Hazardous Waste Facility Operating Permit Renewal Application

Safety-Kleen Corp. Facility
161 Industrial Loop South
Orange Park, Florida

ORIGINAL

FLD 980847214

Prepared For:

Safety-Kleen Corp.
Elgin, Illinois

Prepared By:

ERM
Tampa, Florida

ERM®

August 1997

safety-kleen®

August 20, 1997

Mr. Ashwin B. Patel
Supervisor - Hazardous Waste
Florida Department of
Environmental Protection
Northeast District
7825 Baymeadows Way
Suite 200B
Jacksonville, FL 32256-7577

RE: Safety-Kleen Corp. Orange Park Facility - 161 Industrial Loop South, Orange Park, Florida; FLD 980 847 214; Permit Application HO10-209007; Operating Permit Renewal Application

Dear Mr. Patel:

Enclosed are four copies of the above-referenced Operating Permit Renewal Application. The $10,000 application fee will be submitted under separate cover.

In accordance with Florida Statute 403.722(12), which requires public notice on the day that the application is submitted, a legal advertisement is being published in the *Florida Times-Union*. Also, a letter has been sent to the town of Orange Park, the Clay County Manager, and various other entities that were notified when the previous permit application was submitted. Copies of the letters are attached. Proof of publication will be provided when it is received.

If you have any questions or comments, please contact me at (904) **576-5979**.

Sincerely,

Michael J. Stokes (for)

Richard Morris
Environment, Health & Safety Manager

mmm

Enclosures

DOCKET # P.6

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safety-kleen ®

5 January 1998

Sent via FedEx
Airbill # 9627805246

Ms. Susan Capel
Region IV - Environmental
Protection Agency
61 Forsyth St. S.W.
Atlanta, Georgia 30303-3104

Re: RCRA Subpart CC Compliance
Safety-Kleen Corp. - Orange Park, Florida
FLD 980847214

Dear Ms. Capel:

Safety-Kleen is currently in the process of renewing our Hazardous Waste Part B Application for our facility located in Orange Park, Florida. As part of the renewal application the Jacksonville District Office of the Florida Department of Environmental Protection (FDEP) has requested that we send to your agency information concerning Subpart CC compliance. It is my understanding that FDEP has not been delegated authority in regards to enforcing compliance with Subpart CC regulations.

Please find attached our program at the Orange Park Service Center designed to meet the requirements of Subpart CC. If you have any questions concerning this submittal please contact me (850) 576-5979.

Sincerely,

Richard R. Morris

Richard R. Morris
Environmental, Health & Safety Manager

rrm

enclosure

cc: Ashwin Patel - FDEP Jacksonville Hazardous Waste Supervisor
Karen Cates - FDEP Jacksonville

I. Subpart CC

The Orange Park Service Center is a permitted hazardous waste storage facility and hazardous waste generator subject to the requirements of Subpart CC, Air Emission Standards for Tanks, Surface Impoundments, and Containers. Hazardous waste parts washer solvent are stored in a tank at the facility. The facility also manages a wide variety of other hazardous wastes in containers. All of these materials have been determined to contain volatile organic (VO) concentrations greater than the 500 ppm by weight. Therefore, the storage tank and containers used for the management of hazardous waste at the Service Center are subject to the applicable Subpart CC standards.

II. Tank Standards

Safety-Kleen manages hazardous waste containing greater than 500 ppm of volatile organics with a maximum vapor pressure below 4.0 psi in a tank less than 20,000 gallon capacity. This tank is subject to Level 1 control requirements under Subpart CC because it is in heavy material service storing solvent with a maximum vapor pressure far less than 0.3 kilo Pascal (kPa) (<0.04 psi). The hazardous waste storage tank is equipped with a fixed roof cover that meets the requirements of 40 CFR 264.1084(c)(2) for Level 1 tanks. The fixed roof cover is kept closed with no visible cracks, holes, gaps, or other open spaces. The storage tank is equipped with pressure relief devices and conservation vents that are operated to maintain structural integrity of the tank during normal pressure variations associated with loading, unloading, and diurnal temperature changes.

Safety-Kleen will visually inspect the closure devices on the hazardous waste tank once a year whenever it is safe to assess them as required by 40 CFR 264.1084(c)(4). The visual inspection will be conducted to check for defects such as visible cracks, holes, gaps, seals or gaskets.

The initial inspection was conducted when the tank first became subject to the Subpart CC rule. No defect was found during the visual inspection. Future defects will be repaired as follows:

o First attempt at repair of the defect will be made within 5 calendar days of detection. Final repair will be made as soon as possible but no later than 45 calendar days of detection. Repairs may be delayed if the repair of the defect requires emptying or temporary removal from service of the tank and no alternative tank capacity is available on site.

III. Container Standards

Safety-Kleen manages hazardous wastes in containers of various sizes. Typical containers are between 5 and 55 gallons in capacity. The facility also uses larger containers such as overpacks, totes and transportation containers (tank trucks) for the management of hazardous wastes. The service center is subject to container standards provided in 264.1086.

Any of those containers may be used to manage waste parts washer solvents. Containers managing this heavy liquid (vapor pressure <0.3 kPa) are subject to Level 1 container standards as specified in 40 CFR 264.1086(c). Safety-Kleen also uses small containers (less than 110 gallons) for the management of various types of "light material" hazardous wastes (vapor pressure >0.3 kPa). These containers are subject to Level 1 container standards specified in 1086(c).

Safety-Kleen complies with Level 1 Controls on all containers managed at the service center as follows:

o All containers meet the applicable DOT regulations for packing hazardous materials.

o All containers are equipped with covers that form a continuous barrier over the container openings such that there are no visible holes, gaps, or other open spaces into the interior of the containers.

The covers may be opened to add, remove, and sample the wastes, however, the covers will be kept closed during normal storage and transportation. These requirements apply to hazardous waste storage containers received from off-site and containers that are filled with hazardous wastes. The container standards do not apply to satellite accumulation containers.

Safety-Kleen operates drum washers at the service center that are used to transfer waste parts washer solvents from containers into the hazardous waste storage tank. The drum washers are kept open during active transfer of waste from containers.

Safety-Kleen provides covers on these units and keeps these units closed when not in use. These procedures minimize air emissions from drum washers.

Safety-Kleen complies with the Subpart CC inspection requirements for containers as follows:

o Safety-Kleen empties parts washer solvent containers that are received from off-site typically within 24 hours of receipt. Although these need not be inspected, Safety-Kleen informally inspects them during collection at customer locations and during unloading at the service center.

o Safety-Kleen informally inspects all other containers when they are received and placed in the permitted container storage area.

o The permitted container storage area is inspected daily. The containers are covered and examined for visible cracks, holes, gaps, or other open spaces. When a defect is identified, Safety-Kleen typically overpacks the defective drum into a larger container.

IV. Closed-Vent Systems and Control Devices

The Orange Park Service Center does not have any tanks or containers that require a closed-vent system and controls (40 CFR 264.1087). Therefore, this section is not applicable to the facility.

V. Inspection and Monitoring Requirements

Safety-Kleen conducts visual inspections of tanks and containers as specified above and required by 40 CFR 264.1088. The inspections are part of the facility operating record.

VI. Recordkeeping and Reporting

Safety-Kleen already maintains inspection records for tanks and containers subject to the Subpart CC requirements as part of the general RCRA requirements for tanks and containers. Therefore, there is no need to create and maintain separate inspection records for Subpart CC. Any defects identified that pertain to Subpart CC standards during routine inspection of the facility will be recorded on the inspection forms.

40 CFR 264.1089(g) regards tank covers that are unsafe to inspect and monitor. In such cases the facility will maintain a record in a log containing:

o the identification of the unit that is designated as unsafe to inspect and monitor;

o an explanation for each cover stating why the cover is unsafe to monitor; and

o the plan and schedule for the inspection and monitoring each cover.

Safety-Kleen will submit written reports to the Regional Administrator in the event of noncompliance with air emission control requirements. This report will be submitted within 15 calender days of the time that Safety-Kleen becomes aware of the occurrence. The reportable incidents include:

o Any defects found on a tank or a container cover that are not repaired within 45 calendar days of occurrence.

o Management of wastes in tanks or containers that require a closed vent system and controls.

DELEGATION OF AUTHORITY TO SIGN AND CERTIFY FACILITY PERMIT APPLICATIONS

I, David A. Dattilo, hereby delegate to Safety-Kleen Corp. Divisional Sales Vice Presidents and Regional Sales Managers the authority to sign and certify permit applications and to sign and certify reports for facilities under their respective management responsibility which are submitted on behalf of Safety-Kleen Corp. pursuant to the following provisions:

(1) Section 3005 of the Resource Conservation and Recovery Act (42 U.S.C. § 6925), 40 C.F.R. § 270.11, and their counterparts under state statutes and regulations;

(2) Section 402 of the Clean Water Act (33 U.S.C. § 1342), 40 C.F.R. § 122.22, and their counterparts under state statutes and regulations; and

(3) the Clean Air Act, 42 U.S.C. § 7401 et seq., 40 C.F.R. § 70.5, and their counterparts under state statutes and regulations.

Dated: 1/3/95

David A. Dattilo
Sr. Vice President-Sales and Service
Safety-Kleen Corp.
1000 North Randall Road
Elgin, Illinois 60123-7857

SIGNATORY REQUIREMENTS - REPORTS

2/1/95

STATUTE	LANGUAGE	PERSONS AUTHORIZED TO SIGN	CHANGES TO AUTHORIZATION
Resource Conservation & Recovery Act (RCRA) 40 CFR 270.11 Responsible	**Responsible Corporate Officer or A Duly Authorized Representative:** A person is a duly authorized representative if: (1) The authorization is made in writing by a Responsible Corporate Officer; (2) The authorization specifies either an individual or a position having responsibility for overall operation of the regulated facility or activity such as the position of plant manager, superintendent, or a position of equivalent responsibility (either a named individual or any individual occupying a named position); and (3) The written authorization is submitted to the Agency.	**Branches:** Any **Corporate Officer, Divisional Sales Vice President** or **Regional Sales Manager** can sign reports for the branches in their respective regions. In addition, **Facility Managers** are authorized to sign reports for their facility. **Recycle Centers:** Any **Corporate Officer** can sign reports. (Because East Chicago, Manati and Dorado are operated by subsidiary corporations, any **Corporate Officer of the respective subsidiary** may also sign for that subsidiary, even if that officer is not an officer of Safety-Kleen Corp.) In addition, **Facility Managers** are authorized to sign reports for their facility. **Accumulation and Distribution Centers and Manufacturing Facilities:** Any **Corporate Officer** can sign reports. In addition, **Facility Managers** are authorized to sign reports for their facility.	Changes to an authorized representative must be submitted to the Agency prior to or together with any reports.
Clean Air Act (CAA) 40 CFR 70.5	**Responsible Official:** defined same as "Responsible Corporate Officer" in RCRA, 40 CFR 270.11(i) **or** **Duly Authorized Representative, defined as:** A person responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either: (i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million; **or** (ii)The delegation of authority to a representative is approved in advance by the permitting authority.	Same as RCRA above	Changes to an authorized representative must be submitted to the Agency prior to any applications.
Clean Water Act (CWA) 40 CFR 122.22	**Responsible Corporate Officer or Duly Authorized Representative** (as defined under RCRA, 40 CFR 270.11)	Same as RCRA above	Same as RCRA above
Oil Pollution Prevention Regs 40 CFR 112	**SPCC Plans:** A Registered Professional Engineer must review and certify.	**A Registered Professional Engineer**	Same as RCRA above

SIGNATORY REQUIREMENTS - PERMITS

2/1/95

STATUTE	LANGUAGE	PERSONS AUTHORIZED TO SIGN	CHANGES TO AUTHORIZATION
Resource Conservation & Recovery Act (RCRA) 40 CFR 270.11	**Responsible Corporate Officer:** i. A president, secretary, treasurer, or vice president of a corporation in charge of a principal business function or any other person who performs similar policy or decision making functions for the corporation; OR ii. The manager of one or more manufacturing, production or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million, if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.	**Branches:** Any **Corporate Officer** may sign. Also, by delegation, **Divisional Sales Vice Presidents** and **Regional Sales Managers** may sign permits and permit modification applications for the branches in their respective division or region. **Recycle Centers:** Any **Corporate Officer** can sign permits and permit modification applications. (Because East Chicago, Manati and Dorado are operated by subsidiary corporations, any **Corporate Officer of the respective subsidiary** may also sign for that subsidiary, even if that officer is not an officer of Safety-Kleen Corp.) **Accumulation and Distribution Centers and Manufacturing Facilities:** **Corporate Officers** can sign permits and permit modification applications.	Changes to an authorized representative must be submitted to the Agency prior to or together with any applications.
Clean Air Act (CAA) 40 CFR 70.5	**Responsible Official:** defined same as "Responsible Corporate Officer" in RCRA, 40 CFR 270.11(i) or **Duly Authorized Representative, defined as:** A person responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and either: (i) The facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $25 million; or (ii) The delegation of authority to a representative is approved in advance by the permitting authority.	Same as RCRA above	Changes to an authorized representative must be submitted to the Agency prior to any applications.
Clean Water Act (CWA) 40 CFR 122.22	**Responsible Corporate Officer** (as defined under RCRA, 40 CFR 270.11)	Same as RCRA above	Same as RCRA above
Oil Pollution Prevention Regs 40 CFR 112	**SPCC Plans: A Registered Professional Engineer** must review and certify.	**A Registered Professional Engineer**	Same as RCRA above

6 January 1998 HAND DELIVERED

Mr. Ashwin B. Patel
Supervisor - Hazardous Waste
Florida Department of Environmental Protection
Northeast District
7825 Baymeadows Way
Suite 200B
Jacksonville, FL 32256-7577

RECEIVED
JAN 6 - 1998
DEPT. OF ENV. PROTECTION
NORTHEAST DISTRICT - JAX

Re: Safety-Kleen Corp.
Orange Park Service Center
FLD 980 847 214
Operating Permit Renewal Application HO10-209007
Warning Letter No. WL97-0858HW10NED
Safety-Kleen Corp. Responses to First Notice of Deficiency

Dear Mr. Patel:

Safety-Kleen has prepared the following responses to the Notice of Deficiencies (NODs) outlined in the above referenced Warning Letter dated 21 October 1997. The above referenced renewal application was submitted to the Department on 22 August 1997.

1) A.10 DEP Form 62-730.900(2)(d)- A letter of authorization for the person signing the permit application as the owner/operator is required, if is signed by someone other than the president of the company. Please submit a letter of authorization.

S-K Response: Attached is a letter of authorization delegating Regional Sales Managers the authority to sign and certify permit applications.

2) B.4 Section 2.2, Figure 2.2-1 - Surface water flow patterns are not distinguishable on this map. The Department recommends that a map of approximately scale 1"= 200' be added to indicate this. A map of the industrial park such as was included in the previous permit application, HO10-209007, Fig. 1.B.4-3, is acceptable unless a revised one is available.

S-K Response: Surface water flow from the service center is shown on figure 2.2-5a. Surface water flows east of the service center along a drainage ditch adjacent to Industrial Loop South Road. The drainage ditch is connected to a small retention pond located across the street from the Loring Drive entrance to the Industrial Park.

P.O. BOX 20008 4426 ENTREPOT BOULEVARD TALLAHASSEE, FL 32316 1-800/769-5885

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3) D.1 Page 4 of 5 - Please explain why the SIC codes cited in this permit application are different than the SIC codes listed in the previous permit application, dated September 21, 1992.

S-K Response: The primary SIC code listed in the previous application was 7389 (Solvent Recovery). Safety-Kleen branches/service centers do not recycle or process waste solvents. Spent solvents are transported to our recycle centers for recovery. The branches/service centers perform the following activities as described in the Office of Management and Budget SIC Manual.

1) Equipment Rental and Leasing (SIC 7359) - The leasing and servicing function of the parts cleaners and paint gun cleaners is within this SIC code description.

2) Local Trucking with Storage (4214) - This activity typifies the waste collection activities that are not associated with a leasing and service activity. The dry cleaning, industrial services, waste paint, and imaging businesses all involve the simple collection of closed containers which are temporarily warehoused at the facility.

Note: The initial application also listed SIC codes 5084, 5172, and 5013. Upon further review it was determined that the wording may apply to Safety-Kleen branches, however the activities they describe do not apply to S-K branches. For this reason these codes were dropped from the list because they do adequately describe the activities performed at the branch level.

4) D.2 Section2.3, pg. 2-7, Table 2.3-1, Table 5.1-1, Table 7.1-1/Section 8.1, pg. 8-1- The tables mentioned above do not list all wastestreams handled in the permitted container storage areas. This includes oil filters, truck washwaters, aqueous parts washer, and aqueous brake cleaner. Please revise these tables to include a list of all wastestreams, hazardous and nonhazardous, handled in the permitted storage areas and indicate in which areas they are being handled. Also include a list of all facility generated waste and commonly handled FRS wastestreams being handled in the 90-day and transfer areas.

S-K Response: Tables 2.3-1, 5.1-1, and 7.1.1 have been revised to include oil filters, truck washwaters, aqueous parts washer, and aqueous brake cleaner. Commonly handled FRS waste streams are described in section 2.3 of the permit application. FRS waste streams are handled as 10-day transfer wastes.

5) D.2 Table 2.3-1, Table 5.1-1, Table 7.1-1 - These tables state the facility will store branch generated liquid/solids in the permitted container storage area. The facility has not requested the F001 waste code to be added to the list of approved waste codes for this unit. Either the facility should add the F001 waste code to the permitted container storage area or explain where the branch generated liquid/solid waste will be accumulated in the facility.

S-K Response: The request to add waste code F001 to the permitted container storage area was

included in the Part A application of the facility renewal application.

6) D.2 Section 2.3, page 2-6, paragraph 4 - This paragraph seems to conflict between with the description stated in Sections 5 and 9 of the permit application regarding the handling and storage of used parts washer solvent. The paragraph indicates that used parts washer solvent is handled in containers and may be stored in the permitted storage area. Please explain this discrepancy.

S-K Response: Section 2.3 has been revised to clarify the issue of storing used parts washer solvent in the permitted container storage area. See revised text.

7) D.2 Section 2.3, page 2-8 - A statement is made that mercury-containing "lamps are picked up from customers and are handled at the Branch as nonhazardous transfer waste". Handling lamps under the management standards of 62-737, FAC, does not make them nonhazardous. It only allows the facility to store and transport them under standards different from RCRA. The Department recommends that this sentence be amended to state that the lamps are handled in accordance with the management practices listed in 62-737, FAC.

S-K Response: The recommended changes have been made in section 2.3 in regards to handling of spent mercury containing lamps.

8) D.2 Section 2.3 - Please revise this section to include a brief description of activities conducted at the Fill/Return station or a list of references to another section where a description is made. Also provide a description of the transfer facility and its operations.

S-K Response: In section 2.3 a brief description of activities conducted at the Return & Fill and the transfer area has been included.

9) D.3 EPA Form 8700-23, pg. 4 of 7, pgs 6a-6e - Please explain why the notes on page 4 do not correspond to the definitions of Process Codes S01 and S02. Also, explain why the Process Codes mentioned in pgs 6a-6e for each wastestream or groups of wastestreams do not correspond to the waste handling and storage descriptions mentioned in Sections 8 and 9 of the permit application.

S-K Response: The process code descriptions for S01 and S02 were interchanged on page 4 of 7 of EPA Form 8700-23. The page has been revised to indicate the correct descriptions. The Part A form also has been revised to show the corrected permitted storage capacities and all hazardous waste streams.

10) A.1a A topographic map of scale approximately scale 1"=200 was not included in the application. Please include this map. A map of the industrial park with the needed information such as one mentioned in comment 1 is sufficient.

S-K Response: As agreed upon at the 6 November 1997 meeting, the topographic map shown in

Figure 2-2.1 (at a scale of 1" = 2000') has been enlarged to a scale of 1" = 500'. The additional figure is Figure 2.2-1a.

11) A1.a Section 2, Fig 2.1-1 - Buildings that house businesses, residence, school etc. and other structures such as fire control facilities, storm and sanitary systems, and recreational areas was not observed on this map. The Department is interested in actual land use of the surrounding areas, in addition to the actual zoning. Please revise the map that includes these structures in relation to the facility.

S-K Response: Figure 2.2-3a has been included in Section 2 to provide requested information. The map provides details on areas where the public may congregate. In a phone conversation with Michael Dunbar he indicated that this map may fullfill the intent of this NOD. This map used in conjunction with the zoning map should provide in accurate picture of actual land usuage within in a one mile radius of the facility.

12) A.1b Section 2.2, Figure 2.2-7 - The wind rose chart included does not indicate the precise location. Please provide the specific location where this information was obtained and also comment on why this location was chosen. Also, please state if this was the most recent data available for that location and if the chosen location was the closest to the facility.

S-K Response: The wind rose (Figure 2.2-7) is taken from the National Weather Service data collection facility at the Jacksonville (FL) International Airport. This location was chosen because its the closest location to the facility for which such information was readily available.

13) A.1c Section 2.1, 2.2 - No information regarding the estimated volumes of waste trafficked through the facility was found. Please provide estimated volumes of waste trafficked and their frequency.

S-K Response: Section 2.1 has been revised to include traffic flow to and from the Service Center.

14) A.3 Section 2.2, Figure 2.2-2 - Although this Figure has the appearance of an FIA-FEMA map, it does not contain any information stating it is an FIA or any other type map. If this is a FIA map, submit a copy of the original document in its entirety. If a FIA is not available, use an equivalent mapping technique to determine whether the facility is within the 100-year flood plain, and if so, what the 100-year flood elevation is. Also, include engineering analyses, data, structural or engineering studies, and other pertinent information to justify the alternate method. The US Geological Survey, the Soil Conservation, the Water Management Districts, and the Regional Planning Councils also have information requested in this section.

S-K Response: The map in question is a FEMA map. The source of the map has been added to the figure. As agreed to in our meeting on 6 November 1997, the Department does not require Safety-Kleen to submit the actual FEMA map.

15) A.4b Section 5.10, pg. 5-23 - The evacuation route mentioned in this section does not reference Fig. 5.6-1. Please revise this portion of the plan to include the reference.

S-K Response: Section 5.10 has been revised to reference the evacuation figure 5.6-1.

16) A.4b Section 5.8, 5.9, pg. 5-21 - Please mention the location of the nearest fire hydrant to this facility. This may be referenced in this section, and included on the map requested in Comment 1.

S-K Response: Section 5.9 has been revised to indicate the location of the nearest fire hydrant to the Service Center.

17) A.4c Section 5.6, pg. 5-18/Section 9.1, 9.2, Tera Report, Pg. B-23 - This section states that the storage tanks are not grounded. During a site visit made by the Department staff on October 15, 1997, it appeared that the tanks are grounded. Please confirm this and revise Section 5.6 to include a statement that preventative measures have been taken to eliminate the build-up of a static charge in the tanks system. Also revise the description in Section 9 to state that the tanks are grounded.

S-K Response: Section 5.6 has been revised to include a statement that all tanks are grounded. Section 9.2 has been revised to indicate that all three tanks are grounded. It should be noted that at time of the Terra Report (see page B-23) which is included in the prior application submittal that the tanks were not grounded.

18) A.4c Section 5.6, pg. 5-18/Section 9.3/ Appendix H, Fig.2/Section 11, Fig 11.0-1 - Drawings indicate that the piping has a backflow preventor to keep dirty solvent form flowing back to the Return/Fill station area and thus preventing a possible spill. During the site visit on October 15, 1997, no backflow preventor was observed on the installed piping for the dirty solvent tank system. Please confirm if one is present, or if not, explain why one is not necessary.

S-K Response: A check valve is present in the line carrying the dirty solvent to the storage tank.

19) A.4e Section 6.1 - No statement was found regarding how often the annual training was updated. Please provide an explanation of how all initial and annual training is updated, and how often.

S-K Response: Section 6.1 has been revised to indicate initial training and annual training is reviewed and updated on a yearly basis by the Corporate Environmental, Health & Safety Group located in Elgin, IL.

20) A.4e Section 6.1, pg. 6-2 - Please provide the job description of the Regional Environmental Health and Safety Manager and elaborate on this person's role in the daily operations of the facility. Also please include information on the initial and continuing training this person receives.

SK Response: During the 6 November 1997 meeting this item was dropped from the list of deficiencies.

21) A.5 Section 7.1.3, pg. 7-3/Section 7.1.8 & 9, pg.7-7/Appendix H, Fig.2 - Please state which parts washers generate waste filters. Describe how they are characterized and handled at the facility. Also describe how dumpster strainer waste are characterized and handled.

S-K Response: Section 7.1.3 of the permit application has been revised to address issues under this NOD.

22) A.5 Section 7.1.6, pg. 7-5 - This paragraph indicates that some paint wastes will be handled as FRS waste and will not be permitted waste. Please explain why and how different wastestreams are determined.

S-K Response: Under section 7.1.6, Safety-Kleen explains that waste streams under the FRS program are handled as transfer waste. The FRS paint program deals mainly with hazardous wastes from industrial manufacturing. Since these paint waste streams may contain variables from one generator/process to another, each waste stream is analyzed separately. The waste streams are handled as transfer waste due to the variability in waste codes associated with these types of wastes. Paint waste handled as permitted waste comes from core lines of business such as autobody shops and have historically been shown to contain similar waste codes. Each year the consistency of the core paint waste streams are checked by performing an annual recharacterization program to determine if any waste codes need to be added or deleted. These types of waste streams come from known processes and can be handled as permitted waste. In summary paint wastes from core lines of business are handled as permitted wastes; other paint wastes are handled as FRS/transfer waste. Section 7.1.6 was modified to clarify this.

23) A.5 Section 7.1.6, pg. 7-5,6 - Please explain what is meant by the word "characterize" in the context of this paragraph.

S-K Response: The word "characterizes" in this paragraph means that FRS wastes are characterized (assigned waste codes) using a combination of process knowledge and analytical testing to establish applicable hazardous waste codes and to determine which Recycle Center(s) can handle the waste.

24) A.7 Section 5.2, pg. 5-4 - Please provide more information on how fire extinguishers are serviced to ensure proper operation. Also include how often this is done.

S-K Response: Section 5.2 has been revised to provide service intervals for the fire extinguishers.

25) B.1b Section 8.1, Appendix C, sheet 1 of 3 - The calculations for the total trench volume for the permitted container storage area appear to be in error. Please reverify your calculations and revise all descriptions and figures in the permit application referencing these. Also explain your

justification for using 1280 gallons as the maximum permitted storage capacity for the paint wastestorage shelter. Please include a sketch showing the maximum number of containers that can be stored in this building to justify the storage capacity.

S-K Response: The total trench volumes have been corrected, and associated figures, tables, and text have been revised. A figure showing the layout of 30-gallon drums in the paint waste shelter has been included as Figure C-1 in Appendix C. This figure shows that eighty 30-gallon drums may be placed in one tier. Safety-Kleen may store drums stacked two high (160 drums) for a total of 4,800 gallons.

26) B.1b Section 8, pg.8-1 - The depth of the concrete underneath the containment structure of the permitted container waste storage area inside the facility is not provided. Please provide this information, if available.

SK Response: The depth of concrete beneath the containment structure of the permitted storage area is six inches.

27) C.1 Section 9.1, Appendix E - Since aqueous brake and parts washer fluid is to be added to the dirty solvent tank, please explain why an inside protective coating might not be needed to prevent corrosion.

S-K Response: Adding the aqueous wastes to the dirty solvent tank will not result in tank corrosion. The pH level of the aqueous brake cleaner is slightly greater than 7.0 units and the pH of concentrated aqueous parts cleaner prior to dilution in the parts washer is 10.8 units. Aqueous solutions have been previously added to the dirty solvent tank in the form of rainwater from the tankfarm and vehicle washwaters. The water phases have not contributed to tank corrosion as confirmed by the visual tank inspection and tank shell thickness testing.

28) C.1 Section 9.2, Appendix E/Tera Report, pg. 15 - The age of the tank and tank system appear to conflict between the two references. Please confirm the age of the tanks and the tank systems.

S-K Response: The AST Inspection Services, Inc. report on the aboveground storage tank states that the hazardous waste tank was built approximately in 1980. This was an educated guess by the tank inspector based on his experience with the manufacturing company of the tank. Terra's report indicates that the tank was placed in service in March 1985. It is our understanding that the tank was new when initially placed in service in 1985. March 1985 should be used as the target date in reference to the age of the tank.

29) C.4 Appendix G, Drawing D-14288 - Please indicate what sketches shown on this drawing coincide with the operations at this facility. This may be done by crossing through the sketches that do not apply.

S-K Response: Drawing D-14288 in Appendix G has been amended to indicate what type of dumpster system is present at the Orange Park Service Center. Nonapplicable drawings have been crossed out.

30) C.4 Appendix H, Drawing D-14218 - Please explain the procedure to determine if the high level alarm sensor is properly functioning.

S-K Response: Each working day the high level alarm is tested to determine if it is working properly. A test button is pushed and if the audible alarm goes off it is assumed to be in proper working condition

31) C.7 Section 9.3, pg 9-5/Appendix C, sheet 2 of 3 - During the site visit on October 15,1997, Department staff observed that there is a divider between the containment areas which is not mentioned in this section description. However, this divider may be incorporated into the calculations. Facility personnel also stated that each sump in the containment area was approximately 16 gallons while the calculations state differently. Please explain the apparent discrepancy in the containment area dimensions and re-verify your volume calculations. Also state if there is a divider between the two apparent containment areas and if there is an overflow weir/pipe between them.

S-K Response: The Return & Fill containment area is divided into two equal sections by a concrete divider (with no overflow). Containment calculations have been modified to account for the divider. The sump volumes in the containment area are as noted in the report. Facility personnel were referring to the amount of washwater generated during high pressure truck washes when they made reference to 16 gallons. The volume of the north and south containment areas reflects the curbed area, plus the sumps, minus the volume lost due to the footprint of the dumpsters.

32) C.7 Section 9.3, pg 9-5/Appendix C, sheet 2 of 3 - The volume of the two dumpsters mentioned in this description does not correspond to the volume calculated. A value of 1008 gallons for the two dumpsters was cited in the description while a value of 108 gallons for the barrel washers (dumpsters?) Was calculated. Please explain this discrepancy.

S-K Response: The actual holding capacity of each dumpster is 108 gallons and not 504 gallons. 504 gallons is the holding capacity of a different type of dumpster found in other S-K facilities. Section 9.3 has been revised to reflect the maximum holding capacity of 108 gallons. This value has no bearing on the containment volume calculations discussed above. The closure cost estimate has also been revised to reflect a reduced sludge capacity.

33) C.7 Section 9.3, pg 9-5 - During the Department site visit on October 15, 1997, facility personnel stated that only one dumpster was being used and two were out of service. The description states that two dumpsters are active and a third is slated for closure by end of this year. Please clarify what the current status is of all three dumpsters and provide procedures for

the dumpster(s).

S-K Response: The current status of the three dumpsters is as follows: the dumpster at the north end of the Return & Fill is scheduled for closure prior to issuance of the new operating permit and the two dumpsters at the south end of the Return & Fill will remain active. One of the dumpsters at the south end is currently missing parts of the drum washing mechanism. This dumpster will be fully operational prior to issuance of the operating permit.

34) C.9 Section 9.3 - During the site visit on October 15, 1997, a metal pan was observed underneath the hose fittings in the tank loading/unloading area. Please explain how tank loading and unloading operations are conducted and what is done with spilled/leaked material that accumulates in the pan. This should state where liquid would go in case of an overflow, and if there has ever been a situation regarding a leak or overflow from the pan. Also please state if the 6' x 7' pad at the loading/unloading area is considered part of the permitted area and being inspected.

S-K Response: Minor spills which occur in the containment pan will be cleaned up using absorbent pads. Holes have been drilled in the backside of the containment pan to ensure that major spills are directed into the secondary containment of the tankfarm. These spills will be handled as outlined in the Contingency Plan (see section 5 of the permit application). A review of our spill data base does not identify the spill containment pan as being involved in any spills associated with loading/unloading activities at the tankfarm. There have been spills which have occurred outside of secondary containment on the concrete pad and asphalt. Containment pan involvement is not noted in any of the spill reports. The concrete pad at the loading/unloading is not considered part of the permitted area and is not subject to inspection.

35) K.1 Section 10.2, pg. 10-5 - The statement made that one soil sample will be taken near one of the containment sumps of the Fill station. This does not coincide with the previous permit application. Please explain why this was changed and revise the closure cost estimates accordingly.

S-K Response: The text has been revised to indicate that one soil sample will be collected at each containment sump in the return/fill station. The closure cost estimate has been revised accordingly.

36) Section 2.2 - The box for other solid waste management units was not checked nor indicated on any facility maps in the permit application. Please indicate any other solid waste management units on a facility map and provide a description of what types of wastes are being handled. This would include municipal solid waste dumpsters, transfer areas, and areas were truck washing operations are conducted. These structures and areas may be indicated on a revised map from another section of the permit application and referenced.

S-K Response: As detemine at the 6 November 1997 meeting, the Department agreed that no

changes need to be made to this section.

37) Please submit documentation that the facility is in compliance with Subpart CC of 40 CFR 264. Correspondence stating this from the USEPA is acceptable or submit required information to EPA and copy the Department.

S-K Response: Please find attached a letter written to Susan Capel of EPA concerning the Service Center compliance with Subpart CC regulations.

38) The Department requests the facility to propose operational and design improvements in order to reduce the risk of irreversible health impacts on persons living and working in the areas near the facility, in the events of an accidental release to the air such as fire or explosion, considering the toxicity of some of the wastes that are being stored at the facility. The Department would like Safety-Kleen to evaluate the following operational and design improvements to determine how they will help in reducing such risk:

A) Installation of lightning protection systems at the facility;
B) Installation of 2 hour fire walls;
C) Physical isolation of permitted container, transfer, and loading/unloading areas from one another;
D) Installation of emergency lighting in the event of a power failure;
E) Installation of secondary containment around loading/unloading areas with drains to contain any spills;
F) Installation of electrical fixtures, switches, outlets, and motors that are intrinsically safe in accordance with 29 CFR 1910.307(b);
G) Use forklifts that meet Class1, Div.2 environments under the National Electric Code;
H) Installation of blow out roof panels;
I) Development of a computerized system to daily track the inventory of waste onsite and provide either continuous electronic access to this information via Internet or daily hard copy updates to the Local Emergency Planning Committee (LEPC) and other emergency management agencies in order for these agencies to better respond to emergency situations involved at the facility;
J) Development of a prevention and emergency management plan in coordination with the LEPC and other emergency agencies that includes an automatic emergency notification system to inform the public of different emergencies and a community education program as described in Section 112(r) of the Clean Air Act and the Emergency Preparedness and Community Right-to-Know Act (EPCRA);
K) Development of an evacuation plan, in coordination with the LEPC and other emergency agencies, to inform and safely timely evacuate persons living and working in the vicinity of the facility. The worst case scenario must be considered on the maximum amount of waste in all of the storage units at any time, type of waste, and the hazards of each waste.

S-K Response: Issues under this notice of deficiency will be addressed when the Department finalizes Statewide regulations.

39) Please explain how the facility and its operations will be affected in events such as a 500- year flood or a category IV hurricane.

S-K Response: See response under item 38.

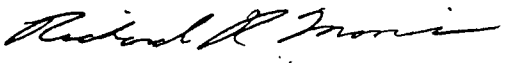
40) Section 5.6, pg. 5-16 - Please explain why smoke detectors or other fire detection systems and fire suppression systems are not installed in the permitted storage areas or in the Return/Fill station as a measure to prevent the spread of fire or explosion.

S-K Response: See response under item 38. Please note that Safety-Kleen intends to install smoke detectors as suggested by the Department.

Please find enclosed four(4) copies of replacement pages associated with this NOD response which are to be inserted in the initial permit applications. Instructions for page/section replacement have been attached. Please note that some of the sections are being submitted in their entirety for simplicity.

If you have any questions concerning this submittal please contact me at (850) 576-5979.

Sincerely,



Richard R. Morris
Environmental, Health & Safety Manager

rrm

attachments

PERMIT APPLICATION

RCRA OPERATING PERMIT RENEWAL APPLICATION

Safety-Kleen Corp. Orange Park Branch
Service Center
161 Industrial Loop South
Orange Park, Florida
FLD 980 847 214

Complete distric copy with all revised pages received by 2/28/98 4/19/00

August 1997

Prepared for:

Safety-Kleen Corp.
One Brinckman Way
Elgin, Illinois 60123

ERM

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SECTION

1

1.0 *APPLICATION FOR A HAZARDOUS WASTE FACILITY PERMIT*

This Part B permit renewal application has been prepared for Safety-Kleen Corporation's (Safety-Kleen's) Branch Service Center (hereafter referred to as the Branch) located at 161 Industrial Loop South, Orange Park, Clay County, Florida.

The following items are included in this section:

- Revised Part A - Hazardous Waste Permit Application;
- Florida Department of Environmental Protection's (FDEP's) Permit Application Review Checklist; and
- FDEP Application Forms 62-730.900(2)(a), 62-730.900(2)(c), and 62-730.900(2)(d). Information required by these application forms are provided on the application forms or within subsequent sections of the document, as referenced on the application forms.

Please note that all figures and tables referenced within a particular section are provided at the end of that section.

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

GSA No. 0248-EPA-07

For EPA Regional Use Only		
Date Received Month Day Year		

United States Environmental Protection Agency
Washington, DC 20460

Hazardous Waste Permit Application Part A

(Read the Instructions before starting)

I. Installation's EPA ID Number *(Mark 'X' in the appropriate box)*

[ ] A. First Part A Submission [X] B. Part A Amendment # 001

C. Installation's EPA ID Number	D. Secondary ID Number *(If applicable)*
FLD980847214	

II. Name of Facility

SAFETY-KLEEN CORP.

III. Facility Location *(Physical address not P.O. Box or Route Number)*

A. Street

1611 INDUSTRIAL LOOP SOUTH

Street *(Continued)*

City or Town	State	Zip Code
ORANGE PARK	FL	32073-

County Code (If known)	County Name
	CLAY

B. Land Type (Enter code)	C. Geographic Location		D. Facility Existence Date
	LATITUDE (Degrees, minutes, & seconds)	*LONGITUDE (Degrees, minutes & seconds)*	Month Day Year
P	30 10 46 N	081 43 08 W	03 01 1985

IV. Facility Mailing Address

Street or P.O. Box

ONE BRINCKMAN WAY

City or Town	State	Zip Code
ELGIN	IL	60123-7857

V. Facility Contact *(Person to be contacted regarding waste activities at facility)*

Name *(Last)*	*(First)*
MORRIS	RICHARD

Job Title	Phone Number *(Area Code and Number)*
EHS MANAGER	850-576-5979

VI. Facility Contact Address *(See instructions)*

A. Contact Address Location	Mailing	Other	B. Street or P.O. Box
[ ]	[X]	[ ]	PO BOX 20008

City or Town	State	Zip Code
TALLAHASSEE	FL	32316-

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

Form Approved. OMB No. 2050-0034 Expires 10/31
GSA No. 0248-EPA-C

EPA I.D. Number *(Enter from page 1)*: FLD 980847214

Secondary ID Number *(Enter from page 1)*:

VII. Operator Information *(See instructions)*

Name of Operator: SAFETY KLEEN CORP

Street or P.O. Box: ONE BRINCKMAN WAY

City or Town: ELGIN

State: IL

ZIP Code: 60123-7851

Phone Number *(Area Code and Number)*: 800-669-5840

B. Operator Type: P

C. Change of Operator Indicator: Yes [ ] No [X]

Date Changed Month / Day / Year:

VIII. Facility Owner *(See instructions)*

A. Name of Facility's Legal Owner: SAFETY KLEEN CORP

Street or P.O. Box: ONE BRINCKMAN WAY

City or Town: ELGIN

State: IL

ZIP Code: 60123-7851

Phone Number *(Area Code and Number)*: 800-669-5840

B. Owner Type: P

C. Change of Owner Indicator: Yes [✓] No [ ]

Date Changed Month / Day / Year: 10 / 20 / 86

IX. SIC Codes *(4-digit, in order of significance)*

Primary	Secondary
7359 (Description) Equipment rental & leasing	4214 (Description) Local trucking w/ storage
Secondary	Secondary
(Description)	(Description)

X. Other Environmental Permits *(See instructions)*

A. Permit Type *(Enter code)*	B. Permit Number	C. Description
N	FLR000B900	NPDES - STORMWATER
E	FLD980847214	USED OIL TRANSFER FACILITY
E	FLD980847214	MERCURY BULB TRANSPORT/STORAGE
R	FLD980847214	RCRA OPERATING PERMIT

EPA I.D. Number *(Enter from page 1)*: F L D 9 8 0 8 4 7 2 1 4

Secondary ID Number *(Enter from page 1)*:

XI. Nature of Business *(Provide a brief description)*

See Section 2.3 of the permit application

XII. Process 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. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in Item XIII.*

B. **PROCESS DESIGN CAPACITY** - *For each code entered in column A, enter the capacity of the process.*
1. **AMOUNT** - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*
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.*

C. **PROCESS TOTAL NUMBER OF UNITS** - *Enter the total number of units used with the corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet or Hectare-meter
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment	Gallons or Liters
D99	Other Storage	Any Unit of Measure Listed Below
	Storage:	
S01	Container (Barrel, Drum, Etc.)	Gallons or Liters
S02	Tank	Gallons or Liters
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	Gallons or Liters
S05	Drip Pad	Gallons or Liters
S06	Containment Building	Cubic Yards or Cubic Meters
S99	Other Disposal	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank	Gallons Per Day or Liters Per Day
T02	Surface Impoundment	Gallons Per Day or Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; or Btu's Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T80	Boiler	Gallons or Liters
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, Or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T88	Titanium Dioxide Chloride Process Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed in 40 CFR §260.10	
T94	Containment Building	Cubic Yards or Cubic Meters
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; or Kilograms Per Hour
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
X04	Geologic Repository	Cubic Yards or Cubic Meters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V

UNIT OF MEASURE	UNIT OF MEASURE CODE
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R

UNIT OF MEASURE	UNIT OF MEASURE CODE
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu's Per Hour	I

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

GSA No. 0248-EPA-OT

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
FLD980847214	

XII. Process Codes and Design Capabilities (Continued)

EXAMPLE FOR COMPLETING ITEM XII (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

Line Number	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	B. 2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	For Official Use Only
X 1	S02	533,788	G	001	
1	S01	3,898	G	002	
2	S02	15,000	G	001	
3					
4					
5					
6		NOTE:			
7		S01 = ONE 15,000 GALLON SPENT PARTS			
8		WASHER SOLVENT TANK			
9		S02 = PERMITTED CAPACITIES OF 1,280 GAL			
10		IN THE PAINT WASTE SHELTER AND			
11		2,618 GALLONS IN THE CONTAINER			
12		STORAGE AREA.			
13					

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item XIII.

XIII. Other Processes (Follow instructions from Item XII for D99, S99, T04 and X99 process codes)

Line Number (Enter #s in seq w/XII)	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	B. 2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	D. Description Of Process
X 1	T04				In-situ Vitrification
1					
2					
3					
4					

EPA I.D. Number *(Enter from page 1)*: F L D 9 8 0 8 4 7 2 1 4

Secondary ID Number *(Enter from page 1)*:

XIV. Description of Hazardous Wastes

A. **EPA HAZARDOUS WASTE NUMBER** - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

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

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

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

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

D. **PROCESSES**

1. **PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of Item XIV-D(1).*
3. *Enter in the space provided on page 7, Item XIV-E, the line number and the additional code(s).*

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

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

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

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

Line Number	A. EPA HAZARD WASTE NO. (Enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (Enter code)	D. PROCESS (1) PROCESS CODES (Enter	D. PROCESS (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
X 1	K 0 5 4	900	P	T 0 3 D 8 0	
X 2	D 0 0 2	400	P	T 0 3 D 8 0	
X 3	D 0 0 1	100	P	T 0 3 D 8 0	
X 4	D 0 0 2				Included With Above

EPA I.D. Number *(Enter from page 1)*: F L D 9 8 0 8 4 7 2 1 4

Secondary ID Number *(Enter from page 1)*:

XIV. Description of Hazardous Wastes *(Continued)*

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1					
2					
3					
4					
5					
6					
7					
8		See	Pages	6a - 6e	
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					

EPA ID Number: FLD980847214

Waste Stream: Spent Parts Washer Solvent, Dumpster Sediment, Tank Bottoms

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	D001	433.3	T	S01	S02	
2	D004					Included with above.
3	D005					Included with above.
4	D006					Included with above.
5	D007					Included with above.
6	D008					Included with above.
7	D009					Included with above.
8	D010					Included with above.
9	D011					Included with above.
10	D018					Included with above.
11	D019					Included with above.
12	D021					Included with above.
13	D022					Included with above.
14	D023					Included with above.
15	D024					Included with above.
16	D025					Included with above.
17	D026					Included with above.
18	D027					Included with above.
19	D028					Included with above.
20	D029					Included with above.
21	D030					Included with above.
22	D032					Included with above.
23	D033					Included with above.
24	D034					Included with above.
25	D035					Included with above.
26	D036					Included with above.
27	D037					Included with above.
28	D038					Included with above.
29	D039					Included with above.
30	D040					Included with above.
31	D041					Included with above.
32	D042					Included with above.
33	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Used Immersion Cleaner #699 (new formula)

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	D004	21.6	T	S01		
2	D005					Included with above.
3	D006					Included with above.
4	D007					Included with above.
5	D008					Included with above.
6	D009					Included with above.
7	D010					Included with above.
8	D011					Included with above.
9	D018					Included with above.
10	D019					Included with above.
11	D021					Included with above.
12	D022					Included with above.
13	D023					Included with above.
14	D024					Included with above.
15	D025					Included with above.
16	D026					Included with above.
17	D027					Included with above.
18	D028					Included with above.
19	D029					Included with above.
20	D030					Included with above.
21	D032					Included with above.
22	D033					Included with above.
23	D034					Included with above.
24	D035					Included with above.
25	D036					Included with above.
26	D037					Included with above.
27	D038					Included with above.
28	D039					Included with above.
29	D040					Included with above.
30	D041					Included with above.
31	D042					Included with above.
32	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Dry Cleaning Waste

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	F002	350.0	T	S01		
2	D004					Included with above.
3	D005					Included with above.
4	D006					Included with above.
5	D007					Included with above.
6	D008					Included with above.
7	D009					Included with above.
8	D010					Included with above.
9	D011					Included with above.
10	D018					Included with above.
11	D019					Included with above.
12	D021					Included with above.
13	D022					Included with above.
14	D023					Included with above.
15	D024					Included with above.
16	D025					Included with above.
17	D026					Included with above.
18	D027					Included with above.
19	D028					Included with above.
20	D029					Included with above.
21	D030					Included with above.
22	D032					Included with above.
23	D033					Included with above.
24	D034					Included with above.
25	D035					Included with above.
26	D036					Included with above.
27	D037					Included with above.
28	D038					Included with above.
29	D039					Included with above.
30	D040					Included with above.
31	D041					Included with above.
32	D042					Included with above.
33	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Paint Waste

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	F003	46.0	T	S01		
2	F005					Included with above.
3	D001					Included with above.
4	D004					Included with above.
5	D005					Included with above.
6	D006					Included with above.
7	D007					Included with above.
8	D008					Included with above.
9	D009					Included with above.
10	D010					Included with above.
11	D011					Included with above.
12	D018					Included with above.
13	D019					Included with above.
14	D021					Included with above.
15	D022					Included with above.
16	D023					Included with above.
17	D024					Included with above.
18	D025					Included with above.
19	D026					Included with above.
20	D027					Included with above.
21	D028					Included with above.
22	D029					Included with above.
23	D030					Included with above.
24	D032					Included with above.
25	D033					Included with above.
26	D034					Included with above.
27	D035					Included with above.
28	D036					Included with above.
29	D037					Included with above.
30	D038					Included with above.
31	D039					Included with above.
32	D040					Included with above.
33	D041					Included with above.
34	D042					Included with above.
35	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Branch-generated liquids and solids

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	F001	17.0	T	S01		
2	F002					Included with above.
3	F003					Included with above.
4	F004					Included with above.
5	F005					Included with above.
6	D001					Included with above.
7	D004					Included with above.
8	D005					Included with above.
9	D006					Included with above.
10	D007					Included with above.
11	D008					Included with above.
12	D009					Included with above.
13	D010					Included with above.
14	D011					Included with above.
15	D018					Included with above.
16	D019					Included with above.
17	D021					Included with above.
18	D022					Included with above.
19	D023					Included with above.
20	D024					Included with above.
21	D025					Included with above.
22	D026					Included with above.
23	D027					Included with above.
24	D028					Included with above.
25	D029					Included with above.
26	D030					Included with above.
27	D032					Included with above.
28	D033					Included with above.
29	D034					Included with above.
30	D035					Included with above.
31	D036					Included with above.
32	D037					Included with above.
33	D038					Included with above.
34	D039					Included with above.
35	D040					Included with above.
36	D041					Included wih above.
37	D042					Included with above.
38	D043					Included with above.

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Form Approved. OMB No 2050-0034 Expires 10/31/99
GSA No 0248-EPA-OT

EPA I.D. Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
F L D 9 8 0 8 4 7 2 1 4	

XV. Map

Attach to this application a topographic map, or other equivalent 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 this map area. See instructions for precise requirements. See Section 2.0 of the Permit Application.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (See instructions for more detail). See Section 2.0 of the permit application.

XVII. 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). See Appendix A of the permit application

XVIII. Certification(s)

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 gather and evaluate 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 possibility of fine and imprisonment for knowing violations.

X [signature] 8/15/97

Owner Signature — Date Signed

Edward Genovese, Regional Sales Manager

Name and Official Title (Type or print)

Owner Signature — Date Signed

Name and Official Title (Type or print)

Operator Signature — Date Signed

Name and Official Title (Type or print)

Operator Signature — Date Signed

Name and Official Title (Type or print)

XIX. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)

U.S Government Printing Office 1997 — 516-920/83546

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GSA No 0248-EPA-OT

For EPA Regional Use Only

Date Received
Month Day Year

United States Environmental Protection Agency
Washington, DC 20460

Hazardous Waste Permit Application Part A

(Read the Instructions before starting)

I. Installation's EPA ID Number *(Mark 'X' in the appropriate box)*

[ ] A. First Part A Submission

[X] B. Part A Amendment # 001

C. Installation's EPA ID Number	D. Secondary ID Number *(If applicable)*
FLD980847214	

II. Name of Facility

SAFETY-KLEEN CORP.

III. Facility Location *(Physical address not P.O. Box or Route Number)*

A. Street

161 INDUSTRIAL LOOP SOUTH

Street *(Continued)*

City or Town	State	Zip Code
ORANGE PARK	FL	32073-

County Code *(If known)*	County Name
	CLAY

B. Land Type	C. Geographic Location		D. Facility Existence Date
(Enter code)	*LATITUDE (Degrees, minutes, & seconds)*	*LONGITUDE (Degrees, minutes & seconds)*	Month Day Year
P	30 10 46 N	081 43 08 W	03 01 1985

IV. Facility Mailing Address

Street or P.O. Box

ONE BRINCKMAN WAY

City or Town	State	Zip Code
ELGIN	IL	60123-7857

V. Facility Contact *(Person to be contacted regarding waste activities at facility)*

Name *(Last)*	*(First)*
MORRIS	RICHARD

Job Title	Phone Number *(Area Code and Number)*
EHS MANAGER	850-576-5979

VI. Facility Contact Address *(See instructions)*

A. Contact Address Location	Mailing	Other	B. Street or P.O. Box
[ ]	[X]	[ ]	PO BOX 20008

City or Town	State	Zip Code
TALLAHASSEE	FL	32316-

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
FLD 980847214	

VII. Operator Information (See instructions)

Name of Operator			
SAFETY KLEEN CORP			
Street or P.O. Box			
ONE BRINCKMAN WAY			
City or Town	**State**	**ZIP Code**	
ELGIN	IL	60123-7851	

Phone Number (Area Code and Number)	B. Operator Type	C. Change of Operator Indicator	Date Changed Month	Day	Year
800-669-5840	P	Yes ☐ No ☒			

VIII. Facility Owner (See instructions)

A. Name of Facility's Legal Owner			
SAFETY KLEEN CORP			
Street or P.O. Box			
ONE BRINCKMAN WAY			
City or Town	**State**	**ZIP Code**	
ELGIN	IL	60123-7851	

Phone Number (Area Code and Number)	B. Owner Type	C. Change of Owner Indicator	Date Changed Month	Day	Year
800-669-5840	P	Yes ☑ No ☐	10	20	86

IX. SIC Codes (4-digit, in order of significance)

Primary		Secondary	
7359	(Description) Equipment rental & leasing	4214	(Description) Local trucking w/ storage
Secondary		**Secondary**	
	(Description)		(Description)

X. Other Environmental Permits (See instructions)

A. Permit Type (Enter code)	B. Permit Number	C. Description
N	FLR000B900	NPDES - STORMWATER
E	FLD980847214	USED OIL TRANSFER FACILITY
E	FLD980847214	MERCURY BULB TRANSPORT/STORAGE
R	FLD980847214	RCRA OPERATING PERMIT

EPA I.D. Number *(Enter from page 1)*

F	L	D	9	8	0	8	4	7	2	1	4

Secondary ID Number *(Enter from page 1)*

XI. Nature of Business *(Provide a brief description)*

See Section 2.3 of the permit application

XII. Process 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. Thirteen lines are provided for entering codes. If more lines are needed, attach a separate sheet of paper with the additional information. For "other" processes (i.e., D99, S99, T04 and X99), describe the process (including its design capacity) in the space provided in item XIII.*

B. **PROCESS DESIGN CAPACITY** - *For each code entered in column A, enter the capacity of the process.*
1. **AMOUNT** - *Enter the amount. In a case where design capacity is not applicable (such as in a closure/post-closure or enforcement action) enter the total amount of waste for that process.*
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.*

C. **PROCESS TOTAL NUMBER OF UNITS** - *Enter the total number of units used with the corresponding process code.*

PROCESS CODE	PROCESS	APPROPRIATE UNITS OF MEASURE FOR PROCESS DESIGN CAPACITY
	Disposal:	
D79	Underground Injection	Gallons; Liters; Gallons Per Day; or Liters Per Day
D80	Landfill	Acre-feet or Hectare-meter
D81	Land Treatment	Acres or Hectares
D82	Ocean Disposal	Gallons Per Day or Liters Per Day
D83	Surface Impoundment	Gallons or Liters
D99	Other Storage	Any Unit of Measure Listed Below
	Storage:	
S01	Container (Barrel, Drum, Etc.)	Gallons or Liters
S02	Tank	Gallons or Liters
S03	Waste Pile	Cubic Yards or Cubic Meters
S04	Surface Impoundment	Gallons or Liters
S05	Drip Pad	Gallons or Liters
S06	Containment Building	Cubic Yards or Cubic Meters
S99	Other Disposal	Any Unit of Measure Listed Below
	Treatment:	
T01	Tank	Gallons Per Day or Liters Per Day
T02	Surface Impoundment	Gallons Per Day or Liters Per Day
T03	Incinerator	Short Tons Per Hour; Metric Tons Per Hour; Gallons Per Hour; Liters Per Hour; or Btu's Per Hour
T04	Other Treatment	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T80	Boiler	Gallons or Liters
T81	Cement Kiln	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T82	Lime Kiln	
T83	Aggregate Kiln	
T84	Phosphate Kiln	
T85	Coke Oven	
T86	Blast Furnace	
T87	Smelting, Melting, Or Refining Furnace	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
T88	Titanium Dioxide Chloride Process Oxidation Reactor	
T89	Methane Reforming Furnace	
T90	Pulping Liquor Recovery Furnace	
T91	Combustion Device Used In The Recovery Of Sulfur Values From Spent Sulfuric Acid	
T92	Halogen Acid Furnaces	
T93	Other Industrial Furnaces Listed In 40 CFR §260.10	
T94	Containment Building	Cubic Yards or Cubic Meters
	Miscellaneous (Subpart X):	
X01	Open Burning/Open Detonation	Any Unit of Measure Listed Below
X02	Mechanical Processing	Short Tons Per Hour; Metric Tons Per Hour; Short Tons Per Day; Metric Tons Per Day; Pounds Per Hour; or Kilograms Per Hour
X03	Thermal Unit	Gallons Per Day; Liters Per Day; Pounds Per Hour; Short Tons Per Hour; Kilograms Per Hour; Metric Tons Per Day; Metric Tons Per Hour; Short Tons Per Day; or Btu's Per Hour
X04	Geologic Repository	Cubic Yards or Cubic Meters
X99	Other Subpart X	Any Unit of Measure Listed Below

UNIT OF MEASURE	UNIT OF MEASURE CODE
Gallons	G
Gallons Per Hour	E
Gallons Per Day	U
Liters	L
Liters Per Hour	H
Liters Per Day	V

UNIT OF MEASURE	UNIT OF MEASURE CODE
Short Tons Per Hour	D
Metric Tons Per Hour	W
Short Tons Per Day	N
Metric Tons Per Day	S
Pounds Per Hour	J
Kilograms Per Hour	R

UNIT OF MEASURE	UNIT OF MEASURE CODE
Cubic Yards	Y
Cubic Meters	C
Acres	B
Acre-feet	A
Hectares	Q
Hectare-meter	F
Btu's Per Hour	I

EPA I.D. Number *(Enter from page 1)*: F L D 9 8 0 8 4 7 2 1 4

Secondary ID Number *(Enter from page 1)*:

XII. Process Codes and Design Capabilities *(Continued)*

EXAMPLE FOR COMPLETING ITEM XII (shown in line number X-1 below): A facility has a storage tank, which can hold 533.788 gallons.

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)	C. Process Total Number Of Units	For Official Use Only
X 1	S 0 2	5 3 3 . 7 8 8	G	0 0 1	
1	S 0 1	7.353	G	0 02	
2	S 0 2	15.000	G	0 0 1	
3					
4					
5					
6		NOTE:			
7		S02 = ONE 15,000 GALLON SPENT PARTS			
8		WASHER SOLVENT TANK			
9		S01 = PERMITTED CAPACITIES OF 4,800 GAL			
10		IN THE PAINT WASTE SHELTER AND			
11		2553 GALLONS IN THE CONTAINER			
12		STORAGE AREA.			
13					

NOTE: If you need to list more than 13 process codes, attach an additional sheet(s) with the information in the same format as above. Number the lines sequentially, taking into account any lines that will be used for "other" processes (i.e., D99, S99, T04 and X99) in Item XIII.

