FIELD MEASURE FOR LENGTH)
8	2	∠ - 2" x 2" x 1/4" x 3'-4" LONG
9	2	BASE ∠ - 5" x 3" x 3/4" x 3'-10" LONG
10	10	1/2" DIA. ANCHOR BOLT
11	10	1/2" DIA. NUT & WASHER (NOT SHOWN)





NOTES

1. SHOP ASSEMBLE SUPPORT FRAME. USE 1/4" FILLET WELDS AT ALL CONNECTIONS UNLESS OTHERWISE NOTED.
2. SHOP PAINT ALL MEMBERS (EXCEPT AT CONNECTIONS) WITH (1) COAT PRIMER. AFTER SURFACE PREPARATION, APPLY (1) COAT OF WHITE OXIDE PAINT AND TWO COATS OF ALKYD BASE GLOSS WHITE STRUCTURAL ENAMEL, E.G. MOBILE 12-W-4. ALLOW PAINT TO DRY 16-24 HOURS BETWEEN COATS TO INSURE PROPER SEALING.

EXHIBIT III-4

NO.	DESCRIPTION	BY	CHKD	APVD	DATE
1	ADD 50 K11 Joist	JWP			2-10-89

REVISIONS

TITLE

PIPE BRIDGE PLAN, ELEVATION, & DETAIL

SAFETY-KLEEN CORP.

777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

FIELD ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		AS SHOWN	NWD-GD	8-3-89

BRANCH: FOR SERVICE CENTER BRANCH

DRAWING NO. D13435

REV.

BPS