XIII. Other Processes *(Follow instructions from Item XII for D99, S99, T04 and X99 process codes)*

Line Number (Enter #s in seq w/XII)	A. Process Code (From list above)	B. PROCESS DESIGN CAPACITY 1. Amount (Specify)	B. PROCESS DESIGN CAPACITY 2. Unit Of Measure (Enter code)	C. Process Total Number Of Units	D. Description Of Process
X 1	T 0 4				In-situ Vitrification
1					
2					
3					
4					

EPA I.D. Number *(Enter from page 1)*: F L D 9 8 0 8 4 7 2 1 4

Secondary ID Number *(Enter from page 1)*:

XIV. Description of Hazardous Wastes

A. EPA HAZARDOUS WASTE NUMBER - *Enter the four-digit number from 40 CFR, Part 261 Subpart D of each listed hazardous waste you will handle. For hazardous wastes which are not listed in 40 CFR, Part 261 Subpart D, enter the four-digit number(s) from 40 CFR, Part 261 Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.*

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

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

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

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

D. PROCESSES

1. PROCESS CODES:

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous waste: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in item XII A. on page 3 to indicate all the processes that will be used to store, treat, and/ or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

NOTE: THREE SPACES ARE PROVIDED FOR ENTERING PROCESS CODES. IF MORE ARE NEEDED:

1. *Enter the first two as described above.*
2. *Enter "000" in the extreme right box of item XIV-D(1).*
3. *Enter in the space provided on page 7, item XIV-E, the line number and the additional code(s).*

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

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

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

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

Line Number	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))
X 1	K 0 5 4	900	P	T 0 3 D 8 0	
X 2	D 0 0 2	400	P	T 0 3 D 8 0	
X 3	D 0 0 1	100	P	T 0 3 D 8 0	
X 4	D 0 0 2				Included With Above

EPA I.D. Number (Enter from page 1)	Secondary ID Number (Enter from page 1)
FLD980847214	

XIV. Description of Hazardous Wastes (Continued)

Line Number	A. EPA Hazardous Waste No. (Enter code)	B. Estimated Annual Quantity of Waste	C. Unit of Measure (Enter code)	D. PROCESSES (1) PROCESS CODES (Enter code)	D. PROCESSES (2) PROCESS DESCRIPTION (If a code is not entered in D(1))
1					
2					
3					
4					
5					
6					
7					
8		See	Pages	6a - 6h	
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					

EPA ID Number: FLD980847214

Waste Stream: Spent Parts Washer Solvent, Dumpster Sediment, Tank Bottoms

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	D001	405.9	T	S01	S02	
2	D004					Included with above.
3	D005					Included with above.
4	D006					Included with above.
5	D007					Included with above.
6	D008					Included with above.
7	D009					Included with above.
8	D010					Included with above.
9	D011					Included with above.
10	D018					Included with above.
11	D019					Included with above.
12	D021					Included with above.
13	D022					Included with above.
14	D023					Included with above.
15	D024					Included with above.
16	D025					Included with above.
17	D026					Included with above.
18	D027					Included with above.
19	D028					Included with above.
20	D029					Included with above.
21	D030					Included with above.
22	D032					Included with above.
23	D033					Included with above.
24	D034					Included with above.
25	D035					Included with above.
26	D036					Included with above.
27	D037					Included with above.
28	D038					Included with above.
29	D039					Included with above.
30	D040					Included with above.
31	D041					Included with above.
32	D042					Included with above.
33	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Used Immersion Cleaner #699 (new formula)

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	D004	21.6	T	S01		
2	D005					Included with above.
3	D006					Included with above.
4	D007					Included with above.
5	D008					Included with above.
6	D009					Included with above.
7	D010					Included with above.
8	D011					Included with above.
9	D018					Included with above.
10	D019					Included with above.
11	D021					Included with above.
12	D022					Included with above.
13	D023					Included with above.
14	D024					Included with above.
15	D025					Included with above.
16	D026					Included with above.
17	D027					Included with above.
18	D028					Included with above.
19	D029					Included with above.
20	D030					Included with above.
21	D032					Included with above.
22	D033					Included with above.
23	D034					Included with above.
24	D035					Included with above.
25	D036					Included with above.
26	D037					Included with above.
27	D038					Included with above.
28	D039					Included with above.
29	D040					Included with above.
30	D041					Included with above.
31	D042					Included with above.
32	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Dry Cleaning Waste

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	F002	350.0	T	S01		
2	D004					Included with above.
3	D005					Included with above.
4	D006					Included with above.
5	D007					Included with above.
6	D008					Included with above.
7	D009					Included with above.
8	D010					Included with above.
9	D011					Included with above.
10	D018					Included with above.
11	D019					Included with above.
12	D021					Included with above.
13	D022					Included with above.
14	D023					Included with above.
15	D024					Included with above.
16	D025					Included with above.
17	D026					Included with above.
18	D027					Included with above.
19	D028					Included with above.
20	D029					Included with above.
21	D030					Included with above.
22	D032					Included with above.
23	D033					Included with above.
24	D034					Included with above.
25	D035					Included with above.
26	D036					Included with above.
27	D037					Included with above.
28	D038					Included with above.
29	D039					Included with above.
30	D040					Included with above.
31	D041					Included with above.
32	D042					Included with above.
33	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Paint Waste

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	F003	46.0	T	S01		
2	F005					Included with above.
3	D001					Included with above.
4	D004					Included with above.
5	D005					Included with above.
6	D006					Included with above.
7	D007					Included with above.
8	D008					Included with above.
9	D009					Included with above.
10	D010					Included with above.
11	D011					Included with above.
12	D018					Included with above.
13	D019					Included with above.
14	D021					Included with above.
15	D022					Included with above.
16	D023					Included with above.
17	D024					Included with above.
18	D025					Included with above.
19	D026					Included with above.
20	D027					Included with above.
21	D028					Included with above.
22	D029					Included with above.
23	D030					Included with above.
24	D032					Included with above.
25	D033					Included with above.
26	D034					Included with above.
27	D035					Included with above.
28	D036					Included with above.
29	D037					Included with above.
30	D038					Included with above.
31	D039					Included with above.
32	D040					Included with above.
33	D041					Included with above.
34	D042					Included with above.
35	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Branch-generated liquids and solids

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	F001	17.0	T	S01		
2	F002					Included with above.
3	F003					Included with above.
4	F004					Included with above.
5	F005					Included with above.
6	D001					Included with above.
7	D004					Included with above.
8	D005					Included with above.
9	D006					Included with above.
10	D007					Included with above.
11	D008					Included with above.
12	D009					Included with above.
13	D010					Included with above.
14	D011					Included with above.
15	D018					Included with above.
16	D019					Included with above.
17	D021					Included with above.
18	D022					Included with above.
19	D023					Included with above.
20	D024					Included with above.
21	D025					Included with above.
22	D026					Included with above.
23	D027					Included with above.
24	D028					Included with above.
25	D029					Included with above.
26	D030					Included with above.
27	D032					Included with above.
28	D033					Included with above.
29	D034					Included with above.
30	D035					Included with above.
31	D036					Included with above.
32	D037					Included with above.
33	D038					Included with above.
34	D039					Included with above.
35	D040					Included with above.
36	D041					Included wih above.
37	D042					Included with above.
38	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Truck Wash Water

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	See Process Description	1.0	T		S02	Likely nonhazardous, but pumped to used solvent tank. For waste codes, see page 6A.
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						

EPA ID Number: FLD980847214

Waste Stream: Used Aqueous Brake Cleaner

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	D004	22.4	T	S01	S02	
2	D005					Included with above.
3	D006					Included with above.
4	D007					Included with above.
5	D008					Included with above.
6	D009					Included with above.
7	D010					Included with above.
8	D011					Included with above.
9	D018					Included with above.
10	D019					Included with above.
11	D021					Included with above.
12	D022					Included with above.
13	D023					Included with above.
14	D024					Included with above.
15	D025					Included with above.
16	D026					Included with above.
17	D027					Included with above.
18	D028					Included with above.
19	D029					Included with above.
20	D030					Included with above.
21	D032					Included with above.
22	D033					Included with above.
23	D034					Included with above.
24	D035					Included with above.
25	D036					Included with above.
26	D037					Included with above.
27	D038					Included with above.
28	D039					Included with above.
29	D040					Included with above.
30	D041					Included with above.
31	D042					Included with above.
32	D043					Included with above.

EPA ID Number: FLD980847214

Waste Stream: Used Aqueous Parts Washer Solvent

Line Number	EPA Hazardous Waste No.	Estimated Annual Quantity of Waste	Units of Measure	Process Codes		Process Description
1	D004	5.0	T	S01	S02	
2	D005					Included with above.
3	D006					Included with above.
4	D007					Included with above.
5	D008					Included with above.
6	D009					Included with above.
7	D010					Included with above.
8	D011					Included with above.
9	D018					Included with above.
10	D019					Included with above.
11	D021					Included with above.
12	D022					Included with above.
13	D023					Included with above.
14	D024					Included with above.
15	D025					Included with above.
16	D026					Included with above.
17	D027					Included with above.
18	D028					Included with above.
19	D029					Included with above.
20	D030					Included with above.
21	D032					Included with above.
22	D033					Included with above.
23	D034					Included with above.
24	D035					Included with above.
25	D036					Included with above.
26	D037					Included with above.
27	D038					Included with above.
28	D039					Included with above.
29	D040					Included with above.
30	D041					Included with above.
31	D042					Included with above.
32	D043					Included with above.

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

Form Approved. OMB No. 2050-0034 Expires: 03/99
GSA No. 3248-EPA-07

EPA I.D. Number *(Enter from page 1)*	Secondary ID Number *(Enter from page 1)*
F L D 9 8 0 8 4 7 2 1 4	

XV. Map

Attach to this application a topographic map, or other equivalent 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 this map area. See instructions for precise requirements. See Section 2.0 of the Permit Application.

XVI. Facility Drawing

All existing facilities must include a scale drawing of the facility (See instructions for more detail). See Section 2.0 of the permit application.

XVII. 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). See Appendix A of the permit application.

XVIII. Certification(s)

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 gather and evaluate 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 possibility of fine and imprisonment for knowing violations.

X _____ 8/13/97

Owner Signature — Date Signed

Edward Genovese, Regional Sales Manager

Name and Official Title (Type or print)

Owner Signature — Date Signed

Name and Official Title (Type or print)

Operator Signature — Date Signed

Name and Official Title (Type or print)

Operator Signature — Date Signed

Name and Official Title (Type or print)

XIX. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (Refer to instructions for more information)

PART I GENERAL PERMIT APPLICATION REVIEW CHECKLIST
PAGE 1 OF 3

FACILITY SAFETY-KLEEN CORP. - ORANGE PARK
EPA ID NUMBER FLD 980 847 214 **PATS NUMBER**
TYPE OF APPLICATION Operating Permit Renewal

SUBMITTAL DATE **REVIEWER**

1.
2.
3.

PAGE / P'GRAPH	REVIEW ITEM	REFERENCE	COMPLETE? Y/N OR N/A	COMMENTS
	General. a. Four (4) copies, with original signatures and seal. b. Standard 3-ring or D-ring binder. c. Headers with revision number, page number and date on each page of the application. d. Formatted same as application instructions. e. Notice to local governments.	62-730.220 (2) 62-730.220(10) 62-730.220(10) 62-730.220(11)	Y	One exception-the document format differs slightly from the application instructions. The format is as presented to FDEP personnel at a meeting prior to preparation of the application.
	Part I- General.			
	A-1 Type Of Facility.	270.13(A)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-2 Type Of Application.	270.13(G)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-3 Revision Number.		Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-4 Date Operation Began.	270.13(G)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-5 Facility Name.	270.13(B)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-6 ID Number.	264.11	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-7 Facility Location.	270.13(B)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-8 Facility Mailing Address.	270.13(B)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-9 Facility Contact. • Name • Address • Title • Phone		Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-10 Operator(s). • Name • Phone	270.13(d)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-11 Operator(s) Address.	270.13(d)	Y	See DEP Form 62-730.900(2)(a) in Section 1

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	A-12 Facility Owner's. • Name • Phone	270.13(e)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-13 Facility Owner's Address.	270.13(e)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-14 Legal Structure.	270.13(d)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-15 County-State Registration.	270.13(d)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-16 State of Incorporation.	270.13(d)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-17 Partners/Owners. • Name • Address	270.13(d)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-18 Site Ownership Status. • Land Owner's Name • Land Owner's Address	270.13(e)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-19 Engineer. • Name • Registration Number • Address • Association	62-730.220(7)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-20 Geologist. • Name • Registration Number • Address • Association	62-730.220(8)	N/A	
	A-21 Indian Lands.	270.13(f)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	A-22 Existing Environmental Permits. • NPDES • UIC • RCRA • PSD • Others	270.13(k)	Y	See DEP Form 62-730.900(2)(a) in Section 1

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	B-1 Facility Location. • County • Nearest Community • Latitude/Longitude • Section/Township/Range • UTM Number	270.13(b)	Y	See DEP Form 62-730.900(2)(a) in Section 1
	B-2 Area of Facility Site.		Y	See DEP Form 62-730.900(2)(a) in Section 1
	B-3 Scale Drawing. • Photographs • Traffic Pattern	270.13(h)	Y	See Section 2.1; photographs in Appendix A
	B-4 Map. • One mile beyond property line • Outline of facility • Location of existing and proposed intake and discharge structures • Hazardous waste treatment, storage, and disposal facilities • Underground injection wells • Springs, rivers, and other surface water bodies • Drinking water wells	270.13(l)	Y	See Section 2.2
	B-5 Flood Plain.		Y	See Section 2.2
	C-1 Zoning.		Y	See Section 2.2
	C-2 Zoning Changes.		Y	See Section 2.2
	C-3 Present Land.		Y	See Section 2.2
	D-1 Waste Generated On-Site. • SIC Codes	270.13(c)	Y	See Section 2.2
	D-2 Description of Operation. • A general description of the facility. Include the nature of the business. Off-site facilities should identify the types of industry served. On-site facilities should briefly describe the process(es) involved in the generation of hazardous waste.	270.13(i)&(m) 270.14(b)(1)	Y	See Section 2.3
	D-3 Process - Codes and Design Capacities. • Process Codes • Process Capacity • Waste Code • Unit of measure • Annual Amount	270.13(i) & (j)	Y	See Table 2.3-1

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1.
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	Part II-A. General 62-730			
	A-1. TOPOGRAPHIC MAP. A topographic map showing the facility and a distance of 1000 feet around it. The following information is required: • Scale 1 in. - 200 ft. • Contours sufficient to show surface water flow • Extend 1000 ft. beyond property • Map scale • Map date • 100 Yr. floodplain • Surface waters • Surrounding land use • Map orientation • Legal boundaries • Location of access control • Injection and withdrawal wells - on-site - off-site • Building • Structures • Sewers • Loading and unloading areas • Fire control facilities • Flood control or drainage barriers • Run-off control systems • Location of hazardous waste units	270.14(b)(19)	Y	See Section 2.2

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	• Location of solid waste management units • Access and internal roads. For large facilities, the use of other scales may be acceptable on a case-by-case basis.			
	A-1a. ADDITIONAL TOPOGRAPHIC REQUIREMENTS FOR LAND STORAGE, TREATMENT, AND DISPOSAL FACILITIES. (See Section Topographic Map Requirements.)	270.14(c)(3) & (4), 264.95 and 264.97	N/A	
	A-1b. WIND ROSE. • Wind speed • Direction • Legend • Date.		Y	See Section 2.2
	A-1c. TRAFFIC INFORMATION. A description of the means of transporting hazardous wastes. All facilities should describe movement of waste on the facility. Description must include: • Estimated volume • Traffic pattern • Traffic control • Access road(s) surfacing and load-bearing capacity. Off-site facilities (only) should also describe movement of waste to the facility from the point where it leaves nearest major highway.	270.14(b)(10)	Y	See Section 2.2
	A-2. FINANCIAL RESPONSIBILITY. A-2a. CLOSURE COST ESTIMATES. • Copy of Financial Mechanism Financial Assurance DEP Form 62-730.900(2) Part II 2. Contact Financial Assurance Section in Tallahassee.	264.142, 264.143 and 270.14(b)(15)	Y	See Section 3.0
	A-2b. POST-CLOSURE CARE COST ESTIMATE. • Copy of Financial Mechanism Financial Assurance DEP Form 62-730.900(2) Part II 2. Contact Financial Assurance Section in Tallahassee.	264.144, 264.145, 264.146 and 270.14(b)(16)	N	See Section 3.0

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	A-2c. CORRECTIVE ACTION COST ESTIMATES. • Copy of Financial Mechanism Financial Assurance DEP Form 62-730.900(2) Part II 2. Contact Financial Assurance Section in Tallahassee.	264.100, 264.101 and 62-730.180(6)	N	See Section 3.0
	A-2d. LIABILITY COVERAGE. • Copy of Policy	264.147 and 270.14(b)(17)	Y	Copy of policy was submitted to the Department in a separate submittal.
	A-3. FLOODPLAIN STANDARD. Documentation of whether or not the facility is located within a 100-yr. floodplain including the source of data (Federal Insurance Administration Map or other maps and calculations). If map other than FIA map is used, demonstration of equivalent mapping technique should be provided. If located in 100-yr. floodplain include: • 100-yr. floodplain level • Other special flooding factors (e.g., wave action) that must be considered to prevent washout.	270.14(b)(11)(iii) and 264.18(b)	Y	See Section 2.2
	A-3b(1). DEMONSTRATION OF COMPLIANCE. For facilities located within the 100-yr. floodplain, a description of how the facility is designed, constructed, operated, and maintained to prevent washout of any hazardous waste during a flood. Either of the following may be used:	270.14(b)(11)(iv) and 264.18(b)	N/A	
	A-3b(1)(a). FLOOD PROOFING AND FLOOD PROTECTION. A structural or other engineering study showing how design of the tanks, containers, or waste piles and the flood proofing and protection devices at the facility will prevent washout including: • Engineering analysis of hydrodynamic and hydrostatic forces • Structural or other engineering studies of hazardous waste units and flood protection devices.	270.14(b)(11)(iv)(A) & (B)	N/A	

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	A-3b(1)(b). FLOOD PLAN. Description of the procedures to be followed to remove hazardous waste to safety before the facility is flooded. The plan must address the following: • Timing related to flood levels. • Estimated time to move the waste. • Description of the location to which the waste will be moved and proof of the receiving facility's eligibility to receive hazardous waste. • Procedures, equipment, and personnel to be used and the means to ensure that these resources will be available. • Potential for accidental discharge of the waste.	270.14(b)(11)(iv)(C) and 264.18(b)(1)(i)	N/A	
	A-3b(2). PLAN FOR FUTURE COMPLIANCE WITH FLOODPLAIN STANDARD. For facilities located within the 100-yr. floodplain that do not comply with the floodplain standard, a plan showing how and when the facility will be brought into compliance. A compliance schedule must be included.	270.14(b)(11)(v)	N/A	
	A-3b(3). WAIVER FOR LAND STORAGE AND DISPOSAL FACILITIES (EXISTING FACILITIES ONLY). If a waiver from the Floodplain Standard is requested, the owner or operator must demonstrate that there will be no adverse effects on human health or the environment if washout occurs. The following factors must be considered in this demonstration: • Volume and physical and chemical characteristics of the waste. • Concentration of hazardous constituents that would potentially affect surface waters. • Impact of such concentration on the current or potential uses of and water quality standards established for the affected surface waters.	264.18(b)(1)(ii)	N/A	

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	• Impact of hazardous constituents on the sediments of affected surface waters or the soils of the 100-yr. floodplain.			
	A-4. FACILITY INFORMATION. A-4a. SECURITY. Security Procedures and Equipment. Unless a waiver is granted, the application must include a description of the security procedures and equipment required by 264.14:	264.14 and 270.14(b)(4)	Y	See Section 4.1
	24-Hour Surveillance System. A 24-hour surveillance system (e.g., television monitoring or surveillance by guards or facility personnel) that continuously monitors and controls entry onto the active portion of the facility: • Procedures and personnel to be used • Location and description of equipment.	264.14(b)(1)	N/A	
	Barrier and Means to Control Entry. (In lieu of a 24-hour surveillance system, the applicant may elect to use a barrier and other means to control entry.)	264.14(b)(2)(i)	Y	See Section 4.1
	Barrier. An artificial or natural barrier (e.g., a fence in good repair or a fence combined with a cliff) that completely surrounds the active portion of the facility: • Height • Material of construction	264.14(b)(2)(i)	Y	See Section 4.1
	Means to Control Entry. A means to control entry, at all times, through the gates or other entrances to the active portion of the facility (e.g., an attendant, television monitors, locked entrance, or controlled roadway access to the facility): • Procedure and personnel to be used. • Location and description of equipment.	264.14(b)(2)(ii)	Y	See Section 4.1

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	Warning Sign. The facility must have a sign with the legend, "Danger - Unauthorized Personnel Keep Out," which must: • Be posted at each entrance to the active portion of the facility. • Be in sufficient numbers to be seen from any approach to the active portion of the facility. • Legend must be in English and any other language predominated in the area. • Be legible from a distance of at least 25 feet. Existing signs with a legend other than "Danger - Unauthorized Personnel Keep Out" may be used if the legend on the sign indicates that only authorized personnel are allowed to enter the active portion and that entry onto the active portion can be dangerous.	264.14(c)	Y	See Section 4.1
	Waiver. If a waiver of these requirements is requested, the owner or operator must demonstrate the following:	264.14(a)	N/A	
	Injury to Intruder. Physical contact with the waste, structure, or equipment within the active portion of the facility will not injure unknowing or unauthorized persons or livestock that may enter the active portion of a facility; and	264.14(a)(1)	N/A	
	Violation Caused by Intruder. Disturbance of the waste or equipment by the unknowing or unauthorized entry of persons or livestock onto the active portion of a facility will not cause a violation of the requirements of 264.	264.14(a)(2)	N/A	
	NOTE: To address the above, the application should include: • Nature and duration of hazard potential from waste. • Equipment and structures to minimum potential for an intruder to: 1)cause a spill; 2) mix incompatible wastes; 3) ignite ignitable or		N/A	

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	reactive wastes; 4)damage containment or monitoring systems. • Feature that prevent contact with waste.			
	A-4b. CONTINGENCY PLAN. A copy of the contingency plan required in Part 264, Subpart D. Include, where applicable, specific requirements in 264.227 and 264.225.	270.14(b)(7) (264.50 through 264.56)	Y	See Section 5
	An existing spill prevention control plan can be amended to incorporate hazardous waste management provisions sufficient to comply with 264, Subpart D requirements. General Information. • Facility name and location and owner or operator name. • Site plan. • Description of facility operations.	264.52(b)	Y	See Section 5.1
	Emergency Coordinators. • Names, addresses, office and home phone numbers, and duties of primary and alternate coordinators in sequences as alternates. • A statement authorizing designated coordinators to commit the necessary resources to implement the contingency plan. • Can reach facility in short period of time.	264.52(d) and 264.55	Y	See Sections 5.3, 5.4, 5.5
	Implementation. Criteria for implementation of contingency plan for any potential emergency: • Fires/explosions. • Unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water.	264.52(a) and 264.56(d)	Y	See Sections 5.3, 5.5, 5.6, 5.7, 5.8, 5.9, 5.10
	Emergency Response Procedures. Notification. • Methodology for immediate notification of facility personnel and necessary state or local agencies.	264.56(a)	Y	See Sections 5.3, 5.4, 5.5, 5.8, 5.9, 5.10

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	Identification of Hazardous Materials. Available data and/or procedures for identification of hazardous materials involved in the emergency and quantity and areal extent of release. Include information on: • Characteristics of waste. • Exact source. • Amount. • Aerial extent of release.	264.56(b)	Y	See Section 5.5
	Hazard Assessment. • Procedure for assessment of possible hazards to the environment and human health. • Procedures for determining the need for evacuation and notification of authorities. The authorities to be notified must include the on-scene-coordinator for that area or the National Response Center.	264.56(c) and 264.56(d)	Y	See Section 5.5
	Control Procedures. • Specific responses and control procedures to be taken in the event of a fire, explosion, or release of hazardous waste to air, land, or water.	264.52(a)	Y	See Sections 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 9.7
	Prevention of Recurrence or Spread of Fires, Explosions or Releases: • During an emergency situation, a description of the necessary steps to be taken to ensure that fires, explosions, or releases do not occur, reoccur, or spread to other hazardous waste at the facility. Steps must include, where applicable: - Shut-down of processes and continued monitoring of them - Collecting, containing, and treating released wastes - Removing and isolating containers - Proper use of fire control structures (e.g., fire doors), systems (e.g., sprinkler systems), and equipment (e.g., extinguishers).	264.56(e)	Y	See Sections 5.5, 5.6, 5.7, 5.8, 5.9, 5.10, 8.1, 9.2, 9.7

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	Storage and Treatment of Released Material • Provisions to monitor for leaks, pressure buildup, gas generation, or ruptures, as appropriate, if operations at the facility are stopped in response to a release, fire or explosion. • Provisions for treatment, storage, or disposal of any hazardous waste resulting from a release, fire, or explosion at the facility. • Equipment available. • Procedures for deployment of these resources. • Methods to contain, treat, and clean up a hazardous release and decontaminate the affected area.	264.56(f) and 264.56(g)	Y	See Sections 5.5, 5.6, 5.7, 5.8, 9.7
	Incompatible Waste. Provisions for preventing waste which is incompatible with the released material from being treated, stored, or located in the affected areas until cleanup procedures are completed.	264.56(h)(1)	N/A	Wastes handled at the facility are not incompatible.
	Post-Emergency Equipment Maintenance. Procedures for ensuring that all emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed. (This includes advising authorities.)	264.56(h)(2) and 264.56(i)	Y	See Section 5.5
	Container Spills and Leakage. Procedures for responding to container spills or leakage including removal of spilled waste and repair or replacement of containers.	264.171	Y	See Sections 5.6, 5.7, 8.1, 8.3, 8.4
	Tank Spills and Leakage. • Procedures for responding to tank spills or leakage, including removal of spilled waste and repair of tank. • Procedures for responding to leaks or spills from tanks containing hazardous wastes F020, F021, F022, F023, F026, and F027; and	264.194(c) and 264.200(a)(2)	Y	See Sections 5.6, 5.7, 9.7

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	procedures for immediate removal of these wastes from the containment system and replacement or repair of the leaking tank.			
	Surface Impoundment Spills, Leakage, and Sudden Drops. • Procedures for stopping waste additions. • Procedures for containing any leakage. • Procedures for stopping leaks and preventing sudden drops and preventing catastrophic failure. • Procedures and criteria for emptying impoundment. • Procedures for installing a liner in existing portions of the impoundment or procedures for certification of the liner in other than existing portions when the impoundment is removed from service as the result of a sudden drop in liquid level. • Obtain qualified engineers certification of repairs and probability of leakage or failure.	270.14(b)(7), 264.227, 264,227(b)(1), 264.227(b)(2), 264.227(b)(3) and 264.227(b)(4) 264.227(b)(5) 264.227(d)(2)	N/A	
	Emergency Equipment. Location, description, and capabilities of emergency equipment. This should include: • Spill control equipment. • Fire control equipment. • Personnel protective items such as respirators and protective clothing. • First aid and medical supplies. • Emergency decontamination equipment. • Emergency communication and alarm systems.	264.52(e)	Y	See Section 5.8
	Coordination Agreements. • A description of coordination agreement existing police and fire departments, hospitals, contractors, and state and local emergency response teams to familiarize them with the facility and actions needed in case of emergency.	264.37 and 264.52(c)	Y	See Section 5.12

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	• A statement indicating that a copy of the contingency plan has been submitted to these organizations. • If applicable, document of refusal to enter into a coordination agreement.	264.53(b) 264.37(b)		
	Evacuation Plan. The plan must include: • Criteria for evacuation. • A description of signal(s) to be used to begin evacuation. • Primary and alternate evacuation routes.	264.52(f)	Y	See Section 5.10
	Required Reports. • Provisions for submission of reports of emergency incidents within 15 days of occurrence. • Notation of such incidents in the operating record identifying the time, date, and details of these emergency incidents.	264.56(u)	Y	See Section 5.5
	D-4c. PREVENTIVE PROCEDURES, STRUCTURES, AND EQUIPMENT. A description of procedures, structures, or equipment used at the facility for the following must be included:	270.14(b)(8)		
	Unloading Operations. Prevention of hazards in unloading operations (e.g., use of ramps or special forklifts).	270.14(b)(8)(i)	Y	See Sections 8.1, 9.2, 9.3
	Run-Off. Prevention of runoff from hazardous waste handling areas to other areas of the facility or environment, or prevention of flooding, (e.g., berms, dikes, trenches).	270.14(b)(8)(ii)	Y	See Sections 5.6, 8.1, 9.2, 9.3, 9.7
	Water Supplies. Prevention of contamination of water supplies.	270.14(b)(8)(iii)	Y	See Sections 5.6, 8.1, 9.2, 9.3, 9.7
	Equipment and Power Failure. Mitigation of effects of equipment failure and power outages.	270.14(b)(8)(iv)	Y	See Sections 5.6, 8.1

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	Personal Protection Equipment. Prevention of undue exposure of personnel to hazardous waste (e.g., protective clothing).	270.14(b)(8)(v)	Y	See Section 5.8
	Precautions to Prevent Ignition or Reaction of Ignitable or Reactive Wastes A description of the precautions taken by a facility that handles ignitable, reactive or incompatible waste to demonstrate compliance with 264.17 including documentation demonstrating compliance with 264.17(c). Precautions to prevent actual ignition, including separation from sources of ignition such as: • Open flames. • Smoking. • Cutting and welding. • Hot surfaces. • Frictional heat. • Spark (static, electrical, or mechanical). • Spontaneous, ignition (heat producing chemical reactions). • Radiant heat. Demonstration that when ignitable or reactive waste is being handled, the owner or operator confines smoking and open flames to specially designated locations. "No Smoking" signs must be conspicuously placed wherever a hazard exists for ignitable or reactive waste.	270.14(b)(9) and 264.17(a) and (c)	Y	See Sections 4.1, 5.9, 8.2, 8.3
	General Precautions for Handling Ignitable or Reactive Waste and Mixing of Incompatible Waste A description of the precautions taken by a facility that treats, stores, or disposes of ignitable or reactive waste, or accidentally mixes incompatible waste or incompatible wastes or other materials, to prevent reactions which:	270.14(b)(9) and 264.17(b) and (c)	Y	Sections 5.9, 8.2, 8.3

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	(1) generate extreme heat or pressure, fire or explosions or violent reactions; (2) produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health or the environment; (3) produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions; (4) damage the structural integrity of the device or facility; (5) by similar means threaten human health or the environment.			
	Documentation to meet requirements of 264.17(c) or (b) may be based on references to published scientific or engineering literature, data from trial tests, waste analyses, or results of treatment of similar wastes by similar treatment processes and under similar operating conditions.	264.17(c)	Y	See Section 7
	Management of Ignitable or Reactive Waste in Containers. Sketches, drawings, or data demonstrating that containers of ignitable or reactive waste are located at least 15 meters (50 feet) from the facility's property line.	270.15(c) and 264.176	Y	See Section 8.2
	Management of Incompatible Wastes in Containers A description of procedures to demonstrate compliance with 264.177(a) and (b), and 264.17(b) and (c): • The procedures used to ensure that incompatible wastes and materials are not placed in the same container (unless 264.17(b) is complied with) or in an unwashed container that previously held compatible waste. • Dikes, berms, walls or other devices used to separate containers, holding wastes which are incompatible with wastes or materials stored nearby.	270.15(d) and 264.177 264.177(a) and 264.177(b) 264.177(c)	Y	See Sections 8.2, 8.3

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	Management of Ignitable or Reactive Wastes in Tanks. A description of the operational procedures for handling incompatible, ignitable, or reactive wastes, including the use of buffer zones. Requirements of 264 include: • Waste must be treated, rendered, or mixed before or immediately after placement in the tank so that it is no longer considered ignitable and complies with 264.17(b); or the waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to react or ignite; or the tank is used solely for emergencies. • Facilities that treat or store ignitable or reactive waste in covered tanks must comply with the National Fire Protection Association's buffer zone requirements for tanks.	270.16(f) and 264.198	Y	See Section 9.2
	Incompatible Wastes in Tanks. A statement that incompatible wastes and materials are not stored in the same tank or in an unwashed tank that previously held an incompatible waste or material (unless 264.17(b) is complied with).	270.16(f) and 264.199	Y	See Section 9.2
	Ignitable or Reactive Wastes in Waste Piles. The application must include a description of the procedures for handling ignitable, or reactive wastes, including the use of buffer zones. Waste must be treated, rendered, or mixed before or immediately after placement in the waste pile so that it is no longer considered ignitable and complies with 264.17(b); or the waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to react or ignite.	270.18(f) and 264.256	N/A	
	Incompatible Wastes in Waste Piles. The applicant must include:	270.18(g) and 264.257	N/A	

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	• A statement that incompatible wastes and materials are not stored in the same waste pile or on the same base that previously held an incompatible waste or material unless 264.17(b) is complied with. • A description of the procedures (dikes, beams, walls, distances) utilized to separate a waste pile of hazardous waste that is incompatible with any waste or other material stored nearby.			
	Ignitable or Reactive Wastes in Surface Impoundment. • A description of the procedures for handling ignitable, or reactive wastes, including the use of buffer zones. Waste must be treated, rendered, or mixed before or immediately after placement in the surface impoundment so that it is no longer considered ignitable and complies with 264.17(b); or • The waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to react or ignite; • The impoundment is used only for emergencies.	270.17(g) and 264.229	N/A	
	Incompatible Waste in Surface Impoundment. The application must include: • A statement that incompatible wastes and materials are not stored in the same surface impoundment or in the impoundment that previously held an incompatible waste or material unless 264.17(b) is complied with.	270.17(h) and 264.230	N/A	
	Ignitable or Reactive Wastes in Landfills. Documentation of procedures for: • Rendering wastes non reactive prior to or immediately after placement in the landfill. • Preventing reactions. • Protecting ignitable wastes in containers from materials or conditions that may cause them to ignite.	270.21(f) and 264.312	N/A	

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	Incompatible Wastes in Landfills. Applicant must provide procedures for ensuring that incompatible wastes will not be disposed of in the same landfill cell, unless 264.17(b) is complied with.	270.21(g) and 264.313	N/A	
	Ignitable or Reactive Wastes in Land Treatment. A description of the management of ignitable or reactive wastes which will be placed in or on the treatment zone, if applicable, and an explanation of how the following requirements will be complied with: • The waste is immediately incorporated into the soil so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste and the requirements of 264.17(b) are complied with; or • The waste is managed in such a way that it is protected from any material or conditions which may cause it to ignite or react.	270.20(g) and 264.281	N/A	
	Incompatible Wastes in Land Treatment. A description of the management of incompatible wastes must be submitted if incompatible wastes, or incompatible wastes and materials, will be placed in or on the same treatment zone, including an explanation of how the requirements of 264.17(b) are complied with.	270.20(h) and 264.243	N/A	
	A-4d. PREPAREDNESS AND PREVENTION REQUIREMENTS. A justification of any request for a waiver of preparedness and prevention requirements of Part 264, Subpart C.	270.14(b)(6)	N/A	
	Equipment Requirements. Unless it can be demonstrated that none of the hazards posed by waste handled at the facility would require a particular kind of equipment specified below, the facility must have the following equipment: (These requirements are not specifically listed in 270.14-270.29 for inclusion in a Part B).	264.32		

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	Internal Communications. An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel.	264.32(a)	Y	See Section 5.8
	External Communications. A device such as telephone (immediately available at the scene of operations) or a handheld two-way radio, for summoning emergency assistance from local police departments, or state or local emergency response teams.	264.32(b)	Y	See Section 5.8
	Emergency Equipment. • Fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals and portable fire extinguishers). • Soil control equipment. • Decontamination equipment.	264.32(c)	Y	See Sections 5.7, 5.8
	Water for Fire Control. One of the following: • Water at adequate volume and pressure to supply water hose streams; or • Foam-producing equipment; or • Automatic sprinklers or water spray systems.	264.32(d)	Y	See Sections 5.8, 5.9
	Aisle Space Requirement. Requests for a waiver of the aisle space requirement must be accompanied by a demonstration that aisle space is not needed to allow the unobstructed movement of personnel, fire protection equipment, or spill control equipment to any area of facility operation in an emergency.	264.35	Y	See Sections 5.9, 8.1
	A-4e. PERSONNEL TRAINING. Outline of Training Program. An outline of both the introductory and continuing training programs by owners or operators to prepare the personnel to operate	270.14(b)(12) and 264.16	Y	See Sections 6.0, 6.1

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	and maintain the facility in a safe manner as required to demonstrate compliance with 264.16. Include a brief description of how training will be designed to meet actual job tasks in accordance with requirements in 264.16(a)(3). (*Note: On-the-job training may be used to comply with these requirements.*)			
	Job Titles and Duties. For each employee whose position at the facility is related to hazardous waste management, the following must be maintained at the facility: • Job title. • Job duties. • Job description.	264.16(d)(1) and 264.16(d)(2)	Y	See Sections 6.0, 6.1
	Training Content, Frequency, and Techniques. In both introductory and continuing training (including an annual review of the initial training) for each employee describe: • Training content. • Frequency of training. • Technique(s) used in training.	264.16(a)(3), 264.16(c) and 264.16(d)(3)	Y	See Sections 6.0, 6.1
	Training Director. Demonstration that the program is directed by a person trained in hazardous waste management: • Credentials of training director.	264.16(a)(2)	Y	See Sections 6.0, 6.1
	Relevance of Training to Job Position. A brief description of how instructions of facility personnel in hazardous waste management procedures (including contingency plan implementation) is relevant to their positions. [To demonstrate compliance with 264.16(a)(2).]	264.16(a)(2)	Y	See Sections 6.0, 6.1
	Training for Emergency Response. Documentation that the training program trains facility personnel to respond effectively to emergencies and trains them to be familiar with	264.16(a)(3)	Y	See Sections 6.0, 6.1

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	emergency procedures, emergency equipment, and emergency systems, include where applicable: • Procedures for using, inspecting, repairing, and replacing facility emergency and monitoring equipment. • Key parameters for automatic waste feed cut-off system. • Communications or alarm systems. • Response to fires or explosions. • Response to groundwater contamination incidents. • Shutdown of operations.	264.16(a)(3)(i) 264.16(a)(3)(ii) 264.16(a)(3)(iii) 264.16(a)(3)(iv) 264.16(a)(3)(v) 264.16(a)(3)(vi)		
	Implementation of Training Program. • Indication that training has been and will be successfully completed by facility personnel within 6 months of their employment or assignment to a facility, or transfer to a new position at a facility, whichever is later. (NOTE: Employees hired after the effective date of these regulations must not work in unsupervised positions until they have completed the training requirements). • Records documenting that the required training has been given to and completed by facility personnel must be maintained.	264.16(d)(4) 264.16(b)	Y	See Sections 6.0, 6.1
	A-5. CHEMICAL AND PHYSICAL ANALYSIS. For each hazardous waste treated, stored or disposed at the facility, the following information should be provided: • General description of the waste. • Hazardous characteristics. • Basis for hazard designation. • Laboratory report on analyses results. • Existing published or documented data on hazardous waste or hazardous waste from a similar process (new facilities only). At a minimum, the analyses should include all the information which must be known to treat,	270.14(b)(2) 264.13(a)	Y	See Section 7.1 and Appendix B

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	store, or dispose of the waste in accordance with Part 264 and 268 requirements or conditions of a permit issued under Part 270.			
	Containers. • Compatibility of waste with container. • For containers of wastes without a secondary containment system test procedures and results or other documentation or information which show that wastes do not contain free liquids. A suggested test for free liquids is the Paint Filter Liquids (Test Method 9095 in SW-846). • Waste specific parameters based on hazardous designation. • Other information required for safe operation.	264.172, 270.15(d), 264.177 and 270.15(b)(1)	Y	See Sections 7.1, 8.2
	Tanks. • Specific gravity. • Waste specific parameters based on hazardous designation. • Other information required for safe operation.	264.191(a)	Y	See Section 7.1
	Waste Piles. • For waste piles that are inside or under a structure when an exemption from 264.251 is requested, test procedures and results, or other documentation or information which show that the wastes do not contain free liquids when placed on the pile. A suggested test for free liquids is the Paint Filter Liquids Test (Method 9095 in SW-846). • Demonstration that the wastes will not generate leachate through decomposition or other reactions while being stored.	264.250(c)(1) 264.250(c)(4)	N/A	
	Incinerators. Trial Burn. If a trial burn is proposed (or has been conducted already), an analysis of each waste or waste mixture to be burned during the trial burn (or burned during	270.62(b)(2)(i)	N/A	

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	the previous trial burn) and after the trial burn is complete, which includes: • Heat value. • Viscosity (liquids). • Physical form (non-liquids). • Identification of hazardous organic constituents listed in Appendix VIII: [Note: The applicant need not analyze for Appendix VIII constituents which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified, and the basis for exclusion stated.] - Approximate quantification of hazardous constituents - Chlorine content - Ash content.			
	Data in Lieu of Trial Burn. Data may be supplied in lieu of the results of a trial burn. The data must include an analysis of each waste or waste mixture to be burned. including: • Heat value. • Viscosity (if applicable) or description of physical form of the waste. • Identification of hazardous organic constituents listed in Appendix VIII: [Note: The applicant need not analyze for Appendix VIII constituents which would reasonably not be expected to be found in the waste. The constituents excluded from analysis must be identified, and the basis for exclusion stated.] - Approximate quantification of hazardous constituents - Quantification of hazardous constituents which may be designated as POHC's based on data submitted from other trial or operational burns which demonstrate compliance with the performance standard in 264.343. - Comparison of waste for which permit data submitted in lieu of a trial burn, including identified POHC'S.	270.19(c)(i)	N/A	

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	Landfills. • Results of the Paint Filter Liquids Test (Method 9095 in SW-846) showing that containerized or bulk wastes do not contain free liquids.	264.314	N/A	
	Land Treatment. • Demonstrate that waste can be completely degraded, transformed, or immobilized in treatment zone: - Percent moisture - Specific gravity or bulk density - Conductivity - Acidity or Alkalinity - TOC - Appendix VIII constituents - Concentration and identification or volition hazardous constituents - Cadmium concentration (when foodchain crops are grown in the treatment zone).	264.272(a) 264.276(b)	N/A	
	A-6. WASTE ANALYSIS PLAN. A copy of the waste analysis plan required by 264.13(b) and, if applicable, 264.13(c). The Waste Analysis Plan should describe the procedures used to obtain chemical and physical information and data on the wastes to ensure proper storage, treatment, and disposal and compliance with the land disposal restriction program. Minimum requirements include:	270.14(b)(3), 264.13(b) & (c) and 268.7	Y	See Section 7
	Parameters and Rationale. A list of parameters chosen for analysis and an explanation of the rationale for their selection.	264.13(b)(1)	Y	See Section 7.2.4 and Table 7.2-1
	Test Methods. A description of the best methods used to test for parameters chosen.	264.13(b)(2)	Y	See Section 7.2.4 and Table 7.2-2
	Sampling Methods. A list of the sampling methods used to obtain a representative sample of each waste to be analyzed.	264.13(b)(3) Part 261, Appendix I	Y	See Section 7.2.4 and Table 7.2-3

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	Frequency of Analysis. A description of the frequency at which the analyses will be repeated. The frequency must be sufficient to ensure that the analysis is accurate and up-to-date. (For an on-site facility, this will be whenever there is a process change. For an incinerator, this will be as often as required to verify consistency of the waste feed.)	264.13(b)(4)	Y	See Section 7.2.4 and Table 7.2-4
	Additional Requirements for Wastes Generated Off-Site. A description of the procedures used to inspect and/or analyze waste generated off-site that includes: • Procedures to determine waste identity. • Sampling frequency. • Sampling methods. • Waste analysis information supplied by generator.	264.73(a) & (b), 264.13(b)(5) and 264.13(c)	Y	See Section 7.2.4
	Additional Requirements for Facilities Handling Ignitable, Reactive, or Incompatible Waste. If the facility stores or treats ignitable, reactive, or incompatible waste, a description of methods which will be used to meet the additional waste analysis requirements necessary for complying with the regulatory requirement specified in Section F-5.	264.13(b)(6) 264.17	Y	See Section 7.2.4
	Additional Waste Analysis Requirements Pertaining. to Land Disposal Restrictions.	270.14(b)(3), 264.13(a)(1), 264.13(b)(6) and 268.7	Y	See Section 7.2.4
	Waste Characteristics. Analytical data must be submitted by the generator to the owner/operator for each waste stored, treated, or disposed at the facility, or information from knowledge of the waste can be used, to determine if the waste is restricted under 268. If generator knowledge is used, all supporting data must be maintained in the operating record.	264.13(a)(1) and 268.7	Y	See Sections 7.3.3 and 7.3.4

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	Waste Characteristics: Solvent Wastes and Dioxin-Containing Wastes. F001-F005 spent solvent wastes are restricted from land disposal under 268.30 and F020-F023 and F026-F028 dioxin-containing wates are prohibited under 268.31 unless: • Wastes meet applicable standards in Subpart D, or • An exemption has been granted pursuant to 268.6, or • An exemption has been granted pursuant to 268.5. To determine if a waste is restricted, you must: • Test waste, or an extract developed using the Toxicity Characteristic Leaching Procedure (TCLP), or • Use information from knowledge of chemical and physical characteristics.	264.13(a)(1) and 268.7(a) 268.30, 268.31 and Part 268, Appendix I	Y	See Section 7.2.4
	Waste Characteristics: California List Wastes. The following wastes are prohibited from land disposal under 268.32: • Liquid hazardous wastes with a pH less than or equal to 2.0. • Liquid wastes containing PCB's at concentrations greater than or equal to 50 ppm • Liquid hazardous wastes that are primarily water and contain HOCs in total concentration greater than or equal to 1,000 mg/l. • Non-liquid hazardous wastes containing HOCs in total concentrations greater than or equal to 1,000 mg/kg. Unless: • An exemption has been granted pursuant to 268.6, or • A case-by-case extension of the effective date has been granted pursuant to 268.5, or	264.13(a)(1), 268.7(a) and 268.32	Y	See Section 7.2.4

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	• Wastes meet applicable standards in Subpart D or, • Where treatment standards are not specified, wastes are in compliance with applicable prohibitions in 268 or RCRA Section 3004(d). To make the determinations: • Use Method 9095 (Paint Filter Liquids Test) in SW-846 to determine if waste is a liquid. • Initial generator must test waste (not extract or filtrate) in accordance with 261.22(a)(1), or use knowledge of the waste to determine if pH is less than or equal to 2.0. • Initial generator of liquid hazardous waste containing PCBs or a liquid or non-liquid hazardous waste containing HOCs must test waste (not extract or filtrate), or use knowledge of waste, to determine if concentration levels meet the prohibitions above.			
	Waste Characteristics: First Third. Initial generator must test a representative sample of the waste extract or the entire waste, depending on whether the treatment standards are expressed as concentrations in the waste extract or the waste, to determine whether a waste listed in 266.10 meets treatment standards set in 268.41 and 268.43, respectively. If the waste contains constituents exceeding applicable Subpart D levels, waste is prohibited from land disposal unless: • An exemption has been granted pursuant to 268.6, or • A case-by-case extension has been granted pursuant to 268.5.	264.13(a)(1), 268.7(a) and 268.33	Y	See Section 7.2.4
	Additional Requirements for Treatment Facilities. Treatment facilities must conduct the following testing:	264.13(a)(1) and 268.7(b)	N/A	

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	• For wastes with treatment standards expressed as concentrations of waste extract (268.41), test treatment residues, or an extract of such residues developed using the TCLP, to assure treatment standards are meet. • For wastes with treatment standards expressed as concentrations in the waste (268.43), test treatment residues, not an extract of such residues, to assure residues meet applicable standards. • For California List Wastes (268.32) not subject to Subtitle D treatment standards, test treatment residues according to procedures in C-3(a)(2) to assure residues comply with applicable prohibitions.			
	Not applicable to wastes for which treatment technologies have been specified. If wastes received from an off-site generator, need procedures to assure that treatment is not conducted until required data is provide by the generator.			
	Additional Requirements for Disposal Facilities. If wastes or treatment residues are received from an off-site generator or treatment facility, assure wastes will not be disposed without receipt of proper notice and certification as specified in 268.7(a) & (b). Owner/operator of land disposal facility must: • Test waste, or an extract of the waste or treatment residue developed using TCLP, or • Use methods required by generators under 268.32 [C-3a(2)] to assure waste or treatment residues comply with applicable Subpart D treatment standards and all applicable prohibitions in 268.32.	264.13(a)(1) and 268.7(c)	N/A	
	Additional Requirements for Surface Impoundments Exempted from Land Disposal Restrictions. For surface impoundments exempted from land disposal restrictions under 268.4(a), address the following:	264.13(b)(7) and 268.4(a)	N/A	
	Sampling and Analysis of Impoundment Contents. • Procedures and schedule to be followed to sample	264.13(b)(7)(i) and (ii),		

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	and test treatment residues to demonstrate compliance with treatment standards or prohibitions. Note that representative samples of the sludge and the supernatant must be tested separately rather than mixed to form homogeneous samples.	and 268.4(a)(2)		
	Annual Removal of Residues. Procedures and schedule for removing residues which do not meet applicable treatment standards or prohibitions, do not exhibit a characteristic of hazardous waste, and are not delisted under Part 260.22. These residues must be removed at least annually. Note that residues may not be placed in any other surface impoundment for subsequent management.	264.13(b)(7)(iii), and 268.4(a)(2)	N/A	
	Requirements for Land Disposal Facilities With An Approved Exemption or Extension. If a case-by-case extension has been approved under 268.5 or a petition has been approved under 268.6, provide a copy of the Notice of Approval.	270.14(b)(21)	N/A	
	A-7. MANIFEST SYSTEM, RECORD KEEPING, AND REPORTING. • Required Notices. • Manifest System. • Operating Records. • Biannual Reports. • Unmanifested Waste Reports. • Waste Minimization. • Addition Reports.	264.12 264.71 264.72 264.73 264.74 264.75 264.76 264.77	Y	See Section 7.3.3
	Inspection Schedule. A copy of the general inspection schedule required by 264.15(b) including, where applicable, specific requirements of 264.174, 264.194, 264.226, 264.254, 264.273, 264.303, and 264.347.	270.14(b)(5) and 264.15	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1

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	General Inspection Requirements. A description of the facility inspection schedule (schedule must be kept at the facility) for the following equipment: • Monitoring equipment. • Emergency and safety equipment. • Security devices. • Operating and structural equipment that are vital to prevent, detect, or respond to environmental or human health hazards. • Testing as necessary of communications or alarm systems, fire protection equipment and decontamination equipment.	270.14(b)(5) and 264.15(a) & (b) 264.15(a) & (b)	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	Examples of Monitoring Equipment That Should be Inspected at Treatment, Storage, and Disposal Facilities Are: • Scales. • Flow and liquid level monitors. • Hazardous gas detectors. • pH monitors. • Leachate monitors. • Pressure sensors. • Temperature gauges.	264.33	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	Examples of Monitoring Equipment That Should Be Inspected at Facilities With Incinerators Are: • Waste flow monitors and recorders. • Auxiliary air flow monitors. • Combustion air flow monitors. • Temperature monitors. • Flame sensors. • CO monitors and recorders. • Pressure differential indicators. • Pressure sensors. • pH monitors. • Ammeters for measuring blower current draw.		N/A	

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	Examples of Safety and Emergency Equipment to Be Inspected at TSD Facilities are: • Respirators. • Communication systems. • Alarm System. • Emergency lighting and power systems. • Smoke detectors. • Fire protection equipment. • First aid equipment and supplies. • Decontamination equipment. • Protective clothing.		Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	Examples of Security Devices to Be Inspected at TSD Facilities Are: • Surveillance system. • Barrier surrounding facility. • Locking devices.		Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	Examples of Operating and Structural Equipment at TSD Facilities Are: • Spill detection devices. • Spill control and collection equipment. • Fire and explosion barriers. • Ventilation equipment. • Sump pumps. • Dikes, bases, and foundations.		Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	In addition; areas such as waste storage, mixing, loading, and unloading areas which are subject to spills; must be inspected.			
	Types of Problems. The schedule must identify the types of problems to look for during the inspection (e.g., leaks, deterioration, readings out of specified range, missing items or materials, inoperative equipment, etc.).	264.15(b)(3)	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	Frequency of Inspection. A description of the inspection frequency must be provided for items on the schedule. The frequency of inspection should be based on the rate of possible deterioration of equipment and the	264.15(b)(4)	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1

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	probability of an environmental or human health incident if the deterioration, malfunction, or operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use.			
	All emergency waste feed cut-off valves must be inspected at least weekly to verify proper operation. All system alarms must also be tested weekly.	264.347(c) (Incinerators only)	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	Specific Process Inspection Requirements. At a minimum, the inspection schedule must include the terms and frequencies called for in 264.174, 264.194, 264.226, 265.253, 264.254, 264.303, and 264.347, where applicable.	270.14(b)(5) and 264.15(b)(4)	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1
	Container Inspection. A description of the weekly inspection of containers and container storage areas for leaks in containers or deterioration of containers and the containment system caused by corrosion or other factors.	264. 174	Y	See Section 8.4 and Figure 8.4.-1
	Tank System Inspection. • A description of the inspection each operating day of overfilling control equipment, monitoring equipment, and levels of waste in uncovered tanks. • A description of the daily inspection of tank construction materials and the area surrounding the tank, including secondary containment system (e.g., dike). • A schedule describing the monitoring of each operating day of monitoring equipment (e.g., pressure and temperature gauges), where present, to ensure that the tank is operated according to design specifications. • A schedule showing the level of waste in uncovered tanks that is inspected each operating day.	264.195	Y	See Section 9.4 and Figure 9.4-1

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	• A schedule and procedure for assessing the condition of the tank, including detection of leaks, cracks, or wall thinning to less than minishell thickness. • A procedure for emptying a tank to allow entry and inspection when necessary to detect corrosion or erosion of the tank sides and bottom. • Confirm proper operation of cathodic protection system (if present) within six months after installation and at least annually thereafter. • Schedule showing all sources of impressed current are inspected and/or tested at least bimonthly.			
	Waste Pile Inspection. The application must provide a description of the procedures to: • Inspect liners and covers during construction and immediately after installation for: - uniformity, damage and imperfections, holes, cracks, thin spots, bulges, root holes, tight seams and joints, permeability and compaction • Remove the waste pile and periodically inspect liners for deterioration, cracks and other imperfections. • Perform weekly inspections and, after storms, to detect: - deterioration, malfunctions, or improper operation of run-on and run-off control systems, - the presence of liquids in leak detection systems, where installed, - proper functioning of wind dispersal control systems, where present, - the presence of leachate in and proper functioning of leachate collection and removal systems, where present.	270.14(b)(5), 270.18(d) and 264.254	N/A	
	Surface Impoundment Inspection. The application must provide a description of how each surface impoundment, including the liner and cover systems and appurtenances for control of over-topping, will be inspected weekly and after storms to detect evidence of any of the following:	270.14(b)(5), 264.226(b) and 270.17(c)	N/A	

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	• Deterioration, malfunctions, or improper operation of overtopping topping control systems. • Sudden drops in the level of the impoundments contents. • The presence of liquids in leak detection systems, where installed. • Severe erosion or other sign of deterioration in dikes or other containment devices.			
	For new facilities, a description of how the liners will be inspected during construction and immediately after installation to detect non-uniformity, damages and imperfections (holes, cracks, thin seams, bulges, root holes, tight seams and joints, permeability, and compaction). See Item D-4b(2) concerning inspection of dikes for structural integrity.	264.226(a)	N/A	
	Incinerator Inspection. • Incinerator and associated equipment must be inspected visually at least daily for leaks, spills, fugitive emissions, and signs of tampering. • Emergency waste feed cut-off system and associated alarms must be tested weekly unless the applicant demonstrates that weekly frequency is unduly restrictive and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted monthly.	264.347	N/A	
	Landfill Inspection. Landfill owners or operators must provide a description of procedures for: • For new facilities, inspection of liners/covers during and immediately after installation. • Inspections weekly and after storms for: - operation of run-on/run-off controls, - liquids in leak detection systems, - proper functioning of wind dispersal controls, - leachate in and proper operation of leachate collection/removal systems.	270.21(d), 264.15(a) and 264.303	N/A	

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	Land Treatment Inspection. A description of the inspection procedures. Specifically the unit must be inspected weekly and after storms for: • Deterioration, malfunctions, or improper operation of run-on and run-off control systems. • Improper functioning of wind dispersal control measures. • The presence of liquids in leak detection systems, where installed. • Proper functioning of wind dispersal control systems, where present. • The presence of leachate in and proper functioning of leachate collection and removal systems, where present.	270.20(c)(5) and 264.273(g)	N/A	
	Surface Impoundment Inspection. The application must provide a description of how each surface impoundment, including the liner and cover systems and appurtenances for control of overtopping, will be inspected weekly and after storms to detect evidence of any of the following: • Deterioration, malfunctions, or improper operation of overtopping topping control systems. • Sudden drops in the level of the impoundment's contents. • The presence of liquids in leak detection systems, where installed. • Severe erosion or other signs of deterioration in dikes or other containment devices.	270.14(b)(5), 270.17(c) and 264.226(b)	N/A	
	For new facilities, a description of how the liners will be inspected during construction and immediately after installation to detect non-uniformity, damages and imperfections (holes, cracks, thin spots, bulges, root holes, tight seams and joints, permeability, and compaction). See Item D-4b(2) concerning inspection of dikes for structural integrity.	264.226(a)	N/A	

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	Incinerator Inspection. • Incinerator and associated equipment must be inspected visually at least daily for leaks, spills, fugitive emissions and signs of tampering. • Emergency waste feed cut-off system and associated alarms must be tested weekly unless the applicant demonstrates that weekly frequency is unduly restrictive and that less frequent inspection will be adequate. At a minimum, operational testing must be conducted monthly.	264.347	N/A	
	Landfill Inspection. Landfill owners or operators must provide a description of procedures for: • For new facilities, inspection of liners/covers during and immediately after installation • Inspections weekly and after storms for: - Operation of run-on/run-off controls, - Liquids in leak detection system, - Proper functioning of wind dispersal controls, - Leachate in and proper operation of leachate collection/removal system.	270.21(d), 264.303 and 264.15(a)	N/A	
	Land Treatment Inspection. A description or the inspection procedures. Specifically the unit must be inspected weekly and after storms for: • Deterioration, malfunctions, or improper operation of run-on and run-off control systems. • Improper functioning of wind dispersal control measures.	270.20(c)(5) and 264.273(g)	N/A	
	Miscellaneous Unit Inspections. Provide an inspection program which ensures compliance with the standards specified in other units, where applicable.	270.14(b)(5) and 264.602	N/A	

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	Remedial Action. A description of procedures for taking remedial actions when inspections reveal problems or when problems are imminent. These may alternately be described in the contingency plan [See 264.194(c), 264.227, 264.171].	264.15(c)	N/A	
	Inspection Log. A copy or description of the inspection log or summary form including the following: • Dates and times of inspections. • Name(s) and inspector(s). • Observations made. • Date and nature of repairs or remedial actions taken.	264.73(b)(5) and 264.15(d)	Y	See Sections 5.2, 8.4, 9.4 and Figures 5.2-1, 8.4-1, 9.4-1

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	B-1. Container Design.			
	B-1(a). Containers Without Free Liquids or F020, F021, F022, F023, F026, and F027. Wastes for storage areas that store containers holding wastes that do not contain free liquids, a demonstration of compliance with 264.175(c); including 270.15(b).	270.15(b) and 264.175(c)	N/A	
	B-1a(1). Test for Free Liquids. Test procedures and results or other documentation or information to show that the wastes do not contain free liquids. Use of the Paint Filter Test, Method 9095 in SW-846, is recommended.	270.15(b)(1) and 264.175(c)	N/A	
	B-1a(2). Description of Storage Area Design and Operation to Drain and Remove Liquids or How Containers Are Kept From Contact With Standing Liquids Containment System Not Required If: • Storage area sloped or otherwise designed and operated to drain and remove liquid resulting from precipitation, or • Containers elevated or otherwise protected from contact with accumulated liquid.	270.15(b)(2), 264.175(c)(1) and 264.175(c)(2)	N/A	
	B-1b. Containers with Free Liquids and/or F020, F021, F022, F023, F026, and F027 Wastes. A description of the containment system to demonstrate compliance with 264.175. Show at least the following:	270.15(a) 264.175(b) and 264.175(d)	Y	See Section 8.1 Figures 8.1-1 and 8.1-2
	B-1b(1). Basic Design Parameters, Dimensions, and Materials of Construction.	270.15(a)(1), and 264.175(b)(1)	Y	See Section 8.1 Figures 8.1-1 and 8.1-2

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	Base must underlie containers which are capable of containing all liquids until the liquid is collected and removed. Information which should be provided to demonstrate this includes the following: • Statement that the base is free of cracks or gaps. • Demonstration of imperviousness of base to wastes and precipitation. • Base design and materials of construction. • Engineering evaluation of structural integrity of base. • Discussion of compatibility of base with wastes.		Y	See Section 8.1
	B-1b(2). Description of How Design Promotes Drainage or How Containers Are Kept From Contact With Standing Liquids in Containment System. Base must be sloped or the containment system must be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the containers are elevated or otherwise protected from contact with accumulated liquids. For this requirement, the applicant should address, where applicable: • Stacking practices. • Grading of base. • Drainage design and removal system.	270.15(a)(2) and 264.175(b)(2)	Y	See Section 8.1
	B-1b(3). Capacity of the Containment System Relative to the Number and Volume of Containers to Be Stored. Sufficient capacity to contain 10 percent of the volume of containers or the volume of the largest container, whichever is greater. Information that should be included to satisfy this requirement is: • Volume of largest container. • Total volume of containers. • Containment structure capacity. • Capacity of run-off collection system. • Geographic storm intensity/frequency data.	270.15(a)(3) and 264.175(b)(3)	Y	See Section 8.1

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	B-1b(4). Provisions for preventing/managing run-on into the containment system must be prevented unless the collection system has sufficient excess capacity in addition to the 10 percent minimum to contain any run-on which might enter the system. The applicant should discuss structures used to control run-on such as: • Containment system ancillary structures (curbs, dikes. etc.). • Engineering grading design. • Collection and removal system design capacity. • Potential run-on.	270.15(a)(4) and 264.175(b)(4)	Y	See Section 8.1
	B-1b(5). How accumulated liquids can be analyzed and removed to prevent overflow spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in a timely manner as is necessary to prevent overflow of the collection system. Information that must be included is: • How liquids will be analyzed. • Removal equipment and methods (sump pump design, piping specifications, location, discharge point, and capacity). • Management of accumulated liquid including prevention of overflow.	270.15(a)(5) and 264.175(b)(5)	Y	See Section 8.1
	B-2. Drawing of Containers With Buffer Zone and Incompatible Waste. • 15 meters (50 feet) from property line. • Means to separate from other waste and flames.	270.15(c), 264.176 and 264.177(c)	Y	See Section 8.2
	B-3. Description of Procedures Used to Ensure Compliance With Management of Incompatible Waste. • Placing incompatible waste in same container. • Putting in unwashed containers.	270.15(d), 264.177(a) & (b) and 264.17(a) & (b)	Y	See Section 8.2
	B-4. Container Management. • Type of containers and construction material should include liners manufacturer (if applicable), specifications, and dimensions.	264.171, 264.172, 264.173, 264.174	Y	See Sections 8.1, 8.2, 8.3, and 8.4

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	• Procedures for handling to avoid rupturing or leaking. • Weekly inspections or deterioration caused by corrosion or other factors. • Machinery, equipment, procedures used to move containers. • Adequate aisle space for machinery, inspections, and to meet applicable codes (i.e., fire). • Maximum number, height, volume, and types of containers in store. • Waste container always kept closed during storage except when adding or removing waste. • Location of ignitable, reactive and incompatible waste. • Markings and labels placed on containers.	270.15(a)(1)		

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	C. Tank Systems.			
	C-1. Existing Tank Systems. Assessment of existing tank system's integrity written assessment, reviewed and certified by an independent, qualified, registered professional engineer, on the structural integrity and suitability of each tank system for handling hazardous waste which includes: • Design standard(s) according to which the tank and ancillary equipment were constructed. • Hazardous characteristics of the wastes that have been and will be handled. • Existing corrosion protection measures. • Documented age of the tank system or an estimate. • Results of a leak test, internal inspection, or other tank integrity examination.	270.16(a) 264.191(a) and 264.191(b)	Y	See Appendix E
	C-2. Dimensions and Capacity of Each Tank: Description of: • Types (i e. aboveground, underground etc.; material of construction), • Volume and number of tanks, • As well as specific location of each.	270.16(b)	Y	See Section 9.2
	C-3. Description of Feed Systems, Safety Cutoff, Bypass Systems and Pressure Controls for Each Tank.	270.16(c)	Y	See footnote a
	C-4. Diagram of Piping, Instrumentation and Process Flow for Each Tank System.	270.16(d)	Y	See footnote a

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	C-5. External Corrosion Protection: Specify type and, as appropriate, location of external corrosion protection measures used to ensure continued structural integrity and suitability of each tank system for handling hazardous waste.	270.16(e) 264.192(a)(3)(ii)	Y	See footnote a
	C-6. New Tank System. Assessment of New Tank System's Integrity Written assessment, reviewed and certified by an independent, qualified registered professional engineer, on the structural integrity and suitability of each tank system for handling hazardous waste. Assessment must show that the foundation, structural support, seams, connections and pressure controls, if applicable, are adequately designed and that the tank system has sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture, or fail. Assessment includes at a minimum: • Design standards(s) according to which tank(s) and/or the ancillary equipment are constructed. • Hazardous characteristics of the waste(s) to be handled.	270.16(a) & (f) 264.192(a)	N/A	
	• Corrosion assessment by a qualified expert for new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water. Include factors such as: • Soil moisture content • Soil pH • Soil sulfides level • Soil resistivity • Structure to soil potential • Influence of nearby underground metal structures (e.g., piping) • Existence of stray electric current • Existing corrosion-protection measures	264.192(a)(3)	N/A	

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	The type and degree of external corrosion protection should consist of one or more of the following: • Corrosion-resistant materials of construction • Corrosion-resistant coating with cathodic protection • Electrical isolation devices.			
	• Determination of design or operation measures that will protect underground tank systems against potential damage due to vehicular traffic.	264.192(a)(4)	N/A	
	• Design considerations to ensure that tank foundations will maintain the load of a full tank and that tank systems will be anchored to prevent flotation or dislodgment where the tank system is placed in a saturated zone or is located within a seismic fault zone. Include design consideration to ensure that tank systems will withstand the effects of frost heave.	264.192(a)(5)	N/A	
	Description of Tank System Installation and Testing Plans and Procedures: Demonstrate that an independent, qualified installation inspector or an independent, qualified registered professional engineer will inspect each new tank system prior to covering, enclosing, or placing a new tank system or component in use. Inspection should determine the presence of: • Weld breaks • Punctures • Scrapes or protective coatings • Cracks • Corrosion • Other structural damage or inadequate construction/installation.	264.192(b) 270.16(f)	N/A	
	Specify how all discrepancies will be repaired. New tank systems or components that are placed under-ground and that are backfilled must be provided with a backfill material that is a non-corrosive, porous, homogeneous substance and that is installed so that the backfill is placed	264.192(c)	N/A	

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	completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.			
	New tanks and ancillary equipment will be tested for tightness prior to being covered, enclosed, or placed in use. Repair procedures must be specified if the tank system is found not to be tight.	264.192(d)	N/A	
	Ancillary equipment will be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.	264.192(e)	N/A	
	External Corrosion Protection. Describe the design, construction, and operation of corrosion protection systems necessary to ensure the integrity system. Show that any field-fabricated corrosion protection system will be supervised by an independent corrosion expert.	264.192(f) and 270.16(e)	N/A	
	C-7. Containment and Detection Releases. Plans and Description of the Design, Construction, and Operation of the Secondary Containment System: The following information must be provided for the secondary containment system: • Age of all existing tank systems. If the age of a tank system cannot be determined, indicate the reason. • Design, installation and operation to prevent any migration of waste or accumulated liquid from the tank system to the soil, groundwater, or surface water at any time during its use. • Capable of detecting and collecting releases and accumulated liquids until the collected material is removed.	264.193(b) and 270.16(g)	Y	See Section 9.2
	Materials of construction used to construct or line the system. • Proof that the materials are compatible with the wastes in the tank system. • System has sufficient strength and thickness to prevent failure caused by any of the following: • Pressure gradients (including static head and external hydrological forces)	264.193(c)(1)	Y	See footnote a

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	• Physical contact with the wastes • Climatic conditions • Stress of daily operation (including stresses from nearby vehicular traffic).			
	Calculations to prove that it is placed on a foundation or base that is capable of providing support, resisting pressure gradients above and below the system, and preventing failure due to settlement, compression or uplift.	264.193(c)(2)	Y	See footnote a
	Description of the leak detection system, including its operating principles, design features and operating procedures.	264.193(c)(3)	Y	See footnote a
	Demonstration that the leak detection system will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours. If the prevailing site conditions or detection technologies will not allow detection of a release within 24 hours, then specify the earliest practical time that detection can take place. Indicate why this longer period does not pose a threat to human health and the environment. • Show how the secondary containment system is sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. • Document how it will be ensured that spilled or leaked waste(s) and precipitation will be removed from the secondary containment system within 24 hours. If wastes and precipitation cannot be removed within 24 hours, then specify the earliest practical time that removal can take place. Indicate why this longer period does not pose a threat to human health and the environment.	264.193(c)(4)	Y	See footnote a
	Requirements for External Liner, Vault, Double-Walled Tank or Equivalent Device.	270.16(g) 264.193(d)-(e)	Y	See footnote a

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	Secondary containment for each tank must include at least one of the following: a liner external to the tank, a vault, a double-walled tank, or an equivalent device approved by the Department. The following design and operation procedures should be given for each device:			
	External liner system: • Calculations to show that it contains 100 percent of the capacity of the largest tank within its boundary. • Run-on or infiltration of precipitation is prevented. Alternatively, show that the collection system has sufficient excess capacity to contain run-on and precipitation from a 25-year, 24-hour rainfall. • Free of cracks or gaps. • System surrounds the tank completely and covers all surrounding soil likely to come in contact with the wastes, if they were released from the tank(s).	264.193(e)(1)	N/A	
	Vault system: • Calculations to show that it contains 100 percent of the capacity of the largest tank within its boundary. • Designed or operated to prevent run-on or infiltration of precipitation. Alternatively, show that the collection system has sufficient excess capacity to contain run-on and precipitation from a 25-year, 24-hour rainfall. • Constructed using chemical-resistant water stops in place at any joints. Specify the material used. • Provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the vault material. Specify coating or lining used, and provide the manufacturer's data sheet. • Method used to protect against the formation and ignition of vapors placed in the tank(s) if the wastes are ignitable or reactive.	264.193(e)(2)	Y	See footnote a

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	• Exterior moisture barrier used, and provide the manufacturer's data sheet. Alternatively, describe how the vault is designed or operated to prevent the migration of moisture into the vault if the vault is subject to hydraulic pressure.			
	Double-walled tank: • An integral structure so that any release from the inner tank is contained by the outer shell, • If the unit is metallic, specify the type(s) of corrosion protection used for both the internal and external shell. • Description of the leak detection system used including the principle of operation, design, and operating characteristics. It must be a continuously operating unit, capable of detecting a release within 24 hours. If the prevailing site conditions or detection technologies will not allow detection of a release within 24 hours, then specify the earliest practical time that detection can take place. Indicate why this longer period does not pose a threat to human health and the environment.	264.193(e)(3)	N/A	
	Secondary Containment and Leak Detection Requirements for Ancillary Equipment: Each tank system's ancillary equipment must be provided with secondary containment such as jacketing, double-walled piping, or a trench. Describe the containment system, and demonstrate that it has been (will be) designed, installed and operated to prevent any migration of waste or accumulated liquid to the soil, groundwater, or surface water at any time during its use. Also, demonstrate that the containment system can detect and collect releases and accumulated liquids. This demonstration must include at least the following: • Materials of construction used to construct or line the system. Show that these materials are compatible with the wastes in the tank system.	264.193(f) and 270.16(g)	Y	See footnote a

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	• Demonstrate that the system has sufficient strength and thickness to prevent failure caused by any of the following: - Pressure gradients (including static head external hydrological forces) - Physical contact with the wastes - Climatic conditions - Stress of daily operation (including stresses from nearby vehicular traffic). • Calculations proving that the secondary containment system is placed on a foundation or base that is capable of providing support, resisting pressure gradients above and below the system, and preventing failure due to settlement, compression, or uplift. • Description of the leak detection system including its operating rinciple, design features and operating procedures. The leak detection system must detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours. If the prevailing site conditions or detection technologies will not allow detection of a release with 24 hours, then specify the earliest practical time that detection can take place. Indicate why this longer period does not pose a threat to human health and the environment. • Secondary containment system must be sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. • Document how it will be ensured that spilled or leaked wastes and precipitation will be removed from the secondary containment system within 24 hours. If wastes and precipitation cannot be			

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	removed within 24 hours, then specify the earliest practical time that removal can take place. Indicate why this longer period does not pose a threat to human health and the environment.			
	A demonstration need not be made for: • Above ground piping (exclusive of flanges, joints, valves, and other connections) that are visually inspected daily, • Welded flanges, joints, and connections that are visually inspected daily, • Seamless or magnetic coupling pumps that are visually inspected daily, and • Pressurized above ground piping systems with automatic shut-off devices that are visually inspected daily.	264.193(f)	Y	See footnote a
	Requirements for Tank Systems Until Secondary Containment is Implemented: Non-enterable underground tanks: results of a leak test (or other tank integrity test approved by the Department). Procedures to be repeated at least annually until secondary containment is provided. Other than non-enterable underground tanks: results of a leak test or present a schedule and procedures for assessing the overall condition of the tank system by an independent, qualified registered professional engineer until secondary containment is provided. Ancillary equipment: results of a leak test (or other integrity assessment measures approved by the Department). Indicate the procedures that will be used to ensure that such tests will be repeated at least annually until secondary containment is provided.	264.193(I)	N/A	
	C-8. Variance from Secondary Containment Is Implemented: Provide information for one of the following alternatives:	264.193(g) and 270.16(h)	N/A	

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	• Technology-based variances: detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the groundwater or surface water during the life of the facility. • Risk-based variances: detailed demonstration that no substantial present or potential hazards will be posed to human health or the environment should a release enter the environment. • Demonstration that tanks used to store or treat hazardous wastes contain no free liquid as defined by the Paint Filter Test and that such tanks are situated inside a building with an impermeable floor.	264.190(a)	N/A	
	C-9. Controls and Practices to Prevent Spills and Overflows: Provide adequate information to ensure that the hazardous wastes or treatment reagents placed in a tank system will not cause any element of that system to rupture, leak, corrode or otherwise fail.	264.194(a) & (b) and 270.16(i)	Y	See Section 9.2
	Provide detailed description of controls and practices used to prevent spills and overflows. Include at a minimum: • Spill prevention controls (e.g., check valves, dry disconnect couplings) • Overfill prevention controls (e.g., level sensing devices, high level alarms, automatic feed cutoff or bypass to a standby tank) • Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.		Y	See Section 9.2

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	C-10. Procedures for handling incompatible, ignitable, reactive wastes. • Waste not placed in tanks unless treated, rendered, or mixed so it does not meet the definition of ignitable, reactive or incompatible. • Tank is solely for emergencies. • Meets the National Fire Protection Associations Flammable and Combustible Liquids Code. • Decontaminated before use.	264.198, 264.199 and 270.16(j)	Y	See Section 9.2, Figure 9.2-2

footnote a: Pertinent information is provided in the January 1992 Design and Integrity Assessment Report prepared by Tera, Inc., that was submitted with the previous permit application. In accordance with an agreement with FDEP personnel at a meeting prior to preparation of this permit renewal application, the January 1992 Design and Integrity Assessment Report is not included with this document.

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SUBMITTAL DATE REVIEWER

1.
2.
3.

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	CLOSURE PLANS & POST-CLOSURE PLANS	270.14(b); 264.110-264.151; 264.178; 264.197; 264.228; 264.258; 264.280; 264.310; 264.351		
	Closure Plans. A copy of the written closure plan required by 264.112 and consistent with 62-730.	270.14(b)(13) and 264.112	Y	See Section 10.0
	Closure Performance Standard. A description of the procedures to close each unit in accordance with 264.111: • Minimizes the need for further maintenance. • Controls, minimizes or eliminates post-closure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the groundwaters, surface waters or to the atmosphere. • Complies with the closure requirements of Subpart G and unit-specific closure requirements. (See individual checklists.)	264.111(264.112 requires consistency with 264.111)	Y	See Section 10.0
	Partial Closure and Final Closure Activities. Fully describe time and all activities required for: • Partial closure, if applicable. • Final closure. • Maximum extent of operation which will be active during life of facility. Description must identify how requirements of 264.111, 264.113, 264.114, 264.115 and applicable requirements of 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, and 264.351 will be met.	264.112(b)	Y	See Sections 10.1 and 10.2 Appendix F (closure of ethylene glycol hazardous waste tank)

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	Maximum Waste Inventory. A description of the maximum inventory of wastes that could be in storage, treatment and disposal at any time during the life of the facility. Methods for removing, transporting, treating, storing, or disposing of all hazardous wastes. Identification of the type(s) of off-site hazardous waste management units to be used, if applicable.	264.112(b)(3)	Y	See Section 10.1
	Schedule for Closure. A schedule for final closure including: • Each HWMU and final closure of the facility. • Closure schedule with total time to close, time for intervening closure activities, and inspection schedule during closure. • Estimated expected year of closure for facilities that use trust funds to establish financial assurance and that are expected to close prior to the expiration of the permit.	264.112(b)(6)	Y	See Figure 10.3-1 See Section 10.3
	Time Allowed for Closure. The schedule for closure must show: • All hazardous wastes will be treated, removed off-site, or disposed of on-site within 90 days from receipt of final volume of waste at the unit or facility. • All closure activities will be completed within 180 days from receipt of final volume of waste at the unit or facility.	264.112(b)(2) and 264.113(a) & (b)	Y	See Figure 10.3-1 See Section 10.3
	Extensions for Closure Time. A petition made to the Department for a schedule for closure which exceeds the 90 days for treatment, removal, or disposal of wastes and/or the 180 days for completion of closure activities made to the Department. One of the following must be demonstrated: • Closure activities requiring longer than 90 or 180 days. • Unit or facility has capacity to receive additional wastes. • There is a reasonable likelihood that another person other than the owner or operator will recommence operation of the site within one year, and	264.113(a) & (b)	N/A	

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	• Closure would be incompatible with continued operation. Demonstrate that all steps have and will be taken to prevent threats to human health and the environment from unclosed but inactive facility.			
	Closure Procedures. Inventory Removal, Disposal or Decontamination of Equipment. A detailed description of steps needed to remove or decontaminate all hazardous waste residues and contaminated containment system components, equipment, structures, and soils. The following should be included: • Decontamination procedures. • Criteria for determining decontamination. • List of equipment, structures, and soils. • Disposal of contaminated soil and residues. • Decontamination of cleanup materials and equipment. • Collection of decon solids and liquids. • Characterization: Number of samples per unit with quantification, parameters for characterization with justification, and TCLP?, totals?. • Disposal proposals (may differ for different media and wastes). • Soils removal: - Visibly stained? - Sample grid and depths - Parameters - Appendix VIII sampling including justification for reduction in Appendix VIII list - Procedures for additional excavation if data shows cleanup criteria exceedances.	264.112 and 264.114 264.112(b)(4)	Y	See Section 10.2

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	• Cleanup criteria: - Background - establish actual values before permit is issued. Consider: * number of background samples * depths (are they in the same type of soils, and representative?) * if multiple background samples are used, how will background be established; e.g., average, highest value?, consider outliners, etc. - State cleanup levels. - Leachability. - Risk assessment (if action levels and state cleanup levels are not available).			
	• Other activities to ensure that the closure performance standard is met [264.112(b)(5)]: - GWM (use GWM checklist). - Leachate collection. - Run-on and run-off control during closure. - Tasks to be inspected by the professional engineer certifying closure. - Maintaining daily log. • Closure schedule. Estimate of expected year of any partial and final closure [264.113(b)(6)]: - Recommend that the schedule start at day 0 upon permit issuance rather than actual calendar dates. * hazardous waste treated or disposed within 90 days * all closure activities must be completed within 180 days. - Must include total time required and sufficient intervening dates to track progress.		Y	See Section 10.2

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	- Justification for extensions for closure period [264.113]: * closure requires more than 90 or 180 days * unit has capacity to receive additional wastes. * another operator will recommence operation within one year * closure would be incompatible with continued operation * steps have been taken to protect human health and the environment including compliance with all permit requirements.			
	• Demonstrate decontamination has been effective. A demonstration that any hazardous constituents left will not impact environmental media in excess of agency established exposure levels, and direct contact will not pose a threat to human health and the environment.	264.111(b)	Y	See Section 10.2
	Closure of Disposal Units. Closure plans for all piles, landfills, surface impoundments, and miscellaneous disposal units in which wastes or contaminated materials are to remain at closure must describe how the unit will be closed, including a description of the final cover to be established and its expected performance. Contingent closure plans for tanks, surface impoundments and waste piles also must provide these descriptions as applicable.	270.14(b)(13), 270.17(f), 270.18(h), 270.21(e), 264.228(a)(2), 264.228(c)(1)(i), 264.258(c), 264.310(a) 264.601 and 264.603	N/A	
	Closure of Containers. A description of how, at closure, all hazardous waste residues will be removed from the containment system, and how remaining containers, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues will be decontaminated or removed. The description should address the following: • Hazardous waste removal and disposal. • Container decontamination and disposal.	264.178	Y	See Section 10.2

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	• Site decontamination and disposal including linings, soil, and washes. • Verification of decontamination. • Maximum inventory.			
	Closure of Tanks. A description of how, at closure, all hazardous waste residues will be removed from tanks, discharge control equipment, and secondary containment structures, and the facility will be decontaminated. The description should address the following: • Waste removal from tanks and equipment. • Decontamination of all components. • Verification of decontamination. • Disposal of waste and residues. • Maximum inventory. If not all contaminated soils can be removed or decontaminated at closure, a closure and post-closure plan for a landfill must be included. If the tank system does not have secondary containment or are not exempt, then a contingent closure and post-closure plan for a landfill must be provided.	264.197(a) 264.112(b)(3) 264.197(b) & (c)	Y	See Section 10.2
	Closure of Waste Piles. The application must describe how all hazardous waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate will be removed or decontaminated at closure and managed as hazardous waste. If any wastes, waste residues or contaminated materials or soils will remain after closure, provide plans for closing the pile as a landfill, and provide post-closure plan.	270.18(h), 264.258 and 264.112(b)(4)	N/A	

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	Piles without liners or with liners that do not meet the requirement of D-3e, must also provide contingent plans for closing the facility as a landfill and a contingent post-closure plan, except for dry, enclosed piles meeting the requirements of D-3b or piles for which a liner exemption is sought in accordance with D-3c. The description should address the following: • Procedure and criteria for determining whether or not decontamination has been successful. • Sampling and analytical techniques.		N/A	
	Closure of Surface Impoundments. A description of how all hazardous waste residues, contaminated containment system components (liners, etc.), contaminated subsoils and structures and equipment contaminated with waste and leachate will be removed or decontaminated at closure and managed as hazardous waste. The description should address the following: • Procedure and criteria for determining whether or not decontamination has been successful. • Sampling and analytical techniques. • Continuance of treatment during closure (if appropriate). If any wastes, waste residues or contaminated materials or soils will remain after closure, provide plans for closing the surface impoundment in place and provide post-closure plans. Plans for closing a surface impoundment in place must address the following: ◦ Elimination of liquids by removal or solidification. ◦ Stabilization of wastes to sufficient bearing capacity.	270.17(f), 264.228(a)(1)&(2) and 264.228(b)	N/A	

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	• Final cover designed and constructed to provide long-term minimization of migration of liquids through the closed impoundment, function with minimal maintenance, promote drainage and minimize erosion of final cover, accommodate settling and subsidence, and have a permeability less than or equal to that of the bottom liner system or natural subsoils present. Surface impoundments without liners or with liners that do not meet requirements of D-4c, must also provide contingent plans for closure in place and a contingent post-closure plan except for impoundments requesting a liner exemption in accordance with D-4b.			
	Closure of Incinerators. Description of how, at closure, all hazardous waste and hazardous waste residues including ash, scrubber waters, and scrubber sludges will be removed from the incinerator, associated duct work, piping, air pollution control equipment, sumps, and any other structures or operating equipment such as pumps, valves, etc., that have come into contact with the hazardous waste. Alternatively, a description of how the incinerator and associated units and equipment will be dismantled and disposed of as a hazardous waste will suffice.	264.351	N/A	
	Closure of Landfills. Provide detailed plans and an engineering report which describes the final cover components in detail. Cover installation and construction quality assurance procedures should be thoroughly described. These detailed plans and engineering report must describe how the final cover will: • Provide long-term minimization of migration of liquids through closed landfill. • Function with minimum maintenance. • Promote drainage and minimize erosion/abrasion. • Settle/subside without losing integrity.	270.21(e), 264.310(a) and 264.280(b)	N/A	

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	• Be less permeable than bottom liners or subsoils. • Withstand freeze/thaw cycles.		N/A	
	Closure of Land Treatment. During closure of land treatment facilities the owner or operator must comply with the following: • Continue all operations (including pH control) necessary to maximize degradation, transformation, or immobilization of hazardous constituents within the treatment zone as required, except to the extent such measures are inconsistent with 264.280(a)(6). • Continue all operations in a treatment zone to minimize run-off of hazardous constituents. • Maintain the run-on control system. • Maintain the run-off management system. • Control wind dispersal of hazardous waste if required. • Continue to comply with any prohibitions or conditions concerning growth of food-chain crops. • Continue unsaturated zone monitoring except that soil -pore liquid monitoring may be terminated 90 days after the last application of waste to the treatment zone. • Establish a vegetative cover on the portion of the facility being closed at such time that the cover will not substantially impede degradation, transformation, or immobilization of hazardous constituents in the treatment zone. The vegetative cover must be capable of maintaining growth without extensive maintenance. When closure is complete, the owner/operator may submit to the Department certification by an independent, qualified soil scientist, in lieu of an independent, registered professional engineer, that the facility has been closed in accordance with the specifications in the approved closure plan.	270.20(f) and 264.280(a)	N/A	

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	Closure of Miscellaneous Units. Show that at closure, all hazardous waste and hazardous waste residues will be removed from the treatment process or equipment, discharge control equipment, and discharge confinement structures, and that the facility will be decontaminated. Description of the sampling/test procedures or other means used to ensure that no contamination remains on, in, or around the units and associated equipment and structures. If any wastes, waste residues or contaminated materials or soils will remain after closure, provide plans for closing the miscellaneous unit as a disposal unit and provide post-closure plans.	264.601 and 270.23(a)(2)	N/A	
	Post-Closure Plan. An owner/operator of a disposal facility must have a written post-closure plan, or, if applicable, a contingent post-closure plan. A copy of the approved plan and all revisions to the plan must be kept at the facility until the post-closure care begins. *Tanks, waste piles, surface impoundments,* incinerators, landfills, land treatment and miscellaneous units should address post-closure plans, as appropriate.	270.14(b)(13), 270.16, 270.17(f), 270.18(h), 270.19 270.20(f), 270.21(e), 270.22, 270.23(a), 264.118, 264.197(b) & (c), 264.228(b) & (c), 264.258(b) & (c), 264.280(c), 264.310(b) and 264.603	Y	See Section 10.4
	Inspection Plan. A description of the inspections to be conducted during the post-closure care period, their frequency, the inspection procedure, and the logs to be kept. The following items, as applicable, should be included in the inspection plan: • Security control devices. • Erosion damage. • Cover settlement, subsidence and displacement. • Vegetative cover condition. • Integrity of run-on and run-off control measures. • Cover drainage system function.	264.118(a), 264.197(b) & (c), 264.228(b) & (c), 264.258(b) & (c) and 264.310(b)	N/A	

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	• Leachate collection/detection and removal system maintenance. • Gas venting system. • Well condition. • Benchmark integrity. The rationale to be used to determine the need for corrective maintenance activities.			
	Monitoring Plan. A description of the monitoring to be conducted during the post-closure care period, including, as applicable, the procedures for conducting the following operations and evaluating the data gathered should include: • Groundwater monitoring. • Leachate collection/detection and removal.	264.118(b)(1), 264.228(b), 264.197(b) & (c), 264.228(c)(1)(ii), 264.258(b) & (c) and 264.310(b)	N/A	
	Maintenance Plan. A description of preventative and corrective maintenance procedures, equipment procedures, equipment requirements, and material needs. Include the following items in the maintenance plan, as applicable: • Repair of security control devices. • Erosion damage repair. • Correction of settlement, subsidence and displacement. • Mowing, fertilization and other vegetative cover maintenance. • Repair of run-on and run-off control structure. • Leachate collection/detection system maintenance. • Well replacement. • The rationale to be used to determine the need for corrective maintenance activities.	264.118(b)(2), 264.197(b) & (c), 264.228(b) & (c), 264.258(b) & (c) and 264.310(b)	N/A	
	Land Treatment. A description of the operation, inspection, and maintenance programs to be used at the closed facility. Include descriptions of the procedures for conducting the following activities and identify frequencies at which they are to be conducted:	264.280(c)	N/A	

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	• Continuance of land treatment. • Vegetative cover maintenance. • Maintenance of run-on control systems and run-off management systems. • Wind dispersal control. • Control of food chain crops. • Unsaturated zone monitoring.			
	Post-Closure Care for Miscellaneous Units. A detailed description of the plans to ensure protection of human health and the environment. Include the prevention of any releases to ground-water or subsurface environment, surface water or wetlands, or on the soil surface, or to air. This will include providing related information from 264.118.	270.23(a)(3) and 264.603	N/A	
	Post-Closure Security. Indicate which security provisions will continue during closure when hazardous waste will remain exposed after completion of partial or final closure or access by the public or domestic livestock may pose a hazard to human health.	264.117(b)	N/A	
	Post-Closure Contact. Provide the name, address, and phone number of the person or office to contact about the hazardous waste disposal unit or facility during the post-closure care period. Notices Required for Disposal Facilities.	264.118(b)(3)	N/A	
	Certification of Closure. A statement by the applicant which indicates that within 60 days of completion of closure of each hazardous waste surface impoundment, waste pile, land treatment, and landfill unit, and within 60 days of the completion of final closure, closure certification will be submitted to the Department. The certification must certify that the hazardous waste management unit or facility, as applicable, has been closed in accordance with the specifications of the approved closure plan. The	264.115 and 264.280(b)	Y	See Section 10.4

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	certification must be signed by the owner/operator and by an independent, registered professional engineer (or by an independent, qualified soil scientist in the case of a land treatment closure).			
	Survey Plat By Owner/Operator and Certified By A Professional Land Surveyor. A statement by the applicant which indicates that no later than the submission of certification of closure of each hazardous waste disposal unit, a survey plat indicating the location and dimensions of landfill cells or other disposal units with respect to permanently surveyed benchmarks, will be submitted to the local zoning authority (or authority with jurisdiction over local land use) and to the Department. The plat must be prepared and certified by a professional land surveyor and must contain a note, prominently displayed, which states the owner/ operator's obligation to restrict disturbance of the disposal unit in accordance with applicable 264 Subpart G regulations.	264.116	N/A	
	Notice to Local Authority (Notice in Deed). Documentation by applicant that within 60 days after closure a record of the type, location and quantity of hazardous waste within each cell or disposal area will be submitted to the appropriate local land use authority and to the Department.	264.119	N/A	
	Post-Closure Certification By Owner/Operator and an Independent Professional Engineer. Provide a statement which indicates that within 60 days of completion of the post-closure care period for each hazardous waste disposal unit, certification will be submitted to the Department. The certification must certify that the post-closure care period for the hazardous waste disposal unit was performed in accordance with the specifications	264.120	N/A	

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	of the approved post-closure plan. The certification must be signed by the owner/operator and by an independent, registered professional engineer.			
	Notice In Deed to Property. Documentation by applicant that he has or will record a notation on the facility deed, or other instrument examined during a title search, that notifies any potential purchaser of the property that: • The property has been used to manage hazardous waste. • Use of the land is restricted to activities that will not disturb integrity of the final cover system, or monitoring system during post-closure care period.	270.14(b) and 264.119	N/A	
	• QAPP, 62-160, F.A.C. (Coordinate review with person responsible for reviewing groundwater portions of QAPP.) - 1.0, title and DEP approval page (original signatures required) - 3.1.1, site history - 3.1.2, summary of historical data - 3.2.1, purpose of project - 3.2.2, intended end use of data - 3.2.3, project schedule and scope of work - 3.3.1, field operations - 3.3.3, project organization - 3.4.2, proposed samples for project, along with site map indicating sample locations - 3.4.2, parameters. • Site-specific parameters: * matrices (soil, sludge, decon fluids) and frequencies. • Appendix VIII parameters. • Analytical methods: * (SW-846) or other appropriate methods * Can PQLs meet cleanup criteria? - 4.7, field-generated waste disposal.		N/A	

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	Closure Cost Estimates Including GW Monitoring. A copy of the most recent closure or contingent closure cost estimate, prepared in accordance with 264.142 and DEP Form 62-730.900(2) Part II A.2.a.: • Completed EPA Guidance Checklists. • Cost estimate based on third party costs. • Fully loaded (most costly). • No salvage credits. • Worst case scenario. • Current year costs. • Cost adjusted annually from anniversary date of first cost estimate. • Based on the point in operating life when extent and manner of operation would make closure most expensive. • Costs should include administrative, engineering, transportation, contingencies, etc., as applicable. • The detailed closure cost estimates include: - removal of wastes - decontamination - sampling and analysis - transportation - treatment and disposal - removal of containment system - removal of soil - certification of closure.	270.14(b)(15) 264.142(a)(2) 264.142(a)(3).&(4) 264.142(a) 264.142(b) 264.142(a)	Y	See Section 10.5
	Financial Assurance Mechanism for Closure. A copy of the established financial assurance mechanism for facility closure adopted in compliance with 264.143.	270.14(b)(15) 264.143, and 264.151	Y	See Section 10.5
	Closure Insurance. To demonstrate that the owner/operator has closure insurance, he or she must submit to the Department, 60 days before hazardous waste is received, a certificate of insurance worded as specified in 264.151(o).	264.143(e) and 264.151(e)	Y	See Section 10.5

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	Post-Closure Care Cost Estimates Including GW Monitoring. If tanks, surface impoundments, incinerators, landfills, land treatment and miscellaneous units or waste piles are utilized, the application must include a post-closure or a contingent post-closure cost estimate prepared in accordance with 264.144 and DEP Form 62-730.900(2) Part II 2.b.: • Completed EPA Guidance Checklists. • Fully loaded labor rate (third party). • No salvage credits. • Worst case scenario. • No operation credits (gas, crops, livestock). • Current year costs. • Based on the extent of operation most likely to make post-closure most expensive. • Costs should include administrative, engineering, transportation, contingencies, etc., as applicable. • The detailed post-closure cost estimates include: - removal of wastes - decontamination - sampling and analysis - transportation - treatment and disposal - removal of containment system - removal of soil - certification of closure.	270.14(b)(16) and 264.144	N/A	
	Financial Assurance Mechanism for Post-Closure. A copy of the established financial assurance mechanism for post-closure care adopted in compliance with 264.145.	270.14(b)(16), 264.145 and 264.151	N/A	
	Liability Requirements. Where applicable, a copy of the insurance policy or other documentation which comprise compliance with the requirements of 264.147. (Coverage is for all facilities owned and operated, and applies until certification for closure and post-closure is completed.	270.14(b)(17) and 264.147(a) & (b)	Y	Copy of policy was submitted to the Department in a separate submittal.

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	Sudden Insurance. Hazardous waste treatment, storage, or disposal facilities must demonstrate financial responsibility for bodily injury and property damage to third parties caused by sudden accidental occurrences. • Amount of at least $1 million per occurrence. • An annual total of at least $2 million, exclusive of legal costs.	264.147(a), 264.147(g) and 264.151(g), (i), & (j)	Y	See Section 3.0
	Nonsudden Insurance. This applies to high risk storage facilities (designated by the Department), surface impoundments, land disposal, and land treatment. • At least $13 million per occurrence. • An annual total of at least $6 million is required, exclusive of legal costs.	264.147 (b) & (d), 264.151(i) and (j) and 264.147(f)	N/A	

INFORMATION REGARDING POTENTIAL RELEASES FROM SOLID WASTE MANAGEMENT UNITS APPLICATION REVIEW CHECKLIST

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FACILITY SAFETY-KLEEN CORP. - ORANGE PARK

EPA ID NUMBER FLD 980 847 214 PATS NUMBER

TYPE OF APPLICATION Operating Permit Renewal

SUBMITTAL DATE REVIEWER

1.

2.

3.

PAGE / P'GRAPH	REVIEW ITEM	REFERENCE	COMPLETE? Y/N OR N/A	COMMENTS
	INFORMATION REGARDING POTENTIAL RELEASES FROM SOLID WASTE MANAGEMENT UNITS. • Facility name. • EPA ID number. • City. • State. • Did they check if they have solid waste management units. • Is there a description of the solid waste management units with data on quantities or volumes, and dates. • Is there any data for prior or current releases of hazardous waste or constituents: - date of release - type of waste release - quantity or volume of waste released - describe nature of release. • Is there a description of the analytical data which describes the nature and extent of environmental contamination. ◦ Certification and signature.		Y	See DEP Form 62-730.900(2)(c) in Section 1

INFORMATION REQUIREMENTS FOR SOLID WASTE MANAGEMENT UNITS APPLICATION REVIEW CHECKLIST

PAGE 1 OF 1

FACILITY SAFETY-KLEEN CORP. - ORANGE PARK
EPA ID NUMBER FLD 980 847 214 **PATS NUMBER**
TYPE OF APPLICATION Operating Permit Renewal

SUBMITTAL DATE **REVIEWER**

1.
2.
3.

PAGE / P'GRAPH	REVIEW ITEM	REFERENCE	COMPLETE? Y/N OR N/A	COMMENTS
	INFORMATION REQUIREMENTS FOR SOLID WASTE MANAGEMENT UNITS.		N/A	Safety-Kleen has not identified any solid waste management units except for the permitted hazardous waste management units that are the subject of this operating permit renewal application.
	Description of Solid Waste Management Units: A description of each solid waste management unit at the facility including: • Location of the unit on the topographic map required under 270.14(b)(19) • Type of units • General dimensions and structural description (provide drawings, if available) • Dates of operation of the unit • Description of all wastes that have been managed at the unit.	270.14(d)(1)		
	Information Pertaining to Releases: The applicant must provide all available information pertaining to releases of hazardous wastes or hazardous constituents from solid waste management units at the facility.	270.14(d)(2)	N/A	
	Sampling and Analysis: The applicant must provide the results of sampling and analysis of groundwater, land surface and subsurface strata, surface water, and air which has been conducted at the request of the Department to complete a RCRA Facility Assessment.	270.14(d)(3)	N/A	

REQUIREMENTS FOR EQUIPMENT LEAKS (SUBPART BB)
PERMIT APPLICATION REVIEW CHECKLIST
PAGE 1 OF 4

FACILITY SAFETY-KLEEN CORP. - ORANGE PARK
EPA ID NUMBER FLD 980 847 214 **PATS NUMBER**
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PAGE / P'GRAPH	REVIEW ITEM	REFERENCE	COMPLETE? Y/N OR N/A	COMMENTS
	S-1. EQUIPMENT LEAKS. Definition of equipment leaks. Equipment leaks are associated with operations that manage hazardous waste with organic concentrations of at least 10 parts per million by weight (ppmw). Equipment in a vacuum is excluded from Subpart BB requirements. Each piece of equipment shall be marked.	264.1050	Y	See Section 11 and Appendix H
	S-2. STANDARDS FOR PUMPS IN LIGHT LIQUID SERVICE • Monthly monitoring for leaks. • Visual inspection for pump seal leakage on a weekly basis. • Leak detection. • Leak detected if: (1) a leak detection instrument reads 10,000 parts per million (ppm) or greater, or (2) there are indications of liquids dripping from the pump seal. • Leaks repaired as soon as practicable. Repairs are to be made within 15 calendar days after detection. Repair extensions are allowed under conditions specified in 264.1059. ◦ Specific exceptions to these standards. Dual mechanical seal system or no detectable emissions.	270.25(d) 264.1052	N/A	

REQUIREMENTS FOR EQUIPMENT LEAKS (SUBPART BB)
PERMIT APPLICATION REVIEW CHECKLIST
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FACILITY SAFETY-KLEEN CORP. - ORANGE PARK

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TYPE OF APPLICATION Operating Permit Renewal

PAGE / P'GRAPH	REVIEW ITEM	REFERENCE	COMPLETE? Y/N OR N/A	COMMENTS
	S-3. STANDARDS FOR COMPRESSORS. • Barrier fluid pressure greater than the compressor stuffing box pressure. • Barrier fluid system connected by a closed-vent system to a control device as described in Subpart AA. • No detectable atmospheric emissions of hazardous contaminants from the barrier system. • Sensors checked daily or an audible alarm checked monthly. • Leak detection. Leak detected if sensor indicates a failure of: (1) the seal system, or (2) the barrier fluid system. • Leak repaired as soon as practicable. Repairs are to be made within 15 calendar days after detection. Repair extensions are allowed under conditions specified in 264.1059. • Specific exceptions to these standards. Certain closed-vent systems or no detectable emissions.	270.25(d) 264.1053	N/A	
	S-4. STANDARDS FOR PRESSURE RELIEF DEVICES IN GAS/VAPOR SERVICE. • Except during pressure releases, no pressure relief device shall release detectable emissions. • Emissions shall be less than 500 ppm above background levels. • Within 5 calendar days after a pressure release, no detectable emissions shall emanate from pressure release device. • Emissions shall be less than 500 ppm above background levels. o Specific exception to these standards. Certain closed-vent systems or no detectable emissions.	270.25(d) 264.1054	N/A	

REQUIREMENTS FOR EQUIPMENT LEAKS (SUBPART BB)
PERMIT APPLICATION REVIEW CHECKLIST
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FACILITY SAFETY-KLEEN CORP - ORANGE PARK
EPA ID NUMBER FLD 980 847 214 PATS NUMBER
TYPE OF APPLICATION Operating Permit Renewal

PAGE / P'GRAPH	REVIEW ITEM	REFERENCE	COMPLETE? Y/N OR N/A	COMMENTS
	S-5. STANDARDS FOR SAMPLING CONNECTING SYSTEMS. • Sampling connecting system equipped with a closed purge system or closed-vent system.	270.25(d) 264.1055	N/A	
	S-6. STANDARDS FOR OPEN-ENDED VALVES OR LINES. • Open-ended valve or line. Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve that seals the open end at all times except during operations. A double block and bleed system will follow the same operating procedures except when operations require venting the line between block valves. • Second valve. A second valve shall be operated such that the primary valve must be closed before the second valve is opened.	270.25 (d) 264.1056	N/A	
	S-7. STANDARDS FOR VALVES IN GAS/VAPOR SERVICE OR IN LIGIIT LIQUID SERVICE • Monitoring schedule based on detection of leaks and predetermined schedule. A reading of 10,000 ppm denotes a detected leak. • Specific exceptions to the monitoring schedule. Unsafe-to-monitor valves, no detectable emissions, and difficult-to-monitor valves.	270.25(d) 264.1057	N/A	
	S-8. STANDARDS FOR PUMPS AND VALVES IN HEAVY LIQUID SERVICE, PRESSURE RELIEF DEVICE IN LIGHT LIQUID OR HEAVY LIQUID SERVICE, AND FLANGES AND OTHER CONNECTORS. • Monitoring. Monitoring is required within 5 days after a leak is found by sight, sound, smell, or other detection method.	270.25(d) 264. 1058	Y	See Section 11 and Appendix H

REQUIREMENTS FOR EQUIPMENT LEAKS (SUBPART BB)
PERMIT APPLICATION REVIEW CHECKLIST
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FACILITY SAFETY-KLEEN CORP. - ORANGE PARK
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TYPE OF APPLICATION Operating Permit Renewal

PAGE / P'GRAPH	REVIEW ITEM	REFERENCE	COMPLETE? Y/N OR N/A	COMMENTS
	• Leak detection. A leak is detected if a leak detection instrument reads 10,000 ppm or greater. • Leak repaired as soon as practicable. Repairs are to be made within 15 calendar days after detection. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected. Repair extensions are allowed under conditions specified in 264.1059.			
	S-9. TESTING. Use of reference method 21 is for compliance testing in 40 CFR Part 60.	264.1063	Y	See Section 11 and Appendix H
	S-10. RECORDKEEPING REQUIREMENTS. Owner complies with recordkeeping requirements.	264.1064	Y	See Section 11 and Appendix H
	S-11. REPORTING REQUIREMENTS. The semi-annual report must be submitted according to requirements.	264.1065	Y	See Section 11 and Appendix H
	S-12. IMPLEMENTATION SCHEDULE REQUIREMENTS. A schedule must be provided if the facility cannot install a closed-vent system and control device to comply with the provisions of 264 Subpart BB on the effective date that the facility becomes subject to the provisions of 264 and 265.	270.25(b)	N/A	
	S-13. PERFORMANCE TEST PLAN REQUIREMENTS. A test plan must be provided if the owner/operator applies for permission to use a control device other than a thermal vapor incinerator, flare, boiler, process heater, condenser, or carbon absorption system and chooses to use test data to determine the organic removal efficiency achieved by the control device.	270.25(c)	N/A	

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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 [x]			
containers	[x]	tanks	[x]
piles	[ ]	surface impoundment	[ ]
miscellaneous units	[ ]	containment building	[ ]
Treatment [ ]			
tanks	[ ]	piles	[ ]
incineration	[ ]	surface impoundment	[ ]
miscellaneous units	[ ]	boiler/industrial furnace	[ ]
type of unit_____		type of unit _____	
		containment building	[ ]

2. Type of application: [ ] TOP [ ] construction [x] operation [ ] closure [ ] RD&D
[ ] construction/operation

3. Revision Number: 0

4. Date current operation began (or is expected to begin): March 1, 1985

5. Facility name: Safety-Kleen Corp. Orange Park Branch Service Center

6. EPA/DEP I.D. No.: FLD 980 847 214

7. Facility location or street address: 161 Industrial Loop South, Orange Park, FL 32073

8. Facility mailing address: One Brinckman Way (Street or P.O. Box) Elgin (City) IL (State) 60123 (Zip)

9. Contact person: Richard Morris Telephone: (850) 576-5979

Title: Environment, Health, & Safety Manager

Mailing Address: PO Box 20008 (Street or P.O. Box) Tallahassee (City) FL (State) 32316 (Zip)

10. Operator's name: Safety-Kleen Corp. Telephone: (800) 669-5840

11. Operator's address: One Brinckman Way (Street or P.O. Box) Elgin (City) IL (State) 60123-7857 (Zip)

12. Facility owner's name: Safety-Kleen Corp. Telephone: (800) 669-5840

13. Facility owner's address: One Brinckman Way (Street or P.O. Box) Elgin (City) IL (State) 60123-7857 (Zip)

14. Legal structure: [X] Corporation [ ] Non-profit Corporation [ ] Partnership [ ] Individual
[ ] Local Government [ ] State Government [ ] Federal Government [ ] Other

15. If an individual, partnership, or business is operating under an assumed name, specify the county and state where the name is registered.

County: N/A State: N/A

16. If the legal structure is a corporation, indicate the state of incorporation.

State of incorporation: Wisconsin

17. If the legal structure is an individual or partnership, list the owners.

Name: N/A

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

Name: N/A

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

Name: N/A

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

18. Site ownership status: [X] owned [ ] to be purchased [ ] to be leased _____ years
[ ] presently leased; the expiration date of the lease is: _____

If leased, indicate:

Land owner's name: N/A

Land owner's address: _____
Street or P.O. Box City State Zip

19. Name of engineer: Elaina J. Modlin, P.E. Registration no.: 49946

Address: 1901 S. Congress Avenue, Suite 480 Boynton Beach FL 33426
Street or P.O. Box City State Zip

Associated with: Environmental Resources Management-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
Storm water	U.S. EPA	FLR00B900	05/21/96	N/A
Used Oil Transfer Facility	FDEP	FLD 980847214	1 year	06/30/98
Transport and Storage Facility for Mercury-Containing Lamps	FDEP	FLD 980847214	03/13/97	03/01/98

B. Site Information

1. Facility location County: Clay Nearest Community: Orange Park

Latitude: 30° 10' 46" North Longitude: 81° 43' 08" West

Section: 5 Township: 3S Range: 27E

UTM #: 17 /430869.59E/3338136.47N

2. Area of facility site (acres): 1.0

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. Please see Section 2.1.

4. Attach topographic map which show all the features indicated in the instruction sheet for this part. Please see Section 2.2.

5. Is the site located in a 100-year flood plain? [ ] yes [x] no Please see Section 2.2.

C. Land Use Information

1. Present zoning of the site LI (Light Industrial)

2. If a zoning change is needed, what should the new zoning be? N/A

3. Present land use of site Industrial

D. Operating Information

1. Is waste generated on site? [x] yes [ ] no

List the SIC codes (4-digit)

7359 4214 _____ _____ _____ _____ _____

2. Attach a brief description of the facility operation, nature of the business, and activities that generate, treat, store or dispose of hazardous waste.

Please see Section 2.3.

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 the instructions for the 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
Please see Table 2.3-1 at end of Section 2.3.			

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P. Information Regarding Potential Releases From Solid Waste Management Units

Facility name: Safety-Kleen Corp. Orange Park Branch Service Center

EPA I.D. Number: FLD 980 847 214

Location: City Orange Park

State Florida

1. Are there any of the following solid waste management units (existing or closed) at your facility? A Solid Waste Management Unit (SWMU) is a discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include all areas at a facility where solid wastes have been routinely and systematically released, as described in the July 27, 1990 Federal Register (55 FR 30798).

NOTE: DO NOT INCLUDE HAZARDOUS WASTES UNITS CURRENTLY SHOWN IN YOUR PART B APPLICATION

	YES	NO
■ Landfill	___	X
■ Surface impoundment	___	X
■ Land farm	___	X
■ Waste pile	___	X
■ Incinerator	___	X
■ Storage tank	___	X
■ Container storage area	___	X
■ Injection wells	___	X
■ Wastewater treatment units	___	X
■ Transfer stations	___	X
■ Waste recycling operations	___	X
■ Land treatment facility	___	X
■ Boiler/industrial furnace	___	X
■ Other (units not listed above)	___	X

2. If there are "Yes" answers to any of the items in 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 WASTES 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 1. above **and also for those hazardous waste units in your Part B application,** please describe for each unit all data available on all 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.)

No releases have been to the environment. All releases were either within secondary containment or were cleaned up before they entered the environment.

4. In regard to the prior releases described in 3. above, please provide (for each unit) all 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.

N/A

Signature and Certification

The following certification must be included with the submittal of this information. The certification must be signed 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. Based on my inquiry of those individuals immediately responsible for obtaining the information, the information submitted 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

Edward Genovese, Regional Sales Manager

Name and Title (typed)

Orange Park Branch Service Center

Facility Name

Date: 8/17/97 Telephone: (813) 682-9084

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APPLICATION FOR A HAZARDOUS WASTE FACILITY PERMIT
CERTIFICATION
TO BE COMPLETED BY ALL APPLICANTS

Facility Name: Safety-Kleen Corp. EPA ID# FLD 980 847 214

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 possibility 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 Protection. It is understood that the permit is only transferable in accordance with Chapter 62-730, F.A.C., and, if granted a permit, the Department of Environmental Protection will be notified prior to the sale or legal transfer of the permitted facility.

Signature of the Operator or Authorized Representative*

Edward Genovese, Regional Sales Manager

Name and Title (Please type or print)

Date: 8/6/97 Telephone: (813) 682-8094

*Attach a letter of authorization

2. Facility Owner

This is to certify that I understand this application is submitted for the purpose of obtaining a permit to construct, operate, or close a hazardous waste management facility on the property as described. As owner of the facility, I understand fully that the facility operator and I are jointly responsible for compliance with the provisions of Chapter 403, Florida Statutes, and all rules and regulations of the Department of Environmental Protection.

Signature of the Facility Owner or Authorized Representative*

Edward Genovese, Regional Sales Manager

Name and Title (Please type or print)

Date: 8/13/97 Telephone: (813) 682-8094

***Attach a letter of authorization**

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 62-730, F.A.C.

Signature of the Land Owner or Authorized Representative*

Edward Genovese, Regional Sales Manager

Name and Title (Please type or print)

Date: 8/13/97 Telephone: (813) 682-8094

***Attach a letter of authorization**

4. Professional Engineer Registered in Florida [Complete when required by Chapter 471, F.S. or not exempted by Rule 62-730.220(7), 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 judgement, 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 Protection.

Elaina J. Modlin #49946
Signature 8/13/97

Elaina J. Modlin, P.E.
Name (please type)

Florida Registration Number: 49946

Mailing Address: 1901 S. Congress Avenue, Suite 480
Street or P.O. Box

Boynton Beach FL 33426
City State Zip

Date: _____ Telephone (561) 736-4648

[PLEASE AFFIX SEAL]

Safety-Kleen Orange Park

5. **Professional Geologist Registered in Florida** [Complete when required by Chapter 492, F.S. or not exempted by Rule 62-730.220(8), F.A.C.]

This is to certify that the interpretations of geology at this hazardous waste management facility have been examined by me, and the interpretations conform to sound geological principles. In my professional judgement, this facility, when properly constructed, maintained and operated, or closed, will comply with all applicable statutes of the State of Florida and the rules of the Department of Environmental Protection.

Not applicable

_____
Signature

_____
Name (please type)

Florida Registration Number:_____

Mailing Address:_____
Street or P.O. Box

_____
City State Zip

Date:_____ Telephone (____) _____

[PLEASE AFFIX SEAL]

SECTION

2

2.0 FACILITY DESCRIPTION

2.1 FACILITY LAYOUT AND TRAFFIC PATTERNS

The facility layout is shown in Figure 2.1-1. The non-building areas of the facility are paved with asphalt or concrete as noted on the site plan. Site photographs are provided in Appendix A.

There are 16 service trucks and 4 vans included in the service center fleet. The trucks and vans leave the service center in the early morning and return in the evening. A tractor trailer will deliver product and remove containerized waste once a week. A bulk tanker will service the facility once a week delivering fresh solvent and pick up used solvent. Site traffic patterns are illustrated in Figure 2.1-2. The majority of the vehicular traffic and loading/unloading operations occurs at and near the return/fill area (Area C), which is paved with asphalt and concrete. Approximately once per week a tractor trailer brings fresh containerized solvents and removes used, containerized solvents for transfer to a Safety-Kleen recycle facility. This truck backs up to the concrete dock, located on the western side of the facility in Area B, to load and unload containers. Area A is used for the loading/unloading of transfer wastes; Area B is used for loading/unloading of containerized permitted wastes from local area vans and trucks. The tanker trucks dispatched from the recycle center to deliver parts washer solvent and pick up used parts washer solvent will perform these activities at the aboveground tank area (Area D) approximately once per week. Truck to building transfer of Fluid Recovery Service (FRS) (transfer) wastes may occur on asphalt or concrete surfaces within the compound, especially in Area E. Truck-to-truck transfer of FRS wastes occurs in the vicinity of Area F.

Wells Road 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 heavy industrial activities in this area. The vans that travel the routes daily between the service center and Safety-Kleen customers use the two-lane road within the industrial park. Traffic from this facility will have a minor impact on local traffic conditions.

2.2 SITE TOPOGRAPHY AND SURROUNDING LAND USE

Figures 2.2-1 and 2.2-1a are USGS topographic maps showing the facility. Due to the small size of the site, all of the information requested in FDEP's application form cannot be placed on one map. Therefore, additional maps are provided here to present the additional information requested in the application form. Specific information requested in the permit application is provided below.

100-Year Floodplain Area

Based on information available from the Federal Emergency Management Agency (Figure 2.2-2), the facility does not lie within a 100-year flood plain.

Surface Water Bodies Within One-Quarter Mile of the Facility Property Boundary (e.g., Intermittent Streams and Springs)

There are no known surface water bodies located within one-quarter mile of the facility.

Surrounding Land Uses

Surrounding land uses are shown in Figures 2.2-3 and 2.2-3a. Parks and/or recreation areas are shown in green on Figure 2.2-3a.

Legal Boundaries of the Facility

Figure 2.2-4 shows the property boundaries.

Drinking Water Wells Listed in Public Records or Otherwise Know to the Applicant Within One-Quarter Mile of the Facility Property Boundary

According to information obtained from the St. Johns River Water Management District (SJRWMD), four wells exist within the vicinity of the site. These wells are listed in Table 2.2-1.

Intake and Discharge Structures Within One Mile

Two facilities which are permitted to either intake or discharge into Florida waters, were identified by EPA Region 4. These facilities are both sewage treatment plants. One is located at 700 Ash Street and is within one mile of the facility, and the other is located at 1279 Kingsley Avenue, which is greater than one mile from the facility. Both discharge into the St. Johns River and are located in the town of Orange Park.

Run-Off Control System

The facility has no formal run-off control system. However, surface water flow is toward a swale located along the south property boundary (Figure 2.2-5). Water in the swale flows in an easterly direction. Figure 2.2-5a shows the direction of storm water flow away from the facility.

Access Control (fences, gates, etc.)

Figure 2.1-1 shows access control features.

Injection and Withdrawal Wells Both On Site and Off Site

There are no injection or withdrawal wells on site. Information provided by the St. Johns River Water Management District for withdrawal wells located near the facility is provided in Table 2.2-1.

Buildings and Other Structures

Buildings and other structures are shown in Figure 2.1-1.

Contours Sufficient to Show Surface Water Flow

Figure 2.2-5 shows the surface water flow direction at the facility. The site is nearly flat. Surface water flow is toward a swale located along the south property boundary (Figure 2.2-5). Water in the swale flows in a westerly direction.

Loading and Unloading Areas

Figure 2.1-2 shows loading and unloading areas in relation to the waste management areas. Additional details regarding traffic patterns are provided in Section 2.1.

Drainage or Flood Control Barriers

Since the facility and the area within 1,000 feet of the facility are not located in a 100-year flood zone, flood control barriers are not necessary. Surface water flow is toward a swale located along the south property boundary (Figure 2.2-5). Water in the swale flows in a westerly direction.

Hazardous Waste Units

Figure 2.2-6 shows hazardous waste management units.

Wind Rose

A wind rose for Jacksonville, Florida is shown in Figure 2.2-7.

Applicability of Other Federal Laws According to 40 CFR 270.3

This is an existing facility. No major expansions of the facility are planned. No issues with federal laws listed in 40 CFR 270.3 are expected.

2.3 DESCRIPTION OF FACILITY OPERATION

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 petroleum-based hydrocarbon 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 Branches (sales branches) located in 45 states domestically that warehouse the products and equipment required to service the customers in their sales areas. On a contractual 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 solvents.

The original service offered by the company in 1968 was the parts cleaner service and it remains the primary business activity. This service involves the leasing of a small parts degreasing unit which consists of a sink affixed to a container of parts washer solvent. On a regularly scheduled basis, a Safety-Kleen sales representative cleans and inspects the parts washer machine and replaces the container of used solvent with one of clean product.

Containers of parts washer solvent that are returned from customers are poured into a drum washer (wet dumpster) at the service center return and fill. The return and fill wet dumpster is piped into the used solvent 15,000-gallon aboveground storage tank located in the tank farm. Containers of product are filled at the return and fill for the next day's services.

Periodically, a tanker truck is dispatched from one of the Safety-Kleen recycle centers to deliver a load of clean solvent and collect the spent solvent at the Branch. Parts washer solvents (used and fresh) are transported in bulk tank trucks between the Branch and the recycle facilities. Clean parts washer solvents may be transported in containers or in bulk tank trucks.

Safety-Kleen has also established a parts cleaner service for users who own their machines. This service provides a solvent reclamation service to these customers regardless of machine model.

A second type of parts washer, the immersion cleaner, is available for the removal of varnish and gum from such things as carburetors and transmissions. This machine consists of an immersible basket with an agitator affixed to a container of the immersion cleaner. The spent solvent remains in the container after delivery to the Branch, where it is stored in a permitted container storage area of the warehouse. Periodically, a box trailer truck is dispatched from a Safety-Kleen recycle center to deliver containers of fresh solvent and collect the containers of spent solvent for reclamation.

The solvents are distributed and collected by service representatives. Containers are transported in specially-equipped, enclosed route trucks. Clean solvents are distributed from and used solvents returned to the Branch. At the Branch, clean parts washer solvent and used parts washer solvent are stored in separate tanks. Used parts washer solvent 105 is manifested from the customer as hazardous waste. Other used parts washer solvent is transported from the customer in accordance with the customer's hazardous waste determination pursuant to 40 CFR 262.11.

Warehouse space is dedicated for the storage of clean and used immersion cleaner. The used immersion cleaner is stored in the permitted container storage area in the warehouse. The immersion cleaner remains in the original covered containers during transfer between the Branch and the recycle facilities.

Used parts washer solvents also may be stored in the permitted storage area. Under normal conditions used parts washer solvent, aqueous brake cleaner, and aqueous parts washer

cleaner are immediately poured into the wet dumpster (dirty solvent tank) when the waste material is received at the Branch. If problems occur with the pumping mechanism of the wet dumpster, the spend solvent may be stored in the permitted container storage area until the dumpster is fixed.

Safety-Kleen's solvent cycle is essentially a closed loop, moving from the Branch to the customer, from the customer to the Branch, from the Branch to the recycle facility and then from the recycle center back to the Branch for redistribution to customers. 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 Branch personnel are accountable for the quantities of clean and used solvents handled by their branch operations. The Branch is basically a temporary storage and transfer facility.

Safety-Kleen also provides a dry cleaning waste reclamation service where containers of dry cleaning wastes are collected and stored temporarily at the Branch before shipment to the recycle centers for reclamation and residue disposal. Perchloroethylene dry cleaning solvent is managed as a permitted waste. Non-perchloroethylene dry cleaning wastes are managed as transfer wastes.

In addition, Safety-Kleen provides a paint waste reclamation service. Wastes containing various thinners and paints are collected in containers and are stored in the north flammable permitted storage area (i.e., the paint waste shelter shown in Figure 2.1-1). Paint wastes are received at the Branch on manifests which are terminated at that point. These wastes are then re-manifested and shipped to a reclaimer, and the regenerated solvent may be distributed to Safety-Kleen customers for use as a product.

Fluid Recovery Services (FRS) is a program managed by the Safety-Kleen Branch. Under this program, other types of waste are collected by the Branch and sent to the recycle centers. The FRS wastes are managed as transfer wastes. Transfer wastes are transported from the Branch within ten days of receipt. The transfer waste area is located in the southwest section of the warehouse (see Figure 2.1-1). Transfer wastes may also be stored in the outdoor shelter adjacent to the paint shelter (see Figure 2.1-1). Manifests are not terminated at the

Branch. These wastes may or may not have originally been obtained from Safety-Kleen by the industrial customer. Examples of the types of waste that may be received from FRS customers include:

1. Spent hydrocarbon distillates, such as waste fuel, oil, petroleum, naphtha, etc.

2. Lubricating oils, hydraulic oils, synthetic oils, and machine oils.

3. Industrial halogenated solvents such as 1,1,1-trichloroethane, tetrachloroethylene, Freon, and trichloroethane.

4. Photographic and x-ray related wastes.

5. Paint, lacquer thinners, and paint wastes that are received from non-core lines of business (and therefore are not handled as permitted wastes).

6. Other hazardous and nonhazardous halogenated and nonhalogenated wastes.

In 1990, Safety-Kleen began offering a service for the collection of spent antifreeze (ethylene glycol) from automobile service stations. All antifreeze collected and managed by Safety-Kleen within Florida is recycled. At the customer's location, Safety-Kleen pumps waste ethylene glycol (antifreeze) into a Safety-Kleen used oil truck. The mixture of waste ethylene glycol and used oil is transported from the Branch directly to CSX's Bulk Intermodal Distribution System (BIDS) terminus for off-loading into tanker cars. The ethylene glycol/used oil mixture is transferred by rail to the Safety-Kleen re-refinery in East Chicago, Indiana, where the waste ethylene glycol is extracted from the oil by distillation. After separation, the ethylene glycol is shipped to a glycol refinery for additional purification into a pure product which is then sold on the open market. This procedure is in accordance with FDEP's *Florida Fact Sheet on the Best Management Practices for Managing Antifreeze Destined for Recycling,* dated August 5, 1996.

Safety-Kleen is permitted to store hazardous ethylene glycol (i.e., used antifreeze mixed with used oil) in one of the 15,000-gallon aboveground storage tanks at the facility (Figure 2.1-

1). This waste stream previously was considered hazardous by the State of Florida. However, the Florida Department of Environmental Protection (FDEP) has subsequently determined this waste stream can be handled as nonhazardous as long as it is destined for recycling. Based on this redesignation, Safety-Kleen intends to "close" the ethylene glycol tank (in accordance with FDEP approval). After the closure has been completed, Safety-Kleen will use the tank as an accumulation point for waste antifreeze/used oil. The tank will then be emptied on a periodic, as-needed basis and the contents transported to the BIDS terminus for rail shipment as described above.

In 1996, the Branch became registered in Florida as a transporter and storage facility for mercury-containing lamps and devices destined for recycling. This registration includes a commitment to comply with the requirements of Florida Administrative Code (FAC) 62-737.700. As a registered storage facility, the Branch can store up to 2,000 kilograms of lamps/devices for a period of up to 180 days. Safety-Kleen provides customers with empty four-foot and eight-foot boxes which hold up to 39 lamps. Boxes containing lamps are picked up from customers and are handled at the at the Branch in accordance with management practices listed in FAC 62-737. The boxes are stored at the Branch in a designated area within the transfer waste storage area (in the southwest corner of the transfer waste storage area, as shown in Figure 8.2-1). This storage area is labeled in accordance with FAC 62-737.700(1)(d), and is partially isolated from other transfer wastes to avoid potential for accidental breakage. The boxes are periodically shipped to a permitted mercury recovery or reclamation facility. Prior to shipment out of the Branch, the boxes are placed on pallets and shrink-wrapped with plastic.

Table 2.3-1 provides a list of permitted and transfer wastes handled at the Orange Park facility.

CONTINUED-USE PROGRAM DESCRIPTION & ENVIRONMENTAL SAFEGUARDS

Safety-Kleen Systems, Inc. (Safety-Kleen) utilizes an alternative approach to manage the solvent cleaning solutions removed from generator locations. This does not mean Safety-Kleen will relax its strict dedication to protection of the environment. Safety-Kleen's Best Management Practices for Continued-Use products is based around the company's Closed Loop System. The Closed Loop System includes customers' Continued-Use Solvent shipped to a Safety-Kleen Branch. The product is then used at the Branch and the Branch then becomes the generator of this material as hazardous waste once it is spent. The material is then shipped with a hazardous waste manifest to a Safety-Kleen Corp. Recycle Center. After the spent solvent is recycled into a fresh product, recycled solvent may then be shipped back to Safety-Kleen Branches. From there, the product is sold back to Safety-Kleen customers.

Safety-Kleen's alternative approach is a non-waste management system for its customers, therefore no Hazardous Waste Manifests or Land Ban forms are required for the initial user. Alternatively, under Safety-Kleen's Continued-Use Program, the used cleaning solutions are packaged and transported under all other applicable DOT shipping papers' and packaging requirements. Safety-Kleen uses a Preprint (Bill of Lading) which provides the general DOT description, Company name/address and volume of Continued-Use Solvent transported back to the branch. This material is all closely monitored and logged at involved Branch locations.

The Safety-Kleen employees (services representatives) that are involved in the Continued-Use Program are integral to it. Each service representative is trained in the area of their responsibility for proper shipment and protection of the environment. The areas of training that are provided for the Safety-Kleen service representatives include: general criteria for the Continued-Use Program, waste management rules, safety procedures, DOT compliance, and initial spill or emergency response identification. It is important to note, any possible spills of Continued-Use material is handled similarly to any other release of this type of product as a Hazardous Material. Spill residues become Safety-Kleen generated waste. Like all Safety-Kleen services, our Continued-Use Program is backed by a $1 billion Certificate of Assurance and Indemnification. This certificate states Safety-Kleen will take full responsibility for managing all materials in an environmentally responsible manner.

Safety-Kleen's collection and shipment procedures were developed and are followed to provide Best Management Practices for not only the customers, but also the protection of the environment. At the time of a new Continued-Use product customer sign-up, a Safety-Kleen service representative will verify that the customer's material will meet

4/19/2000

Safety-Kleen's expected material specification (i.e., Safety-Kleen provided mineral spirits-based cleaning solutions). A service contract is provided for customer signature. Contract language requires the customer to certify that no adulteration of the mineral spirits will take place (e.g., addition of toxic or hazardous waste to the mineral spirits).

Collection procedures also include two additional important practices. For the first three services (pick-ups) of Continued-Use product, the service representative will both physically examine the contents of the container and complete a procedural check-off list. If the first three services are completed with no problems with the product, these two procedures will not need to be completed for any future services.

The physical examination of a container will consist of probing the contents with a device to check for debris or objects to large to pass through the branch container cleaning system. If possible, this material will be removed from the mineral spirits and the customer will be further educated regarding the material specifications. In addition the material must be consistent with normal solvent properties regarding color and odor. All other typical pre-shipment procedures are followed such as completing DOT shipping papers and marking the Continued-Use Solvent container (e.g., with a black rubber identification band).

Upon receipt at the Safety-Kleen Branch, facility warehouse personnel also verify that all containers of Continued-Use Solvent conform to expected physical characteristics of color and odor. If a shipment of Continued-Use Solvent is received at a Branch and is then determined not to be suitable for use in the Continued-Use container cleaning system, the customer will be notified and an Unmanifested Waste Report will be completed if the customer is a hazardous waste Large Quantity Generator or Small Quantity Generator (if toll agreement is not applicable). A determination will be made with the customer that will be based upon their ability to meet the requirements of the Continued-Use Program in reference to the management of any future shipments.

When the Continued-Use Solvent is utilized at the Branch Continued-Use Container Cleaning operation, this activity is conducted above secondary containment structures. Following the final use of the Continued-Use Solvent, it is bulked with other spent solvents and shipped to a Safety-Kleen Corp. Recycle Center. When this material is subsequently shipped and then received at the Safety-Kleen Corp. Recycle Center, a representative sample is taken and a receipt analysis is conducted to assure conformity with the accompanying Hazardous Waste Manifest. This material is then processed for reclamation and redistribution back to a Branch. Any process residues or "bottoms" from the recycling process are analyzed and the appropriate waste determination is made before shipment for further treatment or energy recovery.

A copy of the Florida Department of Environmental Protection's concurrence letter for the implementation of the Continued-Use Program is included herein as Appendix 2.0

4/19/2000

Appendix 2.0

Florida Department of Environmental Protection's October 25, 1999
Continued-Use Program Concurrence Letter

4/19/2000

Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

October 25, 1999

Ms. Catherine A. McCord
Manager, Environmental and Business Integration
Safety-Kleen Systems
1000 North Randall Road
Elgin, Illinois 60123-7587

RE: Safety Kleen Branch-Based "Continued Use Program"

Dear Ms. McCord:

Your proposal for the continued use of Safety-Kleen solvents for the purposes of drum washing in the clean out dumpsters at each of the Safety-Kleen facilities in Florida, has been reviewed by staff. Your proposal as we understand it, is to divert a portion of the used mineral spirits from your qualified customers and place it in a nearby holding tank to be used for the chemical and mechanical cleaning of incoming hazardous waste mineral spirits drums. Safety-Kleen intends to apply these used mineral spirits as an effective substitute for commercial chemical products in accordance with 40 CFR 261.2 (e)(1)(ii) for drum cleaning operations.

The department staff had some concerns about the proposed process. We discussed these concerns with Safety Kleen via e-mail and at a meeting on October 20, 1999 with Phil Retallick, Lin Longshore, and David DeSha. At the October 20, 1999 meeting Safety Kleen submitted the following additional information:

1. Customer Best Management Practices Guide
2. Qualitative Measures to qualify Continued use customers
3. Continued Use Program Environmental Safeguards
4. Tracking and Record Keeping Systems
5. Results from a drum cleaning study testing the effectiveness of used solvent as a cleaning Agent.

Based on these reviews we are approving Safety Kleen's implementation of this "Continued Use Program" in the state of Florida. That authorization is contingent on the following conditions being adhered to by Safety Kleen's branch operations within our jurisdiction. These conditions are as follows:

4/19/2000

1. Education of the continued use customers in potential solvent cross contamination with toxic chemicals that will render the mixture hazardous waste and therefore ineligible to be transported as continued use materials on a DOT Shipping paper to the Safety Kleen branch facility.

2. Safety Kleen will pursue effective implementation of their customer's adherence to Safety Kleen's Best Management Practices and Environmental Safeguards and Controls as outlined in our meeting on October 20, 1999.

3. Each Safety Kleen branch facility operation will provide all manifests for waste and the DOT shipping papers for continued use materials as needed to our field inspectors for their review in the course of a compliance inspection at that branch.

4. Continued use materials will not be speculatively accumulated at a Safety Kleen branch operating facility or by any continued use customers.

5. This determination applies to the "Continued Use Program" implemented by Safety Kleen branches in Florida and does not apply to any other "similar in definition" programs Safety Kleen has or will implement.

6. If any part of a bulk shipment or individual container of solvent destined for continued use is reclaimed, burned for energy recovery, or otherwise defined as a solid and hazardous waste, the entire shipment or container is subject to hazardous waste regulation.

7. If the used solvents are used as drum washing agent when the drums do not need washing, using the used solvents would not be considered legitimate or the Continued Use Program.

8. If the used solvent(s) are being used in excess of the amount of solvent(s) needed for the drum-washing operation (i.e. more than would be necessary), using the used solvent(s) would not be considered legitimate.

9. If the used solvent(s) would not be an effective washing agent for the drums, using the used solvent(s) in lieu of other effective drum washing agents would not be considered legitimate.

10. Finally, this determination does not relieve any Safety Kleen branch operating in the state of Florida from obtaining any necessary permit modifications from this agency to implement this program or permits from any other agency within the state of Florida.

If you have any questions regarding this determination, please call Michael Redig at 850-488-0300 extension 955.

Sincerely,

Satish Kastury, Administrator
Hazardous Waste Regulation

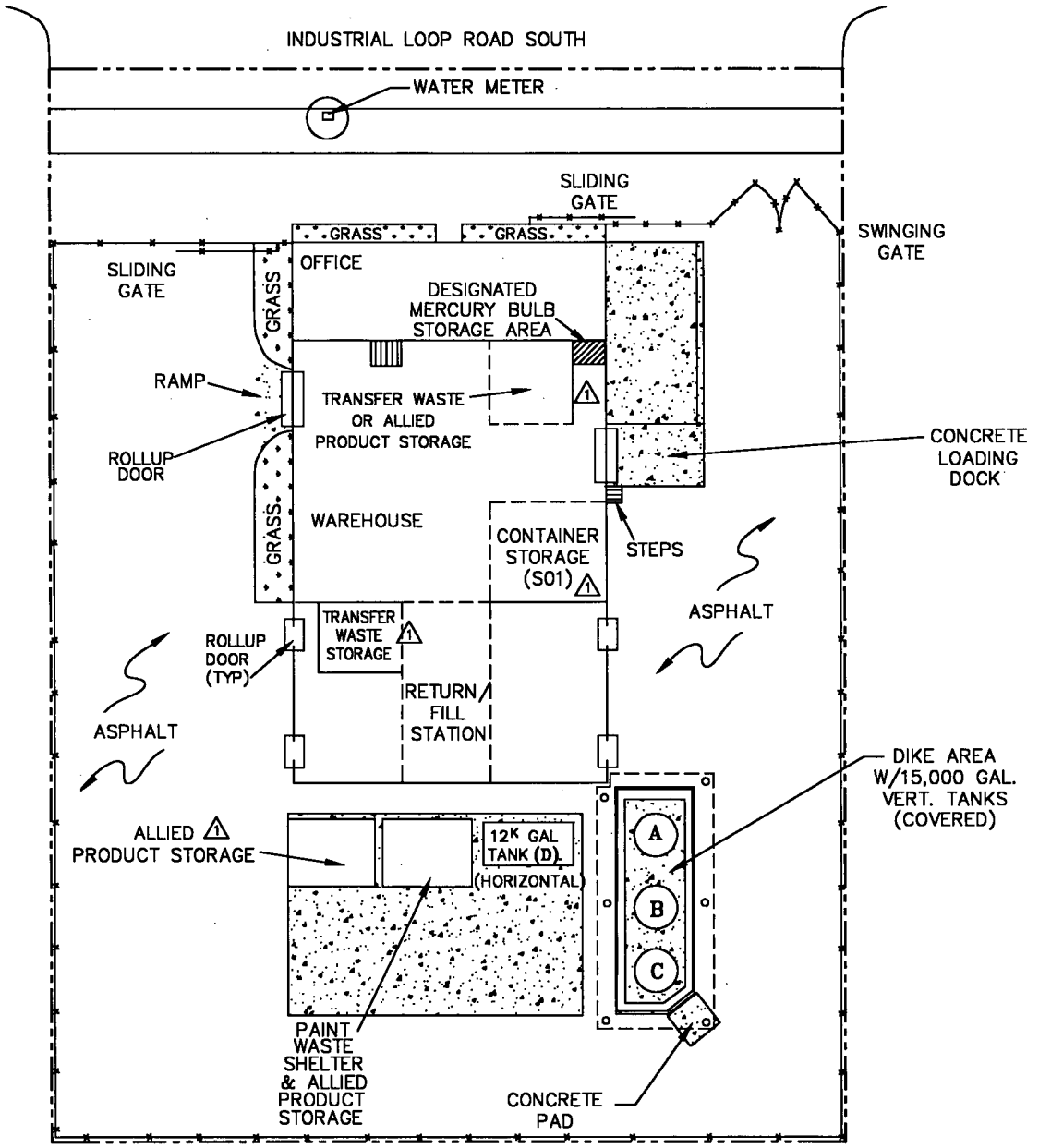
SK/mxro
Enclosure

cc: Michael Redig, FDEP-HWR
Susan Horlick, FDEP-HWR
David Crowley, FDEP-OGC
District Waste Program Administrators
District Technical Committee Members
Reading File

4/19/2000

⚠1 REVISION 1 (FEB. 2000)

FIGURE 2.1-1
SITE LAYOUT
SAFETY-KLEEN CORP. FACILITY
ORANGE PARK, FLORIDA



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) CLEAN CLOSED 10/22/99 USE FOR NON-REGULATED MATERIAL ONLY
- (D) VIRGIN SOLVENT

N

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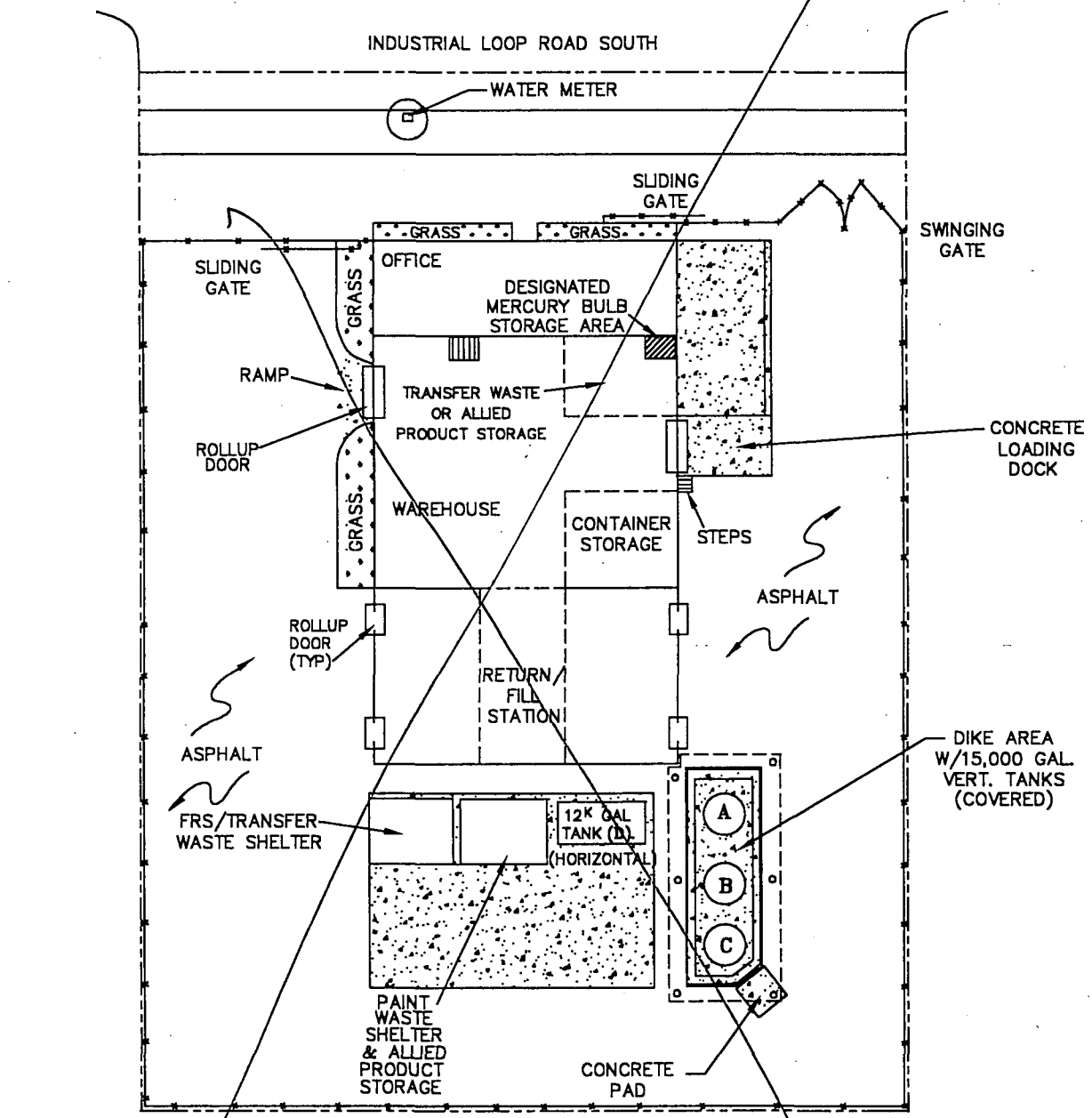
APPROXIMATE SCALE (FEET)

ERM

5331SAFKLN9\SITEMAP 2-10-00

4/19/2000

Figure 2.1-1
Site Layout
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

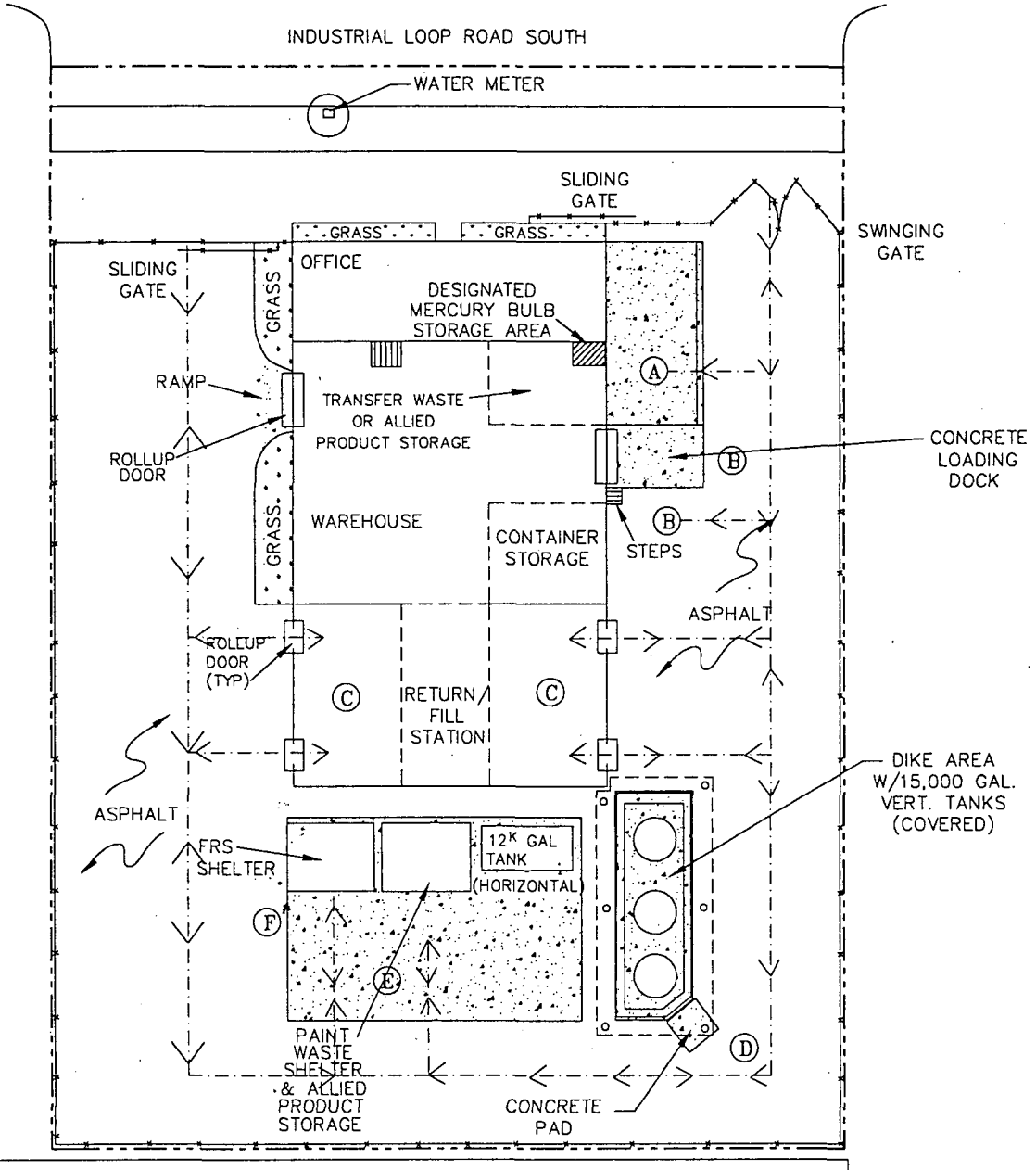
N

0 APPROXIMATE SCALE 40

FEET

ERM

Figure 2.1-2
Truck Traffic Patterns
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

(A) LOADING AND UNLOADING OF CONTAINER SOLVENT AND FRS WASTE FROM TRUCKS

(B) LOADING AND UNLOADING OF CONTAINERS WITH SOLVENT AND FRS WASTE FROM LOCAL AREA VANS

(C) UNLOADING OF PARTS WASHER SOLVENT FROM LOCAL AREA VANS

(D) LOADING AND UNLOADING OF PARTS WASHER SOLVENT AND ETHYLENE GLYCOL FROM TANKER TRUCKS

(E) LOADING AND UNLOADING OF PAINT WASTES AND FRS WASTES FROM TRUCKS AND LOCAL AREA VANS

(F) TRUCK TO TRUCK TRANSFER OF FRS WASTE

N

0 APPROXIMATE SCALE 40

FEET

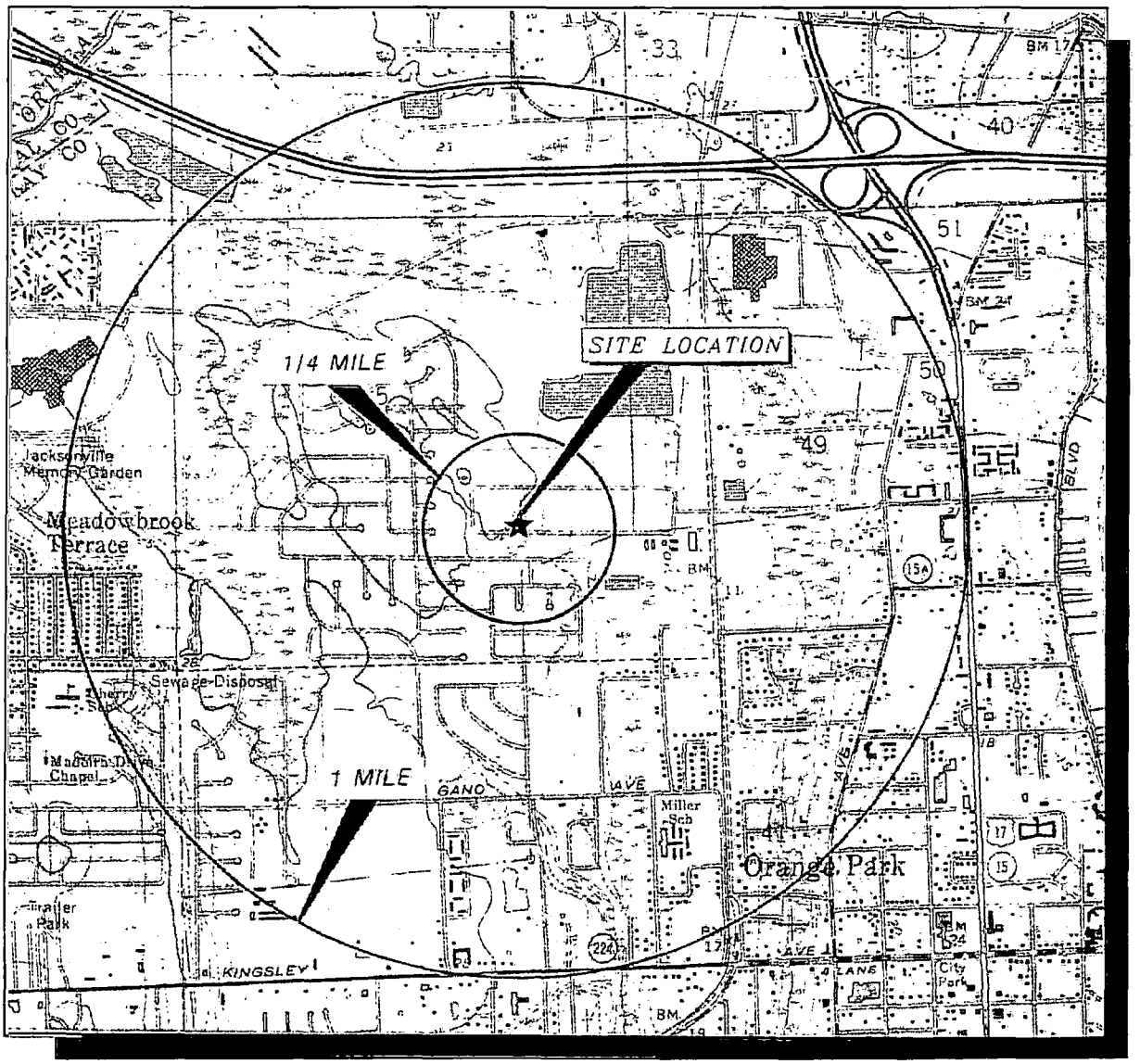
ERM

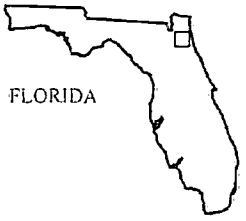
REVISION 0
AUGUST 20, 1997

Figure 2.2-1
Topographic Map
Safety-Kleen Corp. Facility
Orange Park, Florida

ORANGE PARK QUADRANGLE
FLORIDA-CLAY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
PHOTOREVISED 1981

T. 3 S.





QUADRANGLE LOCATION

N

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FEET

711.06/OVIEDO/031497

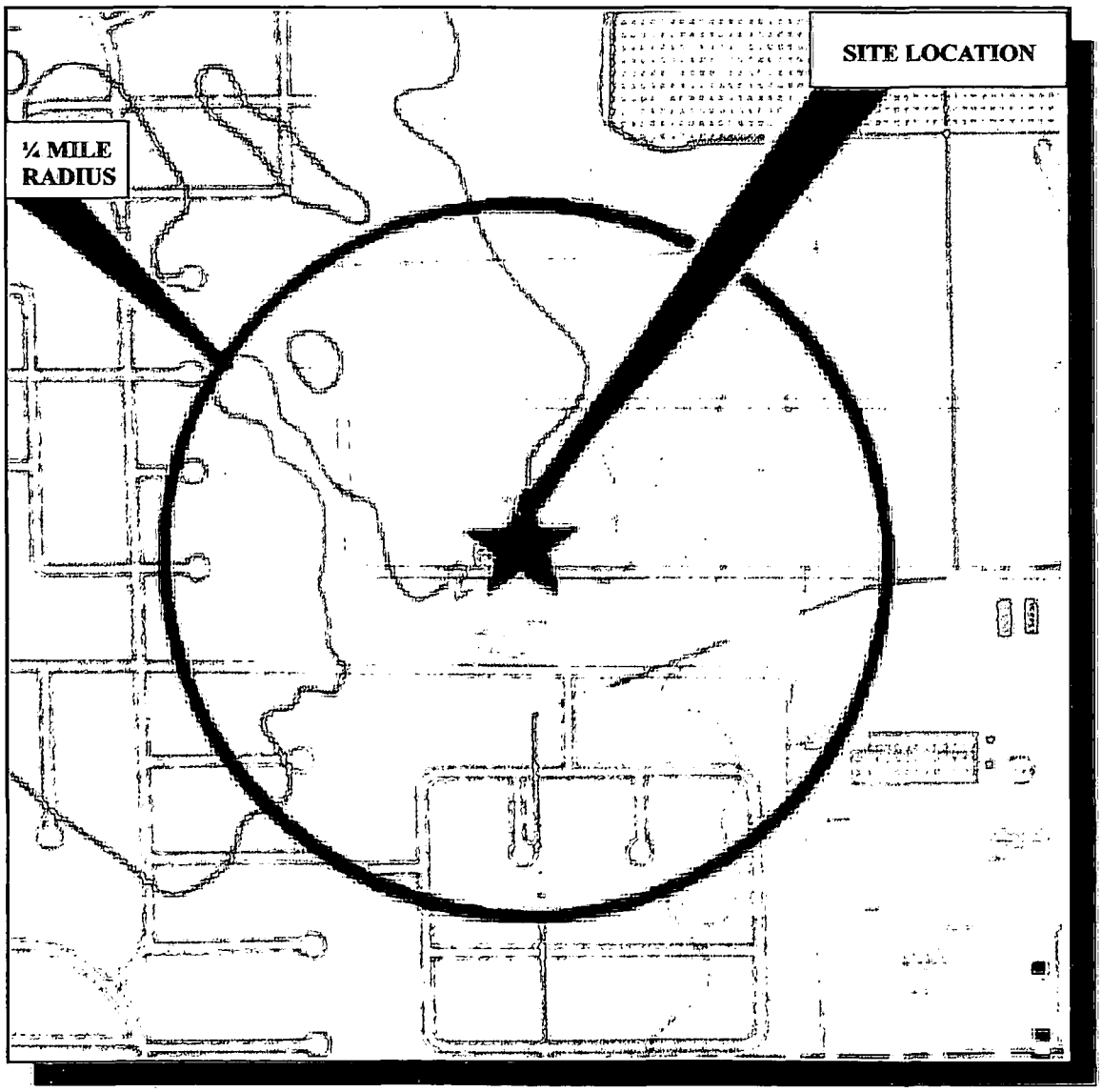
ERM

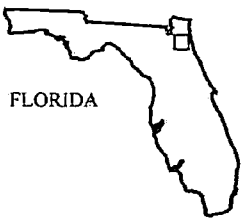
REVISION 0
JANUARY 5, 1998

Figure 2.2-1a
Topographic Map (at a Scale of 1"=500')
Safety-Kleen Corp. Facility
Orange Park, Florida

ORANGE PARK QUADRANGLE
FLORIDA-CLAY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
PHOTOREVISED 1981

T. 3 S.



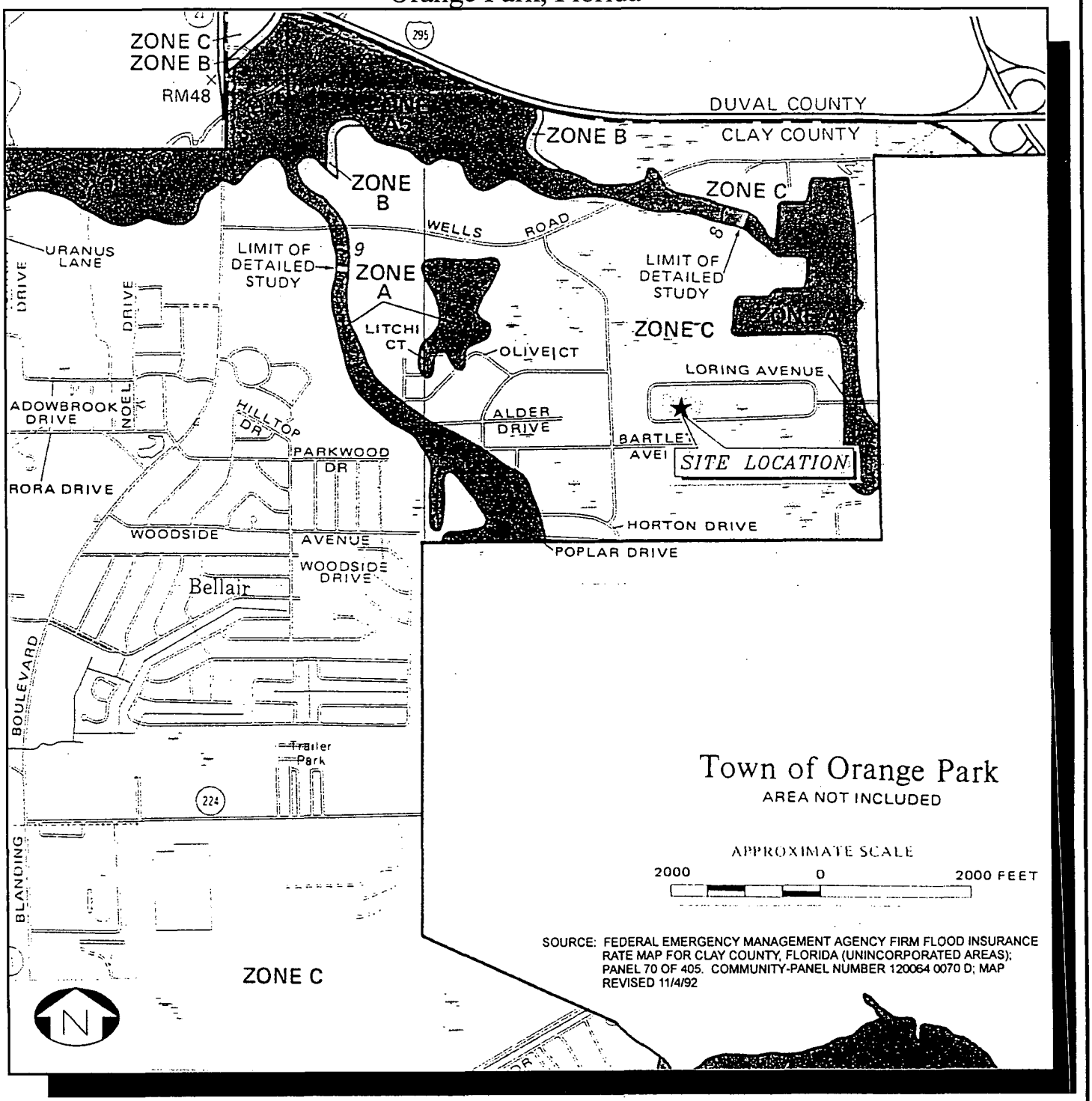


QUADRANGLE LOCATION

311.26/500-FT/121797

ERM

Figure 2.2-2
Floodplain Map
Safety-Kleen Corp. Facility
Orange Park, Florida



SOURCE: FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM FLOOD INSURANCE RATE MAP FOR CLAY COUNTY, FLORIDA (UNINCORPORATED AREAS); PANEL 70 OF 405. COMMUNITY-PANEL NUMBER 120064 0070 D; MAP REVISED 11/4/92

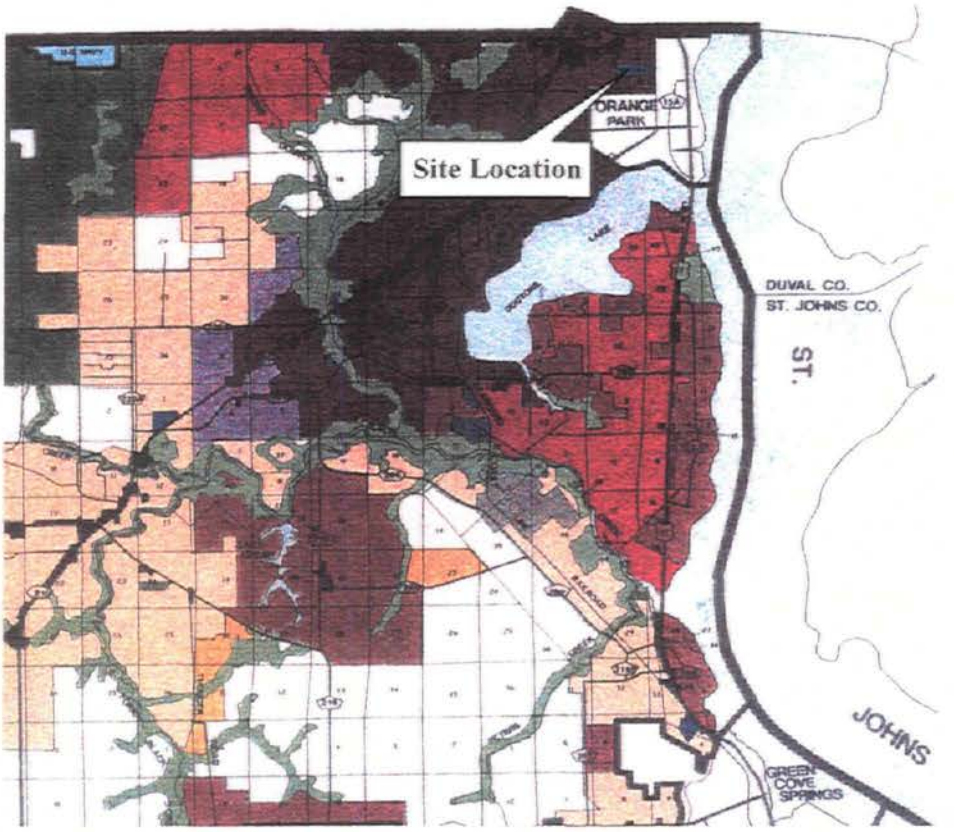
*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)

311.26/FLOOD/072397

ERM

Figure 2.2-3
Surrounding Land Use Map
Safety-Kleen Corp. Facility
Orange Park, Florida



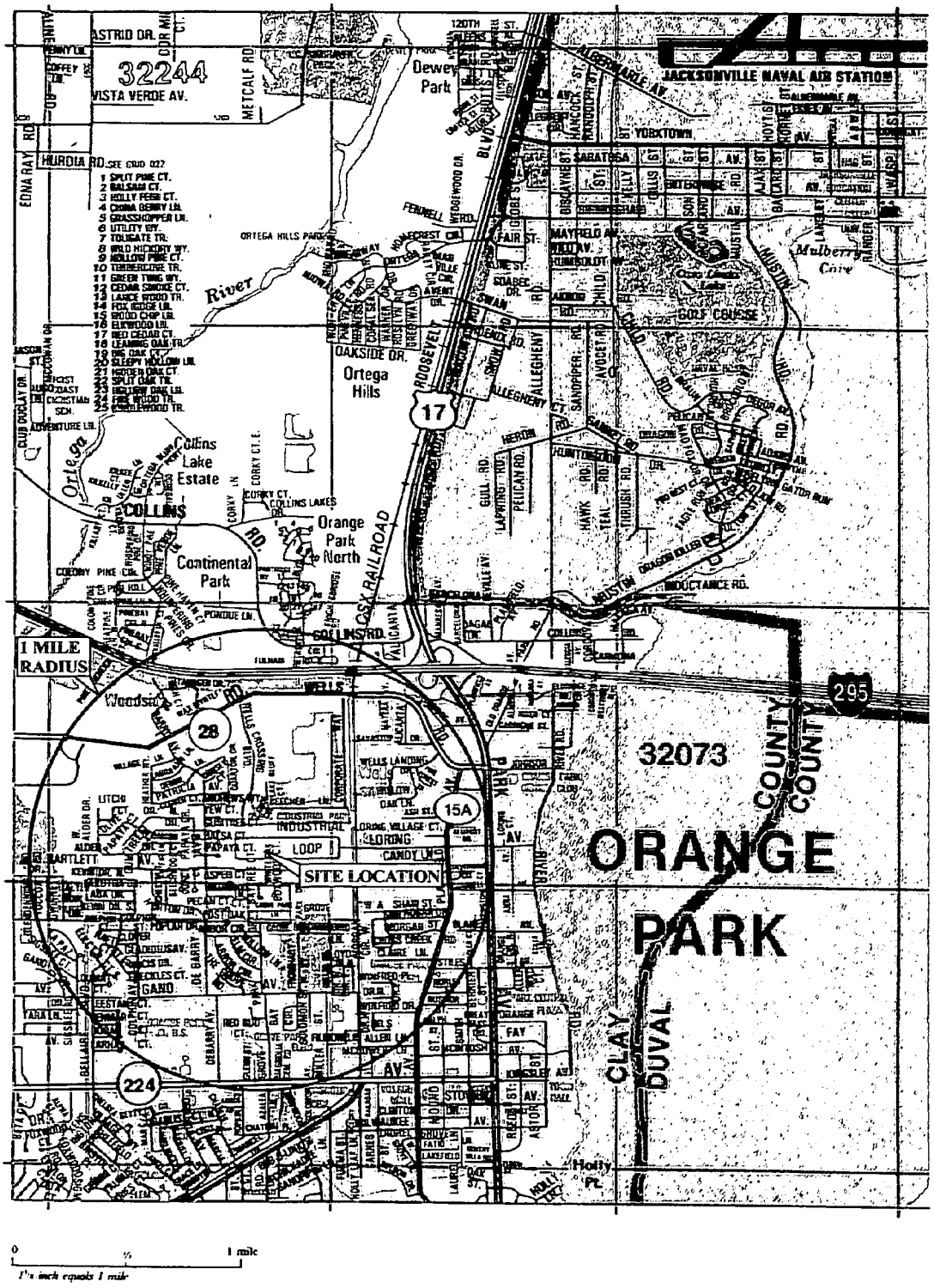
- URBAN CORE
- URBAN FRINGE
- RURAL FRINGE
- RURAL RESIDENTIAL
- AG RESIDENTIAL
- PLANNED COMMUNITY
- COMMERCIAL
- INDUSTRIAL
- MINING
- AGRICULTURE
- MILITARY RESERVATION
- RECREATION PRESERVATION
- CONSERVATION

0 16,5000
FEET

311.26/landuse/072397

ERM

Figure 2.2-3a
Location of Parks, Schools, etc.
Safety-Kleen Corp. Facility
Orange Park, Florida

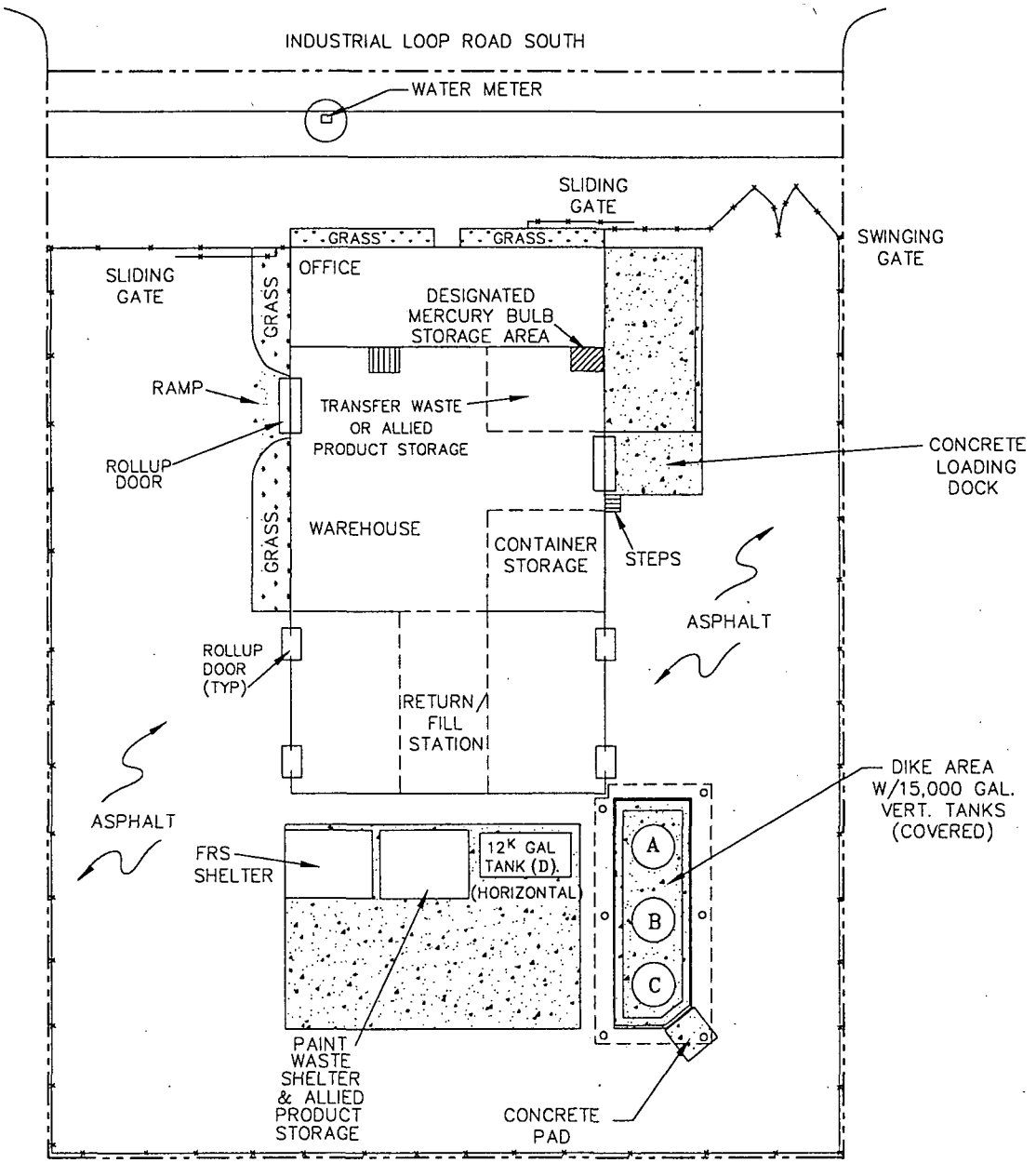


SOURCE: 1997 RAND MCNALLY JACKSONVILLE AND DUVAL COUNTY STREET FINDER®

311.26/street/121797

ERM

Figure 2.2-4
Legal Boundaries
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

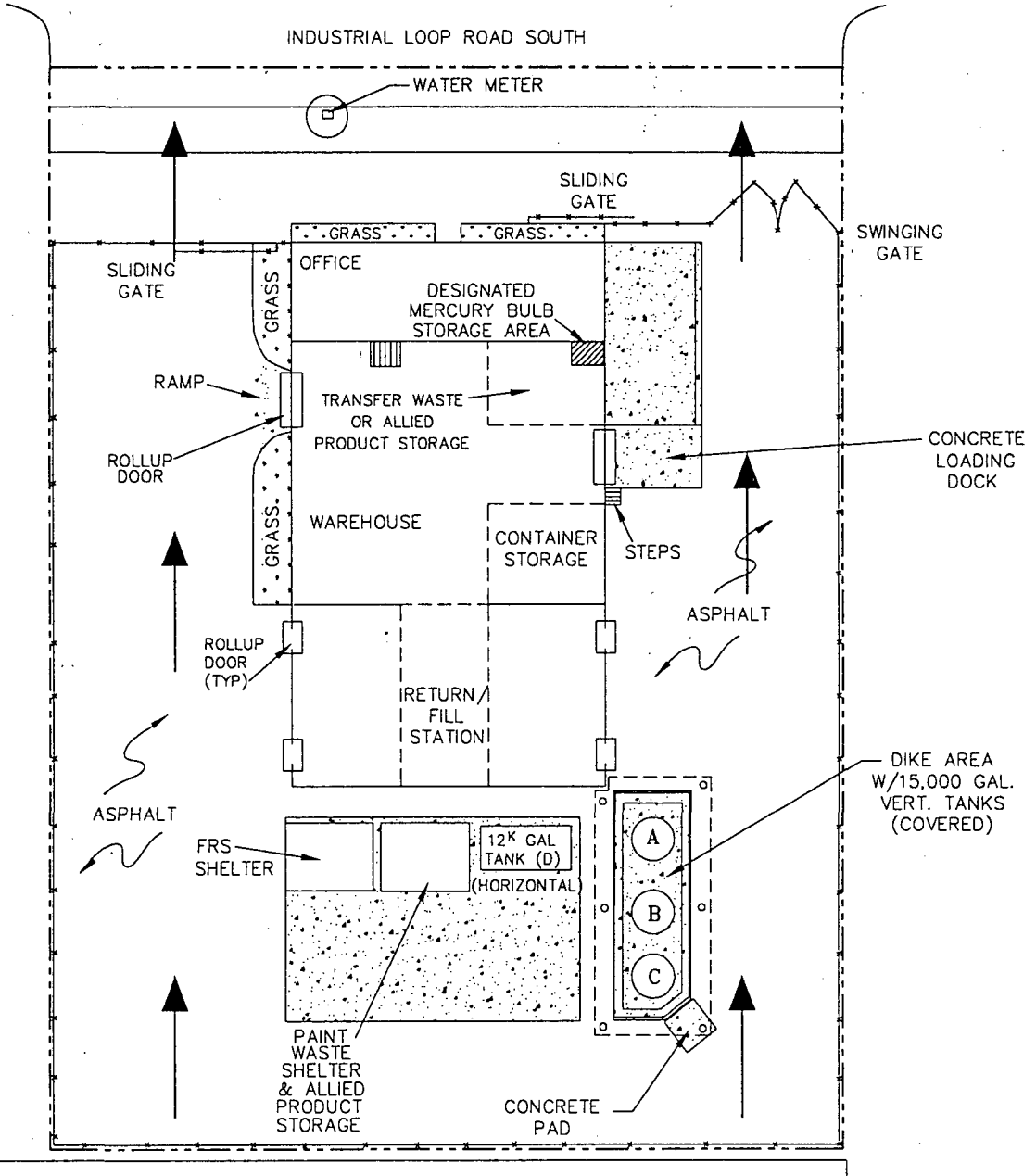
- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

N

0 APPROXIMATE SCALE 40
FEET

ERM

Figure 2.2-5
Drainage Plan
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT
- DIRECTION OF SURFACE WATER FLOW

N

0 APPROXIMATE SCALE 40

FEET

ERM

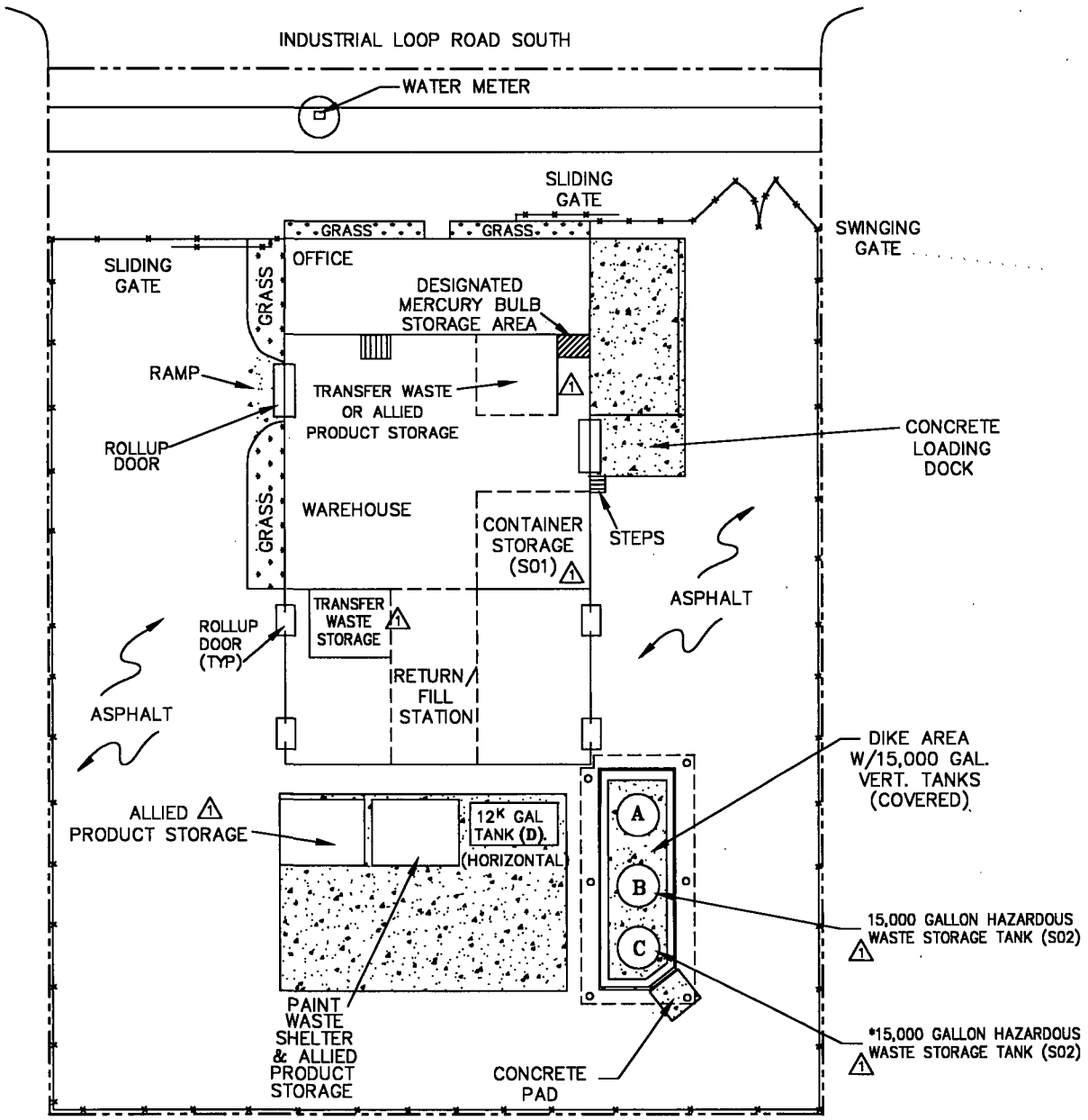
REVISION 0
JANUARY 5, 1998

Figure 2.2-5a
Offsite Surface Water Flow
Safety-Kleen Corp. Facility
Orange Park, Florida

PUD
RC
IA
A
ARDMOOR DR
ANDREWS WAY
YEW CT
UMTREE CT
BALSA CT
PAPAYA CT
DE BARRY
Industrial Loop North
Industrial Loop South
SITE LOCATION
SURFACE WATER FLOW DIRECTION
CULVERT/SWALE
RETENTION POND
(NOT TO SCALE)
GROVE PARK SIX
OAK LANE
AVENUE
Parcel B
Patio Homes
19825
19826-013
19826-010
19826-021
19826-022
19826-023
19826-026
19826-006
19826-019-01
19826-019
19826-001
19826-004-08
19826-004-06
19826-004-07
19826-004-01
19826-004-02
19826-009
19826-011
19826-012
19826-015
19826-016
19826-017
19826-018
19826-020-02
19826-020-01
19826-024
19826-025
19826-027
19826-028
19826-029
19826-030
19826-031
19826-032-01
19826-032-02
19826-033
19826-034
19826-035
19826-036
19826-037
19826-038
19826-039
19826-040
19826-041
19826-042
19826-043
19826-044
19826-045
19826-046
19826-047
19826-048
19826-049
19826-050
19826-051
19826-052
#

⚠1 REVISION 1 (FEB. 2000)

FIGURE 2.2-6
LOCATIONS OF HAZARDOUS WASTE STORAGE AREAS
SAFETY-KLEEN CORP. FACILITY
ORANGE PARK, FLORIDA



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) CLEAN CLOSED 10/22/99 USE FOR NON-REGULATED MATERIAL ONLY
- (D) VIRGIN SOLVENT

* NEVER PLACED WTO HAZARDOUS WASTE STORAGE. CLEAN CLOSURE APPROVED 10/22/99. TO BE USED FOR NON-REGULATED MATERIALS ONLY. ⚠1

N

0 40

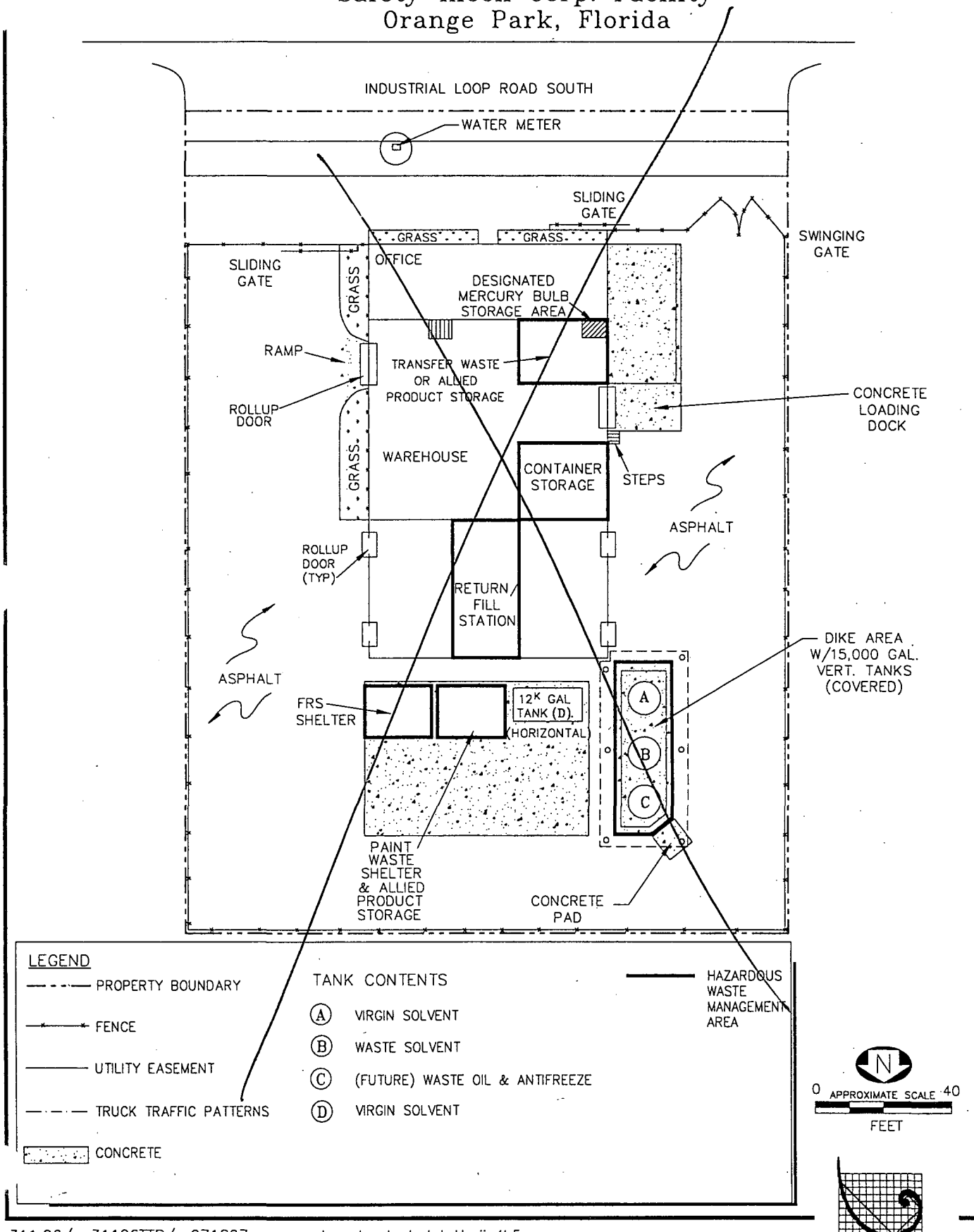
APPROXIMATE SCALE (FEET)

ERM

5331SAFKLN9\HAZWASTE 2-10-00

4/19/2000

Figure 2.2-6
Locations of Hazardous Waste Storage Areas
Safety-Kleen Corp. Facility
Orange Park, Florida

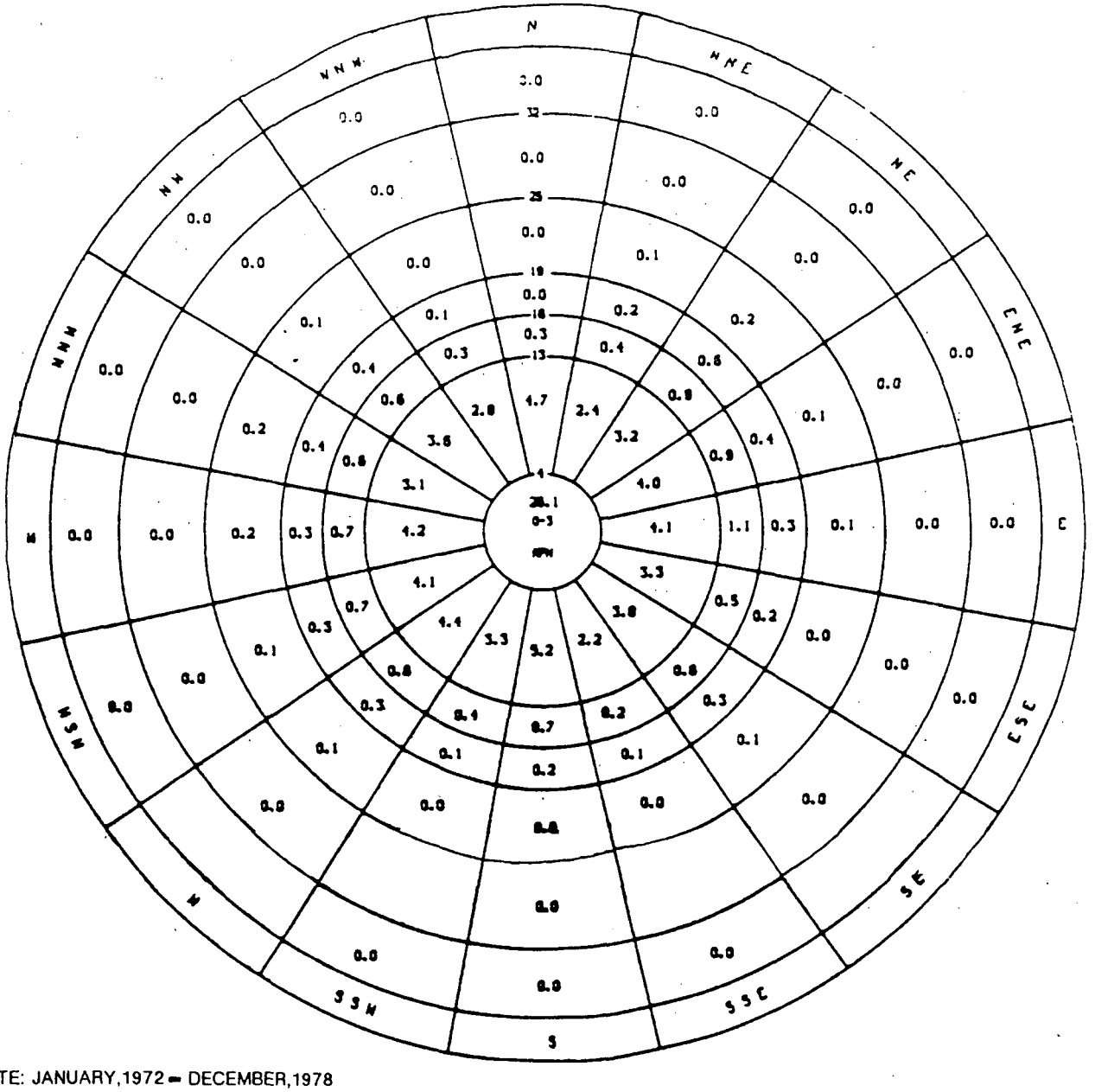


ERM

Figure 2.2-7
Wind Rose
Safety-Kleen Corp. Facility
Orange Park, Florida

JACKSONVILLE, FLORIDA

CEILING-VISIBILITY



DATE: JANUARY,1972 – DECEMBER,1978

PROVIDED BY THE NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NC

ERM

TABLE 2.2-1

WELL INVENTORY RESULTS
SAFETY-KLEEN CORP.
ORANGE PARK, FLORIDA

Section, Township, and Range	Owner Name	Well Type	Well Depth (Feet)	Well Diameter (Inches)	Case Depth (Feet)	Permit No.
41, 04, 26	John Smith	Private	38	3	N/A	019-830035
05, 04, 26	Jacksonville Landscaping	Irrigation	48	4, 2.5	33	019-860040
05, 04, 26	CTWCC, Inc.	Irrigation	52	NA	33	019-860044
05, 04, 26	Jacksonville Landscaping	Irrigation	44	4, 2	34	019-860153

Information provided by St. Johns River Water Management District

TABLE 2.3-1
PERMITTED AND TRANSFER WASTES

Waste Type	Process Code(s)	Estimated Annual Amounts (Tons)	Waste Codes
Spent Parts Washer Solvent*	S01** S02***	405.9	D001 and D-Codes Listed in Note Below
Dumpster Sediment	S01**	Included Above	D001 and D-Codes Listed in Note Below
Tank Bottoms	S01**	Included Above	D001 and D-Codes Listed in Note Below
Used Immersion Cleaner (New Formula) IC699	S01**	21.6	D-Codes Listed in Note Below
Dry Cleaning Waste (Perchloroethylene)	S01**	350	F002 and D-Codes Listed in Note Below
Dry Cleaning Waste (Non-perchloroethylene)	S01****	Included Above	Transfer wastes - waste codes assigned by generator.
Paint Wastes	S01**	46	D001, F003, F005 and D-Codes Listed in Note Below
Fluid Recovery Service (FRS) Waste	S01 *****	250	Transfer wastes - waste codes assigned by generator.
Mercury-Containing Lamps/ Devices	N/A****	Less than 2.2	Not applicable - handled as nonhazardous transfer wastes.
Branch-Generated Liquids/Solids (Debris)	S01**	17	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005
Oil Filters	S01**	7	None
Truck Wash	S02***	1	None******
Aqueous Brake Cleaner	S01** S02***	22.4	D-Codes Listed in Note Below
Aqueous Parts Washer	S01** S02***	5	D-Codes Listed in Note Below

NOTES:

D-Codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043

* Spent parts washer solvents are transported from the customer to the Orange Park Branch in accordance with the generator's hazardous waste determination.

** This waste will be stored in containers in the container storage area. The maximum capacity of hazardous waste in the container storage area is 2,553 gallons. An additional 4,800 gallons of hazardous waste may be stored in the paint shelter.

*** The spent parts washer solvent storage tank has a capacity of 15,000 gallons and may be filled up to 14,250 gallons.

**** This waste will be held for transfer in containers in the transfer area.

***** This waste will be held for transfer in containers in the transfer area or in the FRS shelter (see Section 2.3 for commonly handled wastes).

****** Truck washwater by generator knowledge is most likely nonhazardous, however, the water is being pumped to the spent parts washer solvent tank to cover possible D-Codes listed in the note above.

N/A Process code not applicable.

2.0 FACILITY DESCRIPTION

2.1 FACILITY LAYOUT AND TRAFFIC PATTERNS

The facility layout is shown in Figure 2.1-1. The non-building areas of the facility are paved with asphalt or concrete as noted on the site plan. Site photographs are provided in Appendix A.

Site traffic patterns are illustrated in Figure 2.1-2. The majority of the vehicular traffic and loading/unloading operations occurs at and near the return/fill area (Area C), which is paved with asphalt and concrete. Approximately once per week a tractor trailer brings fresh containerized solvents and removes used, containerized solvents for transfer to a Safety-Kleen recycle facility. This truck backs up to the concrete dock, located on the western side of the facility in Area B, to load and unload containers. Area A is used for the loading/unloading of transfer wastes; Area B is used for loading/unloading of containerized permitted wastes from local area vans and trucks. The trucks dispatched from the recycle center to deliver parts washer solvent and pick up used parts washer solvent will perform these activities at the aboveground tank area (Area D) approximately once per week. Truck to building transfer of Fluid Recovery Service (FRS) (transfer) wastes may occur on asphalt or concrete surfaces within the compound, especially in Area E. Truck-to-truck transfer of FRS wastes occurs in the vicinity of Area F.

Wells Road 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 heavy industrial activities in this area. The vans that travel the routes daily between the service center and Safety-Kleen customers use the two-lane road within the industrial park. Traffic from this facility will have a minor impact on local traffic conditions.

2.2 SITE TOPOGRAPHY AND SURROUNDING LAND USE

Figure 2.2-1 is a USGS topographic map showing the facility. Due to the small size of the site, all of the information requested in FDEP's application form cannot be placed on one

map. Therefore, additional maps are provided here to present the additional information requested in the application form. Specific information requested in the permit application is provided below.

100-Year Floodplain Area

Based on information available from the Federal Emergency Management Agency (Figure 2.2-2), the facility does not lie within a 100-year flood plain.

Surface Water Bodies Within One-Quarter Mile of the Facility Property Boundary (e.g., Intermittent Streams and Springs)

There are no known surface water bodies located within one-quarter mile of the facility.

Surrounding Land Uses

Surrounding land uses are shown in Figure 2.2-3.

Legal Boundaries of the Facility

Figure 2.2-4 shows the property boundaries.

Drinking Water Wells Listed in Public Records or Otherwise Know to the Applicant Within One-Quarter Mile of the Facility Property Boundary

According to information obtained from the St. Johns River Water Management District (SJRWMD), four wells exist within the vicinity of the site. These wells are listed in Table 2.2-1.

Intake and Discharge Structures Within One Mile

Two facilities which are permitted to either intake or discharge into Florida waters, were identified by EPA Region 4. These facilities are both sewage treatment plants. One is

located at 700 Ash Street and is within one mile of the facility, and the other is located at 1279 Kingsley Avenue, which is greater than one mile from the facility. Both discharge into the St. Johns River and are located in the town of Orange Park.

Run-Off Control System

The facility has no formal run-off control system. However, surface water flow is toward a swale located along the south property boundary (Figure 2.2-5). Water in the swale flows in an easterly direction.

Access Control (fences, gates, etc.)

Figure 2.1-1 shows access control features.

Injection and Withdrawal Wells Both On Site and Off Site

There are no injection or withdrawal wells on site. Information provided by the St. Johns River Water Management District for withdrawal wells located near the facility is provided in Table 2.2-1.

Buildings and Other Structures

Buildings and other structures are shown in Figure 2.1-1.

Contours Sufficient to Show Surface Water Flow

Figure 2.2-5 shows the surface water flow direction at the facility. The site is nearly flat. Surface water flow is toward a swale located along the south property boundary (Figure 2.2-5). Water in the swale flows in a westerly direction.

Loading and Unloading Areas

Figure 2.1-2 shows loading and unloading areas in relation to the waste management areas. Additional details regarding traffic patterns are provided in Section 2.1.

Drainage or Flood Control Barriers

Since the facility and the area within 1,000 feet of the facility are not located in a 100-year flood zone, flood control barriers are not necessary. Surface water flow is toward a swale located along the south property boundary (Figure 2.2-5). Water in the swale flows in a westerly direction.

Hazardous Waste Units

Figure 2.2-6 shows hazardous waste management units.

Wind Rose

A wind rose for Jacksonville, Florida is shown in Figure 2.2-7.

Applicability of Other Federal Laws According to 40 CFR 270.3

This is an existing facility. No major expansions of the facility are planned. No issues with federal laws listed in 40 CFR 270.3 are expected.

2.3 *DESCRIPTION OF FACILITY OPERATION*

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 petroleum-based hydrocarbon

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 Branches (sales branches) located in 45 states domestically that warehouse the products and equipment required to service the customers in their sales areas. On a contractual 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 solvents.

The original service offered by the company in 1968 was the parts cleaner service and it remains the primary business activity. This service involves the leasing of a small parts degreasing unit which consists of a sink affixed to a container of parts washer solvent. On a regularly scheduled basis, a Safety-Kleen sales representative cleans and inspects the parts washer machine and replaces the container of used solvent with one of clean product.

The spent solvent is transferred from the containers to a storage tank at the Branch, and containers of product are prepared for the next day's services. Periodically, a tanker truck is dispatched from one of the Safety-Kleen recycle centers to deliver a load of clean solvent and collect the spent solvent at the Branch. Parts washer solvents (used and fresh) are transported in bulk tank trucks between the Branch and the recycle facilities. Clean parts washer solvents may be transported in containers or in bulk tank trucks. Used parts washer solvent is transported in containers from the customer to the Branch, where it is added to the used parts washer solvent tank.

Safety-Kleen has also established a parts cleaner service for users who own their machines. This service provides a solvent reclamation service to these customers regardless of machine model.

A second type of parts washer, the immersion cleaner, is available for the removal of varnish and gum from such things as carburetors and transmissions. This machine consists of an immersible basket with an agitator affixed to a container of the immersion cleaner. The spent solvent remains in the container after delivery to the Branch, where it is stored in a permitted container storage area of the warehouse. Periodically, a box trailer truck is dispatched from a Safety-Kleen recycle center to deliver containers of fresh solvent and collect the containers of spent solvent for reclamation.

The solvents are distributed and collected by service representatives. Containers are transported in specially-equipped, enclosed route trucks. Clean solvents are distributed from and used solvents returned to the Branch. At the Branch, clean parts washer solvent and used parts washer solvent are stored in separate tanks. Used parts washer solvent 105 is manifested from the customer as hazardous waste. Other used parts washer solvent is transported from the customer in accordance with the customer's hazardous waste determination pursuant to 40 CFR 262.11.

Warehouse space is dedicated for the storage of clean and used immersion cleaner. The used immersion cleaner is stored in the permitted container storage area in the warehouse. The immersion cleaner remains in the original covered containers during transfer between the Branch and the recycle facilities.

Clean and used parts washer solvents also may be stored in the permitted storage area. Safety-Kleen leases parts washing equipment, with partially filled containers, which double as the solvent reservoir of the parts washer. The spent parts washer solvent is collected in containers.

Safety-Kleen's solvent cycle is essentially a closed loop, moving from the Branch to the customer, from the customer to the Branch, from the Branch to the recycle facility and then from the recycle center back to the Branch for redistribution to customers. 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 Branch personnel are accountable for the quantities of clean and used solvents

handled by their branch operations. The Branch is basically a temporary storage and transfer facility.

Safety-Kleen also provides a dry cleaning waste reclamation service where containers of dry cleaning wastes are collected and stored temporarily at the Branch before shipment to the recycle centers for reclamation and residue disposal. Perchloroethylene dry cleaning solvent is managed as a permitted waste. Non-perchloroethylene dry cleaning wastes are managed as transfer wastes.

In addition, Safety-Kleen provides a paint waste reclamation service. Wastes containing various thinners and paints are collected in containers and are stored in the north flammable permitted storage area (i.e., the paint waste shelter shown in Figure 2.1-1). Paint wastes are received at the Branch on manifests which are terminated at that point. These wastes are then re-manifested and shipped to a reclaimer, and the regenerated solvent may be distributed to Safety-Kleen customers for use as a product.

Fluid Recovery Services (FRS) is a program managed by the Safety-Kleen Branch. Under this program, other types of waste are collected by the Branch and sent to the recycle centers. The FRS wastes are managed as transfer wastes. Manifests are not terminated at the Branch. These wastes may or may not have originally been obtained from Safety-Kleen by the industrial customer. Examples of the types of waste that may be received from FRS customers include:

1. Spent hydrocarbon distillates, such as waste fuel, oil, petroleum, naphtha, etc.

2. Lubricating oils, hydraulic oils, synthetic oils, and machine oils.

3. Industrial halogenated solvents such as 1,1,1-trichloroethane, tetrachloroethylene, Freon, and trichloroethane.

4. Photographic and x-ray related wastes.

5. Paint and lacquer thinners.

6. Other hazardous and nonhazardous halogenated and nonhalogenated wastes.

In 1990, Safety-Kleen began offering a service for the collection of spent antifreeze (ethylene glycol) from automobile service stations. All antifreeze collected and managed by Safety-Kleen within Florida is recycled. At the customer's location, Safety-Kleen pumps waste ethylene glycol (antifreeze) into a Safety-Kleen used oil truck. The mixture of waste ethylene glycol and used oil is transported from the Branch directly to CSX's Bulk Intermodal Distribution System (BIDS) terminus for off-loading into tanker cars. The ethylene glycol/used oil mixture is transferred by rail to the Safety-Kleen re-refinery in East Chicago, Indiana, where the waste ethylene glycol is extracted from the oil by distillation. After separation, the ethylene glycol is shipped to a glycol refinery for additional purification into a pure product which is then sold on the open market. This procedure is in accordance with FDEP's *Florida Fact Sheet on the Best Management Practices for Managing Antifreeze Destined for Recycling,* dated August 5, 1996.

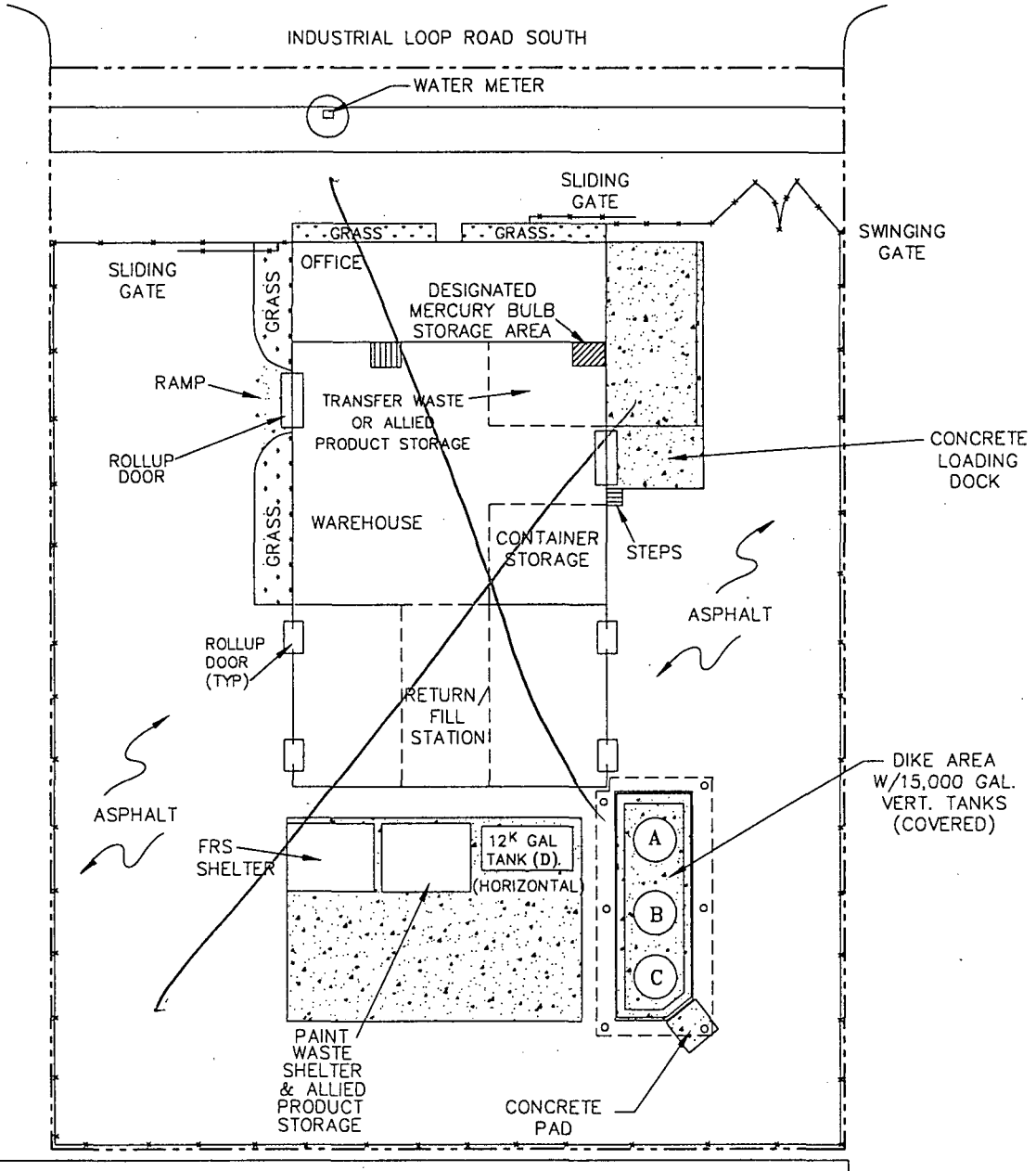
Safety-Kleen is permitted to store hazardous ethylene glycol (i.e., used antifreeze mixed with used oil) in one of the 15,000-gallon aboveground storage tanks at the facility (Figure 2.1-1). This waste stream previously was considered hazardous by the State of Florida. However, the Florida Department of Environmental Protection (FDEP) has subsequently determined this waste stream can be handled as nonhazardous as long as it is destined for recycling. Based on this redesignation, Safety-Kleen intends to "close" the ethylene glycol tank (in accordance with FDEP approval). After the closure has been completed, Safety-Kleen will use the tank as an accumulation point for waste antifreeze/used oil. The tank will then be emptied on a periodic, as-needed basis and the contents transported to the BIDS terminus for rail shipment as described above.

In 1996, the Branch became registered in Florida as a transporter and storage facility for mercury-containing lamps and devices destined for recycling. This registration includes a commitment to comply with the requirements of Florida Administrative Code (FAC) 62-737.700. As a registered storage facility, the Branch can store up to 2,000 kilograms of lamps/devices for a period of up to 180 days. Safety-Kleen provides customers with empty four-foot and eight-foot boxes which hold up to 39 lamps. Boxes containing lamps are picked up from customers and are handled at the at the Branch as nonhazardous transfer

wastes. The boxes are stored at the Branch in a designated area within the transfer waste storage area (in the southwest corner of the transfer waste storage area, as shown in Figure 8.2-1). This storage area is labeled in accordance with FAC 62-737.700(1)(d), and is partially isolated from other transfer wastes to avoid potential for accidental breakage. The boxes are periodically shipped to a permitted mercury recovery or reclamation facility. Prior to shipment out of the Branch, the boxes are placed on pallets and shrink-wrapped with plastic.

Table 2.3-1 provides a list of permitted and transfer wastes handled at the Orange Park facility.

Figure 2.1-1
Site Layout
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

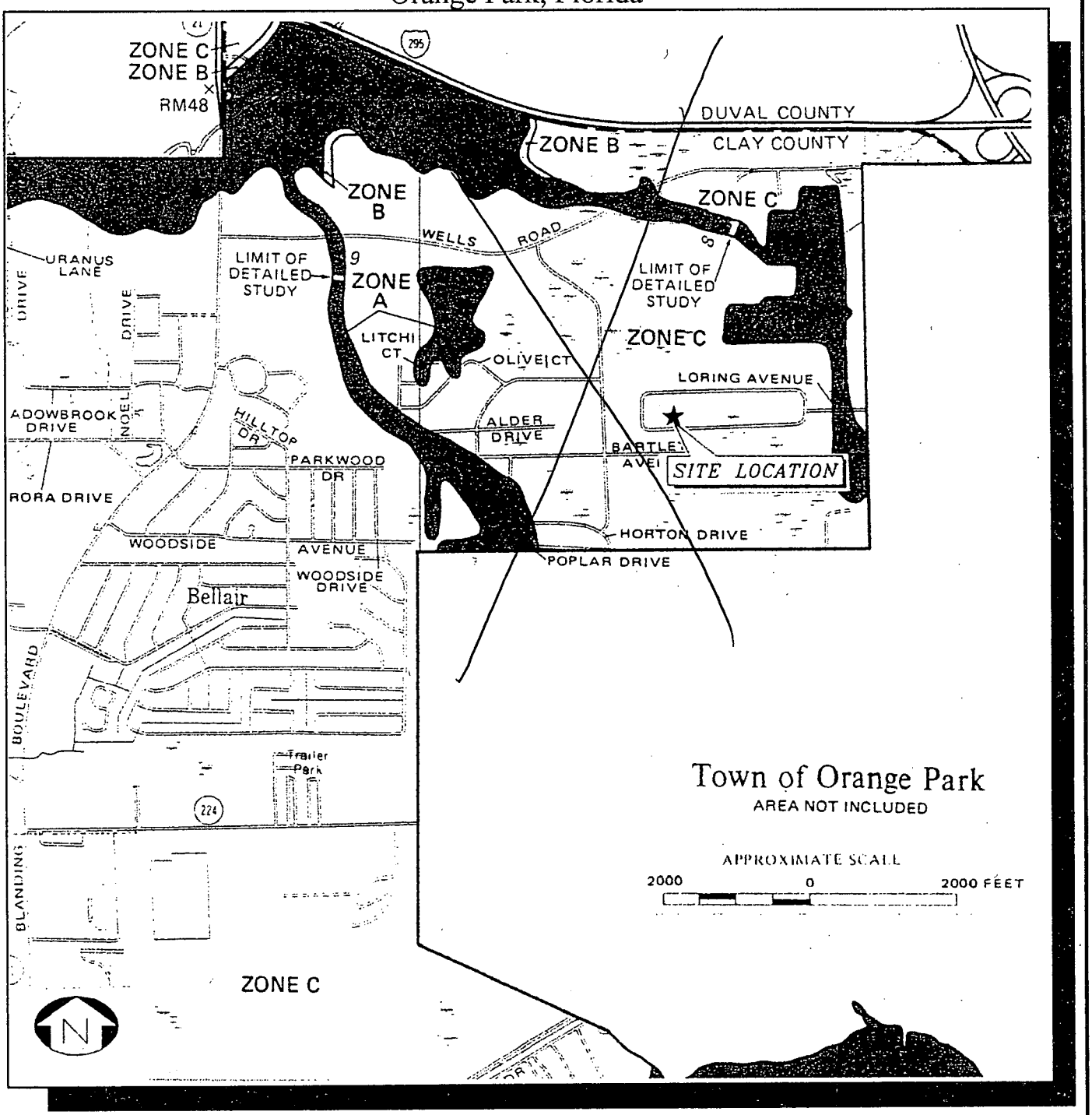
- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

N

0 APPROXIMATE SCALE 40
FEET

ERM

Figure 2.2-2
Floodplain Map
Safety-Kleen Corp. Facility
Orange Park, Florida



*EXPLANATION OF ZONE DESIGNATIONS

ZONE	EXPLANATION
A	Areas of 100-year flood; base flood elevations and flood hazard factors not determined.
A1-A30	Areas of 100-year flood; base flood elevations and flood hazard factors determined.
B	Areas between limits of the 100-year flood and 500-year flood; or certain areas subject to 100-year flooding with average depths less than one (1) foot or where the contributing drainage area is less than one square mile; or areas protected by levees from the base flood. (Medium shading)
C	Areas of minimal flooding. (No shading)

ERM

TABLE 2.3-1

PERMITTED AND TRANSFER WASTES

Waste Type	Process Code(s)	Estimated Annual Amounts (Tons)	Waste Codes
Spent Parts Washer Solvent*	S01** S02***	483.3	D001 and D-Codes Listed in Note Below
Dumpster Sediment	S01**	Included Above	D001 and D-Codes Listed in Note Below
Tank Bottoms	S01**	Included Above	D001 and D-Codes Listed in Note Below
Used Immersion Cleaner (New Formula) IC699	S01**	21.6	D-Codes Listed in Note Below
Dry Cleaning Waste (Perchloroethylene)	S01**	350	F002 and D-Codes Listed in Note Below
Dry Cleaning Waste (Non-perchloroethylene)	S01****	Included Above	Transfer wastes - waste codes assigned by generator.
Paint Wastes	S01**	46	D001, F003, F005 and D-Codes Listed in Note Below
Fluid Recovery Service (FRS) Waste	S01 *****	250	Transfer wastes - waste codes assigned by generator.
Mercury-Containing Lamps/ Devices	N/A****	Less than 2.2	Not applicable - handled as nonhazardous transfer wastes.
Branch-Generated Liquids/Solids (Debris)	S01**	17	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005

NOTES:

D-Codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043

* Spent parts washer solvents are transported from the customer to the Orange Park Branch in accordance with the generator's hazardous waste determination. May include aqueous brake cleaner and aqueous parts washer solvent.

** This waste will be stored in containers in the container storage area. The maximum permitted capacity of hazardous waste in the container storage area is 2,168 gallons. An additional 1,280 gallons of hazardous waste has been permitted to be stored in the paint shelter.

*** The spent parts washer solvent storage tank has a capacity of 15,000 gallons and may be filled up to 14,250 gallons.

**** This waste will be held for transfer in containers in the transfer area.

***** This waste will be held for transfer in containers in the transfer area or in the FRS shelter.

N/A Process code not applicable.

SECTION

3

3.0 FINANCIAL ASSURANCE FOR CLOSURE

Safety-Kleen Corp. is the operator of the Orange Park, Florida Branch. Financial assurance is provided through the use of the financial test specified in Subpart H of 40 CFR Part 264. The closure cost estimate is provided in the closure plan (Section 10.5 of this document). The attached letter from FDEP indicates the status of the most recent Safety-Kleen financial test submittal. Safety-Kleen is currently addressing the issues raised in the FDEP letter. Upon resolution of the financial test issues identified, an updated letter from the Department will be forward to the FDEP Northwest District for inclusion with this permit application.

Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road MS # 4560
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

June 25, 1997

CERTIFIED MAIL # 751 709 862

Ms. Michelle R. Walper
Manager, Financial Assurance
Safety-Kleen Corporation
1000 North Randall Road
Elgin, Illinois 60123-7857

Re: Safety-Kleen Corporation, Florida facilities

FLD 097837983	Altamonte Springs Permit HF02-236952
FLD 984167791	Boynton Beach Permits HO50-195905, HO50-287405
FLD 000776757	Delray Beach Permit HF50-229085
FLD 984171694	Medley Permit HO13-216311
FLD 980840086	Miami Permit HF13-207138
FLD 980847214	Orange Park Permit HO10-209007
FLD 000776716	Port Charlotte Permits HO08-178811, HO28-293040
FLD 984171165	Sanford Permit HO59-224117
FLD 982133159	Tallahassee-Entrepot Boulevard Permit HO37-257760
FLD 000776773	Tallahassee-Tharpe Street Permits HF37-193175, HF37-302966
FLD 980847271	Tampa-24th Avenue Permits HO29-158820, HO29-290949
FLD 049557408	Tampa-Manhattan Avenue Permits HF29-158003, HF29-304058

Dear Ms. Walper:

I reviewed the March 17, 1997, financial test submittal used to demonstrate financial responsibility and find it deficient for the following reasons:

- The Boynton Beach facility closure estimate should be $123,846, not $45,188. Financial demonstrations must reflect the most recent closure cost estimate. Delta Environmental Consultants, Inc. submitted a revised closure estimate of $123,846 to the Department on November 21, 1996.

- The Tallahassee Tharpe Street facility estimates are not acceptable. Financial demonstrations must reflect the most recent cost estimates. Environmental Consulting & Technology, Inc. submitted a January 29, 1997, permit renewal application for permit number HF37-193175. This renewal contained no revised closure, post-closure or corrective action estimates. Please note 40 CFR Parts 264.142, 264.144, 270.14 and Rule 62-730.180, Florida Administrative Code, (F.A.C.), require detailed written revised estimates with a permit application.

- The Tampa 24th Avenue facility closure estimate should be $278,000, not $154,255.40. Financial demonstrations must reflect the most recent closure cost estimate. ERM-South, Inc. submitted a revised closure estimate of $278,000 to the Department on March 6, 1997.

- The Tampa Manhattan facility estimates listed on the financial test are acceptable. However, Environmental Consulting & Technology, Inc. submitted a March 27, 1997, permit renewal application for HF29-158003. This renewal contained no revised closure, post-closure or corrective action estimates. Please note 40 CFR Parts 264.142, 264.144, 270.14 and Rule 62-730.180, F.A.C., require detailed written revised estimates with a permit renewal application.

Please rectify the above items and resubmit or amend your 1996 fiscal-year-end financial responsibility documentation to the letterhead address within thirty (30) days receipt of this letter. If you have any questions, please contact me at (850) 488-0300.

Sincerely,

Ainè Marie Ryan

Ainè Marie Ryan
Hazardous Waste Regulation

AMR

cc: Jeff Pallas, EPA
Jim Mergen, IEPA
Richard Stebnisky, ECT
Gerhard Risse, SK
Bill Crawford
John Jones
Bill Kellenberger
Mary McGehee
Gus Minhaj
Ashwin Patel

SECTION

4

4.0 FACILITY SECURITY

4.1 SECURITY PROCEDURES AND EQUIPMENT

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

1. Entry to the container and return/fill areas will be controlled through gates and doors. All gates and doors will be locked at all times when facility is not in operation. The eastern, northern, and western perimeter of the site is bordered by an approximately eight-foot fence consisting of six feet of chain-link fence topped by approximately two feet of barbed wire. The southern perimeter consists of three secured gates and the building front.

2. The combination of doors and signs prevents unknowing entry and minimizes the potential for unauthorized entry of people or livestock into the facility.

3. Signs are posted at the entrance of the facility and additional locations so that they are visible from any approach at 50 feet. Signs are marked "DANGER - UNAUTHORIZED PERSONNEL KEEP OUT."

4. "NO SMOKING" signs are posted in areas where hazardous wastes are handled.

SECTION

5

Section 5.0

Preparedness, Prevention, Contingency Plan, and Emergency Procedures for Daily Business Operations

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Table 5.6-1 *Emergency Response Equipment*

Table 5.8-1 *Description and Uses of Emergency Equipment*

EMERGENCY PHONE NUMBERS

Emergency Coordinators

Primary:
Kevin Hamilton
2407 Paisley Court
Orange Park, FL 32065
Home: (904) 272-7477
Office: (904) 264-2607
Beeper: (904) 818-0930

First Alternate:
Andy Gaugler
546 Laurel Grove Lane
Orange Park, FL 32073
Home: (904) 269-4976
Office: (904) 264-2607
Beeper: (904) 818-0936

Second Alternate:
David Carter
6325 Faulkner Drive
Jacksonville, FL 32244
Home: (904) 772-0918
Office: (904) 264-2607
Beeper: (904) 818-0933

Emergency Notification Phone Numbers

Safety-Kleen Environment, Health and Safety Department: (800) 468-1760

National Response Center*: (800) 424-8802

Florida Department of Environmental Protection Northeast District:
(904) 448-4320 (normal business hours)

Florida Department of Environmental Protection Tallahassee Office
(904) 488-0300 (normal business hours)

State Warning Point: (904) 413-9911 (24 hours)

Emergency Team to be Notified

Clay County Public Safety
915 Walnut Street
Green Cove Springs, FL 32243
(904) 284-6330 or 911

Clay County Sheriff
901 Orange Avenue
Green Cove Springs, FL 32043
(904) 264-6512 or 911

Orange Park Medical Center
2001 Kingsley Avenue
Orange Park, FL 32073
(904) 276-8580 or 911

O.H. Materials Company
P.O. Box 551
Findlay, OH 45839
(800) 537-9540
(Primary Cleanup Contractor)

Ryckman's Emergency Action Team
1733 Vanderventer
St. Louis, MO 63146
(800) 325-1398
(Secondary Cleanup Contractor)

*Call NRC only if the State Warning Point number cannot be reached.

Section 5.0

Preparedness, Prevention, Contingency Plan, and Emergency Procedures for Daily Business Operations

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EMERGENCY PHONE NUMBERS

Emergency Coordinators

Primary: Kevin Hamilton
2407 Paisley Court
Orange Park, FL 32065
Home: (904) 272-7477
Office: (904) 264-2607
Beeper: (904) 818-0930

First Alternate: Andy Gaugler
546 Laurel Grove Lane
Orange Park, FL 32073
Home: (904) 269-4976
Office: (904) 264-2607
Beeper: (904) 818-0936

Second Alternate: David Carter
6325 Faulkner Drive
Jacksonville, FL 32244
Home: (904) 772-0918
Office: (904) 264-2607
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Emergency Team to be Notified

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2001 Kingsley Avenue
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St. Louis, MO 63146
(800) 325-1398
(Secondary Cleanup Contractor)

*Call NRC only if the State Warning Point number cannot be reached.

5.0 *PREPAREDNESS, PREVENTION, CONTINGENCY PLAN, AND EMERGENCY PROCEDURES FOR DAILY BUSINESS OPERATIONS - SAFETY-KLEEN CORP., ORANGE PARK, FLORIDA*

5.1 *GENERAL INFORMATION*

Purpose

The preparedness, prevention, and contingency plan and emergency procedures are designed to ensure that Safety-Kleen reduces the possibility of emergency situations and, should they occur, respond in a manner to prevent or minimize hazards to human health or the environment from fire, explosion, or any unplanned 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 plan are to be carried out immediately if there is a fire, explosion, or release of hazardous materials that could threaten human health or the environment. All responses must conform with the procedures contained in this plan.

General Description of Activities

The business activities conducted at the Orange Park Branch Service Center (Branch) relate to the leasing and servicing of Safety-Kleen Parts Cleaning Equipment, including the provisions of a solvent leasing service for the customers. Clean solvents are distributed from, and the used solvents returned to, the Branch, where separate storage tanks are utilized for the storage of clean and used parts washer solvent. One 15,000-gallon and one 12,000-gallon fresh parts washer solvent storage tanks currently are utilized at the facility. In addition, a 15,000-gallon tank is used to contain used parts washer solvent. Warehouse space is designated for the storage of containers of both clean and used immersion cleaner, parts washer solvent, Fluid Recovery Services (FRS) wastes, and dry cleaning wastes (chlorinated and nonchlorinated solvent). Paint waste is stored in a permitted flammable storage area. Overpack containers are used for the management of containers whose integrity has been compromised.

Parts washer solvents are transported in covered containers between the Branch and customers. Upon returning to the Branch, the used parts washer solvent is transferred from

the containers into a wet dumpster (solvent return receptacle) in which coarse solids in the parts washer solvents are retained. Used parts washer solvent from the wet dumpster flows into a 15,000-gallon aboveground tank for storage. Used parts washer solvent is picked up regularly by a bulk tank truck from a Safety-Kleen recycle facility which at the same time delivers clean parts washer solvent. The sludge in the wet dumpster is regularly cleaned out, containerized, and stored as Branch-generated waste in a permitted waste storage area for later shipment to a Safety-Kleen recycle facility for reclamation or disposal.

The immersion cleaner remains in a covered container at all times during transportation and storage. The solvent is not transferred to another container while being used by the customers or while in storage at the Branch.

Dry cleaning wastes are picked up at commercial dry cleaning establishments in containers. Dry cleaning wastes handled by Safety-Kleen consist of spent filter cartridges, powder residue from diatomaceous or other powder filter systems, and still bottoms, all of which fall into the categories of either perchloroethylene-based waste or naphtha-based waste. The still bottoms and powder residue are packaged on the customer' s premises in containers. The perchloroethylene-based dry cleaning waste is terminated at the Orange Park facility, where it is stored as permitted waste prior to shipment to a Safety-Kleen recycle center. The naphtha-based dry cleaning waste is handled at the Orange Park facility as transfer waste. All naphtha-based dry cleaning waste is shipped to a Safety-Kleen recycle center. The naphtha-based dry cleaning waste is shipped to a Safety-Kleen recycle center within 10 days of arrival at the Orange Park facility.

All antifreeze collected and managed by Safety-Kleen within Florida is recycled. At the customer's location, Safety-Kleen pumps waste ethylene glycol (antifreeze) into a Safety-Kleen used oil tanker truck. The mixture of waste ethylene glycol and used oil is transported from the Branch directly to CSX's Bulk Intermodal Distribution System (BIDS) terminus for off-loading into tanker cars. The ethylene glycol/used oil mixture is transferred by rail to the Safety-Kleen re-refinery in East Chicago, Indiana, where the waste ethylene glycol is extracted from the oil by distillation. After separation, the ethylene glycol is shipped to a glycol refinery for additional purification into a pure product which is then sold on the open market. This procedure is in accordance with FDEP's *Florida Fact Sheet on the Best*

Management Practices for Managing Antifreeze Destined for Recycling, dated August 5, 1996.

Safety-Kleen is permitted to store hazardous ethylene glycol (i.e., used antifreeze mixed with used oil) in one of the 15,000-gallon aboveground storage tanks at the facility (Figure 5.1-1). This waste stream previously was considered hazardous by the State of Florida. However, the Florida Department of Environmental Protection (FDEP) has subsequently determined this waste stream can be handled as nonhazardous as long as it is destined for recycling. Based on this redesignation, Safety-Kleen intends to "close" the ethylene glycol tank (in accordance with FDEP approval). After the closure has been completed, Safety-Kleen will use the tank as an accumulation point for waste antifreeze/used oil. The tank will then be emptied on a periodic, as-needed basis and the contents transported to the BIDS terminus for rail shipment as described above.

Paint wastes consist of various lacquer thinners and paints. The waste is collected in containers at the customer's place of business and the containers are then stored in the permitted paint waste shelter. The paint waste manifests are terminated upon receipt at the Branch. The paint wastes are then re-manifested and periodically sent to a Safety-Kleen recycle center.

The FRS wastes are packaged in polyethylene or steel containers which are not opened until they reach a recycle center. The FRS wastes are transfer wastes and may be stored onsite for up to 10 days. The FRS wastes may also undergo branch-to-branch or truck-to-truck transfer. This transfer will occur at the return/fill station inside secondary containment.

The waste products exhibit essentially the same biological, physical, and chemical properties as the fresh product. Used products are basically fresh products with impurities of dirt and metals. Material Safety Data Sheets (MSDSs) for each hazardous material are available at the Branch and on demand by fax through a company-owned MSDS information service. This service provides 24-hour phone or fax access to an extensive MSDS database. Example MSDSs for several of the chemicals handled at the facility are provided in Appendix A at the end of this section.

The Branch is registered in Florida as a transporter and storage facility for mercury-containing lamps and devices destined for recycling. This registration includes a commitment to comply with the requirements of Florida Administrative Code (FAC) 62-737.700. As a registered storage facility, the Branch can store up to 2,000 kilograms of lamps/devices for a period of up to 180 days. Safety-Kleen provides customers with empty four-foot and eight-foot boxes which hold up to 39 lamps. Boxes containing lamps are picked up from customers and are handled at the at the Branch as nonhazardous transfer wastes. The boxes are stored at the Branch in a designated area within the transfer waste storage area. This storage area is labeled in accordance with FAC 62-737.700(1)(d), and is partially isolated from other transfer wastes to avoid potential for accidental breakage. The boxes are periodically shipped to a permitted mercury recovery or reclamation facility. Prior to shipment out of the Branch, the boxes are placed on pallets and shrink-wrapped with plastic.

Figures 5.1-1 and 5.1-2 show the basic site and floor plans and the locations of waste management facilities and facility storage. Table 5.1-1 provides a list of permitted and transfer wastes handled at the facility.

5.2 *INSPECTION PROCEDURES*

Inspection of Safety Equipment

The purpose of the inspection plan is to establish a procedure and schedule for the systematic monitoring and inspection of emergency and spill control equipment to ensure proper operation, and to maintain compliance. Table 5.2-1 is an Inspection Schedule.

The Branch Manager or designee is responsible for carrying out the inspection in accordance with the following procedure and schedule.

- A weekly inspection of fire extinguishers must be performed to ensure that the tag date has not expired and the units are properly charged and accessible. Once a year the extinguishers are serviced unless a fire extinguisher has been used. Discharged extinguishers are serviced immediately.

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The Branch Manager or designee is responsible for carrying out the inspection in accordance with the following procedure and schedule.

- A weekly inspection of fire extinguishers must be performed to ensure that the tag date has not expired and the units are properly charged and accessible.

- A weekly inspection of eyewash stands must be performed to assure accessibility; check for proper operation of this equipment on a monthly basis. Inventory of the first-aid kit must be checked on a weekly basis.

- A weekly check of the supply of spill control equipment (absorbent material) must be performed.

- A weekly check of the conditions and inventory of other emergency equipment will be made. This includes gloves, aprons, goggles, respirators, and other personal protective equipment.

Inspection of Security Equipment

The Branch Manager or designee, using the Weekly Inspection Log (Figure 5.2-1 or similar), inspects the security features of the facility weekly (e.g., gates and locks), looking for any evidence of sticking, corrosion, or unusual activity. The facility fence will be checked weekly for deterioration, gaps, and broken wire ties.

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 and other material management facilities to ensure proper operation and maintain compliance. Table 5.2-1 provides an Inspection Schedule.

The Branch Manager or designee is responsible for carrying out the inspections of all hazardous waste management facilities in accordance with the following procedure and schedule.

Daily inspections of aboveground tanks will include the following:

- Note volume in tank.

- Observe tank exterior for loose anchoring, wet stops, leaks.

- Check the automatic high level alarm.

- Inspect secondary containment walls and piping.

- Inspect transfer pumps for leaking seals and overheated motors.

- Inspect the solvent dispensing hose, fittings, and valve for any leaks, damage, or wear that could cause a leak to develop.

- Inspect the valves for proper seat. Stem leaks from worn glands and warped valve bodies should be repaired. If the valve cannot be repaired, replace the unit.

Daily inspection of the solvent return receptacle (wet dumpster) will consist of an inspection for leaks and excess dumpster mud build-up.

Daily inspections of the container storage area include the following:

- Verify that total volume is within permitted limits.

- Physically examine the condition of containers to verify that leaks have not occurred since the last inspection.

- Verify that all container identification, dates, and hazardous waste labels are attached and current.

- Inspect container placement and stacking such as aisle space, height, and stability of stacks.

- Examine containment areas to detect signs of deterioration and failure of the containment system such as cracks, breakage, settlement, and spillage.

Corrective Action

Any discrepancies or deficiencies found during routine inspections will be recorded in the inspection log and brought to the attention of a supervisor. At this time an evaluation of the seriousness of the problem will be noted and a decision made if the situation requires immediate action or the problem can be handled as routine maintenance. The evaluation of the seriousness of the problem will be recorded in the facility's inspection log. If the problem poses a threat to human health or the environment, action will be taken immediately. The Branch Manager has the overall responsibility for resolving any discrepancies found during the routine inspection.

5.3 *EMERGENCY NOTIFICATION*

Emergency Coordinator

The Branch Manager or designee is the emergency coordinator. Page iii at the beginning of Section 5 includes the names, home addresses, and both office and home phone numbers of the primary emergency coordinator and alternate. At least one employee will be either present on the facility premises or on call with responsibility for coordinating all emergency response measures at all times. This primary emergency coordinator and alternate emergency coordinator are thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of materials handled, the location of all records within the facility, and the facility layout. In addition, these coordinators have the authority to commit the resources needed to carry out the contingency plan.

5.4 *EMERGENCY RESPONSE AGENCIES AND TEAM MEMBERS*

The agencies and response team members to be notified whenever an imminent or actual emergency occurs are presented on page iii, located at the beginning of Section 5.

5.5 *ACTIONS OF THE EMERGENCY COORDINATOR*

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

a. Notify all facility personnel present of the emergency. The relatively small size of this facility makes direct verbal communication the most expedient form of emergency notification. The emergency coordinator may also elect to proceed to the front of the building and repeatedly sound a car horn to notify building occupants of an emergency. A head count will be performed by the emergency coordinator.

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

c. Summon the primary emergency coordinator, if that person is absent.

Whenever a release, fire, or explosion occurs, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials. Because of the limited types of chemicals in storage, the identification processes can easily be performed visually.

Procedure for Assessing Possible Hazard to the Environment and Human Health

- 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.

- If a fire or explosion is determined uncontrollable by plant personnel or threatening neighboring establishments or population, assistance from a local emergency response agency shall be summoned immediately and an evacuation order requested.

- In case of a release outside of the containment area that is deemed immediately uncontainable or unrecoverable, the local emergency response agency and/or specialty cleanup contractor shall be called in.

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

- Expert assistance should be requested to determine whether the escaped materials are potentially harmful and whether the receiving medium ultimately will be a populated area, public water supply source, a private well, or an environmentally sensitive area.

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

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

- 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.

- The coordinator must immediately notify the Northeast District of the FDEP, (904) 448-4320 during regular business hours, or the State Warning Point at (904) 413-9911 outside regular business hours or holidays, or 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.

Immediate assistance in assessing and responding to an emergency is obtained by the emergency coordinator by calling the 24-hour emergency number of the Safety-Kleen Corporation Environment, Health and Safety Department's Contractor InfoTrack ((800) 468-1760). The 24-hour emergency number identified as InfoTrack is a vendor contracted by Safety-Kleen to respond to all reports of spills or chemical emergencies. All Safety-Kleen facilities in the state use this contractual arrangement with InfoTrack. This allows Safety-Kleen to respond to any emergency with a maximum of effort, thereby reducing the threat to human health or the environment.

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 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 build-up, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing 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:

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

- 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 requirements of the preceding paragraph, before operations are resumed in the affected area(s) of the facility.

The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, the owner must submit a written report on the incident to the Northeast District of the FDEP, 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7590. The report must include:

1. Name, address, and telephone number of the owner or operator;

2. Name, address, and telephone number of the facility;

3. Date, time, and type of incident (e.g., fire, explosion);

4. Name and quantity of material(s) involved;

5. The extent of injuries, if any;

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

7. Estimated quantity and disposition of recovered material that resulted from the incident.

5.6 *POTENTIAL SPILL SOURCES*

The following is a list of activities that have the potential for a small scale (less than 55 gallons of waste) pollution incident.

1. Moving of containers.

   Every time a container is moved, the possibility exists that it could tip over or be dropped. To minimize the possibility of spillage of solvent under those conditions, all container lids must be secured before the container is moved.

2. Delivery truck container transfers.

   a. Individual delivery containers hold from 5 to 55 gallons of waste, a quantity which can be contained by oil sorbent clay or pads, if accidentally spilled.

   b. Each vehicle is equipped with a hoist and hand cart for ease of moving clean solvent containers off the truck and into the customer's shop and returning the dirty solvent containers to the truck.

   c. Lids are secured on containers during movement to prevent a spill.

   d. Each truck contains a complete spill kit, shovel, and a quantity of sorbent material to contain minor spills.

   e. The cargo must be secured in the route vehicle before transit.

Spills Inside Buildings

In the event of a spill indoors, the doors and windows should be opened to improve the ventilation in the confined area. Following the instructions of the Material Safety Data Sheet (MSDS), a worker would enter the area wearing rubber gloves, boots, and respirator, and mop up the liquid and containerize it for subsequent shipment to a Safety-Kleen recycle

center for reclamation/disposal. The cleanup is completed only when the workers have cleaned themselves and the emergency equipment with soap and water.

Spills on Concrete Pads

Concrete pads in loading and unloading areas are, in most cases, equipped with secondary containment. Under most spill conditions, product can be totally contained on the concrete surface and in the containment system. Upon containment, arrangements must be immediately undertaken to recover the material. Any soil that may be involved must be removed and handled in the same manner as the material spilled.

Tank Spills or Leakage

Aboveground tanks are underlain by a concrete slab and surrounded by a concrete dike to contain any spilled or leaked solvent. The containment system has been sized in accordance with the regulations, and the product will be totally contained under most spill conditions. Should a spill occur, arrangements must be immediately undertaken to recover the material. In the event of leakage, tank repair or replacement will be initiated. Any soil that may be involved must be removed and handled in the same manner as the material spilled.

Spill Control Procedures

If a harmful discharge occurs:

1. Stop the discharge, if possible, by immediately transferring the liquid to a good container.

2. Retain, contain, or slow the flow of the material, if possible, by diking with sorbent pad or dirt. Based on the seriousness of the incident, the emergency coordinator will select the level of personal protective equipment required to address the incident. Pump and mop up the liquid from the floor into a good container and return the container to storage for subsequent shipment to a Safety-Kleen recycle center for reclamation/disposal. The area and equipment that comes in contact with the spill

must be decontaminated with soap and water. All residues resulting from containment and decontamination should be collected for proper disposal at a Safety-Kleen recycle center.

3. If the material escapes the containment efforts, immediately call the cleanup contractor with response time less than two hours (page iii). Record the date, time, and name of person taking the message. Call the primary emergency coordinator, if that person is absent.

4. Immediately recover spilled solvent to reduce property and environmental damage using the emergency and safety equipment stored onsite for such situations (Figure 5.6-1 and Table 5.6-1), or call in emergency response contractors (page iii). Start recovery operations immediately.

   After recovery of spilled solvent, wash all contaminated impervious surfaces and equipment with soap and water. The residue of spill- or fire-contaminated soils and waste waters must be removed and disposed of at a Safety-Kleen recycle center. In addition, the recovered solvent will be sent to a Safety-Kleen recycle center for reclamation.

5. Report any incident as soon as possible to Safety-Kleen Corporate Environment, Health and Safety Department on the 24-hour telephone line: (800) 468-1760. If the Environmental Department does not respond within 30 minutes, call the State Warning Point ((904) 413-9911) or the National Response Center (telephone: (800) 424-8802).

6. The person reporting a spill should be prepared to give their name, position, company name, address, and telephone number. The person reporting also should give the nature of the material spilled (e.g., immersion cleaner, etc.) 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 date 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.

Information on every spill must be recorded (Safety-Kleen Incident Report Form (Figure 5.6-2) or similar). A notification of each spill will be sent to the Corporate Environment Health and Safety Department.

Reports of emergency incidents will be transmitted to the Secretary of the FDEP or designee within 15 days of occurrence. This report shall include:

1. Name, address, and telephone number of the owner of operator;

2. Name, address, and telephone number of the facility;

3. Date, time, and type of incident (e.g., fire, explosion);

4. Name and quantity of materials involved;

5. The extent of injuries, if any;

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

7. Estimated quantity and disposition of recovered material that resulted from the incident.

Containment Systems

Containerized Wastes

The hazardous waste container storage areas consist of two areas: the container storage area located in the warehouse and the paint waste/allied product storage shelter located north of the main building. These areas are shown in Figures 5.6-3 and 5.6-4. All containers are stored in these storage areas. At least two feet of aisle space are maintained, and the containers are stored no more than six feet high or two pallets high, whichever is higher. Containers are stored on pallets wherever possible.

Warehouse Container Storage Area

The container storage area shown in Figure 5.6-3 occupies a portion of the main site building. This warehouse area has concrete floors, concrete berms, and a central collection trench to form a spill containment system within the area.

The permitted container storage area has a 25' 5" x 24' concrete floor with 6-inch curbing on exposed sides and two containment trenches with a combined containment capacity of 255.3 gallons. Maximum storage capacity is 2,553 gallons. Waste allowed for storage is immersion cleaner, dry cleaning solvent, parts washer solvent dumpster mud, tank bottoms, and oil filters. The types and number of each type of container may vary; however, the storage capacity will not be exceeded.

Paint Waste Shelter

The permitted paint waste shelter consists of a 45' x 68' concrete pad underlying a 15.5' x 20' shelter with metal containment pans. This shelter is divided into a paint waste storage area and an allied product storage area. Allied products are unused or "virgin" materials. The storage shed consists of six metal containment pans each measuring 5' x 10'. The pans have overlapping lips which prevent liquids from migrating between the pans and onto the concrete. Total containment capacity is 1,122 gallons. Materials allowed for storage

include virgin flammable and flammable paint-related wastes up to 4,800 gallons. The types and number of each type of container may vary; however, the storage capacity will not be exceeded.

FRS Wastes and Transfer Wastes

Transfer wastes may be stored in the southwest portion of the warehouse. FRS wastes may be stored in the outdoor shelter adjacent to the paint waste shelter. Since FRS wastes are transfer wastes only, they are not required to have containment.

Any small spill in the warehouse container storage area which might occur would generally puddle where it was spilled. The spilled material would be cleaned up where it puddled or be manually directed to the containment trenches. In the event that a large spill were to occur, some dispersion would be expected to occur based on the direction, force, and pathway obstacles presented by and to the spill. The trenches protect, however, the only openings in the curbing. Only in the event that the spill were to exceed the containment capacity of the trenches would spilled wastes be able to extend beyond the containment area. Once outside the containment area the wastes would continue to be on a concrete surface.

In the container storage areas, containers are handled with a hand-truck free of sharp points or stacked by hand. Each time a container is moved, a possibility exists that it will be tipped over, dropped, or punctured. To minimize the possibility of spillage, containers are tightly covered and kept in an upright position. A small portable electric pump is available to quickly transfer the liquid from any leaking container into a safe container. Each route truck is equipped with an electric hoist. This hoist is used in the loading/unloading operation to minimize chances for spillage and/or employee injury. Trucks used for shipping containers between a recycle center and the Orange Park facility have lift gates for container loading/unloading. All non-flammable containerized wastes are loaded/unloaded at docks located on the north and east sides of the building. With the exception of used parts washer solvent, all flammable wastes are loaded/unloaded at the concrete dock portion of the flammable storage building.

All containers are covered during movement and are located within diked, concrete floored areas to contain any potential spill. The small quantities of waste onsite at any time can be cleaned up immediately through the use of hand-held electric pumps, mops, wet/dry vacuums, or sorbent materials, should a spill occur. Any spilled waste is contained for offsite recycling/reclamation.

All containerized waste movement is performed manually, by a pallet jack, or by propane-fueled forklift. Therefore, power outages are not expected to threaten employee safety.

Return/Fill Station

The return/fill shelter (Figure 5.6-5) is an enclosed shelter with concrete pads and curbing. Sloping of the containment area is essentially non-detectable. However, there is a slight slope toward the sumps. The curbing extends beyond the grating so that the delivery trucks can position over the containment area during loading/unloading. Three wet dumpsters are not intended for storage; however, they are capable of holding up to 108 gallons each, for a total of 324 gallons (the third dumpster is scheduled to be closed prior to issuance of this renewal permit). The containment capacity for the return/fill station is 2,606 gallons, which equates to a storage capacity of 26,060 gallons. The area just outside of the return/fill stations is concrete. Any spills which occur on the concrete are cleaned up and the area decontaminated. The decontamination process should result in the *de minimis* amounts of residue remaining.

The entire yard area is covered by either concrete or asphalt thus preventing direct contact with soils and ground water.

Tank Area

The tank area (Figure 5.6-6) houses three 15,000-gallon tanks and is provided with containment, including a sump. This containment area is not sloped. The containment area has a capacity of approximately 20,000 gallons, which exceeds the required 15,000 gallons. Any spilled material is removed by pump or wet vacuum. The tanks loading/unloading area is a concrete pad. The pad is not intentionally sloped. Any spills which occur on the pad are

cleaned up and the area decontaminated. Decontamination methods are discussed later in this Plan. This decontamination will result in *de minimis* residue.

Preventative measures have been taken to eliminate the build-up of a static charge in the tanks by grounding all tanks. Employee training emphasizes the importance of inspection, maintenance, personal safety, and reporting of conditions with pollution incident potential. This training, coupled with the Safety-Kleen's containment system and immediate cleanup of any spills, eliminates or greatly minimizes the chance of contamination of ground water and/or surface water in the vicinity of the site. In addition, surface run-off at the site does not come in contact with stored products in the waste management area.

5.7 *DECONTAMINATION*

Once the spilled material has been cleaned up, the spill area and equipment used during the spill clean-up must be decontaminated and/or disposed, as described below.

Concrete Surfaces/Containment Area

- Concrete surfaces/containment areas will be cleaned with a detergent solution and then rinsed with hot water. The rinsate will be collected via wet vacuums and placed in containers. Visual inspection will be used to determine the success of the decontamination procedure.

- The intent of the surface decontamination is to prevent current or future releases of materials to the environment. Vigorous cleaning with detergent is sufficient to prevent releases to the environment during normal operations. Potential for hazards from residual materials to future occupants of the facility are addressed in the closure plans for the facility and the decontamination procedures incorporated therein.

Equipment

The equipment used to clean the area includes mops, pails, scrub brushes, and a wet/dry vacuum. Equipment which is considered reusable (i.e., pails, wet/dry vacuum, hoses) will be washed with detergent, and wash water and rinsate will be collected for proper disposal. All

Containment Systems

Containerized Wastes

The hazardous waste container storage areas consist of two areas: the container storage area located in the warehouse and the paint waste/allied product storage shelter located north of the main building. These areas are shown in Figures 5.6-3 and 5.6-4. All containers are stored in these storage areas. At least two feet of aisle space are maintained, and the containers are stored no more than six feet high or two pallets high, whichever is higher. Containers are stored on pallets wherever possible.

Warehouse Container Storage Area

The container storage area shown in Figure 5.6-3 occupies a portion of the main site building. This warehouse area has concrete floors, concrete berms, and a central collection trench to form a spill containment system within the area.

The permitted container storage area has a 25' 5" x 24' concrete floor with 6-inch curbing on exposed sides and two containment trenches with a combined containment capacity of 261.8 gallons. Maximum storage capacity is 2,618 gallons. Waste allowed for storage is immersion cleaner, dry cleaning solvent, parts washer solvent dumpster mud, tank bottoms, and oil filters. The types and number of each type of container may vary; however, the storage capacity will not be exceeded.

Paint Waste Shelter

The permitted paint waste shelter consists of a 45' x 68' concrete pad underlying a 15.5' x 20' shelter with metal containment pans. This shelter is divided into a paint waste storage area and an allied product storage area. Allied products are unused or "virgin" materials. The storage shed consists of six metal containment pans each measuring 5' x 10'. The pans have overlapping lips which prevent liquids from migrating between the pans and onto the concrete. Total containment capacity is 1,122 gallons. Materials allowed for storage

includes virgin flammable and flammable paint-related wastes. The types and number of each type of container may vary; however, the storage capacity will not be exceeded.

FRS Wastes and Transfer Wastes

Transfer wastes may be stored in the southwest portion of the warehouse. FRS wastes may be stored in the outdoor shelter adjacent to the paint waste shelter. Since FRS wastes are transfer wastes only, they are not required to have containment.

Any small spill in the warehouse container storage area which might occur would generally puddle where it was spilled. The spilled material would be cleaned up where it puddled or be manually directed to the containment trenches. In the event that a large spill were to occur, some dispersion would be expected to occur based on the direction, force, and pathway obstacles presented by and to the spill. The trenches protect, however, the only openings in the curbing. Only in the event that the spill were to exceed the containment capacity of the trenches would spilled wastes be able to extend beyond the containment area. Once outside the containment area the wastes would continue to be on a concrete surface.

In the container storage areas, containers are handled with a hand-truck free of sharp points or stacked by hand. Each time a container is moved, a possibility exists that it will be tipped over, dropped, or punctured. To minimize the possibility of spillage, containers are tightly covered and kept in an upright position. A small portable electric pump is available to quickly transfer the liquid from any leaking container into a safe container. Each route truck is equipped with an electric hoist. This hoist is used in the loading/unloading operation to minimize chances for spillage and/or employee injury. Trucks used for shipping containers between a recycle center and the Orange Park facility have lift gates for container loading/unloading. All non-flammable containerized wastes are loaded/unloaded at docks located on the north and east sides of the building. With the exception of used parts washer solvent, all flammable wastes are loaded/unloaded at the concrete dock portion of the flammable storage building.

All containers are covered during movement and are located within diked, concrete floored areas to contain any potential spill. The small quantities of waste onsite at any time can be cleaned up immediately through the use of hand-held electric pumps, mops, wet/dry vacuums, or sorbent materials, should a spill occur. Any spilled waste is contained for offsite recycling/reclamation.

All containerized waste movement is performed manually, by a pallet jack, or by propane-fueled forklift. Therefore, power outages are not expected to threaten employee safety.

Return/Fill Station

The return/fill shelter (Figure 5.6-5) is an enclosed shelter with concrete pads and curbing. Sloping of the containment area is essentially non-detectable. However, there is a slight slope toward the sumps. The curbing extends beyond the grating so that the delivery trucks can position over the containment area during loading/unloading. Three wet dumpsters are not intended for storage; however, they are capable of holding up to 504 gallons each, for a total of 1,512 gallons. The containment capacity for the return/fill station is 2,130 gallons, which equates to a storage capacity of 21,300 gallons. The area just outside of the return/fill stations is concrete. Any spills which occur on the concrete are cleaned up and the area decontaminated. The decontamination process should result in the *de minimis* amounts of residue remaining.

The entire yard area is covered by either concrete or asphalt thus preventing direct contact with soils and ground water.

Tank Area

The tank area (Figure 5.6-6) houses three 15,000-gallon tanks and is provided with containment, including a sump. This containment area is not sloped. The containment area has a capacity of 17,100 gallons, which exceeds the required 15,000 gallons. Any spilled material is removed by pump or wet vacuum. The tanks loading/unloading area is a concrete pad. The pad is not intentionally sloped. Any spills which occur on the pad are cleaned up

and the area decontaminated. Decontamination methods are discussed later in this Plan. This decontamination will result in *de minimis* residue.

Employee training emphasizes the importance of inspection, maintenance, personal safety, and reporting of conditions with pollution incident potential. This training, coupled with the Safety-Kleen's containment system and immediate cleanup of any spills, eliminates or greatly minimizes the chance of contamination of ground water and/or surface water in the vicinity of the site. In addition, surface run-off at the site does not come in contact with stored products in the waste management area.

5.7 *DECONTAMINATION*

Once the spilled material has been cleaned up, the spill area and equipment used during the spill clean-up must be decontaminated and/or disposed, as described below.

Concrete Surfaces/Containment Area

- Concrete surfaces/containment areas will be cleaned with a detergent solution and then rinsed with hot water. The rinsate will be collected via wet vacuums and placed in containers. Visual inspection will be used to determine the success of the decontamination procedure.

- The intent of the surface decontamination is to prevent current or future releases of materials to the environment. Vigorous cleaning with detergent is sufficient to prevent releases to the environment during normal operations. Potential for hazards from residual materials to future occupants of the facility are addressed in the closure plans for the facility and the decontamination procedures incorporated therein.

Equipment

The equipment used to clean the area includes mops, pails, scrub brushes, and a wet/dry vacuum. Equipment which is considered reusable (i.e., pails, wet/dry vacuum, hoses) will be washed with detergent, and wash water and rinsate will be collected for proper disposal. All

non-reusable equipment and/or equipment which is not capable of being decontaminated will be containerized and disposed of as hazardous waste.

Wash Water and Rinsate

If the rinsate or other wastes generated in the clean-up process is determined to be hazardous, it will be properly disposed of as a hazardous waste; otherwise, the material may be disposed of as a nonhazardous waste. It should be noted that wash water and rinsate will not be allowed to drain to surface waters.

5.8 *EMERGENCY RESPONSE EQUIPMENT AND COMMUNICATION*

Due to the small size of the facility, routine communication will be accomplished by voice communication. Emergency alarms are available at the tank farm, return/fill station, and warehouse. Telephones are used in case of a spill or fire emergency to summon assistance. Emergency numbers are posted by phones throughout the facility. Included with these phone numbers is the 24-hour spill number for the Corporate Environmental Department at the corporate office in Elgin, Illinois. Figure 5.6-1 provides the locations of fire extinguishers, first-aid kits, and emergency eyewashes. Other emergency response equipment (Table 5.6-1) is kept in a small storage area inside the warehouse near the return/fill dock. This equipment includes mops and buckets, soap, shovels, and spill sorbent pads. Rubber gloves, boots, pumps, and a wet/dry vacuum cleaner are stored in an emergency supply area near the container storage area. Descriptions and uses of the equipment are provided in Table 5.8-1. Adequate aisle space is provided in the container storage area for movement in an emergency situation.

The equipment available at the facility for emergency situations is adequate for most cases. Large or serious emergency situations will be remediated by local emergency response teams or special emergency response or cleanup contractors. The facility is constructed and operates in accordance with National Fire Protection Association (NFPA) standards and applicable local ordinances. Applicable health and safety standards are also observed at the facility.

5.9 *FIRE CONTROL PROCEDURES*

In the event of a fire at the facility, the following activities will be executed.

Call the Fire Department. The nearest fire hydrant is located west of the facility, approximately 200 feet from the Branch, on the south side of the road.

[Note: Center aisles are available in container storage areas to permit fire department personnel to pass with fire fighting equipment.]

Act quickly with the fire extinguisher to put out the fire before it spreads.

Call the Police Department and local hospital (page iii) when injury occurs, and/or the order of on-lookers and traffic is to be maintained.

Ignitable Wastes

All wastes and products are kept away from ignition sources--Personnel must confine smoking and open flames to remote areas, separate from any solvent (e.g., the office or locker room). The parts washer solvent and paint waste handling areas are separated from the office area to minimize the potential for a fire to spread or injury to personnel to occur.

The tank farm is more than 20 feet from the property line. Likewise, the flammable storage area is 50 feet or more from the property line. Both of these distances meet the NFPA code for storage of ignitable materials.

Ignitable wastes are handled so that they do not:

1. Become subject to extreme heat or pressure, fire or explosion, or a violent reaction--The parts washer solvents and paint wastes are stored in a tank or in containers, none of which are near sources of extreme heat, fire, potential explosion sources or subject to violent reactions. The tanks are vented and the containers kept at room temperature to minimize the potential for pressure build-up. The tanks are painted white to reflect sunlight and are vented to prevent pressure build-up.

5.9 *FIRE CONTROL PROCEDURES*

In the event of a fire at the facility, the following activities will be executed.

Call the Fire Department.

[Note: Center aisles are available in container storage areas to permit fire department personnel to pass with fire fighting equipment.]

Act quickly with the fire extinguisher to put out the fire before it spreads.

Call the Police Department and local hospital (page iii) when injury occurs, and/or the order of on-lookers and traffic is to be maintained.

Ignitable Wastes

All wastes and products are kept away from ignition sources--Personnel must confine smoking and open flames to remote areas, separate from any solvent (e.g., the office or locker room). The parts washer solvent and paint waste handling areas are separated from the office area to minimize the potential for a fire to spread or injury to personnel to occur.

The tank farm is more than 20 feet from the property line. Likewise, the flammable storage area is 50 feet or more from the property line. Both of these distances meet the NFPA code for storage of ignitable materials.

Ignitable wastes are handled so that they do not:

1. Become subject to extreme heat or pressure, fire or explosion, or a violent reaction--The parts washer solvents and paint wastes are stored in a tank or in containers, none of which are near sources of extreme heat, fire, potential explosion sources or subject to violent reactions. The tanks are vented and the containers kept at room temperature to minimize the potential for pressure build-up. The tanks are painted white to reflect sunlight and are vented to prevent pressure build-up.

2. Produce uncontrolled toxic mists, fumes, dusts, or gases in quantities sufficient to threaten human health--The vapor pressure of petroleum-based parts washer solvent is low (2 mm mercury) and it and the paint waste may react with strong oxidizers and reactive metals only. Toxic mists, fumes, and dusts do not form in quantities sufficient to threaten human health since strong oxidizers are not handled at this facility and the solvent vaporization is minimal under normal working conditions.

   [Note: Drycleaning wastes are initially not flammable, but may produce toxic gases and hydrochloric acid at elevated temperatures (about 1,200°F).]

3. Produce uncontrolled fires or gases in quantities sufficient to pose a risk of fire or explosion--See "1" above and "4" below.

4. Damage the structural integrity of the Safety-Kleen facility--The parts washer solvent and paint wastes do not cause deterioration of the tank, drums, or other structural components of the facility.

Incompatible Wastes

Reactive and/or incompatible waste is not handled at the facility. All waste or products are kept away from ignition sources. Employees must confine smoking or open flames to designated safe areas.

Materials are handled so they do not:

a. Generate extreme heat or pressure, fire or explosion, or violent reaction.

b. Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health.

c. Produce uncontrolled fires or gases in sufficient quantities to pose a risk of fire or explosion.

d. Damage the structural integrity of the Safety-Kleen facility.

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

External Factors

The design of the facility is such that a harmful spill is highly unlikely to occur from most external factors. The storage tanks are inaccessible to non-Safety-Kleen personnel. Also, the container storage areas are in buildings which are inaccessible to unauthorized personnel.

1. Vandalism - Only extreme vandalism would result in a solvent spill or fire. Responses to spills and fires are described in a previous section of this Plan.

2. Strikes - A strike would not result in a solvent spill or fire.

3. Power Failure - A power failure would not result in a spill or fire. Should a power failure occur, all activities requiring electricity will cease.

4. Flooding - The waste management facility elevation is above the projected 100-year flood plain; therefore, a 100-year flood will not affect the facility.

5. Storms or Cold Weather - The solvent return/fill station, tank storage, and the container storage areas are roofed to eliminate the possibility of rain entering the waste management areas. Neither snow, cold weather, nor storm water is expected to affect the facility.

5.10 EVACUATION PLAN

In an uncontrolled emergency, all persons are to be evacuated from the area by means of a verbal cry or use of the public address system and are to assemble across the street from the

entrance drive to the facility (see Figure 5.6-1) to assure that all personnel are accounted for and out of the area. The emergency coordinator may elect to use a car horn as a means of emergency notification. A head count will be performed by the emergency coordinator.

The Fire Department must be notified at the time of evacuation either from a safe onsite building or neighboring facilities.

Clearly marked exits exist in warehouse and office area.

5.11 *AVAILABILITY AND REVISION OF THE PREPAREDNESS, PREVENTION, AND 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 listed under the Preparedness and Prevention Plan, 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.

This Plan is reviewed and updated, if necessary, whenever:

1. The facility permit is modified to allow new process wastes to be stored or treated, or applicable regulations are revised;

2. The list or location of emergency equipment changes;

3. The facility changes in its design, construction, operation, maintenance, or other circumstances in a way that:

entrance drive to the facility to assure that all personnel are accounted for and out of the area. The emergency coordinator may elect to use a car horn as a means of emergency notification. A head count will be performed by the emergency coordinator.

The Fire Department must be notified at the time of evacuation either from a safe onsite building or neighboring facilities.

Clearly marked exits exist in warehouse and office area.

5.11 *AVAILABILITY AND REVISION OF THE PREPAREDNESS, PREVENTION, AND 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.

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This Plan is reviewed and updated, if necessary, whenever:

1. The facility permit is modified to allow new process wastes to be stored or treated, or applicable regulations are revised;

2. The list or location of emergency equipment changes;

3. The facility changes in its design, construction, operation, maintenance, or other circumstances in a way that:

3. The facility changes in its design, construction, operation, maintenance, or other circumstances in a way that:

   a. Materially increase the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or

   b. Changes in response necessary in an emergency.

4. The names, addresses, or phone numbers of emergency coordinators change;

5. The employee assigned to each emergency task changes, or

6. The plan fails when implemented in an emergency.

5.12 *ARRANGEMENTS WITH LOCAL AUTHORITIES*

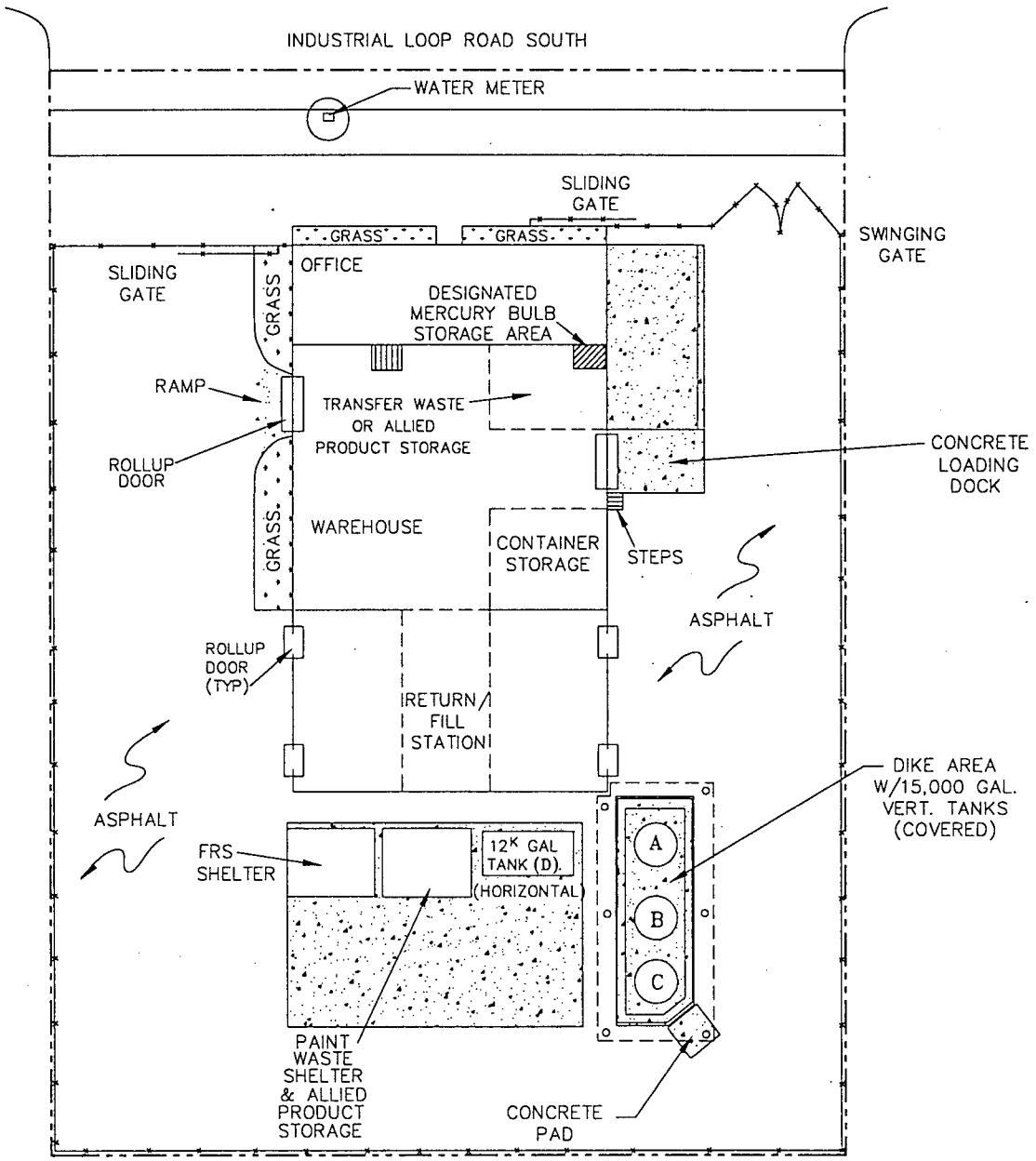
Arrangements have been made to familiarize the Police Department, Fire Department, and local emergency response teams with the layout of the facility, properties of hazardous materials handled (Material Safety Data Sheets) at the facility and associated hazards, places where facility personnel would normally be working, entrances to and roads inside the facility, and possible evacuation routes.

Potential primary and secondary spill control contractors are identified in this Plan.

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.

Appendix B of this Plan (located at the end of Section 5) includes copies of example distribution letters for transmittal. Copies of updated transmittal letters are kept on file at the facility.

Figure 5.1-1
Site Layout
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

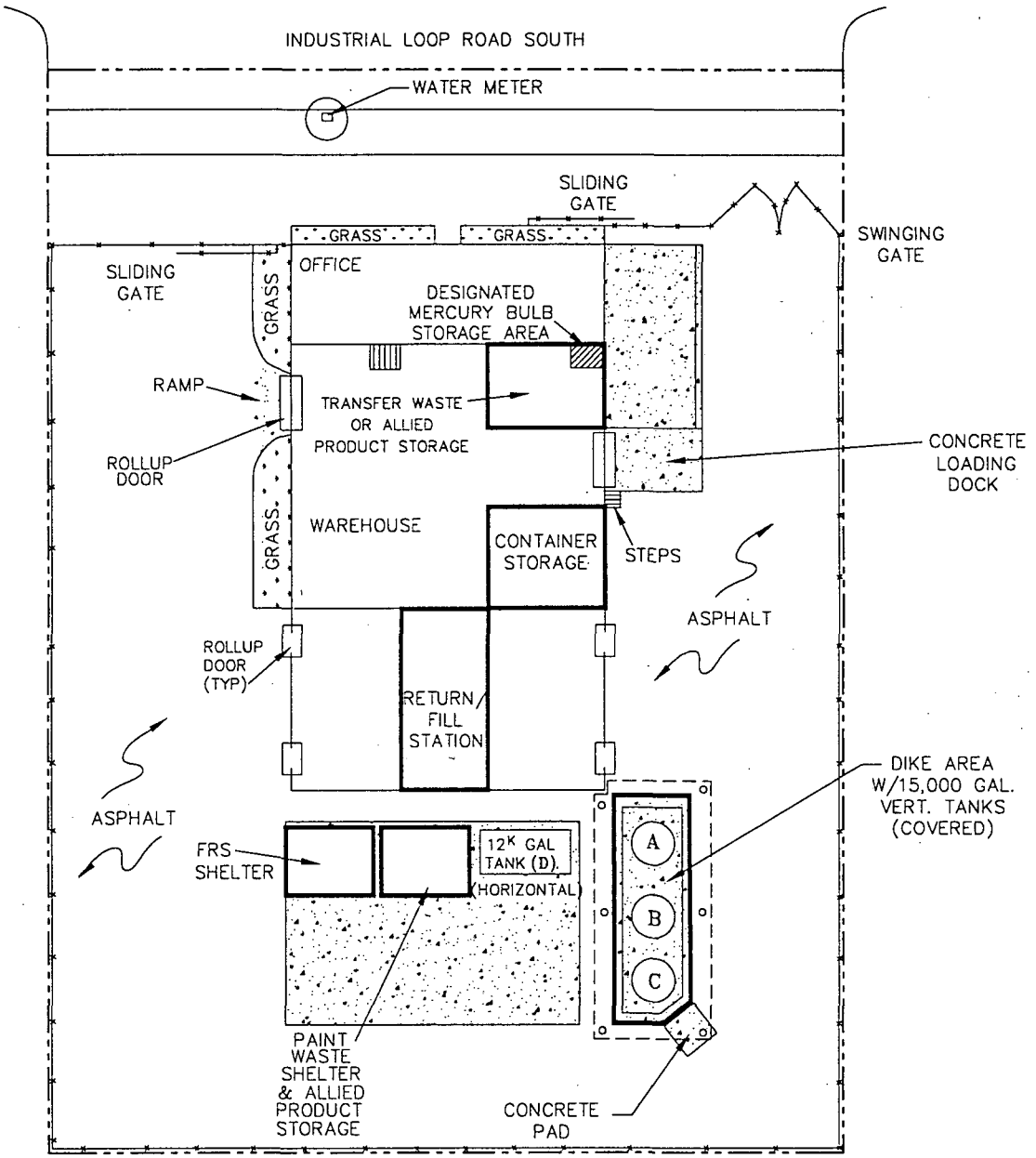
- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

N

0 APPROXIMATE SCALE 40
FEET

ERM

Figure 5.1-2
Locations of Hazardous Waste Storage Areas
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE
- HAZARDOUS WASTE MANAGEMENT AREA

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

N

0 APPROXIMATE SCALE 40

FEET

ERM

FIGURE 5.2-1

INSPECTION LOG SHEET FOR:
Weekly Inspection of SAFETY AND EMERGENCY EQUIPMENT, SECURITY DEVICES AND MISCELLANEOUS EQUIPMENT

INSPECTOR'S NAME/TITLE _____

INSPECTOR'S SIGNATURE: (SIGN ON THE DAY INSPECTION IS PERFORMED; PERFORM INSPECTION ON THE SAME DAY EVERY WEEK)				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
____/____/____	____/____/____	____/____/____	____/____/____	____/____/____
DATE: (M / D / Y)				
_____	_____	_____	_____	_____
TIME				

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 or 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 malfunctioning or inadequate aprons, gloves, glasses, respirators, emergency respirators, emergency respirator is missing components, items requiring security or clean environment are exposed to the environment, other: _____

Communication Devices: A N
If 'N', circle appropriate problem: inadequate supply of telephones, malfunctioning telephone(s), malfunctioning intercom, emergency alarm does not work, telephones are not located where needed, 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: _____

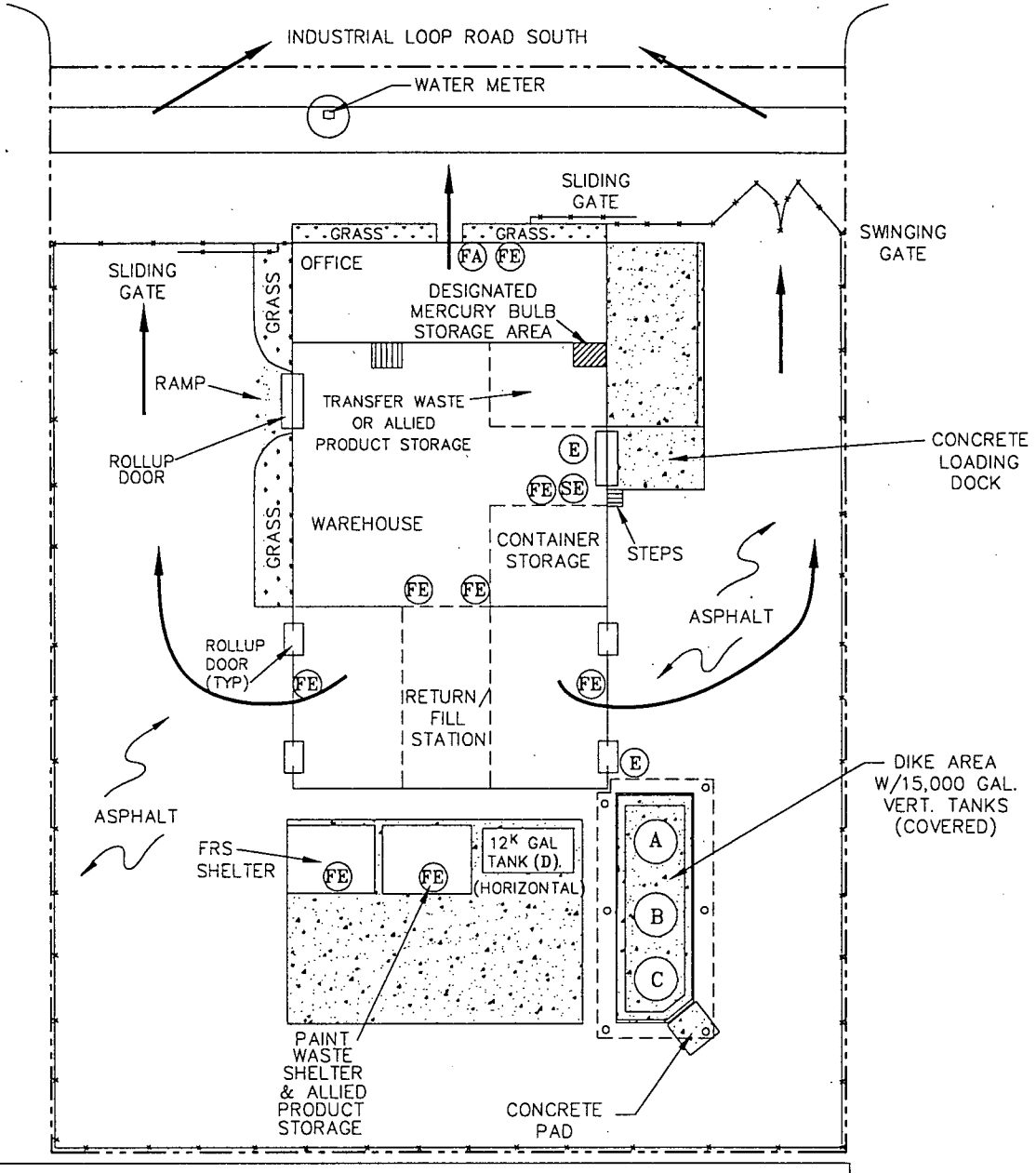
MISCELLANEOUS EQUIPMENT

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 REPAIRS OF ANY ITEMS INDICATED AS "NOT ACCEPTABLE": _____

* 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)

Figure 5.6-1
Locations of Emergency Equipment
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

- (FE) FIRE EXTINGUISHER
- (E) EYE WASH AND SHOWER
- (FA) FIRST AID
- (SE) SPILL EQUIPMENT
- EVACUATION ROUTES

N

0 APPROXIMATE SCALE 40
FEET

ERM

FIGURE 5.6-2

SAFETY-KLEEN CORP. - U.S. SERVICE CENTERS AND DCs/ACs/OCs
INCIDENT REPORT FORM

Report all environmental incidents to Infotrac, 1-800-468-1760 immediately (including fires, releases, etc.).

1. Facility Number:_____ Facility Location:_____
2. Incident Date:_____ Approx. Time Began:_____ Discovered:_____ Ended:_____
3. Reported By:_____
4. Incident Location: (a) If at S-K site, specify area of facility:_____
   (b) If not at S-K site, specify location, contact, and phone #:_____

IF A RELEASE, COMPLETE THIS SECTION:

5. Describe incident in detail (if applicable include materials, volume released, and persons/property involved):_____
6. Materials involved: (common name, chemical name)_____
7. Cause of incident :_____
8. Injuries or property damage :_____
9. Describe response action and material not recovered:_____
10. Cleanup residue volume:_____ Spill Kit Restocked? __Yes __No
11. Emergency response contractor (specify name and phone #):_____
12. Emergency agencies at scene (names and phone #s):_____
13. Potential public exposure? yes___ no___ comments:_____
14. Describe actions taken to prevent recurrence:_____
15. Spill residue shipping papers (check): __Bill of Lading __Manifest __Not Applicable
16. Emergency EPA ID # (offsite releases):_____

17. IF NOT A RELEASE, DESCRIBE INCIDENT:_____
18. Follow-up action:_____

19. Notification:

	S-K Infotrac 1-800-468-1760	State (SERC, EPA)	Nat'l Response Center 1-800-424-8802	Local (LEPC, other)
Required?	X yes	__yes __no	__yes __no	__yes __no
Date/Time:				
Contact name:				
Report #:				
Comments rec'd:				

20. Written Reports:

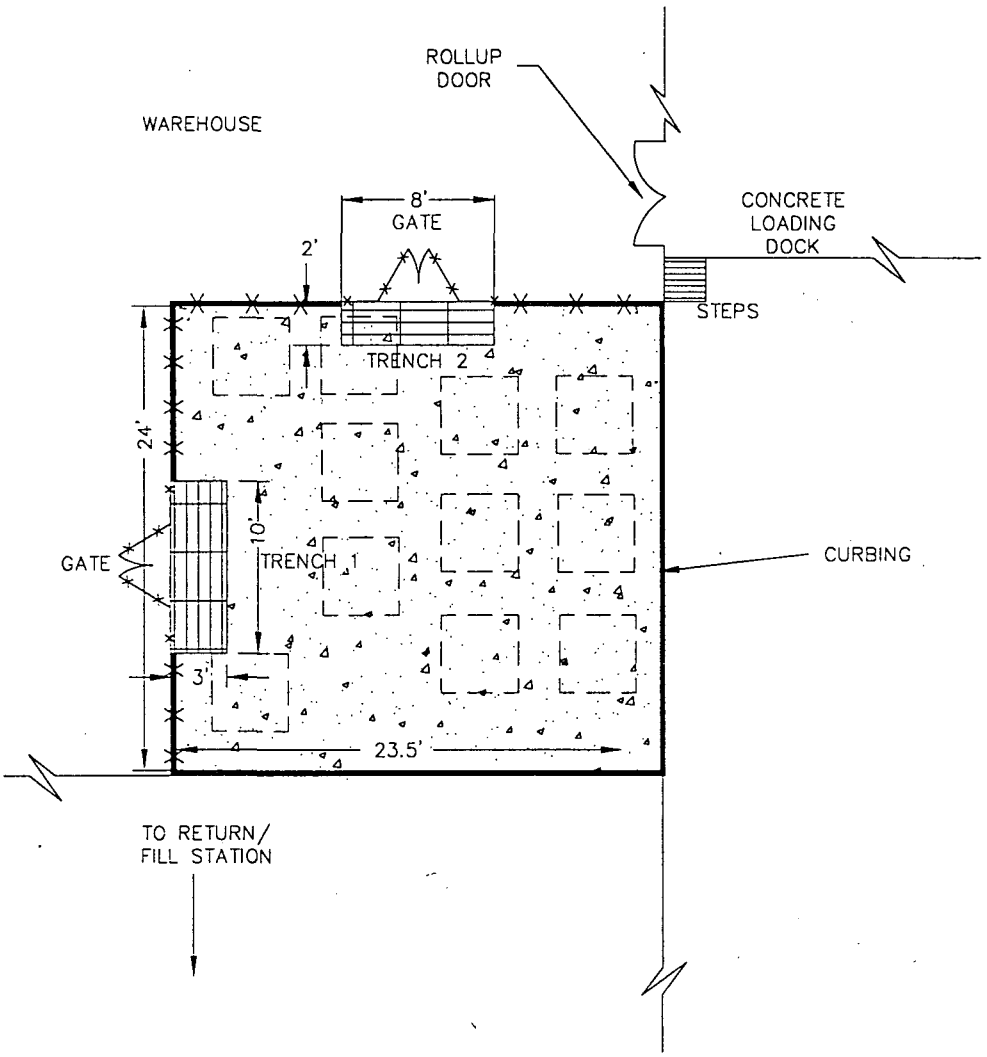
Required?	X no	__yes __no	__yes __no	__yes __no

Name of preparer (print):_____ Date:_____

Distribution: (1) immediately deliver/fax to facility Environmental Engineer; (2) within 24 hours fax to Environmental Affairs Manager; (3) file original in Facility Incident Report File (EHS 1430). (NO MAIL DISTRIBUTION REQUIRED.)

REVISION 0
AUGUST 20, 1997

Figure 5.6-3
Container Storage Area
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

GRATING

WOOD PALLETS

CONCRETE

CURBING (4" CONCRETE)

FENCE

N

0 APPROXIMATE SCALE 10

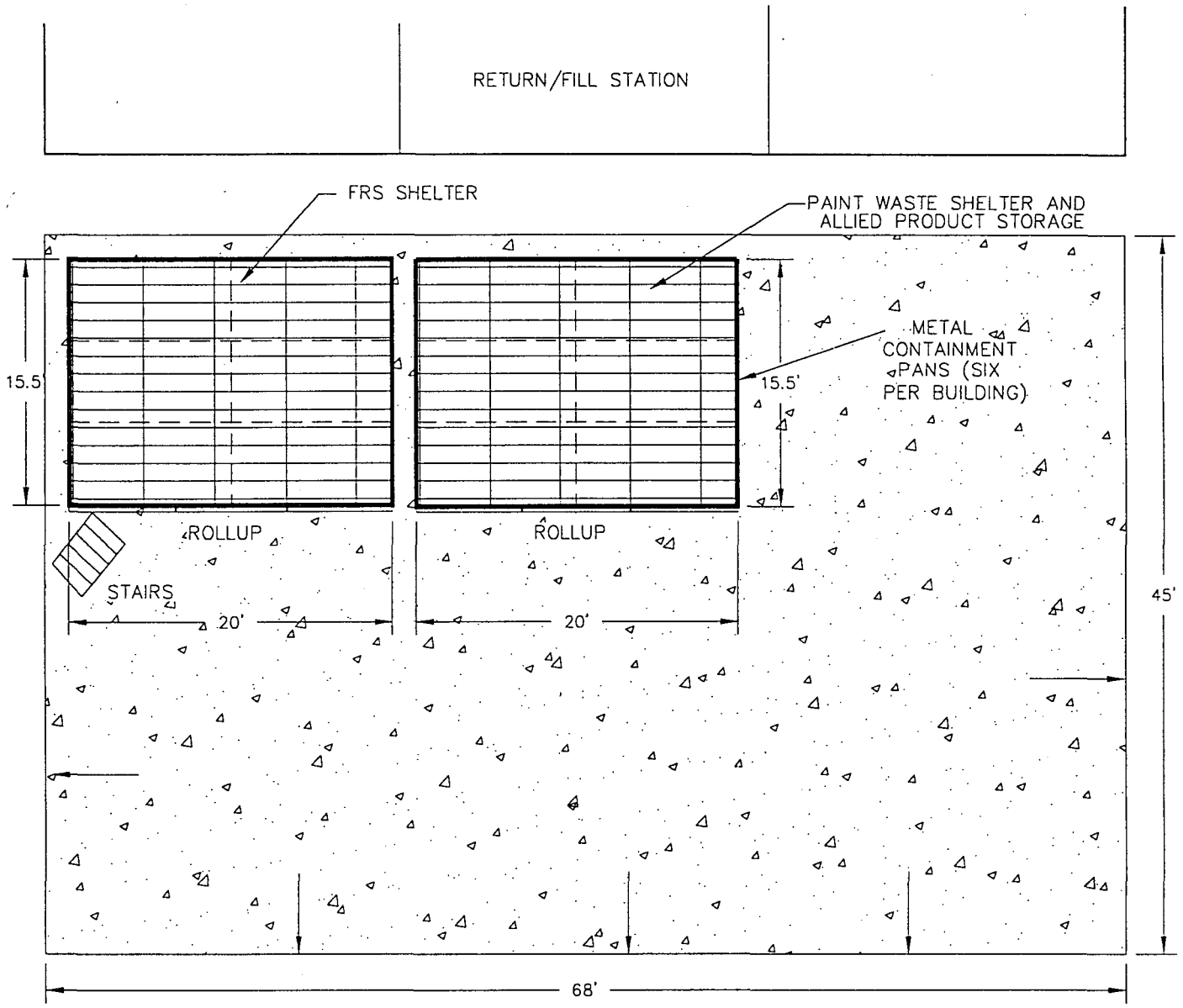
FEET

13112.26/31126CS/072192-5

ERM

REVISION 0
AUGUST 20, 1997

Figure 5.6-4
Container and Paint Waste Storage Area
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- METAL CONTAINMENT PAN (PAN DEPTHS ARE 0.5 FEET)
- GRATING (GRATING IS ELEVATED ~3 FEET ABOVE GROUND SURFACE)
- CONCRETE
- DIRECTION OF SLOPED EDGES

N

0 APPROXIMATE SCALE 10
FEET

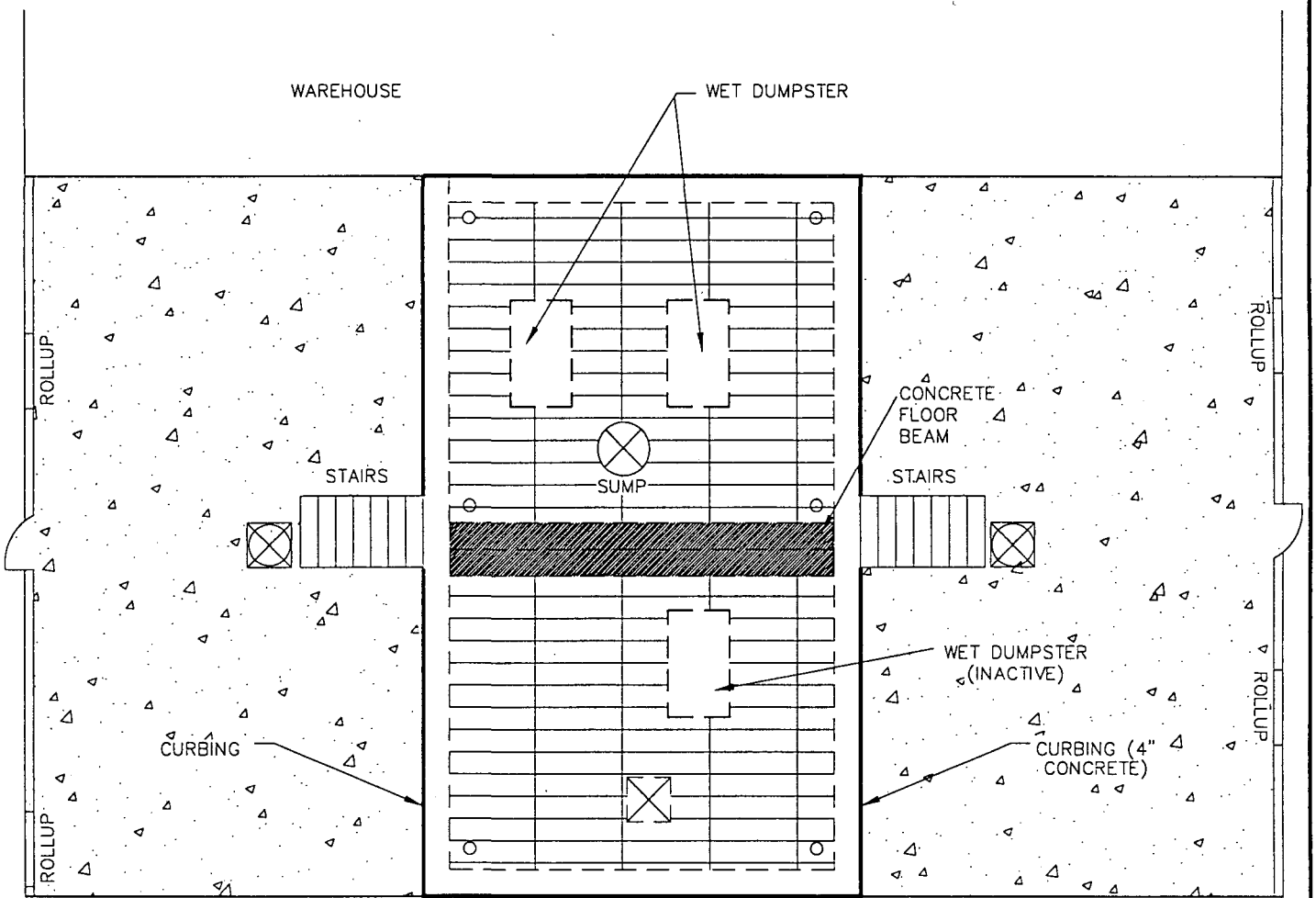
NOTE: THE FRS SHELTER AND PAINT WASTE SHELTER/ALLIED PRODUCT STORAGE SHELTER ARE FULLY ENCLOSED & COVERED SHEDS

311.26/31126PST/072197

ERM

REVISION 0
AUGUST 20, 1997

Figure 5.6-5
Return/Fill Station
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- FILL NOZZLES
- SUMP
- GRATING
- CURBING (4" CONCRETE)

N

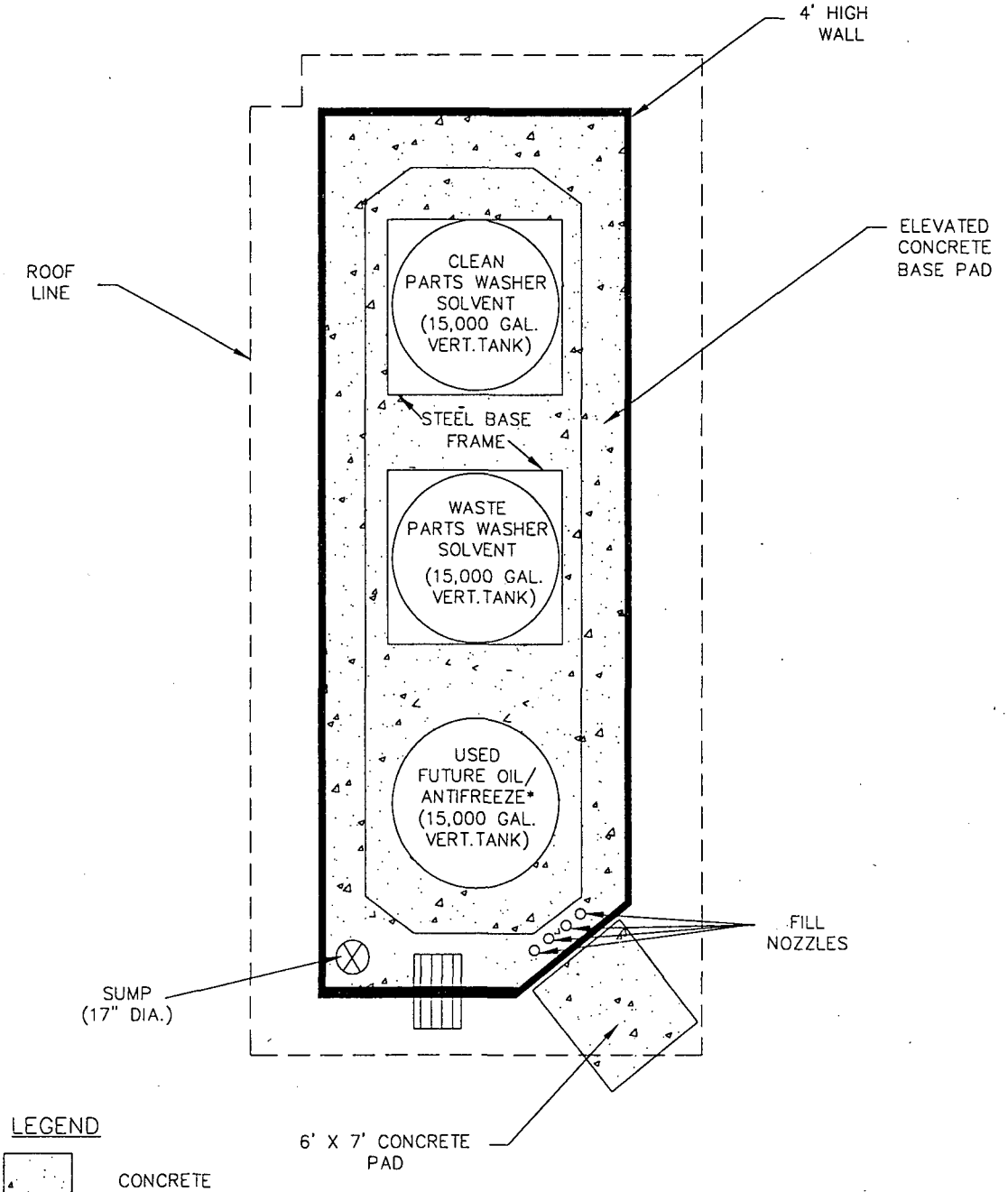
0 APPROXIMATE SCALE 10
FEET

13112.26/31126RF/021192-2

ERM.

REVISION 0
AUGUST 20, 1997

Figure 5.6-6
Tank Storage Area
Safety-Kleen Corp. Facility
Orange Park, Florida



*TANK TO BE CLOSED BY 12/31/97 AND PUT INTO NEW SERVICE FOR USED OIL & ANTIFREEZE

ERM

TABLE 5.1-1
PERMITTED AND TRANSFER WASTES

Waste Type	Process Code(s)	Estimated Annual Amounts (Tons)	Waste Codes
Spent Parts Washer Solvent*	S01** S02***	405.9	D001 and D-Codes Listed in Note Below
Dumpster Sediment	S01**	Included Above	D001 and D-Codes Listed in Note Below
Tank Bottoms	S01**	Included Above	D001 and D-Codes Listed in Note Below
Used Immersion Cleaner (New Formula) IC699	S01**	21.6	D-Codes Listed in Note Below
Dry Cleaning Waste (Perchloroethylene)	S01**	350	F002 and D-Codes Listed in Note Below
Dry Cleaning Waste (Non-perchloroethylene)	S01****	Included Above	Transfer wastes - waste codes assigned by generator.
Paint Wastes	S01**	46	D001, F003, F005 and D-Codes Listed in Note Below
Fluid Recovery Service (FRS) Waste	S01 *****	250	Transfer wastes - waste codes assigned by generator.
Mercury-Containing Lamps/ Devices	N/A****	Less than 2.2	Not applicable - handled as nonhazardous transfer wastes.
Branch-Generated Liquids/Solids (Debris)	S01**	17	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005
Oil Filters	S01**	7	None
Truck Wash	S02***	1	None******
Aqueous Brake Cleaner	S01** S02***	22.4	D-Codes Listed in Note Below
Aqueous Parts Washer	S01** S02***	5	D-Codes Listed in Note Below

NOTES:

D-Codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043

* Spent parts washer solvents are transported from the customer to the Orange Park Branch in accordance with the generator's hazardous waste determination.

** This waste will be stored in containers in the container storage area. The maximum capacity of hazardous waste in the container storage area is 2,553 gallons. An additional 4,800 gallons of hazardous waste may be stored in the paint shelter.

*** The spent parts washer solvent storage tank has a capacity of 15,000 gallons and may be filled up to 14,250 gallons.

**** This waste will be held for transfer in containers in the transfer area.

***** This waste will be held for transfer in containers in the transfer area or in the FRS shelter (see Section 2.3 for commonly handled wastes).

****** Truck washwater by generator knowledge is most likely nonhazardous, however, the water is being pumped to the spent parts washer solvent tank to cover possible D-Codes listed in the note above.

N/A Process code not applicable.

TABLE 5.1-1

PERMITTED AND TRANSFER WASTES

Waste Type	Process Code(s)	Estimated Annual Amounts (Tons)	Waste Codes
Spent Parts Washer Solvent*	S01** S02***	433.3	D001 and D-Codes Listed in Note Below
Dumpster Sediment	S01**	Included Above	D001 and D-Codes Listed in Note Below
Tank Bottoms	S01**	Included Above	D001 and D-Codes Listed in Note Below
Used Immersion Cleaner (New Formula) IC699	S01**	21.6	D-Codes Listed in Note Below
Dry Cleaning Waste (Perchloroethylene)	S01**	350	F002 and D-Codes Listed in Note Below
Dry Cleaning Waste (Non-perchloroethylene)	S01****	Included Above	Transfer wastes - waste codes assigned by generator.
Paint Wastes	S01**	46	D001, F003, F005 and D-Codes Listed in Note Below
Fluid Recovery Service (FRS) Waste	S01 *****	250	Transfer wastes - waste codes assigned by generator.
Mercury-Containing Lamps/ Devices	N/A****	Less than 2.2	Not applicable - handled as nonhazardous transfer wastes.
Branch-Generated Liquids/Solids (Debris)	S01**	17	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005

NOTES:

D-Codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043

* Spent parts washer solvents are transported from the customer to the Orange Park Branch in accordance with the generator's hazardous waste determination. May include aqueous brake cleaner and aqueous parts washer solvent.

** This waste will be stored in containers in the container storage area. The maximum permitted capacity of hazardous waste in the container storage area is 2,168 gallons. An additional 1,280 gallons of hazardous waste has been permitted to be stored in the paint shelter.

*** The spent parts washer solvent storage tank has a capacity of 15,000 gallons and may be filled up to 14,250 gallons.

**** This waste will be held for transfer in containers in the transfer area.

***** This waste will be held for transfer in containers in the transfer area or in the FRS shelter.

N/A Process code not applicable.

TABLE 5.2-1

INSPECTION SCHEDULE

Area/Equipment	Specific Item	Types of Problems	Frequency of Inspection
Safety Equipment	Fire Extinguishers	• Overdue inspection • Inadequately charged • Inaccessible	Weekly
	Eyewash	• Disconnected/malfunctioning values • Pressure • Inaccessible	Weekly
	First-Aid Kit	• Inadequate inventory	Weekly
	Spill Cleanup Equipment	• Inadequate supply of sorbent, towels, shovels, mops, empty drums	Weekly
	Personal Protection Equipment	• Inadequate supply of aprons, glasses, respirators	Weekly
Security Equipment	Gates and Locks	• Sticking corrosion, lack of warning signs	Weekly
	Fence	• Broken ties, corrosion, holes, distortion	Weekly
Storage Tank System-Storage Tanks	Volume in Tank	• Must never be more than 95 percent full	Each operating day
	Tank Exterior	• Rusty or loose anchoring, lack of grounding, wet spots, discoloration, leaks, distortion	Each operating day
	High Level Alarms	• Malfunctioning siren/strobe light	Each operating day
	Volume Gauges	• Disconnected, sticking, condensation	Each operating day
Secondary Containment	Bottom and Walls	• Cracks, debris, ponding, wet spots/stains, deterioration, displacement, leaks	Each operating day
	Rigid Piping and Supports	• Distortion, corrosion, paint failures, leaks	Each operating day

TABLE 5.2-1

INSPECTION SCHEDULE

Area/Equipment	Specific Item	Types of Problems	Frequency of Inspection
Transfer Pumps and Hoses	Pumps Seals	• Leaks	Each operating day
	Motors	• Overheating	Each operating day
	Fittings	• Leaks	Each operating day
	Valves	• Leaks, sticking	Each operating day
	Hose Connections and Fittings	• Cracks, loose, leaks	Each operating day
	Hose Body	• Crushed, cracked, thin spots, leaks	Each operating day
Return/Fill Station	Wet Dumpster	• Excess sediment build-up, leaks, rust, split seams, distortion, deterioration, excess debris	Each operating day
Container Storage Area	Total Volume in Storage	• Exceeds permitted limit	Each operating day
	Condition of Drums	• Missing or loose lids; labels missing, incomplete or incorrect; rust, leaks, distortion	Each operating day
	Stacking/Placement/ Aisle Space	• Containers not on pallets, unstable stacks, inadequate aisle space	Each operating day
Secondary Containment	Curbing, Floor and Sump	• Ponding/wet spots, deterioration, displacement, leaks, other	Each operating day

TABLE 5.6-1

EMERGENCY RESPONSE EQUIPMENT

Description	Type/Capacity	Location	Quantity
Fire Extinguisher	ABC (10 lb)	Container Storage Area	3
Fire Extinguisher	ABC	Return/Fill Station Area	4
Fire Extinguisher	ABC	Office	1
Eyewash	Fountain	Warehouse	1
Eyewash	Fountain	Tank Storage Area	1
First-Aid	Standard	Office	1
Telephones	Standard	Manager's Office	1
Telephones	Standard	Secretary's Desk	1
Telephones	Standard	Warehouse	2
Gloves	Rubber	Emergency Equip. Area	Min. 1 pair
Protective Clothing	Apron	Emergency Equip. Area	Min. 1
Eye Protection	Goggles/Safety Glasses	Emergency Equip. Area	Min. 1
Sorbent Material	Oil Absorbing	Emergency Equip. Area	Min. 1 bag
Shovel	Standard	Emergency Equip. Area	Min. 1
Mop and Bucket	Standard	Emergency Equip. Area	Min. 1
Pump	Hand-held, Electric	Emergency Equip. Area	Min. 1
Respirator	Air Purifying	Emergency Equip. Area	Min. 2
Wet/Dry Vacuum	Portable, Electric	Emergency Equip. Area	1
Empty Drums for Overpack	30, 55, and 85 gallons	Container Storage Area	4

TABLE 5.8-1

DESCRIPTION AND USES OF EMERGENCY EQUIPMENT

Item	Location	Use/Description
Gloves	Locker Room/Emergency Equipment Area	The rubber or plastisol gloves sold by Safety-Kleen are to be used when handling the solvents.
Safety Glasses	Locker Room/Emergency Equipment Area	To be worn when loading or unloading solvent.
Plastic Aprons	Locker Room/Emergency Equipment Area	For situations where a solvent may get on the worker's clothing.
Eyewash Stand	Container storage area and return/fill station	The workers should operate the stand and become familiar with its operation.
Showers	Locker Room	These are used for emergency and routine cleaning of employees.
Fire Extinguisher	Points where solvent is transferred	An ABC extinguisher is a universal system used on paper, wood, and electrical, as well as solvent fires. The extinguishers must be full and carry an inspection tag. The accepted extinguisher is available as S-K Part No. 4009.
Absorbent Material	Loading/Unloading Area and Warehouse	An adequate supply will be on hand to handle small spills. S-K Part No. 8890 A 50-pound bag will also be kept in the warehouse to remediate and prevent the spread of large spills.
Air Purifying Respirator	Locker Room/Emergency Equipment Area	To be worn by any person entering an area or performing work where potentially harmful fumes are present or suspected to be present but are not considered to be immediately dangerous to life and health.
Portable Pumps Wet/Dry Vacuum	Warehouse	For use in picking up liquid spills in the container containment area, or other paved areas, and to transfer materials associated with a spill.
Recovery Containers	Warehouse	Emergency storage of spilled product, cleaning fluids, or other materials associated with a spill.
Plastic	Warehouse	To be used for containment of decontamination zones.
Duct Tape	Warehouse	Taping of protective clothing, containment plastic, and other miscellaneous uses.
First-Aid Supplies	Locker Room/Emergency Equipment Area	Minor first-aid needs and health problems.
Shovels and Mops	Warehouse	To be used to collect spills and spill residue.
Communication Equipment	Throughout the Facility	Six telephones with paging/loudspeaker systems are available in the office and warehouse for internal and external communications.
Decontamination Equipment	Warehouse	Two brushes, a box of detergent and cloth rags are available for decontamination of clean-up equipment.

Appendix A

Material Safety Data Sheets

IMMERSION CLEANER AND COLD PARTS CLEANER
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 1 -- PRODUCT AND PREPARATION INFORMATION

PRODUCT INFORMATION

IDENTITY (TRADE NAME): IMMERSION CLEANER AND COLD PARTS CLEANER

SYNONYMS: None

SK PART NUMBERS: 50, 699, 6861, 9699

FAMILY/CHEMICAL NAME: None

PRODUCT USE: For cleaning carburetors and metal parts.
If this product is used in combination with other chemicals, refer to the Material Safety Data Sheets for those chemicals.

24-HOUR EMERGENCY TELEPHONE	*MEDICAL:*	*TRANSPORTATION:*
These numbers are for emergency use only. If you desire non-emergency information about this product, please call a telephone number listed below.	**1-800-752-7869 (USA)**	**1-708-888-4660 (USA)**
	1-312-942-5969 (CANADA)	**1-613-996-6666 (CANADA)**

MANUFACTURER/SUPPLIER: Safety-Kleen Corp. - 1000 North Randall Road- Elgin, IL, 60123-7857 USA
Telephone number: 1-800-669-5740
Safety-Kleen Canada Inc. - 300 Woolwich Street South - Breslau, ON, Canada
N0B 1M0 Telephone number: 1-800-265-2792

PREPARATION INFORMATION

MSDS FORM NO.: 82411 *REVISION DATE:* December 1, 1994

ORIGINAL ISSUE DATE: December 1, 1989 *SUPERSEDES:* March 18, 1992

PREPARED BY: Product MSDS Coordinator *APPROVED BY:* MSDS Task Force

TELEPHONE NUMBER: **For Product Technical Information Call 1-312-694-2700 (USA); 1-519-648-2291 (Canada)**

SECTION 2 -- HAZARDOUS COMPONENTS

				OSHA PEL		ACGIH TLV		OTHER DATA	
NAME	SYNONYM	CAS NO.	WT%	TWA	STEL	TWA	STEL	LD[a]	LC[b]
Solvent naphtha (petroleum), heavy arom.	Aromatic 150	64742-94-5	30-60	N.Av.[e]	N.Av.	N.Av.	N.Av.	>5000[k]	>5000[k] mg/m^3/4 hours
N-Methyl-2-pyrrolidone	1-Methyl-2-pyrrolidinone	872-50-4	10-30	N.Av.[f]	N.Av.	N.Av.	N.Av.	3914	N.Av.
Propanol, 1(or 2)-(2-methoxy-methylethoxy)-	Dipropylene glycol monomethyl ether	34590-94-8	7-13	100 ppm (skin)	150[h] ppm (skin)	100 ppm (skin)	150 ppm (skin)	5135	N.Av.
Oleic acid	Red Oil	112-80-1	5-10	5[c] mg/m^3	N.Av.	10[d] mg/m^3	N.Av.	74000	N.Av
Monoethanolamine	2-Amino-ethanol	141-43-5	3-7	3 ppm	6[h] ppm	3 ppm	6 ppm	1720	N.Av

IMMERSION CLEANER AND COLD PARTS CLEANER
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

NAME	SYNONYM	CAS NO.	WT%	OSHA PEL TWA	OSHA PEL STEL	ACGIH TLV TWA	ACGIH TLV STEL	OTHER DATA LD[a]	OTHER DATA LC[b]
*Naphthalene[g]	Naphthalin	91-20-3	3-6	10 ppm	15[h] ppm	10 ppm	15 ppm	490	N.Av
1,4-Dichlorobenzene	Dichlorobenzene, para-	106-46-7	0-0.2**	75 ppm	110[h] ppm	75 ppm	110 ppm	500	N.Av
Methylene chloride	Dichloromethane	75-09-2	0-0.2**	500 ppm	N.Av.	50 ppm	N.Av.	1600	88000 mg/m^3/30 minutes

N.Av. = Not Available
*See Section 9-SARA Title III
**Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product

[a]Oral-Rat LD50 (mg/kg)
[b]Inhalation-Rat LC50
[c]NIOSH recommended for a similar material: 14 ppm 10 hour TWA
[d]Vegetable oil mists
[e]Respirable fraction
[f]Manufacturer recommended exposure limit – 100 ppm TWA
[g]Constituent of Solvent naptha (petroleum), heavy arom. (Aromatic 150)
[h]Reference source 29 CFR 1910.1000 Ch. XVII (7-1-92 edition)
[k]Based on a similar material

SECTION 3 -- EMERGENCY AND FIRST AID PROCEDURES

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

SKIN: Remove contaminated clothing and shoes. Wash skin twice with soap and water. Consult physician if irritation or pain persists.

INHALATION: (Breathing) 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.

INGESTION: (Swallowing) Seek immediate medical attention. Do NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips to avoid aspiration (breathing) into the lungs.

SPECIAL NOTE TO PHYSICIAN: No specific antidote available. Treat symptomatically and supportively. Gastric lavage is not recommended for monoethanolamine poisoning. Call medical emergency telephone number (see Section 1) for additional information.

SECTION 4 -- HEALTH HAZARD DATA AND TOXICOLOGICAL PROPERTIES

PRIMARY ROUTES OF EXPOSURE: Eye and skin contact; inhalation, ingestion.

EXPOSURE LIMITS: See Section 2.

SIGNS AND SYMPTOMS OF EXPOSURE

ACUTE: *Eyes:* Contact with liquid or exposure to vapor may cause severe irritation, pain, and burns.

Skin: Contact removes skin oils, possibly leading to irritation or dermatitis. Dipropylene glycol monomethyl ether [propanol, 1 (or 2)-(2-methoxy-methylethoxy)-] is a skin absorption hazard.

Inhalation (Breathing): High concentrations of vapor or mist may irritate the respiratory tract. High concentrations of vapor or mist may cause nausea and vomiting. High concentrations of vapor or mist may cause headaches, dizziness, incoordination, numbness, irregular heartbeat, and other central nervous system effects. In more severe cases, high concentrations of vapor or mist may cause drunkenness or unconsciousness. When in contact with mucous membranes, liquid aromatic hydrocarbons may cause vasodilation and chemical pneumonitis with pulmonary edema, hemorrhaging, and tissue necrosis. Naphthalene poisoning may affect eyes.

IMMERSION CLEANER AND COLD PARTS CLEANER
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

Ingestion (Swallowing): Harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, abdominal pain, symptoms of central nervous system depression as noted under ***ACUTE Inhalation***, and myocardial injury. Monoethanolamine may cause mucosal burns of the mouth and esophagus. Breathing into the lungs during ingestion or vomiting may cause lung injury and possibly death.

CHRONIC: Prolonged or repeated eye contact may cause conjunctivitis or tissue injury. Prolonged or repeated skin contact may cause drying, cracking, blisters, or dermatitis. Prolonged or repeated contact with aromatic hydrocarbons has been reported to cause subtle, long-lasting neurological effects. Repeated or prolonged exposure to monoethanolamine may cause inflammatory and ulcerative changes in the mouth and possibly bronchial and gastrointestinal disturbances. Cataracts and corneal ulcerations have been reported in humans following prolonged or repeated exposure to naphthalene.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing liver, kidney, respiratory, central nervous system, or skin disorders may have increased susceptibility to the effects of exposure.

CARCINOGENICITY: IARC classifies chemicals by their carcinogenic risk, including agents that are known, probable, or possible carcinogens. NTP classifies chemicals as either known carcinogens, or for which there is a limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. ACGIH recognizes several categories of carcinogens, including confirmed human carcinogens, suspected human carcinogens, and animal carcinogens.

Methylene chloride and 1,4-dichlorobenzene are listed by IARC as possible carcinogens.
Methylene chloride and 1,4-dichlorobenzene are classified by NTP as having limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.
Methylene chloride is recognized by ACGIH as a suspected human carcinogen.
1, 4 - Dichlorobenzene is recognized by ACGIH as an animal carcinogen.

Also see Section 9.

OTHER POTENTIAL HEALTH HAZARDS: The following information is required by Canadian WHMIS regulations. Irritancy is covered in ***SIGNS AND SYMPTOMS OF EXPOSURE*** in Section 4. There is no known human sensitization, toxicologically synergistic product, or teratogenicity associated with this material.
N-methyl-2-pyrrolidone and methylene chloride have demonstrated experimental effects for reproductive toxicity and mutagenicity.

SECTION 5 -- FIRE AND EXPLOSION HAZARD DATA

EMERGENCY RESPONSE GUIDE NUMBERS: 60
Reference *DOT Emergency Response Guidebook*
39
Reference *Dangerous Goods Initial Emergency Response Guide*

FIRE AND EXPLOSION HAZARDS: Decomposition and combustion products may be toxic. Heated containers may rupture, explode, or be thrown into the air. Vapors are heavier than air and may travel great distances to ignition source and flash back. Not sensitive to mechanical impact. Material may be sensitive to static discharge, which could result in fire or explosion.

FIRE FIGHTING PROCEDURES: Keep storage containers cool with water spray. Wear positive-pressure, self-contained breathing apparatus (SCBA) and chemical protective clothing. Structural firefighters' protective clothing is not effective. Fully encapsulating suits should be worn for maximum protection.

EXTINGUISHING MEDIA: Carbon dioxide, regular foam, dry chemical, water spray.

CONDITIONS OF FLAMMABILITY: Heat, sparks, or flame.

FLASH POINT: 150°F (65°C) (approximately) Tag Closed Cup

AUTOIGNITION TEMPERATURE: 830°F (444°C) (based on Solvent naphtha (petroleum), heavy arom.)

IMMERSION CLEANER AND COLD PARTS CLEANER
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

FLAMMABLE LIMITS IN AIR:	*LOWER:* 0.6 Vol.% (based on Solvent naphtha (petroleum), heavy arom.) *UPPER:* 7.0 Vol.% (based on Solvent naphtha (petroleum), heavy arom.)
HAZARDOUS COMBUSTION PRODUCTS:	Burning may produce carbon monoxide, nitrogen oxides, irritating smoke, and fumes.

SECTION 6 -- REACTIVITY DATA

STABILITY:	Stable under normal temperatures and pressures, and not reactive with water.
INCOMPATIBILITY (MATERIALS AND CONDITIONS TO AVOID):	Avoid acids, oxidizing agents, heat, sparks, or flame. Oleic acid can react with perchlorates and perchloric acid to form explosive products.
HAZARDOUS POLYMERIZATION:	Not known to occur under normal temperatures and pressures
HAZARDOUS DECOMPOSITION PRODUCTS:	None under normal temperatures and pressures.

SECTION 7 -- PREVENTIVE MEASURES

PRECAUTIONS FOR SAFE USE AND HANDLING

HANDLING PRECAUTIONS:	Keep away from heat, sparks, or flame. Where explosive mixtures may be present, equipment safe for such locations should be used. Avoid contact with eyes, skin, clothing, or shoes. Use in well ventilated area and avoid breathing vapor or mist.
PERSONAL HYGIENE:	Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco products. Clean contaminated clothing, shoes, and protective equipment before reuse. Discard contaminated clothing, shoes, or protective equipment if they cannot be thoroughly cleaned.
SHIPPING AND STORING PRECAUTIONS:	Keep container tightly closed when not in use and during transport. Do not pressurize, cut, heat, weld, grind, or expose containers to flame or other sources of ignition. Empty product containers may contain product residue. See Section 9 for Packing Group information.
SPILL PROCEDURES:	Remove all ignition sources. Do not touch or walk through spilled material; stop leak if you can do it without risk. Wear protective equipment specified in Section 7, CONTROL MEASURES. Ventilate area and avoid breathing vapor or mist. For large spills, isolate area and deny entry; dike far ahead of liquid spill for later disposal. Contain away from surface waters and sewers. Contain as a liquid for possible recovery or sorb with compatible sorbent material and shovel with a clean, non-sparking tool into closable container for disposal. See *DOT Emergency Response Guidebook* guide number 60 or *Dangerous Goods Initial Emergency Response Guide* guide number 39 for more information.
WASTE DISPOSAL METHODS:	Dispose in accordance with federal, state, provincial, and local regulations. Contact Safety-Kleen regarding recycling or proper disposal.

CONTROL MEASURES

EYE PROTECTION:	Where there is likelihood of eye contact, wear chemical goggles; use of contact lenses is not recommended.
PROTECTIVE GLOVES:	Use 4H, Silvershield (PE/EVAL), or equivalent gloves to prevent contact with skin.
RESPIRATORY PROTECTION:	Use NIOSH/MSHA-approved respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limit. A self-contained breathing apparatus (SCBA) and full protective equipment are required for large spills or fire emergencies. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134 and in Canada with CSA Standard 794.4-M1982.

IMMERSION CLEANER AND COLD PARTS CLEANER
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

ENGINEERING CONTROLS:	Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where explosive mixtures may be present, systems safe for such locations should be used.
OTHER PROTECTIVE EQUIPMENT:	Where spills and splashes are likely, wear appropriate chemical-resistant boots, apron, or other protective clothing. Clean water should be available in work areas for flushing the eyes and skin.

SECTION 8 -- PHYSICAL DATA

PHYSICAL STATE, APPEARANCE, AND ODOR:	Liquid, clear, brown.
ODOR THRESHOLD:	Not available.
SPECIFIC GRAVITY:	0.95 (water = 1)
DENSITY:	7.9 lb/gal
VAPOR DENSITY:	4.4 (air = 1)
VAPOR PRESSURE:	less than 0.4 mm Hg at 68°F (20°C)
BOILING POINT:	340°F (171°C) initial
FREEZING POINT:	less than 10°F (-12°C)
pH:	11
VOLATILE ORGANIC COMPOUNDS: (PHOTOCHEMICALLY REACTIVE AS PER 40 CFR PART 51.100(S))	92 WT%; 7.3 lb/US gal; 874 g/l
EVAPORATION RATE:	1.0 (butyl acetate = 1)
SOLUBILITY IN WATER:	Complete.
COEFFICIENT OF WATER/OIL DISTRIBUTION:	greater than 1
MOLECULAR WEIGHT:	Not available.

SECTION 9 -- OTHER REGULATORY INFORMATION

TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME:	COMPOUND CLEANING LIQUID, N.O.S. (contains Monoethanolamine)
DOT CLASS:	8
DOT ID NUMBER:	NA1760 Packing Group III
TDG CLASSIFICATION:	Corrosive Liquids, N.O.S. (contains monoethanolamine), Class 8, UN1760, Packing Group III

IMMERSION CLEANER AND COLD PARTS CLEANER
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SARA TITLE III:	The asterisked component listed in Section 2 is subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. Product poses the following physical and health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986: Immediate (Acute) Health Hazard Delayed (Chronic) Health Hazard Fire Hazard
WHMIS CLASSIFICATION:	Class B3, Combustible Liquids; Class D2A, Infectious and Toxic Materials, Other Toxic Effects, Very Toxic Material; Class E, Corrosive Material
TSCA:	All the components of this product are listed on, or are exempted from the requirement to be listed on, the TSCA Inventory.
CALIFORNIA:	This product contains detectable amounts of benzene CAS 71-43-2, 1,4 -dichlorobenzene CAS 106-46-7, methylene chloride CAS 75-09-2, perchloroethylene CAS 127-18-4, and trichloroethylene CAS 79-01-6. These materials are listed by the State of California as known carcinogens. This product contains a detectable amount of toluene CAS 108-88-3. This material is listed by the State of California as known to cause reproductive toxicity.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the material as supplied to the user.

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SAFETY-KLEEN PREMIUM GOLD SOLVENT

MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

safety-kleen

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SAFETY-KLEEN PREMIUM GOLD SOLVENT

SYNONYMS: (Also known as SAFETY-KLEEN PREMIUM GOLD SOLVENT - CALIF. and SAFETY-KLEEN PREMIUM SOLVENT.) Parts Washer Solvent; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Stoddard Solvent; Mineral Spirits.

PRODUCT PART NUMBERS: (Also known as 6639.) 6638.

PRODUCT USE: Cleaning and degreasing metal parts.
If this product is used in combination with other chemicals, refer to the Material Safety Data Sheets for those chemicals.

24-HOUR EMERGENCY TELEPHONES

	MEDICAL:	TRANSPORTATION (SPILL):
These numbers are for emergency use only. If you desire non-emergency information about this product, please call a telephone number listed below.	**1-800-752-7869 (USA) Extension 2**	**1-800-468-1760 (USA)**
	1-312-942-5969 (CANADA)	**1-613-996-6666 (CANADA)**

MANUFACTURER/SUPPLIER: Safety-Kleen Corp.
1000 North Randall Road
Elgin, IL, 60123-7857 USA
1-800-669-5740

TECHNICAL INFORMATION: 1-800-669-5740 Extension 7500

MSDS FORM NUMBER: 82658 (also formerly 82657) **ISSUE:** April 4, 1997

ORIGINAL ISSUE: January 26, 1995 **SUPERSEDES:** September 18, 1996

PREPARED BY: Product MSDS Coordinator **APPROVED BY:** MSDS Task Force

SAFETY-KLEEN PREMIUM GOLD SOLVENT
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

				OSHA PEL		ACGIH TLV			
WT%	NAME	SYNONYM	CAS NO.	TWA	STEL	TWA	STEL	LD[a]	LC[b]
100	Distillates (petroleum), *hydrotreated light*	N.Av.	64742-47-8	500[c] ppm	N.Av.	100[c] ppm	N.Av.	>5000[d]	>2000 mg/m^3/ 4 hours

N.Av. = Not Available
[a]*Oral-Rat LD50 (mg/kg)*
[b]Inhalation-Rat LC50
[c]Based on Stoddard Solvent.
[d]*Skin-Rat LD50>2000 mg/kg*

See 29 CFR 1910.1000(d)(2) and ACGIH Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices booklet (Appendix C) for the determination of exposure limits for mixtures. Consult an industrial hygienist or similar professional to confirm that the calculated exposure limits are appropriate.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING!

APPEARANCE
Liquid, clear, colorless to pale yellow, mild hydrocarbon odor.

IMMEDIATE HAZARDS
Combustible liquid and vapor.
Harmful if inhaled.
Eye and skin irritant.
May be harmful if swallowed.

DELAYED HAZARDS
Contains material which may cause central nervous system damage.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): High vapor or mist concentrations may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea and vomiting. High concentrations of vapor or mist may cause headaches, dizziness, incoordination, numbness, irregular heartbeat, and other central nervous system effects. Massive acute overexposure may result in rapid central nervous system depression, sudden collapse, deep coma, and death.

EYES: Direct contact with materials or exposure to vapors may cause irritation.

SKIN: Direct contact with materials or exposure to vapors may cause irritation. A single, prolonged exposure is not likely to cause the material to be absorbed through the skin in harmful amounts.

INGESTION (SWALLOWING): May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Breathing material into the lungs during ingestion or vomiting may cause lung injury and possible death.

SAFETY-KLEEN PREMIUM GOLD SOLVENT
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing lung, cardiac, central nervous system, or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated inhalation may cause toxic effects. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, swelling, or burns.

CANCER INFORMATION: No known carcinogenicity. For more information, see **SECTION 11: CARCINOGENCITY.**

Also see **SECTION 15: CALIFORNIA.**

SECTION 4: FIRST AID MEASURES

INHALATION: (BREATHING) Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYES: For direct contact, immediately flush eyes with plenty of water, holding eyelids apart, for 15 minutes. If irritation or redness from exposure to vapor or mist develops, move away from exposure into fresh air. Get medical attention if irritation or pain persists.

SKIN: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain persists.

INGESTION: (SWALLOWING) Immediately get medical attention. Do NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips to avoid breathing material into the lungs.

NOTE TO PHYSICIANS: No specific antidote available. Treat symptomatically and supportively. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Call medical emergency telephone number (see **SECTION 1**) for additional information.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 148°F (64°C) Tag Closed Cup (minimum)

FLAMMABLE LIMITS IN AIR: **LOWER:** 0.5 VOL% (minimum)
UPPER: 9.3 VOL% (maximum)

AUTOIGNITION TEMPERATURE: 440°F (227°C) (minimum)

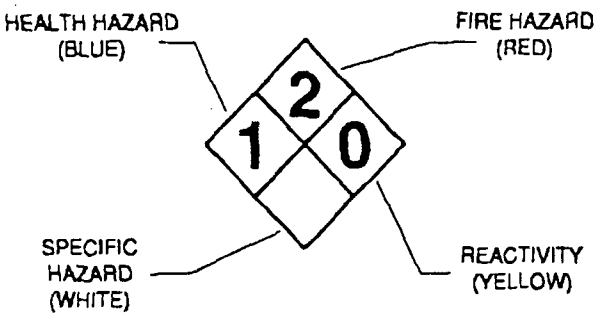
HAZARDOUS COMBUSTION PRODUCTS: Burning may produce carbon monoxide.

CONDITIONS OF FLAMMABILITY: Heat, sparks, or flame.

SAFETY-KLEEN PREMIUM GOLD SOLVENT
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical, water spray, or water fog.

NFPA 704 HAZARD IDENTIFICATION: This information is intended solely for the use by individuals trained in this system.



FIRE FIGHTING INSTRUCTIONS: Keep storage containers cool with water spray. Positive-pressure, self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing may provide limited protection.

FIRE AND EXPLOSION HAZARDS: Decomposition and combustion products may be toxic. "Empty" containers may retain residue and can be dangerous. Heated containers may rupture. Vapors can travel to ignition source and flash back. Vapor explosion hazard indoors, outdoors, or in sewers. Run-off to sewer may create fire or explosion hazard. Not sensitive to mechanical impact. Material may be sensitive to static discharge, which could result in fire or explosion.

EMERGENCY RESPONSE GUIDE NUMBER: 128
Reference *North American Emergency Response Guidebook*

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Wear protective equipment specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain away from surface waters and sewers. Contain as a liquid for possible recovery or sorb with compatible sorbent material and shovel with a clean, non-sparking tool into sealable container for disposal.

Additionally, for large spills: isolate hazard area. Keep unnecessary and unprotected personnel from entering. Dike far ahead of liquid spill for collection and later disposal.

SAFETY-KLEEN PREMIUM GOLD SOLVENT
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 7: HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks, or flame. Where explosive mixtures may be present, equipment safe for such locations should be used. Use clean, non-sparking tools and explosion-proof equipment. When transferring material, metal containers, including trucks and tank cars, should be grounded and bonded. Avoid contact with eyes, skin, clothing, and shoes. Use in well ventilated area. Do not breathe vapor or mist.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORT INFORMATION** for Packing Group information.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco products. Clean contaminated clothing, shoes, and protective equipment before reuse. Discard contaminated clothing, shoes, or protective equipment if they cannot be thoroughly cleaned.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limit. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limit. Where explosive mixtures may be present, equipment safe for such locations should be used.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Use NIOSH/MSHA-approved respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limit. A self-contained breathing apparatus (SCBA) and full protective equipment are required for large spills or fire emergencies. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4-M1982.

EYE PROTECTION: Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

SKIN PROTECTION: Where skin contact is likely, wear nitrile, Viton®, or equivalent protective gloves; use of butyl rubber, natural rubber, or equivalent gloves is not recommended.

SAFETY-KLEEN PREMIUM GOLD SOLVENT
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OTHER PROTECTIVE EQUIPMENT:	Where spills and splashes are likely, wear appropriate chemical-resistant boots, apron, or other protective clothing. Clean water should be available in work areas for flushing the eyes and skin.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR:	Liquid, clear, colorless to pale yellow, mild hydrocarbon odor.
ODOR THRESHOLD:	30 ppm (based on Stoddard Solvent)
SPECIFIC GRAVITY:	0.78 to 0.82 60°F/60°F (15.6°C/15.6°C) (water = 1)
DENSITY:	6.5 to 6.8 lb/US gal (780 to 820 g/l)
VAPOR DENSITY:	5 (air = 1) approximately
VAPOR PRESSURE:	0.2 mm Hg at 68°F (20°C) (approximately) 0.6 mm Hg at 100°F (38°C) (approximately)
BOILING POINT:	350°F (177°C) (initial)
FREEZING/MELTING POINT:	less than -45°F (-43°C)
pH:	Not applicable.
EVAPORATION RATE:	0.1 (butyl acetate = 1)
SOLUBILITY IN WATER:	Insoluble.
MOLECULAR WEIGHT:	160 (approximately)

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.
INCOMPATIBILITY:	Avoid acids, alkalies, oxidizing agents, reducing agents, or reactive halogens.
REACTIVITY:	Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.
HAZARDOUS DECOMPOSITION PRODUCTS:	None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS**.

SECTION 11: TOXICOLOGICAL INFORMATION

SENSITIZATION:	Based on best current information, there is no known human sensitization associated with these materials.

CARCINOGENICITY: IARC classifies chemicals by their carcinogenic risk, including agents that are known, probable, or possible carcinogens. NTP classifies chemicals as either known carcinogens, or for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. ACGIH recognizes several categories of carcinogens, including confirmed human carcinogens and suspected human carcinogens.

Based on best current information, there is no known carcinogenicity associated with these materials.

Also see **SECTION 15: CALIFORNIA.**

REPRODUCTIVE TOXICITY: Based on best current information, there is no known reproductive toxicity associated with these materials.

Also see **SECTION 15: CALIFORNIA.**

TERATOGENICITY: Based on best current information, there is no known teratogenicity associated with these materials.

MUTAGENICITY: Based on best current information, there is no known mutagenicity associated with these materials.

TOXICOLOGICALLY SYNERGISTIC PRODUCT(S): Based on best current information, there are no known toxicologically synergistic products associated with these materials.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: A Static Acute Bioassay as per the California Department of Fish and Game WPCL, was done using fathead minnows, and up to 750 ppm of the products in water.

The material passed the bioassay with only 1 out of 10 minnows dying. To fail the bioassay, more than 40% of the fish would die in 750 ppm.

OCTANOL/WATER PARTITION COEFFICIENT: Not available.

VOLATILE ORGANIC COMPOUNDS: 100 WT%; 6.5 to 6.8 lb/US gal; 780 to 820 g/l
Photochemically reactive as per 40 CFR Part 51.100(s).

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding recycling or proper disposal.

SAFETY-KLEEN PREMIUM GOLD SOLVENT
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

USEPA WASTE CODE(S): Not regulated.
Based on available data, this information applies to the material as supplied to the user. Processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

SECTION 14: TRANSPORT INFORMATION

DOT: COMBUSTIBLE LIQUID, N.O.S. (PETROLEUM NAPHTHA), NA1993, PGIII

TDG: Not regulated.

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

SARA SECTIONS 311 AND 312: Materials pose the following physical and health hazards as defined in 40 CFR Part 370 and are subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986:

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA SECTION 313: These products do not contain toxic chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: All the components of these products are listed on the TSCA Inventory.

CALIFORNIA: These products may contain a detectable amount of benzene CAS 71-43-2. This material is listed by the State of California as a known carcinogen.

Our testing of these products indicates that this compound is not always detectable. However, when detected, the benzene level is at or below the product specification of 0.4 mg/l.

These products may contain a detectable amount of p-dichlorobenzene CAS 106-46-7. This material is listed by the State of California as a known carcinogen.

Our testing of these products indicates that this compound is not always detectable. However, when detected, the p-dichlorobenzene level is at or below 7.5 mg/l.

These products may contain a detectable amount of toluene CAS 108-88-3. This material is listed by the State of California as known to cause reproductive toxicity.

SAFETY-KLEEN PREMIUM GOLD SOLVENT
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

Our testing of these products indicates that this compound is not always detectable. However, when detected, the toluene level is at or below 500 mg/l.

CANADIAN REGULATIONS

These products have been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS: B3, D2B

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All the components of these products are listed on the Canadian Domestic Substances List.

SECTION 16: OTHER INFORMATION

REVISION INFORMATION: New format.

LABEL/OTHER INFORMATION: These products are Underwriters Laboratories (UL) listed.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the material as supplied to the user.

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3E COMPANY
4920 Carroll Canyon Road
Diego, CA 92121
Ph: 619-677-0150
Fax: 619-677-0270

Material Safety Data Sheet Transmittal Form

25-Jul-97

Total # of Pages: 22
Request #: 137720
Processed By:

Recipient:

ATTN: RICH MORRIS

Tallahassee Branch
904-576-8060

Requester:

RICH MORRIS

Tallahassee Branch 307902
Safety-Kleen

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If you have any questions regarding the enclosed/attached MSDS or if we can be of any further assistance, please contact 3E COMPANY at (619) 677-0150.

3E Index #	Manufacturer ORDERED/Actual	Brand Name ORDERED	Product Name ORDERED/Actual	UPC #	Item #
R	**The MSDS is attached for the following product(s).**				
SAKC-00-0151.03	Safety-Kleen Corp.		GUN CLEANER/LACQUER THINNER		
	Safety-Kleen Corp.		Safety-Kleen Heavy Duty Lacquer Thinner 6782		
SAKC-00-0174.03	Safety-Kleen Corp.		105 RECYCLED SOLVENT		
	Safety-Kleen Corp.		Safety-Kleen 105 Solvent Recycled		

END OF ORDER DETAIL - Request # 137720

SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782

MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782

SYNONYMS: Not available.

PRODUCT PART NUMBER: 6782

PRODUCT USE: Paint gun cleaner.
If this product is used in combination with other chemicals, refer to the Material Safety Data Sheets for those chemicals.

24-HOUR EMERGENCY TELEPHONES

	MEDICAL:	TRANSPORTATION (SPILL):
These numbers are for emergency use only. If you desire non-emergency information about this product, please call a telephone number listed below.	**1-800-752-7869 (USA) Extension 2**	**1-800-468-1760 (USA)**
	1-312-942-5969 (CANADA)	**1-613-996-6666 (CANADA)**

MANUFACTURER/SUPPLIER: Safety-Kleen Corp.
1000 North Randall Road
Elgin, IL, 60123-7857 USA
1-800-669-5740

TECHNICAL INFORMATION: **1-800-669-5740 Extension 7500**

MSDS FORM NUMBER: 82343 **ISSUE:** April 2, 1996

ORIGINAL ISSUE: July 20, 1989 **SUPERSEDES:** March 5, 1996

PREPARED BY: Product MSDS Coordinator **APPROVED BY:** MSDS Task Force

SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

				OSHA PEL		ACGIH TLV			
WT%	NAME	SYNONYM	CAS NO.	TWA ppm	STEL ppm	TWA ppm	STEL ppm	LD[a]	LC[b]
30 to 60	*Toluene	Methylbenzene	108-88-3	200	500[h]	50 (skin)	N.Av.	636	49000[b] mg/m^3/ 4 hours
0 to 60**	*Ethylbenzene	Phenylethane	100-41-4	100	N.Av.	100	125	3500	4000[e] ppm/4 hours
10 to 40**	*Methyl ethyl ketone	MEK; Butanone, 2-	78-93-3	200	N.Av.	200	300	2737	23500[b] mg/m^3/ 8 hours
0 to 40**	Methyl propyl ketone	2-Pentanone	107-87-9	200	N.Av.	200	250	1600	2000[b] ppm/4 hours
0 to 40**	*Methyl isobutyl ketone	4-Methyl-2-pentanone; Hexone	108-10-1	100	N.Av.	50	75	2080	4000[e] ppm
0 to 20**	C_5 to C_8 Aliphatic hydrocarbons	N.Av.	109-66-0[c]	1000[c]	N.Av.	600[c]	750[c]	N.Av.	364000[b,c] mg/m^3/ 4 hours
0 to 20**	Acetone	Dimethyl ketone	67-64-1	750	1000	750	1000	5800	50100[b] mg/m^3/ 8 hours
0 to 20**	C_9 to C_{20} Aliphatic hydrocarbons	N.Av.	64741-41-9[d]	500[d]	N.Av.	100[d]	N.Av.	>5000[d]	>5500[b] mg/m^3/ 4 hours
0 to 17**	Isopropyl acetate	1-Methylethyl acetate	108-21-4	250	N.Av.	250	310	N.Av.	50600 mg/m^3/ 8 hours
0 to 17**	Ethyl acetate	Acetic ether	141-78-6	400	N.Av.	400	N.Av.	5620	200000[b] mg/m^3
0 to 17**	Isobutyl acetate	2-Methyl propyl acetate	110-19-0	150	N.Av.	150	N.Av.	13400	8000[e] ppm/4 hours
0 to 17**	N-Butyl acetate	Butyl ethanoate	123-86-4	150	N.Av.	150[h]	200	10768	2000[b] ppm/4 hours
0 to 17**	Propylene glycol methyl ether acetate	1-Methoxy-2-propanol acetate	108-65-6	100[f]	150[f]	N.Av.	N.Av.	8532	4345[b] ppm/6 hours
0 to 17**	Ethyl-3-ethoxyproplonate	Ethoxypropionic acid ethyl ester,3-	763-69-9	50[f]	100[f]	N.Av.	N.Av.	5000	1000 ppm/6 hours
0 to 15**	*Xylene	Dimethylbenzene	1330-20-7	100	N.Av.	100	150	4300	5000[b] ppm/4 hours

SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

				OSHA PEL		ACGIH TLV			
WT%	NAME	SYNONYM	CAS NO.	TWA ppm	STEL ppm	TWA ppm	STEL ppm	LD[a]	LC[b]
0 to 10**	Ethyl alcohol	Ethanol	64-17-5	1000	N.Av.	1000	N.Av.	7060	20000[b] ppm/ 10 hours
0 to 10**	Isopropyl alcohol	Isopropanol	67-63-0	400	N.Av.	400	500	5045	16000[b] ppm/8 hours
0 to 10**	*N-Butyl alcohol	Butanol	71-36-3	100	N.Av.	50[k] (Skin) (Ceiling)	N.Av.	790	8000[b] ppm/4 hours
0 to 10**	*Tert-Butanol	Trimethylmethanol	75-65-0	100	N.Av.	100	N.Av.	3500	N.Av.
0 to 2.9**	*Methyl alcohol	Methanol	67-56-1	200	N.Av.	200 (Skin)	250 (Skin)	5628	64000[b] ppm/4 hours
0 to 1[g,**]	*1,1,1-Trichloroethane	Methyl chloroform	71-55-6	350	N.Av.	350	450	9600	18000[b] ppm/4 hours
0 to 1[g,**]	*Methylene chloride	Dichloromethane	75-09-2	500[q]	2000[m]	50	N.Av.	1600	88000[b] mg/m^3/ 30 minutes
0 to 1[g,**]	*Perchloroethylene	Tetrachloro-ethylene	127-18-4	100	300[p]	25	100	2629	34200[b] mg/m^3/ 8 hours
0 to 1[g,**]	*1,1,2-Trichloro-1,2,2-trifluoroethane	Trichlorotrifluoro-ethane	76-13-1	1000	N.Av.	1000	1250	43000	N.Av.

N.Av. = Not Available
* See SECTION 15: SARA TITLE III
**Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.
[a]Oral-Rat LD50 (mg/kg)
[b]Inhalation-Rat LC50
[c]Based on Pentane
[d]Based on Stoddard Solvent
[e]Inhalation-Rat LCLo
[f]Manufacturer recommended.
[g]Total chlorinated compounds: 0 to 1.0 WT%
[h]Notice of Intended Changes: 20 ppm
[k]Notice of Intended Changes: 25 ppm (ceiling)
[m]5 minutes in any 2 hours
[n]10 minutes in an 8 hour shift
[p]5 minutes in any 2 hours in an 8 hour shift.
[q]Proposed rulemaking: 25 ppm

See 29 CFR 1910.1000(d)(2) and ACGIH *Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices* booklet (Appendix C) for the determination of exposure limits for mixtures. Consult an industrial hygienist or similar professional to confirm that the calculated exposure limits are appropriate.

SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING!

APPEARANCE
Liquid, clear and colorless, solvent odor.

IMMEDIATE HAZARDS
Vapors may ignite explosively.
Flammable liquid and vapor.
May cause respiratory tract, eye, and skin irritation.
Harmful if absorbed through skin.

DELAYED HAZARDS
Suspect cancer hazard. Contains materials (less than 1% total) which may cause cancer. Risk of cancer depends on duration and level of exposure.
Possible birth defect hazard. Contains materials which can cause birth defects based on experimental data.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): High vapor or mist concentrations may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea and vomiting. High concentrations of vapor or mist may cause headaches, dizziness, incoordination, numbness, and other central nervous system effects. High concentrations of vapor or mist may cause liver or kidney damage. Massive acute overexposure may result in rapid central nervous system depression, sudden collapse, deep coma, and death.

EYES: Direct contact with material or exposure to vapors may cause severe irritation and eye damage.

SKIN: Direct contact with material or exposure to vapors may cause irritation leading to dermatitis or blistering. Toluene, n-butyl alcohol, and methyl alcohol may be absorbed through the skin and cause harm with symptoms similar to **INHALATION (BREATHING).**

INGESTION (SWALLOWING): This material may be harmful or fatal if swallowed. May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING).** Breathing material into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing cardiovascular, liver, kidney, lung, central nervous system, or skin disorders may have increased susceptibility to the effects of exposure.

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CHRONIC: Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact may cause drying, cracking, or dermatitis. Prolonged or repeated inhalation may cause cardiac, liver, and kidney damage. Reports have associated repeated or prolonged occupational over exposure to these types of solvents with permanent brain and central nervous system damage.

CANCER INFORMATION: This material contains methylene chloride and perchloroethylene which may cause cancer. Risk of cancer depends on duration and level of exposure. For complete discussion, see **SECTION 11: CARCINOGENICITY**.

Also see **SECTION 15: CALIFORNIA.**

SECTION 4: FIRST AID MEASURES

INHALATION: (BREATHING) Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Someone should stay with victim. Seek medical attention if breathing difficulty persists.

EYES: For direct contact, immediately flush eyes with plenty of water, holding eyelids apart, for 15 minutes. If irritation or redness from exposure to vapor or mist develops, move away from exposure into fresh air. Get medical attention if irritation or pain persists.

SKIN: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain persists.

INGESTION: (SWALLOWING) Immediately get medical attention. Do NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips to avoid breathing material into the lungs.

NOTE TO PHYSICIANS: No specific antidote available. Treat symptomatically and supportively. Do not administer Adrenaline (epinephrine) or similar drugs following material overexposure. Increased sensitivity of the heart to such drugs may be caused by overexposure to material. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Call medical emergency telephone number (see **SECTION 1**) for additional information.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: less than 70°F (21°C) Tag Closed Cup

FLAMMABLE LIMITS IN AIR: **LOWER:** 1.0 VOL% (based on a similar product)
UPPER: 13.2 VOL% (based on a similar product)

AUTOIGNITION TEMPERATURE: Not available.

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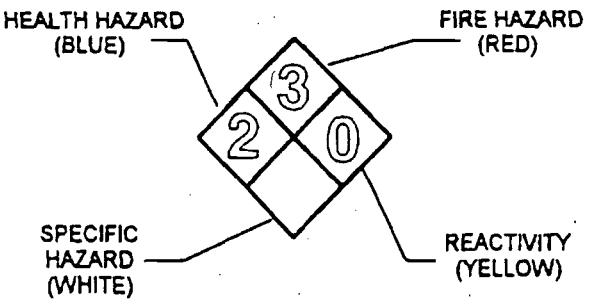
HAZARDOUS COMBUSTION PRODUCTS: Burning may produce phosgene gas, chlorides, chloroacetylenes, formaldehyde, peracetic acid, and carbon monoxide.

CONDITIONS OF FLAMMABILITY: Heat, sparks, or flame.

EXTINGUISHING MEDIA: Carbon dioxide, alcohol-resistant foam, dry chemical, or water spray.

NFPA 704 HAZARD IDENTIFICATION: This information is intended solely for the use by individuals trained in this system.



FIRE FIGHTING INSTRUCTIONS: Keep storage containers cool with water spray. Positive-pressure, self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing may provide limited protection.

FIRE AND EXPLOSION HAZARDS: Decomposition and combustion products may be toxic. "Empty" containers may retain residue and can be dangerous. Heated containers may rupture, explode, or be thrown into the air. Vapors can travel to ignition source and flash back. Not sensitive to mechanical impact. Material may be sensitive to static discharge, which could result in fire or explosion.

EMERGENCY RESPONSE GUIDE NUMBERS: 26
Reference *DOT Emergency Response Guidebook*

41
Reference *Dangerous Goods Initial Emergency Response Guide*

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MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Stop leak if you can do it without risk. Wear protective equipment specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Ventilate area and avoid breathing vapor or mist. Water spray may reduce vapor, but it may not prevent ignition in closed spaces. Contain away from surface waters and sewers. Contain as a liquid for possible recovery or sorb with compatible sorbent material and shovel with a clean, non-sparking tool into closable container for disposal.

Additionally, for large spills: isolate hazard area. Keep unnecessary and unprotected personnel from entering. Dike far ahead of liquid spill for collection and later disposal.

SECTION 7: HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks, or flame. Where explosive mixtures may be present, equipment safe for such locations should be used. Use clean, non-sparking tools and explosion-proof equipment. When transferring material, metal containers, including trucks and tank cars, should be grounded and bonded. Avoid contact with eyes, skin, clothing, or shoes. Use in well-ventilated area. Do not breathe vapor or mist.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Store container in a cool place. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 15: REGULATORY INFORMATION** for Packing Group information.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling, and before eating, drinking, or using tobacco products. Clean contaminated clothing, shoes, and protective equipment before reuse. Discard contaminated clothing, shoes, or protective equipment if they cannot be thoroughly cleaned.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

SAFETY-KLEEN HEAVY DUTY LACQUER THINNER 6782
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION:	Use NIOSH/MSHA-approved respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limit. A self-contained breathing apparatus (SCBA) and full protective equipment are required for large spills or fire emergencies. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4-M1982.
EYE PROTECTION:	Where eye contact is likely, wear chemical goggles; use of contact lenses is not recommended.
SKIN PROTECTION:	Where skin contact is likely, wear polyethylene/ethylene vinyl alcohol, Barricade™ or equivalent gloves; use of natural rubber, butyl rubber, or equivalent gloves is not recommended.
OTHER PROTECTIVE EQUIPMENT:	Where spills and splashes are likely, wear appropriate chemical-resistant boots, apron, or other protective clothing. Clean water should be available in work areas for flushing the eyes and skin.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR:	Liquid, clear and colorless, solvent odor.
ODOR THRESHOLD:	Not available.
SPECIFIC GRAVITY:	0.84 (water = 1)
DENSITY:	7.0 lb/US gal (840 g/l)
VAPOR DENSITY:	2.2 to 3.9 (air = 1) (approximately)
VAPOR PRESSURE:	79 mm Hg at 68°F (20°C) (approximately)
BOILING POINT:	133° to 342°F (56° to 172°C) (based on a similar product)
FREEZING/MELTING POINT:	-200° to -8°F (-129° to -22°C) (approximately)
pH:	Not applicable.
EVAPORATION RATE:	3.7 (butyl acetate = 1) (based on a similar product)
SOLUBILITY IN WATER:	Slight.
MOLECULAR WEIGHT:	65 to 114 (approximately)

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MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.

INCOMPATIBILITY: Avoid acids, alkalies, oxidizing agents, and halogens.

REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.**

SECTION 11: TOXICOLOGICAL INFORMATION

SENSITIZATION: Based on best current information, there is no known human sensitization associated with this material.

CARCINOGENICITY: IARC classifies chemicals by their carcinogenic risk, including agents that are known, probable, or possible carcinogens. NTP classifies chemicals as either known carcinogens, or for which there is a limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. ACGIH recognizes several categories of carcinogens, including confirmed human carcinogens and suspected human carcinogens.

Methylene chloride and perchloroethylene are listed by IARC as possible carcinogens. Methylene chloride and perchloroethylene are classified by NTP as having limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. Methylene chloride is recognized by ACGIH as a suspected human carcinogen.

Also see **SECTION 3: CANCER INFORMATION** and **SECTION 15: CALIFORNIA.**

REPRODUCTIVE TOXICITY: Toluene, MEK, xylene, ethyl alcohol, isopropyl alcohol, methyl alcohol, 1,1,1-trichloroethane, and perchloroethylene have demonstrated experimental effects of reproductive toxicity.

TERATOGENICITY: Toluene, ethylbenzene, MEK, N-butyl acetate, xylene, ethyl alcohol, isopropyl alcohol, N-butyl alcohol, methyl alcohol, 1,1,1-trichloroethane, and perchloroethylene have demonstrated experimental effects of teratogenicity.

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MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

MUTAGENICITY: Toluene, ethyl benzene, xylene, ethyl alchol, isopropyl alcohol, methyl alcohol, ethyl acetate, 1,1,1-trichloroethane, and perchloethylene have demonstrated experimental effects of mutagenicity. Methylene chloride has demonstrated human effects of mutagenicity.

TOXICOLOGICALLY SYNERGISTIC PRODUCT(S): Based on best current information, there are no known toxicologically synergistic products associated with this material.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: Not available.

ENVIRONMENTAL FATE

OCTANOL/WATER PARTITION COEFFICIENT: Not available.

VOLATILE ORGANIC COMPOUNDS: 100 WT%; 7.0 lb/US gal; 840 g/l
Photochemically reactive as per 40 CFR Part 51.100(s).

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding recycling or proper disposal.

USEPA WASTE CODE(S): D001, D018, D035, D039
Based on available data, this information applies to the material as supplied to the user. Processing, use, or contamination will make this information inappropriate, inaccurate, or incomplete.

SECTION 14: TRANSPORT INFORMATION

DOT: PAINT RELATED MATERIAL, 3, UN1263, PGII

TDG: Paint Related Material, Class 3, UN1263, PGII

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MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

SARA SECTIONS 311 AND 312: Material poses the following physical and health hazards as defined in 40 CFR Part 370 and is subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986:

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA SECTION 313: Asterisked components in **SECTION 2** are subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: All the components of this product are listed on TSCA Inventory.

CALIFORNIA: This product contains detectable amounts of benzene CAS 71-43-2, methylene chloride CAS 75-09-2, and perchloroethylene CAS 127-18-4. These materials are listed by the State of California as known carcinogens.

This product contains a detectable amount of toluene CAS 108-88-3. This material is listed by the State of California as known to cause reproductive toxicity.

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

WHMIS: B2, D1B, D2A, D2B

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All the components of this product are listed on the Canadian Domestic Substances List.

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SECTION 16: OTHER INFORMATION

REVISION INFORMATION: Revised sections 1, 2, and 8.

LABEL/OTHER INFORMATION: This product is USDA approved and UL classified.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the material as supplied to the user.

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SAFETY-KLEEN 105 SOLVENT RECYCLED

MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: SAFETY-KLEEN 105 SOLVENT RECYCLED

SYNONYMS: (Also known as SAFETY-KLEEN 105 SOLVENT RECYCLED - CALIF.) Parts Washer Solvent; Petroleum Distillates; Petroleum Naptha; Naptha, Solvent; Stoddard Solvent; Mineral Spirits.

PRODUCT PART NUMBERS: (Also known as 6614.) 6617, 1011662, 1014662.

PRODUCT USE: Cleaning and degreasing metal parts.
If this product is used in combination with other chemicals, refer to the Material Safety Data Sheets for those chemicals.

24-HOUR EMERGENCY TELEPHONES

	MEDICAL:	TRANSPORTATION (SPILL):
These numbers are for emergency use only. If you desire non-emergency information about this product, please call a telephone number listed below.	**1-800-752-7869 (USA) Extension 2**	**1-800-468-1760 (USA)**
	1-312-942-5969 (CANADA)	**1-613-996-6666 (CANADA)**

MANUFACTURER/SUPPLIER: Safety-Kleen Corp.
1000 North Randall Road
Elgin, IL, 60123-7857 USA
1-800-669-5740

TECHNICAL INFORMATION: 1-800-669-5740 Extension 7500

MSDS FORM NUMBER: 82310 (also formerly 82311) **ISSUE:** April 4, 1997

ORIGINAL ISSUE: July 20, 1989 **SUPERSEDES:** April 12, 1994

PREPARED BY: Product MSDS Coordinator **APPROVED BY:** MSDS Task Force

SAFETY-KLEEN 105 SOLVENT RECYCLED
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

				OSHA PEL		ACGIH TLV			
WT%	NAME	SYNONYM	CAS NO.	TWA	STEL	TWA	STEL	LD[a]	LC[b]
99 to 100	Distillates (petroleum), hydrotreated light	N.Av.	64742-47-8[d]	500[c] ppm	N.Av.	100[c] ppm	N.Av.	>5000	>5500[c] mg/m^3/ 4 hours
0 to 0.2**	Tetrachloroethene*	Perchloroethylene; Tetrachloroethylene	127-18-4	100 ppm	200 ppm (ceiling)	25 ppm	100 ppm	2629	34200 mg/m^3/ 8 hours

N.Av. = Not Available
* See **SECTION 15: SARA TITLE III**
**Even though the concentration range does not fall under the ranges prescribed by WHMIS, this is the actual range which varies with each batch of the product.

[a]Oral-Rat LD50 (mg/kg)
[b]Inhalation-Rat LC50
[c]Based on Stoddard Solvent.
[d]For Stoddard Solvent: 5000 ppm IDLH (Immediately Dangerous to Life or Health)

See 29 CFR 1910.1000(d)(2) and ACGIH *Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices* booklet (Appendix C) for the determination of exposure limits for mixtures. Consult an industrial hygienist or similar professional to confirm that the calculated exposure limits are appropriate.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING!

APPEARANCE
Liquid, clear and green, mild hydrocarbon odor.

IMMEDIATE HAZARDS
Combustible liquid and vapor.
Harmful if inhaled.
Eye and skin irritant.
May be harmful if swallowed.

DELAYED HAZARDS
Contains material which may cause central nervous system damage.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): High vapor or mist concentrations may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea and vomiting. High concentrations of vapor or mist may cause headaches, dizziness, incoordination, numbness, irregular heartbeat, and other central nervous system effects. Massive acute overexposure may result in rapid central nervous system depression, sudden collapse, deep coma, and death.

EYES: Direct contact with materials or exposure to vapors may cause irritation with watering, stinging, or redness.

SKIN: Direct contact with materials or exposure to vapors may cause irritation. A single, prolonged exposure is not likely to cause the material to be absorbed through the skin in harmful amounts.

INGESTION (SWALLOWING): May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under **INHALATION (BREATHING)**. Breathing material into the lungs during ingestion or vomiting may cause lung injury and possible death.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing cardiac, lung, central nervous system, or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated inhalation may cause toxic effects. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, swelling, or burns.

CANCER INFORMATION: These materials contain perchloroethylene CAS 127-18-4 (0 to 0.2 WT%) which may cause cancer. Risk of cancer depends on duration and level of exposure. For more information, see **SECTION 11: CARCINOGENICITY.**

Also see **SECTION 15: CALIFORNIA.**

SECTION 4: FIRST AID MEASURES

INHALATION: (BREATHING) Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYES: For direct contact, immediately flush eyes with plenty of water, holding eyelids apart, for 15 minutes. If irritation or redness from exposure to vapor or mist develops, move away from exposure into fresh air. Get medical attention if irritation or pain persists.

SKIN: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain persists.

INGESTION: (SWALLOWING) Immediately get medical attention. Do NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips to avoid breathing material into the lungs.

NOTE TO PHYSICIANS: No specific antidote available. Treat symptomatically and supportively. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Call medical emergency telephone number (see **SECTION 1**) for additional information.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 105°F (40°C) (minimum) Tag Closed Cup

FLAMMABLE LIMITS IN AIR: **LOWER:** 0.7 VOL% (minimum)
UPPER: 13 VOL% (maximum)

SAFETY-KLEEN 105 SOLVENT RECYCLED MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

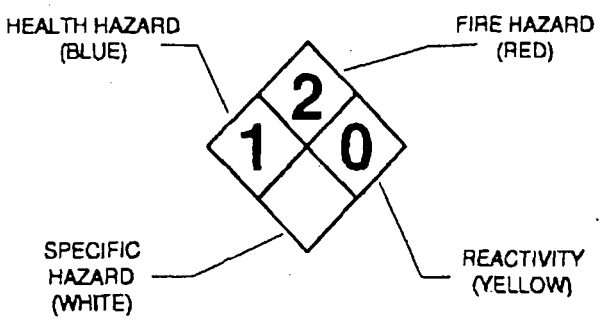
AUTOIGNITION TEMPERATURE: 400°F (205°C) (minimum)

HAZARDOUS COMBUSTION PRODUCTS: Burning may produce carbon monoxide.

CONDITIONS OF FLAMMABILITY: Heat, sparks, or flame.

EXTINGUISHING MEDIA: Carbon dioxide, regular foam, dry chemical, water spray, or water fog.

NFPA 704 HAZARD IDENTIFICATION: This information is intended solely for the use by individuals trained in this system.



FIRE FIGHTING INSTRUCTIONS: Keep storage containers cool with water spray. Positive-pressure, self-contained breathing apparatus (SCBA) and structural firefighters' protective clothing may provide limited protection.

FIRE AND EXPLOSION HAZARDS: Decomposition and combustion products may be toxic. "Empty" containers may retain residue and can be dangerous. Heated containers may rupture. Vapors can travel to ignition source and flash back. Vapor explosion hazard indoors, outdoors, or in sewers. Run-off to sewer may create fire or explosion hazard. Not sensitive to mechanical impact. Material may be sensitive to static discharge, which could result in fire or explosion.

EMERGENCY RESPONSE GUIDE NUMBER: 128
Reference *North American Emergency Response Guidebook*

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Wear protective equipment specified in **SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain away from surface waters and sewers. Contain as a liquid for possible recovery or sorb with compatible sorbent material and shovel with a clean, non-sparking tool into sealable container for disposal.

Additionally, for large spills: isolate hazard area. Keep unnecessary and unprotected personnel from entering. Dike far ahead of liquid spill for collection and later disposal.

SAFETY-KLEEN 105 SOLVENT RECYCLED MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 7: HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks, or flame. Where explosive mixtures may be present, equipment safe for such locations should be used. Use clean, non-sparking tools and explosion-proof equipment. When transferring material, metal containers, including trucks and tank cars, should be grounded and bonded. Avoid contact with eyes, skin, clothing, and shoes. Use in well ventilated area. Do not breathe vapor or mist.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See **SECTION 14: TRANSPORT INFORMATION** for Packing Group information.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco products. Clean contaminated clothing, shoes, and protective equipment before reuse. Discard contaminated clothing, shoes, or protective equipment if they cannot be thoroughly cleaned.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limits. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where explosive mixtures may be present, equipment safe for such locations should be used.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Use NIOSH/MSHA-approved respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limit. A self-contained breathing apparatus (SCBA) and full protective equipment are required for large spills or fire emergencies. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4-M1982.

EYE PROTECTION: Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

SKIN PROTECTION: Where skin contact is likely, wear nitrile, Viton®, or equivalent protective gloves; use of butyl rubber, natural rubber, or equivalent gloves is not recommended.

SAFETY-KLEEN 105 SOLVENT RECYCLED MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

OTHER PROTECTIVE EQUIPMENT: Where spills and splashes are likely, wear appropriate chemical-resistant boots, apron, or other protective clothing. Clean water should be available in work areas for flushing the eyes and skin.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR: Liquid, clear and green, mild hydrocarbon odor.

ODOR THRESHOLD: 30 ppm (based on Stoddard Solvent).

SPECIFIC GRAVITY: 0.77 to 0.80 60°F/60°F (15.6°C/15.6°C) (water = 1)

DENSITY: 6.4 to 6.7 lb/US gal (770 to 800 g/l)

VAPOR DENSITY: 5 (air = 1) (approximately)

VAPOR PRESSURE: 0.4 mm Hg at 68°F (20°C) (approximately)
1.0 mm Hg at 100°F (38°C) (approximately)

BOILING POINT: 310°F (155°C) (initial)

FREEZING/MELTING POINT: -45°F (-43°C) (maximum)

pH: Not applicable.

EVAPORATION RATE: 0.1 (butyl acetate = 1)

SOLUBILITY IN WATER: Insoluble.

MOLECULAR WEIGHT: 150 (approximately)

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.

INCOMPATIBILITY: Avoid acids, alkalies, oxidizing agents, reactive halogens, or reducing agents.

REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. See also **SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.**

SECTION 11: TOXICOLOGICAL INFORMATION

SENSITIZATION: Based on best current information, there is no known human sensitization associated with these materials.

CARCINOGENICITY:

IARC classifies chemicals by their carcinogenic risk, including agents that are known, probable, or possible carcinogens. NTP classifies chemicals as either known carcinogens, or for which there is limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals. ACGIH recognizes several categories of carcinogens, including confirmed human carcinogens and suspected human carcinogens.

Perchloroethylene is listed by IARC as a possible carcinogen. Perchloroethylene is classified by NTP as having limited evidence of carcinogenicity in humans or sufficient evidence of carcinogenicity in experimental animals.

Also see **SECTION 3: CANCER INFORMATION** and **SECTION 15: CALIFORNIA.**

REPRODUCTIVE TOXICITY:

Perchloroethylene has demonstrated experimental effects of reproductive toxicity.

Based on best current information, the other component listed in **SECTION 2** is not a reproductive toxin.

Also see **SECTION 15: CALIFORNIA.**

TERATOGENICITY:

Perchloroethylene has demonstrated experimental effects of teratogenicity.

Based on best current information, the other component listed in **SECTION 2** is not a teratogen.

MUTAGENICITY:

Perchloroethylene has demonstrated human effects of mutagenicity.

Based on best current information, the other component listed in **SECTION 2** is not a mutagen.

TOXICOLOGICALLY SYNERGISTIC PRODUCT(S):

Based on best current information, there are no known toxicologically synergistic products associated with these materials.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY:

Not available.

OCTANOL/WATER PARTITION COEFFICIENT:

Not available.

VOLATILE ORGANIC COMPOUNDS:

100 WT%; 6.4 to 6.7 lb/US gal; 770 to 800 g/l
Photochemically reactive as per 40 CFR Part 51.100(s).

SAFETY-KLEEN 105 SOLVENT RECYCLED MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL: Dispose in accordance with federal, state, provincial, and local regulations. Regulations may also apply to empty containers. The responsibility for proper waste disposal lies with the owner of the waste. Contact Safety-Kleen regarding recycling or proper disposal.

USEPA WASTE CODES: D001, D018, D027, D039, and D040.
Based on available data, this information applies to the material as supplied to the user. Processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

SECTION 14: TRANSPORT INFORMATION

DOT: COMBUSTIBLE LIQUID, N.O.S. (PETROLEUM NAPHTHA), NA1993, PG III

TDG: Petroleum Distillates, N.O.S., Class 3, UN1268, PG III

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

SARA SECTIONS 311 AND 312: Materials pose the following physical and health hazards as defined in 40 CFR Part 370 and are subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986:

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA SECTION 313: Asterisked component in **SECTION 2** is subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: All the components of these products are listed on the TSCA Inventory.

CALIFORNIA: These products contain detectable amounts of benzene CAS 71-43-2, p-dichlorobenzene CAS 106-46-7, methylene chloride CAS 75-02-2, perchloroethylene CAS 127-18-4, and trichloroethylene CAS 79-01-6. These materials are listed by the State of California as known carcinogens.

These products contain a detectable amount of toluene CAS 108-88-3. This material is listed by the State of California as known to cause reproductive toxicity.

SAFETY-KLEEN 105 SOLVENT RECYCLED MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

CANADIAN REGULATIONS

These products have been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS: B3, D2A, D2B

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All the components of these products are listed on the Canadian Domestic Substances List.

SECTION 16: OTHER INFORMATION

REVISION INFORMATION: New format.

LABEL/OTHER INFORMATION: These products are United States Department of Agriculture (USDA) and Factory Mutual (FM) approved.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the material as supplied to the user.

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Appendix B

Example Letters to Local Authorities

safety-kleen®

_____
(Date)

CERTIFIED MAIL — RETURN RECEIPT REQUESTED

Clay County Public Safety
915 Walnut Street
Green Cove Springs, FL 32243

RE: Safety-Kleen Corp., 161 Industrial Loop Road South, Orange Park, Florida 32073

Dear Sir:

Under terms of Environmental Protection Agency (EPA) Regulations 40 CFR 264, Subpart D, Safety-Kleen Corp. (SK) must provide local police, fire departments, hospitals, and state or local emergency response teams with a copy of the contingency plan for the above-referenced facility, and any revisions to the plan. A copy of the updated contingency plan is enclosed for your files. Please review this updated contingency plan.

EPA Regulations 40 CFR 264, Subpart C, require that SK attempt to make arrangements for the provision of emergency assistance. Emergency assistance for this facility may be needed from the policy and fire departments, state emergency response teams, and hospitals. The completion and return of the enclosed form (self-addressed envelope provided) will acknowledge receipt of this update to the contingency plan and provides your agreement to be available for emergency assistance.

Thank you for your cooperation in this matter. Should you have any questions or desire to visit our facility, please contact me at (904) 284-6330.

Sincerely,.

Kevin Hamilton
Branch Manager
Orange Park Facility

mmm

Enclosure(s)

13112.26\0897PERM\S5APPB.L-1\MMM\1\072897

PRINTED ON RECYCLED PAPER

_____
(Date)

Clay County Public Safety
915 Walnut Street
Green Cove Springs, FL 32243

Mr. Kevin Hamilton
Branch Manager
Safety-Kleen Corp. - Orange Park
161 Industrial Loop Road South
Orange Park, FL 32073

RE: Safety-Kleen Corp., 161 Industrial Loop Road South, Orange Park, Florida 32073

Dear Mr. Hamilton:

This is to acknowledge that Clay County Public Safety has been made aware of the potential need for emergency assistance associated with the operation of the Safety-Kleen Corp. facility at 161 Industrial Loop Road South, Orange Park, Florida. Clay County Public Safety understands that the emergency coordinator is available to provide additional information on the nature of assistance that may potentially be required, type of physical and chemical hazards that may potentially be encountered, and the type of injury or illness that may potentially occur.

This is to acknowledge receipt of the updated contingency plan information for the Orange Park, Florida facility.

Clay County Public Safety _____ (agrees/declines) to be available to provide emergency assistance for the Safety-Kleen Corp. facility at 161 Industrial Loop Road South, Orange Park, Florida.

Sincerely,

_____
(Signature)

_____
(Title)

_____ Check here if you do not have a copy of the contingency plan for this Safety-Kleen Corp. facility.

safety-kleen®

_____
(Date)

CERTIFIED MAIL — RETURN RECEIPT REQUESTED

Clay County Sheriff
901 Orange Avenue
Green Cove Springs, FL 32043

RE: Safety-Kleen Corp., 161 Industrial Loop Road South, Orange Park, Florida 32073

Dear Sir:

Under terms of Environmental Protection Agency (EPA) Regulations 40 CFR 264, Subpart D, Safety-Kleen Corp. (SK) must provide local police, fire departments, hospitals, and state or local emergency response teams with a copy of the contingency plan for the above-referenced facility, and any revisions to the plan. A copy of the updated contingency plan is enclosed for your files. Please review this updated contingency plan.

EPA Regulations 40 CFR 264, Subpart C, require that SK attempt to make arrangements for the provision of emergency assistance. Emergency assistance for this facility may be needed from the policy and fire departments, state emergency response teams, and hospitals. The completion and return of the enclosed form (self-addressed envelope provided) will acknowledge receipt of this update to the contingency plan and provides your agreement to be available for emergency assistance.

Thank you for your cooperation in this matter. Should you have any questions or desire to visit our facility, please contact me at (904) 264-6512.

Sincerely,

Kevin Hamilton
Branch Manager
Orange Park Facility

mmm

Enclosure(s)

13112.26\0897PERM\S5APPB.L-2\MMM\1\072897

PRINTED ON RECYCLED PAPER

_____
(Date)

Clay County Sheriff
901 Orange Avenue
Green Cove Springs, FL 32043

Mr. Kevin Hamilton
Branch Manager
Safety-Kleen Corp. - Orange Park
161 Industrial Loop Road South
Orange Park, FL 32073

RE: Safety-Kleen Corp., 161 Industrial Loop Road South, Orange Park, Florida 32073

Dear Mr. Hamilton:

This is to acknowledge that Clay County Sheriff's Department has been made aware of the potential need for emergency assistance associated with the operation of the Safety-Kleen Corp. facility at 161 Industrial Loop Road South, Orange Park, Florida. The Clay County Sheriff's Department understands that the emergency coordinator is available to provide additional information on the nature of assistance that may potentially be required, type of physical and chemical hazards that may potentially be encountered, and the type of injury or illness that may potentially occur.

This is to acknowledge receipt of the updated contingency plan information for the Orange Park, Florida facility.

The Clay County Sheriff's Department _____ (agrees/declines) to be available to provide emergency assistance for the Safety-Kleen Corp. facility at 161 Industrial Loop Road South, Orange Park, Florida.

Sincerely,

_____
(Signature)

_____
(Title)

_____ Check here if you do not have a copy of the contingency plan for this Safety-Kleen Corp. facility.

safety-kleen®

_____
(Date)

CERTIFIED MAIL — RETURN RECEIPT REQUESTED

Orange Park Medical Center
2001 Kingsley Avenue
Orange Park, FL 32073

RE: Safety-Kleen Corp., 161 Industrial Loop Road South, Orange Park, Florida 32073

Dear Sir:

Under terms of Environmental Protection Agency (EPA) Regulations 40 CFR 264, Subpart D, Safety-Kleen Corp. (SK) must provide local police, fire departments, hospitals, and state or local emergency response teams with a copy of the contingency plan for the above-referenced facility, and any revisions to the plan. A copy of the updated contingency plan is enclosed for your files. Please review this updated contingency plan.

EPA Regulations 40 CFR 264, Subpart C, require that SK attempt to make arrangements for the provision of emergency assistance. Emergency assistance for this facility may be needed from the policy and fire departments, state emergency response teams, and hospitals. The completion and return of the enclosed form (self-addressed envelope provided) will acknowledge receipt of this update to the contingency plan and provides your agreement to be available for emergency assistance.

Thank you for your cooperation in this matter. Should you have any questions or desire to visit our facility, please contact me at (904) 276-8580.

Sincerely,

Kevin Hamilton
Branch Manager
Orange Park Facility

mmm

Enclosure(s)

13112.26\0897PERM\S5APPB.L-3\MMM\1\072897

PRINTED ON RECYCLED PAPER

_____
(Date)

Orange Park Medical Center
2001 Kingsley Avenue
Orange Park, FL 32073

Mr. Kevin Hamilton
Branch Manager
Safety-Kleen Corp. - Orange Park
161 Industrial Loop Road South
Orange Park, FL 32073

RE: Safety-Kleen Corp., 161 Industrial Loop Road South, Orange Park, Florida 32073

Dear Mr. Hamilton:

This is to acknowledge that Orange Park Medical Center has been made aware of the potential need for emergency assistance associated with the operation of the Safety-Kleen Corp. facility at 161 Industrial Loop Road South, Orange Park, Florida. Orange Park Medical Center understands that the emergency coordinator is available to provide additional information on the nature of assistance that may potentially be required, type of physical and chemical hazards that may potentially be encountered, and the type of injury or illness that may potentially occur.

This is to acknowledge receipt of the updated contingency plan information for the Orange Park, Florida facility.

Orange Park Medical Center _____ (agrees/declines) to be available to provide emergency assistance for the Safety-Kleen Corp. facility at 161 Industrial Loop Road South, Orange Park, Florida.

Sincerely,

_____
(Signature)

_____
(Title)

_____ Check here if you do not have a copy of the contingency plan for this Safety-Kleen Corp. facility.

SECTION

6

6.0 PERSONNEL TRAINING

This section of the permit application describes Safety-Kleen's training program. All position descriptions referenced may not be present at this facility. Training plan outlines, job descriptions, training content, frequency and techniques are described as well as the implementation of the training program.

The purpose of Safety-Kleen's training program is to familiarize employees with environmental regulations, records, and emergency procedures so they will perform their jobs in the safest and most efficient manner possible.

6.1 DESCRIPTION OF TRAINING PROGRAM

Each employee is trained to operate and maintain the service center safely, and to understand hazards unique to that person's job assignment. New Branch Managers (Resource Recovery Branch Manager) and new Branch Supervisors must complete a formal introductory training program before starting their jobs, with annual review and update thereafter. New Sales Representatives must be trained prior to conducting unsupervised hazardous waste services. All other hazardous waste employees must undergo a combination of videotape and on-the-job training within six months of starting.

Outline of Training Program

An outline of the training program, given both initially and annually to employees who manage or handle hazardous waste at the Branch, is presented in Table 6.1-1. The training is reviewed and updated yearly by the Corporate Environmental, Health, and Safety Department located in Elgin, Illinois.

Job Title/Job Description

Job descriptions for employees who would be expected to manage or handle hazardous wastes, including the Branch Manager (Resource Recovery Branch Manager), Branch Automotive Manager, Branch Industrial Manager, Branch Secretary (paperwork only), Sales

6.0 PERSONNEL TRAINING

This section of the permit application describes Safety-Kleen's training program. All position descriptions referenced may not be present at this facility. Training plan outlines, job descriptions, training content, frequency and techniques are described as well as the implementation of the training program.

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Each employee is trained to operate and maintain the service center safely, and to understand hazards unique to that person's job assignment. New Branch Managers (Resource Recovery Branch Manager) and new Branch Supervisors must complete a formal introductory training program before starting their jobs, with annual review and update thereafter. New Sales Representatives must be trained prior to conducting unsupervised hazardous waste services. All other hazardous waste employees must undergo a combination of videotape and on-the-job training within six months of starting.

Outline of Training Program

An outline of the training program, given both initially and annually to employees who manage or handle hazardous waste at the Branch, is presented in Table 6.1-1.

Job Title/Job Description

Job descriptions for employees who would be expected to manage or handle hazardous wastes, including the Branch Manager (Resource Recovery Branch Manager), Branch Automotive Manager, Branch Industrial Manager, Branch Secretary (paperwork only), Sales

Representatives, and Warehouseperson (also called Material Handler) are provided in Tables 6.1-2 through 6.1-7.

Training Content, Frequency, and Techniques

Employee training is accomplished using classroom, videotape, written, and on-the-job methods. The Environment, Health and Safety (EHS) and Training Departments of Safety-Kleen's Corporate Office prepares a training program for employees and they must provide documentation that the program has been executed. Employees are trained prior to starting or as soon as they begin working (depending on their position), and are trained annually thereafter.

The following presents the specific training requirements for new Safety-Kleen employees who will manage or handle hazardous waste.

Training of New Branch Managers: New Branch Managers are trained for several weeks before they begin their new positions. This training is given on the job and in the classroom. During this training, the new manager reviews environmental records and learns the recordkeeping requirements. These records include: manifests, personnel records, training records, service center inspection records, and spill reports. At least eight hours of this initial training 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.

The training culminates in four weeks of training at that person's new service center, at least one day of which is devoted to environmental training with the Environmental Health and Safety Manager. Additional time is spent reviewing past environmental compliance at the Branch Manager's service center; the regulations unique to the state are discussed as well.

Training of New Branch Automotive Manager and Branch Industrial Manager: The Branch Automotive Manager and Branch Industrial Manager are responsible for administrative operations at the Branch. This training is on location and in classroom modes. While being trained at the branch at which they will be stationed, a new Branch

Automotive/Industrial Manager reviews environmental records and learns the recordkeeping and inspection requirements. These records include: manifests, personnel records, training records, service center inspection records, and spill reports.

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 Automotive/Industrial Manager's site.

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. This training is often presented in company-produced videotape presentations on emergency response, shipping documents (including manifests), drum labels, and other safety and environmental compliance issues.

Training of New Sales Representatives: New Sales Representatives are trained on the job for two weeks during which they are introduced to manifests, service center inspection records, and training records. A Sales Representative may also be trained as the designee for performing a facility inspection. Additional training is in the form of videotape presentations and a review of the Contingency Plan. Within six months of starting a position, the sales representative must review the items listed in the outline presented in Table 6.1-1.

Training of New Warehouseperson: A Warehouseperson is trained to maintain the service center and assist the other branch employees in their tasks. The Warehouseperson may be a designee to perform the Branch inspection and must be trained by the Branch Manager. Within six months of starting a position, the Warehouseperson must review the items listed in the outline presented in Table 6.1-1.

Annual Training: On an annual basis, employees are trained using a program prepared and updated annually by the EHS and Training Departments which contains the topics in

Table 6.1-1. This training also includes updates on environmental regulations, an in-depth review of the Contingency Plan and a review of RCRA inspection criteria. This review is in the form of videotapes and a review and discussion of the storage service center permit/application. In addition, periodic memoranda on changes in environmental regulations are issued by the EHS Department and must be read and discussed by Branch personnel.

Training Director

The training is directed by Safety-Kleen's Training and Development and EHS Departments which operate out of the Corporate Office in Elgin, Illinois. Each Environmental Health and Safety Manager who works in this department is responsible for compliance of the service centers in a given geographic area of the country. The EHS Department, in coordination with the facility, must:

- Provide a training program which addresses the requirements of environmental regulations and corporate policy;
- Notify the proper authorities, oversee remedial actions, and submit a written report to the state after an emergency situation has occurred;
- Assure that environmental permits are submitted and updated as required;
- Manage any environmental compliance issues which exceed the resources available at the service center level; and
- Participate in training new Branch Managers and conducting Annual Branch Manager Training.

Qualifications for individual staff members of the EHS Department who conduct training at the Service Center are available upon request.

Relevance of Training to Job Position

Each employee is trained to operate and maintain the service center safely and to understand hazards unique to the job assignment. Safety-Kleen's training programs are designed to give employees appropriate instruction regarding the hazardous waste management procedures they will encounter in performing their respective duties. Since the handling of hazardous materials is a large part of the operations of the service center, all employees are given training in environmental regulations, transportation regulations, the Preparedness and Prevention Plan, and Contingency Plan.

Training for Hazardous Waste Management

As described previously, all employees are trained in the aspects of hazardous waste management which are relevant to their position. This includes job-specific hazards and necessary precautions, emergency response, and proper recordkeeping. This training is given initially and updated annually.

Training for Contingency Plan Implementation

All employees are trained in Contingency Plan implementation, through both initial training and yearly refresher courses, as summarized in Table 6.1-1. Employees are trained on the contents of the Contingency Plan as well as criteria for implementation.

Training for Emergency Response

All employees are trained in emergency response procedures, through both initial training and yearly refresher courses, as summarized in Table 6.1-1. The emergency training involves spill and fire prevention as well as remedial action procedures. Employees are also trained to recognize when evacuation and outside assistance may be necessary.

Implementation of Training Program

New Branch Managers and Sales Representatives must complete an introductory training program discussed previously within six months of starting their jobs, with annual review and update thereafter. Warehousepersons are given the full hazardous waste training course, as outlined in Table 6.1-1, within six months of starting work. Personnel involved in direct handling of hazardous waste do not work unsupervised until they have completed the entire initial hazardous waste training course.

Training for Handling Mercury-Containing Lamps and Devices

As a registered transporter and storage facility for mercury-containing lamps and devices destined for recycling, the Branch has certified that employees handling spent lamps or devices are trained in the applicable proper handling and emergency cleanup and containment procedures, and that these emergency procedures will be kept at the Branch for inspection upon request by the FDEP.

Personnel Training Records Forms

Tables 6.1-8 and 6.1-9 are sample personnel training record forms. These forms, or forms similar to them, will be used to record training. All training is documented and kept on file at the service center until closure. Additional forms may be used contingent upon the specific issue being addressed. All forms will show the training received, employee name, and the date of training.

TABLE 6.1-1

INTRODUCTORY AND CONTINUING TRAINING TOPICS FOR BRANCH EMPLOYEES

- Hazard Communication Safety Training
- Hazard Communication Understanding MSDSs
- Preventing Injury and Illnesses
- Chemistry of Safety-Kleen Products
- Hazardous Materials Regulations
- Waste Analysis Plan
- Preparedness, Prevention, and Contingency Plan
- Day Four - Ten-Day Training - Haz Mat/POT/MANFST VID QUIZ
- Completion of New Employee Orientation Program *
- Initial Contingency Plan Training (Including Part B review) *
- Respirator Fit Testing and Training

* New employees only; not a part of annual training.

TABLE 6.1-2

JOB DESCRIPTION
RESOURCE RECOVERY BRANCH MANAGER

JOB DESCRIPTION:

The Resource Recovery 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. The Branch Manager 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. Ensure 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 relations activities.
9. Coordinate with corporate Technical Services and EHS Departments and implement necessary actions or plans for Regulatory compliance.
10. Be able to act as the primary emergency response coordinator.

TABLE 6.1-3

JOB DESCRIPTION
BRANCH AUTOMOTIVE MANAGER

JOB DESCRIPTION:

Develops and maintains automotive account business by presenting and providing the complete Automotive Fluid Recovery Service to customers in assigned territories. Trains, motivates, and controls the automotive sales staff within the assigned territories.

REPORTS TO:

Directly to the Resource Recovery Branch Manager and indirectly to Regional Automotive Sales Manager. All Automotive and Oil Sales Representatives within assigned territories report directly to the Branch Automotive Manager (BAM). One or more Branch Secretaries report to the BAM, as assigned by the Resource Recovery Branch Manager.

QUALIFICATION:

Minimum high school graduate with above average Safety-Kleen route sales experience. Applicant should exhibit leadership abilities and be self-motivated, and pass Company testing.

PRINCIPAL RESPONSIBILITIES:

1. Markets and sells the total Automotive Fluid Recovery Service.
2. Signs automotive accounts to the Safety-Kleen Service Contract and Oil agreements where applicable.
3. Ensures that customers have the right kind of equipment which is properly labeled, and on the appropriate service interval, by completing machine condition reports.
4. Ensures that the Company's ethical standards are maintained.
5. Reviews weekly and period sales production summaries.
6. Ensures the timely completion of services.
7. Reviews and acts on accounts receivable standards.
8. Assures proper completion and administration of hazardous waste paperwork.
9. Assures proper management, preparation, and shipment of hazardous waste (including packaging, placarding, transportation, and storage procedures).
10. Assures DOT compliance.

11. Trains personnel following the *Corporate Training 10-Day Action Plan*.

12. Conducts sales meetings.

13. Oversees career development by conducting selling skills training meetings (in conjunction with ASM).

14. Conducts health and safety meetings.

15. Develops team contests or rewards for set period objectives.

16. Develops rewards for achieved objectives.

17. Holds monthly goal setting sessions with assigned personnel.

18. Conducts quarterly performance reviews with assigned personnel.

19. Controls all personnel within the assigned territories by daily/weekly communication in regards to branch standards and goals.

TABLE 6.1-4

JOB DESCRIPTION
BRANCH INDUSTRIAL MANAGER

JOB DESCRIPTION:

Develops and maintains industrial account business by presenting and providing the complete Industrial Fluid Recovery Service to customers in assigned territories. Trains, motivates, and controls the industrial sales staff within the assigned territories.

REPORTS TO:

Directly to the Resource Recovery Branch Manager and indirectly to Regional Industrial Sales Manager. All Industrial Sales Representatives within assigned territories report directly to the Branch Industrial Manager (BIM). One or more Branch Secretaries report to the BIM, as assigned by the Resource Recovery Branch Manager.

QUALIFICATION:

Minimum high school graduate with above average Safety-Kleen route sales experience. Applicant should exhibit leadership abilities, be self-motivated, and pass Company testing. Good reading and letter writing skills are also required.

PRINCIPAL RESPONSIBILITIES:

1. Ensures that customers have the right kind of equipment which is properly labeled, and on the appropriate service interval, by completing machine condition reports.

2. Ensures that the Company's ethical standards are maintained.

3. Performs the required amount of cold calls, sample processing, and machine placements.

4. Reviews weekly and period sales production summaries.

5. Ensures the timely completion of services.

6. Reviews and acts on accounts receivable standards.

7. Assures proper completion and administration of hazardous waste paperwork.

8. Assures proper management, preparation, and shipment of hazardous waste (including packaging, placarding, transportation, and storage procedures).

9. Assures DOT compliance.

10. Trains personnel following the *Corporate Training 10-Day Action Plan*.

11. Conducts sales meetings.

12. Oversees career development by conducting selling skills training meetings (in conjunction with ISM).

13. Conducts health and safety meetings.

14. Develops team contests or rewards for set period objectives.

15. Develops rewards for achieved objectives.

16. Holds monthly goal setting sessions with assigned personnel.

17. Conducts quarterly performance reviews with assigned personnel.

18. Controls all personnel within the assigned territories by daily/weekly communication in regards to branch standards and goals.

TABLE 6.1-5

JOB DESCRIPTION
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. Ensure 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.

TABLE 6.1-6

JOB DESCRIPTION
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 Industrial Manager or Branch Automotive Manager

QUALIFICATION:

Minimum high school graduate

PRINCIPAL RESPONSIBILITIES:

1. Maintain their route truck and replenish products on the truck before beginning the 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 paperwork 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.

TABLE 6.1-7

JOB DESCRIPTION
WAREHOUSE PERSONNEL

JOB DESCRIPTION:

Perform duties to assist the sales representatives in loading and unloading the trucks. Perform janitorial duties at the Branch.

REPORTS TO:

Branch Manager

QUALIFICATIONS:

Attended high school

PRINCIPAL RESPONSIBILITIES:

1. Maintain warehouse in clean and orderly manner.
2. Assist sales representatives in loading trucks and replacing solvent.
3. Clean containers as needed.
4. Park or move trucks as needed.
5. Stock inventory.
6. Replenish trucks with inventory.
7. Perform other related duties as assigned.

ENVIRONMENT, HEALTH, & SAFETY TRAINING

TRAINING SUMMARY SHEET I

Branch Name :_____ Branch No. :_____

Employee Name :_____ Employee Number :_____

Hire Date :_____ 6 Mon. Training Compl. Date (target) :_____

Position / Title :_____ Termination Date :_____

** CORE HAZARDOUS MATERIALS TRAINING **

(Emergency Response Training must be completed before an employee works in an unsupervised position. Employees must be completely trained in all items listed below within six (6) months of starting and annually thereafter.)

TRAINING COMPLETED:		MGR. INIT.
DATE		
_____	EHS VIDEO PART I - HAZ COM - Safety Training	_____
_____	EHS VIDEO PART II - HAZ COM - Understanding MSDSs	_____
_____	EHS VIDEO PART III - Preventing Injuries & Illnesses	_____
_____	EHS VIDEO PART IV - Hazards Associated w/ Mat'ls Handling	_____
_____	EHS VIDEO PART V - Chemistry of Safety - Kleen Products	_____
_____	EHS VIDEO PART VI - Hazardous Materials Regulations	_____
_____	EHS VIDEO PART VII - Waste Analysis Plan	_____
_____	EHS VIDEO PART VIII - Prep., Prvn., & Contingency Plans	_____
_____	Day Four - TEN DAY TRAINING - HAZ MAT/DOT/MANFST VID QUIZ	_____
_____	Completion of New Employee Orientation Program	_____
_____	Initial Contingency Plan Training (incl. Part B review)	_____
_____	Respirator Fit Testing & Training	_____

** CERTIFICATION by the employee that training has been received obligates the employee to discharge his/her 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. **

_____ Employee's Signature:_____

** CONTINUING TRAINING **
(On the following TRAINING SUMMARY SHEET IIs)

Table 6.1-9

1560.____

ENVIRONMENT, HEALTH, & SAFETY TRAINING

TRAINING SUMMARY SHEET II

Branch Name :_____ Branch No. :_____

Employee Name :_____ Employee Number :_____

TRAINING COMPLETED:

DATE		MGR. INIT.

SECTION

7

7.0 WASTE INFORMATION

7.1 WASTE ANALYSES AND WASTE CODES

In accordance with EPA's hazardous waste regulations, the following types of hazardous waste have been identified at the Branch:

- Used parts washer solvent, dumpster mud, and tank bottom sludge;
- Used immersion cleaner #699;
- Dry cleaning wastes;
- Paint wastes;
- Fluid Recovery Service (FRS) wastes;
- Used aqueous parts washer solvent;
- Used aqueous brake cleaner; and
- Branch-generated liquids and solids (debris).

The typical composition and chemical/physical analysis for each of the waste streams listed above (except FRS) is shown in the chemical analyses reports in Appendix B. This information is based on existing data generated from similar processes within Safety-Kleen's current and/or potential customer base.

7.1.1 Used Parts Washer Solvent

The clean parts washer solvents are labeled under trade names. Flash points of the petroleum-based parts washer solvents range from 105°F (ignitable) to 212°F. Chemically, the solvent primarily consists of petroleum hydrocarbon fractions 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 used petroleum-based parts washer solvent consists primarily of parts washer solvent, solids, 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 bottom solids may range from 2 percent to 10 percent, by volume, in the used solvent mixture. The substances that comprise the used parts washer solvent are compatible and are suitable for bulking.

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

Containers of parts washer solvent that are returned from customers are poured into a drum washer (wet dumpster) at the return/fill station, which is piped into the used solvent 15,000-gallon aboveground storage tank located in the tank farm. As generated, the used Parts Cleaner 105 is considered to be an ignitable waste (D001). Other used parts washer solvents are considered nonignitable. The mixture within the 15,000-gallon storage tank, therefore, may not exhibit the characteristic of ignitability, even though it must be managed as such. The used parts washer solvents also may be considered characteristic waste by toxicity characteristic leaching procedure (TCLP) and may carry the waste codes referred to in Table 7.1-1.

7.1.2 Used Immersion Cleaner

Safety-Kleen leases units containing "Immersion Cleaner and Carburetor and Cold Parts Cleaner #699." This product is a heavy aromatic naphtha, N-methyl-2-pyrolidon dipropylene glycol methyl ether, monoethanolamine and oleic acid, and may contain a maximum of 1 percent chlorinated compounds.

The used immersion cleaner #699 is returned from customers in separate containers and remains in these containers for shipment to a Safety-Kleen recycle facility. 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. This spent solvent is not an ignitable waste. It is regarded as characteristic hazardous waste because of the presence

of various metals and organic constituents. The waste codes that the used immersion cleaner may carry are listed in Table 7.1-1.

7.1.3 Used Parts Washer Solvent Bottom Sludge

Tank bottom sludge settles from used parts washer solvent in the aboveground tanks. The sludge may contain soils, oil and grease, and water picked up in degreasing operations, together with a small amount of mineral spirits. Analyses have shown that the sludge is an ignitable waste and may be considered characteristically hazardous with respect to TCLP standards. The sludge is removed from the aboveground tank periodically and shipped to a Safety-Kleen facility for reclamation.

Dumpster mud is accumulated in the wet dumpster strainer when emptying the used parts washer solvent from the containers into the aboveground storage tanks. The dumpster mud accumulates in two strainers, one located in the wet dumpster and a second strainer prior to the dumpster pump. Parts washer filters may also be added to the dumpster mud. Currently, two models of parts washers use filters. The mineral spirits brake cleaner (Model 14) and parts washer (Model 44) generate waste filters at the time of service (note: Model 44 filters are optional). The filters are added to the dirty solvent and transported to the Branch where the filters are separated from the solvent and are added to the dumpster mud. The nature of this waste is similar to the used parts washer solvent tank bottom sludge, except with some small metal parts and less mineral spirits. It is regarded as an ignitable waste and often is a characteristic waste using TCLP standards. An annual recharacterization of the dumpster mud waste stream is completed.

The mud in the dumpsters is cleaned out frequently. The waste is containerized and stored as a Branch-generated waste in a permitted waste storage area for later shipment to a Safety-Kleen recycle facility for reclamation or disposal.

Parts washer solvent dumpster mud and tank bottom sludge accumulated in the solvent return receptacles (wet dumpsters) and in the solvent tank are considered to be ignitable wastes (D001) and characteristic wastes by TCLP and may carry the waste codes referred to in Table 7.1-1.

7.1.4 Dry Cleaning Wastes

Solvent used in dry cleaning of clothing is commonly tetrachloroethylene (perchloroethylene), mineral spirits, or trichlorotrifluoroethane. Hence, wastes generated from dry cleaning operations contain various concentrations of the solvent constituents. Basically, wastes generated by dry cleaning facilities are in the following forms:

1. Filter Cartridges: 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.

Approximately 80 percent of the dry cleaning solvent used is perchloroethylene (F002) and a characteristic waste by TCLP, and may carry the waste codes referred to in Table 7.1-1. Approximately 17 percent of the dry cleaning solvent is mineral spirits, and the remaining 3 percent of the dry cleaning solvent is trichlorotrifluoroethane. The mineral spirits and trichlorotrifluoroethane are nonperchloroethylene dry cleaning wastes and are managed as transfer wastes.

7.1.5 Paint Wastes

Paint wastes consist of various lacquer thinners and paints. The waste is collected in containers at the customer's place of business. Upon receipt at the Branch, the manifest is terminated, and the waste paint containers are stored in Safety-Kleen's permitted paint waste

shelter (flammable). The paint wastes are then re-manifested and periodically sent to a Safety-Kleen recycle center.

Paint wastes include such constituents as acetone, isopropyl alcohol, methyl ethyl ketone, methyl isobutyl ketone, toluene, xylenes, and acetate compounds. This waste stream may be an ignitable waste (D001) and a characteristic waste by TCLP. Because of the solvent constituents, it also may be considered a listed waste (F003, F005) and may carry the waste codes referred to in Table 7.1-1.

7.1.6 Fluid Recovery Service Wastes

Fluid Recovery Services (FRS) is a program managed by the Safety-Kleen Branch. Under this program, waste types similar to the products provided by Safety-Kleen are collected by the Branch and processed by the recycle centers. These products may or may not have been originally obtained from Safety-Kleen by the industrial customer. These wastes are handled as transfer wastes at the Branch. Examples of the types of wastes that may be received from FRS customers include:

1. Spent hydrocarbon distillates, such as waste fuel, oil, petroleum, and naphtha, etc.

2. Lubricating oils, hydraulic oils, synthetic oils, and machine oils.

3. Industrial halogenated solvents such as 1,1,1-trichloroethane, tetrachloroethylene, Freon, and trichloroethane.

4. Photographic and x-ray related wastes.

5. Paint, lacquer thinners, and paint wastes that are received from non-core lines of business (and therefore are not handled as permitted wastes).

6. Other hazardous and nonhazardous halogenated and nonhalogenated wastes.

Due to the great variability in the composition of FRS wastes, their application or use, and the source industry, Safety-Kleen characterizes each waste stream from each generator separately.

Certain other wastes that result from the use of organic solvents are also managed through the Branch. These include the solids and sludges that settle out of the used solvent during handling and processing. Lint, paper, oils, greases, carbons, and metals are examples of materials which may settle or separate out of used solvent. In addition to the listed waste codes, these wastes may also exhibit a characteristic when tested using the toxicity characteristic leaching procedure.

Certain solvents are not economically recoverable in their prime form. These are typically solvents of low intrinsic value (e.g., methanol), those where the user's specifications are unattainable or where the mixture cannot be efficiently separated because of the formation of azeotropes, or due to overlapping or close boiling ranges. However, when properly blended and processed, these solvents can be a beneficial source of energy. The Safety-Kleen recycle centers are equipped to process nonrecoverable solvent mixtures with still bottoms from recovery of their solvent to produce valuable solvent-based fuels.

7.1.7 Antifreeze Waste

The spent antifreeze (ethylene glycol) is collected from automobile service stations and is typically mixed with used oil. All antifreeze collected and managed by Safety-Kleen within Florida is recycled. At the customer's location, Safety-Kleen pumps waste ethylene glycol (antifreeze) mixed with used oil into a Safety-Kleen used oil tanker truck which is transported from the Branch directly to CSX's bulk intermodal distribution system (BIDS) terminus for off-loading into tanker cars. The ethylene glycol/used oil mixture is transferred by rail to the Safety-Kleen re-refinery in East Chicago, Indiana, where the waste ethylene glycol is extracted from the oil by distillation. After separation, the ethylene glycol is shipped to a glycol refinery for additional purification into a pure product which is then sold on the open market. This procedure is in accordance with FDEP's *Florida Fact Sheet on the Best Management Practices for Managing Antifreeze Destined for Recycling,* dated August 5, 1996. This waste stream previously was considered hazardous by the state of Florida. However, the Florida Department of Environmental Protection (FDEP) has subsequently determined this waste stream can be handled as nonhazardous as long as it is destined for recycling.

As discussed in Section 9.0, the antifreeze tank is slated for closure. Once closure of the existing 15,000-gallon used antifreeze tank is complete, Safety-Kleen anticipates using this vessel for storage of the used oil/antifreeze mixture. The tank will then be emptied on a periodic, as-needed basis and the contents transported to the BIDS terminus for rail shipment as described above.

7.1.8 Aqueous Brake Cleaner

The Aqueous Brake Cleaner (ABC) is primarily an aqueous solution with approximately 10% nonorganic additives and detergents. The spent ABC is transported from the customers in containers. Spent ABC from customer's parts washers may be accumulated in the 15,000-gallon used solvent storage tank via the return/fill station. The used aqueous brake cleaner may be considered characteristic waste by TCLP and may carry the waste codes referred to in Table 7.1-1.

7.1.9 Aqueous Parts Washer Solvent

The aqueous parts washer solvent is primarily an aqueous solution with a small amount of organic additives (alcohols). The spent aqueous parts washer solvent is transported from customers in containers and may be accumulated in the 15,000-gallon used solvent storage tank via the return/fill station. The used aqueous parts washer solvent may be considered characteristic waste by TCLP and may carry the waste codes referred to in Table 7.1-1.

7.1.10 Mercury-Containing Lamps and Devices

Mercury-containing lamps and devices are another type of waste handled by the Branch. These wastes are handled as nonhazardous transfer wastes, and as such carry no waste codes. As part of its protocol for handling mercury-containing lamps and devices, the Branch provides customers with four-foot and eight-foot boxes which hold up to 39 lamps. The boxes are picked up at customer locations and are stored at the Branch in a designated area within the transfer waste storage area (Figure 8.2-1). This storage area is labeled in accordance with 62-737.700(1)(d), Florida Administrative Code (FAC). The boxes are periodically shipped to a permitted mercury recovery or reclamation facility.

of various metals and organic constituents. The waste codes that the used immersion cleaner may carry are listed in Table 7.1-1.

7.1.3 Used Parts Washer Solvent Bottom Sludge

Tank bottom sludge settles from used parts washer solvent in the aboveground tanks. The sludge may contain soils, oil and grease, and water picked up in degreasing operations, together with a small amount of mineral spirits. Analyses have shown that the sludge is an ignitable waste and may be considered characteristically hazardous with respect to TCLP standards. The sludge is removed from the aboveground tank periodically and shipped to a Safety-Kleen facility for reclamation.

Dumpster mud is accumulated in the wet dumpsters when emptying the used parts washer solvent from the containers into the aboveground storage tanks. Filters from parts washers utilizing parts washer solvents also may be added. The nature of this waste is similar to the used parts washer solvent tank bottom sludge, except with some small metal parts and less mineral spirits. It is regarded as an ignitable waste and often is a characteristic waste using TCLP standards.

The mud in the dumpsters is cleaned out frequently. The waste is containerized and stored as a Branch-generated waste in a permitted waste storage area for later shipment to a Safety-Kleen recycle facility for reclamation or disposal.

Parts washer solvent dumpster mud and tank bottom sludge accumulated in the solvent return receptacles (wet dumpsters) and in the solvent tank are considered to be ignitable wastes (D001) and characteristic wastes by TCLP and may carry the waste codes referred to in Table 7.1-1.

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Solvent used in dry cleaning of clothing is commonly tetrachloroethylene (perchloroethylene), mineral spirits, or trichlorotrifluoroethane. Hence, wastes generated

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1. Filter Cartridges: 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.

Approximately 80 percent of the dry cleaning solvent used is perchloroethylene (F002) and a characteristic waste by TCLP, and may carry the waste codes referred to in Table 7.1-1. Approximately 17 percent of the dry cleaning solvent is mineral spirits, and the remaining 3 percent of the dry cleaning solvent is trichlorotrifluoroethane. The mineral spirits and trichlorotrifluoroethane are nonperchloroethylene dry cleaning wastes and are managed as transfer wastes.

7.1.5 Paint Wastes

Paint wastes consist of various lacquer thinners and paints. The waste is collected in containers at the customer's place of business. Upon receipt at the Branch, the manifest is terminated, and the waste paint containers are stored in Safety-Kleen's permitted paint waste shelter (flammable). The paint wastes are then re-manifested and periodically sent to a Safety-Kleen recycle center.

Paint wastes include such constituents as acetone, isopropyl alcohol, methyl ethyl ketone, methyl isobutyl ketone, toluene, xylenes, and acetate compounds. This waste stream may be an ignitable waste (D001) and a characteristic waste by TCLP. Because of the solvent constituents, it also may be considered a listed waste (F003, F005) and may carry the waste codes referred to in Table 7.1-1.

7.1.6 Fluid Recovery Service Wastes

Fluid Recovery Services (FRS) is a program managed by the Safety-Kleen Branch. Under this program, waste types similar to the products provided by Safety-Kleen are collected by the Branch and processed by the recycle centers. These products may or may not have been originally obtained from Safety-Kleen by the industrial customer. These wastes are handled as transfer wastes at the Branch. Examples of the types of wastes that may be received from FRS customers include:

1. Spent hydrocarbon distillates, such as waste fuel, oil, petroleum, and naphtha, etc.

2. Lubricating oils, hydraulic oils, synthetic oils, and machine oils.

3. Industrial halogenated solvents such as 1,1,1-trichloroethane, tetrachloroethylene, Freon, and trichloroethane.

4. Photographic and x-ray related wastes.

5. Paint, lacquer thinners, and paint wastes.

6. Other hazardous and nonhazardous halogenated and nonhalogenated wastes.

Due to the great variability in the composition of FRS wastes, their application or use, and the source industry, Safety-Kleen characterizes each waste stream from each generator separately.

As discussed in Section 9.0, the antifreeze tank is slated for closure. Once closure of the existing 15,000-gallon used antifreeze tank is complete, Safety-Kleen anticipates using this vessel for storage of the used oil/antifreeze mixture. The tank will then be emptied on a periodic, as-needed basis and the contents transported to the BIDS terminus for rail shipment as described above.

7.1.8 Aqueous Brake Cleaner

The Aqueous Brake Cleaner (ABC) is primarily an aqueous solution with approximately 10% nonorganic additives and detergents. The spent ABC is transported from the customers in containers. Spent ABC from customer's parts washers may be accumulated in the 15,000-gallon used solvent storage tank via the return/fill station. The used aqueous parts washer solvent may be considered characteristic waste by TCLP and may carry the waste codes referred to in Table 7.1-1.

7.1.9 Aqueous Parts Washer Solvent

The aqueous parts washer solvent is primarily an aqueous solution with a small amount of organic additives (alcohols). The spent aqueous parts washer solvent is transported from customers in containers and may be accumulated in the 15,000-gallon used solvent storage tank via the return/fill station. The used aqueous parts washer solvent may be considered characteristic waste by TCLP and may carry the waste codes referred to in Table 7.1-1.

7.1.10 Mercury-Containing Lamps and Devices

Mercury-containing lamps and devices are another type of waste handled by the Branch. These wastes are handled as nonhazardous transfer wastes, and as such carry no waste codes. As part of its protocol for handling mercury-containing lamps and devices, the Branch provides customers with four-foot and eight-foot boxes which hold up to 39 lamps. The boxes are picked up at customer locations and are stored at the Branch in a designated area within the transfer waste storage area (Figure 8.2-1). This storage area is labeled in accordance with 62-737.700(1)(d), Florida Administrative Code (FAC). The boxes are periodically shipped to a permitted mercury recovery or reclamation facility.

7.1.11 Branch-Generated Liquids and Solids (Debris)

In the course of conducting day-to-day business operations, the Branch may generate waste primarily associated with sampling customers' wastes. Such wastes may include wipes, gloves, etc. In addition, liquid wastes may be generated as a result of the decontamination of sampling equipment. The liquid and solid wastes are contained in drums which can be stored in the permitted container storage area or in the permitted paint waste shelter (if flammable). The waste codes associated with this waste stream will vary according to the type of waste being sampled. Branch-generated liquids and solids (debris) may carry the waste codes listed in Table 7.1-1.

7.2 WASTE ANALYSIS PLAN

7.2.1 General Waste Handling Procedures

Safety-Kleen provides solvent distribution, collection, and reclamation services to companies that are primarily engaged in automobile repair, industrial maintenance, and dry cleaning. Safety-Kleen operates a "closed loop" waste recovery service for the parts cleaning machines used by customers at their facilities. When the cleaning fluids become dirty and can no longer be used effectively, Safety-Kleen picks up the dirty fluids and replaces them with clean, recycled fluids. The dirty fluids are returned to Safety-Kleen where they are recycled and subsequently reused by customers. Approximately two-thirds of the cleaning fluids provided as product by Safety-Kleen have been used before and subsequently reclaimed. Safety-Kleen's customers typically are small quantity generators who operate businesses which generate only a few hazardous waste streams. These factors help ensure that Safety-Kleen will receive a highly predictable and homogeneous waste stream.

Spent solvents are the primary feedstocks for the generation of Safety-Kleen solvent products. As a result, quality control of the spent solvents is necessary to ensure that reclamation occurs in the safest and most efficient manner possible. Furthermore, the materials collected at the Branch are usually collected from a company with a single process. The composition and quality of these materials are known and Safety-Kleen's operating

experiences have shown that the collected materials rarely deviate from company specifications. As an additional safeguard, Safety-Kleen personnel are instructed to inspect certain materials before returning them to the Branch. This mode of operation has been proven to safeguard the recycling process and maintain a quality product.

It is Safety-Kleen's practice that suspected nonconforming material must not be accepted until a full analysis has been done or the material must be rejected. Procedures to verify waste characteristics occur at several check points in the management of the solvent, as described below.

Safety-Kleen controls the use and management of its solvents by:

1. Limiting the solvents stored to those compatible with one another and their containers;

2. Determining the customer's type of business (i.e., his/her SIC code may be recorded) and the purpose for which the machine will be used;

3. Training customers to use the machines properly;

4. Training employees to inspect spent solvent and determine whether it is acceptable;

5. Indicating on the service document Safety-Kleen's acceptance criteria;

6. Marking each container with the customer's name, address, and EPA I.D. number (if required). This information remains on containerized waste until it is accepted at the Branch;

7. Keeping a record of each incoming and outgoing shipment in the operating log at each facility;

8. Demonstrating the chemical and physical homogeneity of the wastes by sampling and analyzing a representative portion of generator waste streams on an ongoing annual basis at the national level; and

9. Routine analysis of the wastes received at the recycle centers.

Safety-Kleen's customers sign a service document containing the following information:

1. The name, address, and EPA I.D. number of the facility to which the waste is being shipped;

2. The customer's name, address, and EPA I.D. number (if required); and

3. The description and amount of Safety-Kleen solvent waste generated.

Each incoming and outgoing shipment is recorded in the facility's operating log. In addition, each sales representative reviews acceptance criteria each time a waste is picked up. In accordance with Safety-Kleen's pre-printed documents, all generators sign a statement with each shipment that there has been no material added to the closed-loop products supplied by Safety-Kleen since the last shipment. Finally, selected environmental reviews may be utilized to guard against the addition of other wastes into the generator's waste.

If a waste is rejected at the time of service based on the volume or consistency discrepancies, the customer will be given a choice as to whether they will dispose of the waste or will require Safety-Kleen's assistance. If a customer requests Safety-Kleen's assistance, a sample will be drawn using a Coliwasa® tube, and it will be analyzed for flash point, volatile organic compounds, and other parameters to adequately define the constituents (e.g., for halogenated organic solvents, PCBs, flash point, etc.). If the waste is within the acceptable range for wastes permitted for storage, it will be relabeled and manifested, and then managed with the other wastes. If it is not acceptable, it will either be: (a) managed on a 10-day transfer basis and manifested to a properly permitted reclamation or disposal facility, or (b) manifested and shipped directly to a properly permitted reclamation or disposal facility.

7.2.2 *Qualitative Waste Analyses*

General Inspection Procedures

Prior to acceptance, Safety-Kleen visually inspects each container of waste parts washer solvent at the customer's location. This inspection includes an evaluation of the waste volume, appearance, and consistency. Safety-Kleen's personnel are familiar with the characteristics of all wastes as described in Section 7.1 and managed at this facility. Safety-Kleen has established specific criteria for wastes managed at their facilities based on known characteristics. These criteria, described below, are used by Safety-Kleen personnel to aid in their visual inspections. These acceptance criteria enable Safety-Kleen to help ensure that the waste being picked up is an acceptable waste and does not contain unacceptable contaminates.

If a particular container of waste does not meet the established acceptance criteria, the Safety-Kleen service representative will reject the container at the customer's place of business. At the customer's request, a sample may be collected and analyzed by Safety-Kleen to determine whether it can be managed by Safety-Kleen. Depending on the source, the waste will be analyzed for parameters related to the suspected source of the waste. Alternately, the customer may choose to dispose of the material by using another (non-Safety-Kleen) facility.

If the waste is sampled for further analysis, the service representative will take a sample of the waste and then seal the container and label it as hazardous waste. The container is left with the customer pending the results of the laboratory tests. The laboratory testing involves analyzing the suspect waste for compounds related to the suspected source of the waste (e.g., volatile organics, halogenated organics, PCBs, etc.).

If the laboratory analysis reveals that the sampled waste is not contaminated, Safety-Kleen will accept the waste from the customer. If the laboratory confirms that the waste is contaminated, the customer will be given a choice as to whether they will dispose of the waste or will require Safety-Kleen's assistance.

7.2.3 *Waste-Specific Criteria*

The following is a description of the specific acceptance criteria for each waste stream.

Spent Parts Washer Solvent

Volume and color are the acceptance criteria for determining by visual inspection whether spent parts washer solvent has been contaminated, most significantly volume. Safety-Kleen places clean parts washer solvent in 5-, 16-, and 30-gallon containers with the customer which, if no additional material has been added to the container, should not hold more than the 5, 10, and 19 gallons of waste, respectively, at the time of waste pick-up since those volumes were equal to the respective virgin product amounts in the containers. If the volume of waste in a given container exceeds the specified level, the Safety-Kleen service representative may sample the waste for laboratory testing as described above, or he/she will reject the waste.

The spent parts washer solvent is also visually inspected for its color. Unused parts washer solvent (Parts Cleaner 105 and Premium Solvent) has a greenish tint or is clear. The aqueous parts cleaner is also clear. As the solvent is used, it changes color. The specific color which the solvent turns is dependent upon the type of equipment being cleaned. For example, solvent used at automotive shops changes to brown or black, while solvent used by silk screeners will change the color of the inks (red, blue, pink, green, etc.). If the spent solvent color does not appear to be consistent with the type of equipment being cleaned, the service representative may sample the waste for possible contamination as described above, or he/she will reject the waste.

Immersion Cleaner

The criteria for the inspection of spent immersion cleaner are volume, color, and physical state. Clean immersion cleaner is delivered to the customer in containers. These containers each contain six gallons of immersion cleaner. Spent immersion cleaner is picked up from the customer in the same containers. If no additional material has been added to the spent immersion cleaner, the containers should contain no more than six gallons. If a container

contains more than six gallons of waste, a sample may be collected and analyzed for contamination following the procedures described above or the waste will be rejected.

Unused immersion cleaner is amber in color. As the solvent is used, it turns brown in color. The more it is used, the darker brown it becomes, until it is almost black. Therefore, it the spent immersion cleaner does not appear to be amber, brown, or black, the service representative may sample the waste for possible contamination as described above, or he/she will reject the container of waste.

Dry Cleaner Wastes

Dry cleaner wastes consist of spent filter cartridges, powder residue, and still bottoms, each of which is discussed below.

Spent Filter Cartridges

Spent filter cartridges are placed in containers which hold one to three cartridges. It is readily apparent to the trained service representative whether the items in the containers are filter cartridges. The containers may also contain approximately one inch of liquid which should be either clear or have a light brownish tint. If the amount of the liquid is greater than approximately one inch or if the liquid is a color other than light brown, the service representative may sample the waste for contamination in accordance with the procedures described above, or he/she will reject the waste.

Powder Residue

The criteria for the acceptance of powder residue are consistency and color, the former being the more significant criterion of the two. A container of powder residue should not contain more than one inch of liquid. The waste should be slightly wet, with a paste-like consistency. If there is too much liquid in the container, the waste will may be sampled for contamination in accordance with the procedures described above, or the waste will be rejected.

The powder residue is also inspected for color and should appear to be greyish-black. If the residue is not greyish-black in color, the service representative will may sample the waste for contamination in accordance with the procedures described above, or he/she will reject the waste.

Still Bottoms

The criteria for the acceptance of dry cleaning still bottoms are consistency and color. The waste should have a highly viscous, tar-like consistency. If the consistency of the waste is too thin, the waste may be sampled for contamination in accordance with the procedures described above, or it will be rejected.

In addition to the consistency, the still bottom waste is inspected for color. The waste should appear dark brown or black in color. If the waste is a different color, a service representative may sample the waste for contamination in accordance with the procedures described above, or he/she will reject the waste.

Paint Wastes

Safety-Kleen handles both lacquer thinner waste generated from the paint gun cleaning process and paint waste, each of which is described below.

Lacquer Thinner Waste

The significant criterion for determining whether lacquer thinner waste will be accepted is volume. The solvent is provided to customers in five-gallon containers. The paint gun cleaning machine operates as a closed system consisting of a five-gallon container of fresh lacquer thinner and a five-gallon container for spent (used) lacquer thinner. The closed system is designed such that there should never be a combined volume of more than 7.5 gallons of solvent in the two five-gallon containers. The fresh solvent container starts with five gallons of clean solvent and the spent solvent container starts with 2.5 gallons of clean solvent. As the machine is used to clean the spray guns, the fresh solvent is pumped from a tube in the fresh solvent container through the machine and into the spent solvent container.

This cleaning/degreasing process will continue until the volume of solvent in the fresh container reaches the 2.5-gallon mark. A tube in the fresh solvent extends half way down the container (i.e., to the 2.5-gallon mark). Any solvent above 2.5 gallons in the fresh solvent container at the time of servicing will be pumped through the machine into the spent solvent container by the Safety-Kleen service representative. Therefore, when the machine is serviced, the spent solvent container will always contain five gallons of solvent. If a service representative discovers more than a total of 7.5 gallons of solvent in the two containers or there is an overfill from the spent solvent container, the waste may be sampled for contamination in accordance with the procedures described above, or the waste will be rejected.

Paint Waste

The significant criterion for the inspection of paint waste is consistency. The waste should contain no more than 30 percent solids. The service representative will insert a three-foot-long glass tube into the container. The tube should glide easily down to the bottom of the container. If there is resistance to the insertion of the glass tube, it is assumed that the level of solids is in excess of 30 percent and the service representative will reject the waste.

The contents of the glass tube are also visually examined for consistency and water content. The material should be a "free flowing" liquid, but should not contain a significant amount of water. If there is more than approximately 10 inches of water in the three-foot tube (the water and paint will separate in the tube and thus can be measured), the waste will be rejected.

Mercury-Containing Lamps and Devices

As part of its protocol for handling mercury-containing lamps and devices destined for recycling, the Branch provides customers with four-foot and eight-foot boxes which hold up to 39 lamps. Boxes are inspected prior to transport from the customer to the Branch. Boxes containing broken lamps are not accepted by Safety-Kleen. If the lamps are broken while in custody of Safety-Kleen, the entire contents of the box are sealed in plastic shrink wrap or transferred to another container and closed.

7.2.4 Waste Analyses at the Recycle Facility

Analyses performed at the Safety-Kleen recycle facilities are undertaken to safeguard the recycling process and to assure the product quality. In addition, each waste material is sampled and analyzed upon receipt of each waste load as required by the permit and associated waste analysis plan for the receiving recycle center. In order to properly and safely process waste generated by the branch, the recycle center samples and analyzes each waste load as it is received from the branch. The following tables summarize a typical waste analysis plan at the recycle facility related to the hazardous materials returned from the Branch:

- Table 7.2-1 Parameters and Rationale for Hazardous Waste Identification
- Table 7.2-2 Parameters and Test Methods
- Table 7.2-3 Methods Used to Sample Hazardous Wastes
- Table 7.2-4 Frequency of Analysis

In addition to the aforementioned analyses, TCLP analyses for all compounds, except pesticides, will be conducted every year on all characteristic hazardous waste streams (example: used parts washer solvent and immersion cleaner #699).

7.3 REQUIRED RECORDS AND REPORTING

7.3.1 Waste Manifests

Appropriate shipping papers/manifests are used, based on the monthly quantity of hazardous waste generated by the customer. Safety-Kleen services all three categories of generators in Florida — conditionally exempt small quantity generators (CESQGs), SQGs, and LQGs. CESQGs' spent solvent is removed via a service document and no manifest or Land Disposal Restrictions (LDR) form is required. Appropriate records are kept at the Branch as to the date of waste pick-up, quantity, and other data on the service document. SQGs' spent solvent is shipped under a tolling agreement in Florida, which means that a manifest is not

used. An LDR form is completed for each SQG. LQGs' spent solvent is always manifested (if hazardous) and an LDR form completed.

Spent solvent (from each Safety-Kleen customer, regardless of generator status) is brought back to the Branch and dumped in the return/fill station and pumped to the waste solvent tank. This tank contains the spent solvent of many customers and is hazardous. The contents are regularly sent via truck tanker to the recycle center in Lexington, South Carolina. These loads are always manifested and accompanied with an LDR form.

Shipments of parts washer solvent dumpster mud are also manifested accordingly. Required records are kept at the Branch and the recycle center in accordance with regulatory timeframes.

In accordance with 40 CFR 264.71 through 77, Safety-Kleen will ensure that:

1. Customers who are required to provide a manifest do so;

2. The manifests are prepared and signed properly; and

3. Copies are distributed and kept on file, as required.

In addition, discrepancies must be remediated in accordance with 40 CFR 264.72 and unmanifested wastes will be reported as described under 40 CFR 264.76.

7.3.2 Required Notices

If Safety-Kleen arranges to receive hazardous waste from a foreign source, the Regional Administrator must be notified in writing at least four weeks in advance of the date the waste is expected to arrive at the facility. Notice of subsequent shipments of the same waste from the same foreign source is not required. Safety-Kleen informs its customers in writing (i.e., on each service document) that the facility has the appropriate permit(s) for, and will accept the waste the generator is shipping. Safety-Kleen keeps a copy of this written notice as part of the operating record.

Before transferring ownership or operation of this facility during its operating life, Safety-Kleen will notify the new owner or operator in writing of the requirements of Part 264 and Part 270 of Chapter 40 in the Code of Federal Regulations.

Biennial reports required by Chapter 62-730.180(7) FAC, will be prepared and submitted by Safety-Kleen, and these records will also be available at the facility for review. The biennial report will be submitted to the Regional Administrator and/or FDEP by March 1 during each even numbered year (1990 being the first year) on EPA form 8700-13B. The report will cover facility activities during the previous calendar years and will include:

- The EPA identification number, and address of the facility;
- The calendar years covered by the report;
- The method of treatment, storage, or disposal for each hazardous waste;
- The most recent closure cost estimate under 40 CFR 264.142 and the most recent contingent post-closure cost estimate under 40 CFR 264.144; and
- A certification signed by the owner or operator of the facility or the authorized representative.

7.3.3 Operating Record

An operating log which contains the information required under 40 CFR 264.73 is maintained and all records and logs are available at the facility, in accordance with 40 CFR 264.74.

The following information will be maintained in writing in the operation record for the facility:

- A description and quantity of each hazardous waste received;

- The date and storage method for such hazardous waste;
- The location of each hazardous waste stored within the facility;
- Records and results of waste analyses performed;
- Summary reports and details of all incidents that require implementation of the Contingency Plan;
- Inspection records of the facility;
- Monitoring, testing, or analytical data, and corrective action where required by Subpart F and other applicable sections of 40 CFR 264;
- All closure cost estimates under 40 CFR 264.142 and all contingent post-closure cost estimates under 40 CFR 264.144;
- An annual certification that the facility has a program in place to reduce the volume and toxicity of generated hazardous waste;
- Records of quantities and date of placement for each shipment of hazardous waste placed in land disposal units under an extension to the effective date of any land disposal restriction granted; and
- Copies of LDR certifications required for on-site storage facilities required by 40 CFR 268.7.

Section 264.74 requires that all records, including plans, must be furnished upon request to duly designated representative of the Regional Administrator, and this requirement will be honored. A copy of all records of waste disposal locations and quantities will be submitted to the Regional Administrator and/or FDEP upon closure of the facility, if applicable.

As a registered transporter and storage facility for mercury-containing lamps and devices destined for recycling, the Branch complies with the record keeping requirements of 62-737.200(2)(e) FAC.

7.3.4 Land Ban Notification/Certification Forms

In accordance with 40 CFR 268.7, Safety-Kleen will provide notification/certification for wastes banned from land disposal as follows:

1. Special forms for each regularly handled waste types (e.g., parts washer solvent, immersion cleaner, and perchloroethylene); or

2. A general form that must be completed for unique or nonstandard 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.

TABLE 7.1-1
PERMITTED AND TRANSFER WASTES

Waste Type	Process Code(s)	Estimated Annual Amounts (Tons)	Waste Codes
Spent Parts Washer Solvent*	S01** S02***	405.9	D001 and D-Codes Listed in Note Below
Dumpster Sediment	S01**	Included Above	D001 and D-Codes Listed in Note Below
Tank Bottoms	S01**	Included Above	D001 and D-Codes Listed in Note Below
Used Immersion Cleaner (New Formula) IC699	S01**	21.6	D-Codes Listed in Note Below
Dry Cleaning Waste (Perchloroethylene)	S01**	350	F002 and D-Codes Listed in Note Below
Dry Cleaning Waste (Non-perchloroethylene)	S01****	Included Above	Transfer wastes - waste codes assigned by generator.
Paint Wastes	S01**	46	D001, F003, F005 and D-Codes Listed in Note Below
Fluid Recovery Service (FRS) Waste	S01 *****	250	Transfer wastes - waste codes assigned by generator.
Mercury-Containing Lamps/ Devices	N/A****	Less than 2.2	Not applicable - handled as nonhazardous transfer wastes.
Branch-Generated Liquids/Solids (Debris)	S01**	17	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005
Oil Filters	S01**	7	None
Truck Wash	S02***	1	None******
Aqueous Brake Cleaner	S01** S02***	22.4	D-Codes Listed in Note Below
Aqueous Parts Washer	S01** S02***	5	D-Codes Listed in Note Below

NOTES:

D-Codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043

* Spent parts washer solvents are transported from the customer to the Orange Park Branch in accordance with the generator's hazardous waste determination.

** This waste will be stored in containers in the container storage area. The maximum capacity of hazardous waste in the container storage area is 2,553 gallons. An additional 4,800 gallons of hazardous waste may be stored in the paint shelter.

*** The spent parts washer solvent storage tank has a capacity of 15,000 gallons and may be filled up to 14,250 gallons.

**** This waste will be held for transfer in containers in the transfer area.

***** This waste will be held for transfer in containers in the transfer area or in the FRS shelter (see Section 2.3 for commonly handled wastes).

****** Truck washwater by generator knowledge is most likely nonhazardous, however, the water is being pumped to the spent parts washer solvent tank to cover possible D-Codes listed in the note above.

N/A Process code not applicable.

TABLE 7.2-1

PARAMETERS AND RATIONALE FOR HAZARDOUS WASTE IDENTIFICATION

Hazardous Waste	Parameter[a]	Rationale
1. Used Parts Washer Solvent	Flash Point TCLP	May exhibit ignitable characteristics (D001); may contain TCLP compounds.
2. Parts Washer Solvent Tank Bottom Sludge and Free Water	TCLP Flash Point	The sludge and free water may contain TCLP compounds and the sludge has a flash point of 105° F (D001).
3. Parts Washer Solvent Dumpster Mud	TCLP Flash Point	The mud and free water may contain TCLP compounds and the sludge has a flash point of 105° F (D001).
4. Used Immersion Cleaner (699IC)	TCLP	May contain TCLP compounds.
5. Dry Cleaning Wastes (Perchloroethylene)	Perchloroethylene TCLP	Three separate formulas exist for dry cleaning products. Perchloroethylene formula is the only waste managed as a permitted waste. It may contain TCLP compounds.
6. Paint Wastes	Acetone Isopropyl Alcohol Methyl Ethyl Ketone Methyl Isobutyl Ketone Toluene Xylenes Acetate Compounds Flash Point TCLP	Contains ingredients of F003 and F005 wastes, and may contain TCLP compounds. May exhibit ignitable characteristics (D001).
7. Aqueous Brake Cleaner	TCLP	May contain TCLP compounds.
8. Aqueous Parts Washer	TCLP	May contain TCLP compounds.

NOTES:

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

TABLE 7.2-2

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)	Methods Based on "Test Methods for Evaluation of Solid Waste, Physical/ Chemical Methods," SW-846, USEPA and ASTM Standards. In particular 8240 and 8270.

TABLE 7.2-3

METHODS USED TO SAMPLE HAZARDOUS WASTES

Hazardous Waste	Reference for Sampling	Sampler	Description of Sampling Method
1. Used Parts Washer Solvent	Sampling a tank "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	For tanks--Bomb sampler (similar to weighted bottle sampler)
2. Parts Washer Solvent, Tank Bottom Sludge, and Free Water	Same as 1	Same as 1	Same as 1
3. Parts Washer Solvent Dumpster Mud	Sampling a drum "Samplers and Sampling Procedures for Hazardous Waste Streams," EPA/600/2-80/018	Same as 1	Representative composite sample using drum sampler
4. Used Immersion Cleaner IC699	Same as 3	Same as 1	Same as 3
5. Dry Cleaning Wastes	Same as 3	Same as 1	Same as 3
6. Paint Wastes	Same as 3	Same as 1	Same as 3
7. Aqueous Brake Cleaner	Same as 3	Same as 1	Same as 3
8. Aqueous Parts Washer	Same as 3	Same as 1	Same as 3

TABLE 7.2-4

FREQUENCY OF ANALYSIS OF HAZARDOUS WASTES

Hazardous Waste	Frequency[a]
1. Used Parts Washer Solvent	Gas chromatograph annually Flash point annually TCLP annually
2. Parts Washer Solvent, Tank Bottom Sludge, and Free Water	Gas chromatograph annually TCLP annually
3. Parts Washer Solvent Dumpster Mud	Gas chromatograph annually TCLP annually
4. Used Immersion Cleaner 699	Gas chromatograph annually TCLP annually
5. Dry Cleaning Wastes	Gas chromatograph annually TCLP annually
6. Paint Wastes	Gas chromatograph annually TCLP annually
7. Aqueous Brake Cleaner	Gas chromatograph annually TCLP annually
8. Aqueous Parts Washer	Gas chromatograph annually TCLP annually

NOTES:

[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.

TABLE 7.1-1

PERMITTED AND TRANSFER WASTES

Waste Type	Process Code(s)	Estimated Annual Amounts (Tons)	Waste Codes
Spent Parts Washer Solvent*	S01** S02***	433.3	D001 and D-Codes Listed in Note Below
Dumpster Sediment	S01**	Included Above	D001 and D-Codes Listed in Note Below
Tank Bottoms	S01**	Included Above	D001 and D-Codes Listed in Note Below
Used Immersion Cleaner (New Formula) IC699	S01**	21.6	D-Codes Listed in Note Below
Dry Cleaning Waste (Perchloroethylene)	S01**	350	F002 and D-Codes Listed in Note Below
Dry Cleaning Waste (Non-perchloroethylene)	S01****	Included Above	Transfer wastes - waste codes assigned by generator.
Paint Wastes	S01**	46	D001, F003, F005 and D-Codes Listed in Note Below
Fluid Recovery Service (FRS) Waste	S01 *****	250	Transfer wastes - waste codes assigned by generator.
Mercury-Containing Lamps/ Devices	N/A****	Less than 2.2	Not applicable - handled as nonhazardous transfer wastes.
Branch-Generated Liquids/Solids (Debris)	S01**	17	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005

NOTES:

D-Codes: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D023, D024, D025, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D041, D042, D043

* Spent parts washer solvents are transported from the customer to the Orange Park Branch in accordance with the generator's hazardous waste determination. May include aqueous brake cleaner and aqueous parts washer solvent.

** This waste will be stored in containers in the container storage area. The maximum permitted capacity of hazardous waste in the container storage area is 2,168 gallons. An additional 1,280 gallons of hazardous waste has been permitted to be stored in the paint shelter.

*** The spent parts washer solvent storage tank has a capacity of 15,000 gallons and may be filled up to 14,250 gallons.

**** This waste will be held for transfer in containers in the transfer area.

***** This waste will be held for transfer in containers in the transfer area or in the FRS shelter.

N/A Process code not applicable.

TABLE 7.2-1

PARAMETERS AND RATIONALE FOR HAZARDOUS WASTE IDENTIFICATION

Hazardous Waste	Parameter[a]	Rationale
1. Used Parts Washer Solvent	Flash Point TCLP	May exhibit ignitable characteristics (D001); may contain TCLP compounds.
2. Parts Washer Solvent Tank Bottom Sludge and Free Water	TCLP Flash Point	The sludge and free water may contain TCLP compounds and the sludge has a flash point of 105° F (D001).
3. Parts Washer Solvent Dumpster Mud	TCLP Flash Point	The mud and free water may contain TCLP compounds and the sludge has a flash point of 105° F (D001).
4. Used Immersion Cleaner (699IC)	TCLP	May contain TCLP compounds.
5. Dry Cleaning Wastes (Perchloroethylene)	Perchloroethylene TCLP	Three separate formulas exist for dry cleaning products. Perchloroethylene formula is the only waste managed as a permitted waste. It may contain TCLP compounds.
6. Paint Wastes	Acetone Isopropyl Alcohol Methyl Ethyl Ketone Methyl Isobutyl Ketone Toluene Xylenes Acetate Compounds Flash Point TCLP	Contains ingredients of F003 and F005 wastes, and may contain TCLP compounds. May exhibit ignitable characteristics (D001).

NOTES:

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

TABLE 7.2-3

METHODS USED TO SAMPLE HAZARDOUS WASTES

Hazardous Waste	Reference for Sampling	Sampler	Description of Sampling Method
1. Used Parts Washer Solvent	Sampling a tank "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	For tanks–Bomb sampler (similar to weighted bottle sampler)
2. Parts Washer Solvent, Tank Bottom Sludge, and Free Water	Same as 1	Same as 1	Same as 1
3. Parts Washer Solvent Dumpster Mud	Sampling a drum "Samplers and Sampling Procedures for Hazardous Waste Streams," EPA/600/2-80/018	Same as 1	Representative composite sample using drum sampler
4. Used Immersion Cleaner IC699	Same as 3	Same as 1	Same as 3
5. Dry Cleaning Wastes	Same as 3	Same as 1	Same as 3
6. Paint Wastes	Same as 3	Same as 1	Same as 3

TABLE 7.2-4

FREQUENCY OF ANALYSIS OF HAZARDOUS WASTES

Hazardous Waste	Frequency[a]
1. Used Parts Washer Solvent	Gas chromatograph annually Flash point annually TCLP annually
2. Parts Washer Solvent, Tank Bottom Sludge, and Free Water	Gas chromatograph annually TCLP annually
3. Parts Washer Solvent Dumpster Mud	Gas chromatograph annually TCLP annually
4. Used Immersion Cleaner 699	Gas chromatograph annually TCLP annually
5. Dry Cleaning Wastes	Gas chromatograph annually TCLP annually
6. Paint Wastes	Gas chromatograph annually TCLP annually

NOTES:

[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.

SECTION

8

8.0 CONTAINERS

The hazardous waste container storage areas consist of two areas: the container storage area located in the warehouse and the paint waste/allied product storage shelter located north of the main building. These areas are shown in Figures 8.1-1 and 8.1-2.

8.1 CONTAINMENT SYSTEM

Container Storage Area

The container storage area shown in Figure 8.1-1 occupies a portion of the main site building. This warehouse area has concrete floors, concrete berms, and a central collection trench to form a spill containment system within the area.

The permitted container storage area has a 25' 5" x 24' concrete floor with 6-inch curbing on exposed sides and two containment trenches with a combined containment capacity of 255.3 gallons. The maximum hazardous waste storage capacity of this area, therefore, is 2,553 gallons (the containment volume is 10% of the allowable storage capacity). Waste allowed for storage is immersion cleaner, dry cleaning solvent, parts washer solvent dumpster mud, tank bottoms, and oil filters. The types and number of each type of container may vary; however, the storage capacity will not be exceeded. Containment volume calculations are provided as Appendix C.

Paint Waste Shelter

The permitted paint waste shelter consists of a 45' x 68' concrete pad underlying a 15.5' x 20' shelter with metal containment pans. This shelter is divided into a paint waste storage area and an allied product storage area. Allied products are unused or "virgin" materials. The storage shed consists of six metal containment pans each measuring 5' x 10'. The pans have overlapping lips which prevent liquids from migrating between the pans and onto the concrete. Total containment capacity is 1,122 gallons. Based on this, the maximum potential storage capacity is 11,220 gallons. Due to space constraints, however, the

maximum actual capacity is less: 4,800 gallons, assuming 30-gallon drums stacked two high. Materials allowed for storage includes virgin flammable and flammable paint-related wastes. The types and number of each type of container may vary; however, the storage capacity will not be exceeded. Containment volume calculations and a layout of the 30-gallon containers are provided in Appendix C.

FRS Wastes and Transfer Wastes

Transfer wastes may be stored in the southwest portion of the warehouse. FRS wastes may be stored in the Return and Fill Area (Figure 8.1-3). Since FRS wastes are transfer wastes only, they are not required to have containment. Allied products and mercury-containing lamps may also be stored in the transfer waste area as shown in Figure 8.2-1.

Containment

The containment system in the warehouse is free of cracks and is sufficiently impervious to prevent seepage into and through the concrete. The flooring beneath the paint waste shelter (which has a metal floor and metal containment pans) is also concrete. Concrete is fully compatible with the wastes stored. Studies performed with the Canadian Portland Cement Association revealed that the average permeability of concrete is 1×10^{-10} cm/s, which should prevent infiltration should a release occur. Copies of documentation supporting this conclusion on the permeability of concrete are presented in Appendix D. The warehouse is completely enclosed so no precipitation can enter it.

Handling of Spills

Spills from containers are removed by a hand-held, portable electric pump, wet-dry vacuum cleaner, or sorbent materials. Since the characteristics of the stored wastes are known, no analyses are performed for the materials collected from the containment area. All collected materials are sent to a RCRA-permitted recycling/reclamation facility.

maximum actual capacity is less: 4,800 gallons, assuming 30-gallon drums stacked two high. Materials allowed for storage includes virgin flammable and flammable paint-related wastes. The types and number of each type of container may vary; however, the storage capacity will not be exceeded. Containment volume calculations and a layout of the 30-gallon containers are provided in Appendix C.

FRS Wastes and Transfer Wastes

Transfer wastes may be stored in the southwest portion of the warehouse. FRS wastes may be stored in the outdoor shelter adjacent to the paint waste shelter. Since FRS wastes are transfer wastes only, they are not required to have containment. Allied products and mercury-containing lamps may also be stored in the transfer waste area as shown in Figure 8.2-1.

Containment

The containment system in the warehouse is free of cracks and is sufficiently impervious to prevent seepage into and through the concrete. The flooring beneath the paint waste shelter (which has a metal floor and metal containment pans) is also concrete. Concrete is fully compatible with the wastes stored. Studies performed with the Canadian Portland Cement Association revealed that the average permeability of concrete is 1×10^{-10} cm/s, which should prevent infiltration should a release occur. Copies of documentation supporting this conclusion on the permeability of concrete are presented in Appendix D. The warehouse is completely enclosed so no precipitation can enter it.

Handling of Spills

Spills from containers are removed by a hand-held, portable electric pump, wet-dry vacuum cleaner, or sorbent materials. Since the characteristics of the stored wastes are known, no analyses are performed for the materials collected from the containment area. All collected materials are sent to a RCRA-permitted recycling/reclamation facility.

Any small spill in the warehouse containment storage area which might occur would generally puddle where it was spilled. The spilled material would be cleaned up where it puddled or be manually directed to the containment trench. In the event that a large spill were to occur, some dispersion would be expected to occur based on the direction, force, and pathway obstacles presented by and to the spill. Only a catastrophic event would result in an exceedance of the 255.3-gallon containment capacity. In this case, once outside the containment area, the wastes would flow onto paved surfaces inside the building. All containers are stored on pallets which prevent the containers from coming in contact with spilled, accumulated liquids.

In the paint waste shelter, the containment pans would serve to collect any spilled liquids. Because the containers are stored on metal grating above the pans, contact with spilled liquids should not occur. Also, the entire structure is elevated, with a total containment capacity of 1,122 gallons, so only a catastrophic event would result in a release to the surrounding paved surfaces outside the building.

Container Handling

In the container storage area, containers are handled with a hand-truck or forklift that is free of sharp points and stacked by hand. Every time a drum is moved, a chance exists that it will be tipped over, dropped, or punctured. To minimize the possibility of spillage, containers are tightly covered and kept in an upright position. A small portable electric pump is available to quickly transfer the liquid from any leaking container into another safe container. Each route truck is equipped with an electric hoist. This hoist is used in the loading/unloading operation to minimize chances for spillage and/or employee injury. Trucks used for shipping containers between the recycle center and Branch have lift gates for drum loading/unloading. With the exception of mineral spirits, all drummed wastes are loaded/unloaded from the trucks at the docks located on the north or west sides of the building. The used parts washer solvent is loaded/unloaded at the return/fill station, which is described in Section 9.0.

All containers are transported, moved, and stored carefully in an upright position. In the warehouse area, the immersion cleaner, parts washer solvent dumpster mud containers, and

dry cleaning waste containers are moved with two-wheel hand trucks and stacked by hand. Containers are palletized whenever possible to facilitate shipping and storage. Pallets may be stacked up to six feet high, or two high (whichever is higher), while in storage. This practice will prevent the containers from contacting standing liquid while they are in storage. A two-foot aisle space will be provided immediately adjacent to containment walls. There are two-foot aisle spaces located between parallel rows.

Total Allowable Capacity

The container storage areas for the spent solvents and the paint waste shelter have a total potential waste capacity of 7,353 gallons (2,553 gallons in the container storage area and 4,800 gallons in the paint waste shelter). The types and numbers of each container may vary, with the maximum container being up to 55 gallons. However, the total volume of waste stored will never exceed the maximum permitted volume.

8.2 *INCOMPATIBLE, IGNITABLE, AND REACTIVE WASTE MANAGEMENT*

All material at the Orange Park Branch is managed in accordance with local fire protection code and fire department recommendations. The following distances, based on NFPA 30, are illustrated in Figure 8.2-1:

- 50-foot distance from property line to flammable container storage;
- 20-foot distance from property line to flammable tank storage; and
- 5-foot distance from a flammable tank to a major structure.

The facility does not routinely manage unwashed containers that may previously have held materials that would be incompatible with wastes stored at the facility. Also, the used parts washer solvents and used aqueous parts washer solvents consist of materials that are compatible and suitable for bulking.

Procedure for Managing Waste Types

The solvents stored at this facility are compatible with each other and with other materials handled at this facility with respect to reactivity. Therefore, special waste segregation procedures are not necessary at this facility. However, the wastes are the primary source of feed stock for regenerating the clean solvents. For ease of inventory control and product integrity, separation and grouping of both used and unused solvents is a standard practice at the Branch. All containers are designed and constructed to be compatible with the stored material and to minimize the possibility of breakage and leaking, in accordance with DOT shipping container specifications.

Wastes are stored primarily in polyethylene and steel containers. Since none of the waste handled by Safety-Kleen reacts with metal or polyethylene, compatibility is assured. Since none of the wastes handled by Safety-Kleen react with metal or polyethylene, compatibility is assured. Immersion cleaner and dry cleaning waste containers are never opened at the Branch, and none of the wastes are incompatible. Overpack containers are used for the management of containers whose integrity has been compromised.

Potential Fire Sources

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

1. *All wastes and products are kept away from ignitable sources*--Personnel must confine smoking and open flames to the Branch designated area which is located outside the south door of the office area. No other smoking areas are designated. The parts washer solvent handling area and the aboveground storage tanks are remote from the office area to minimize the potential for a fire to spread or injury to personnel to occur.

2. *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 parts washer solvent waste is stored in a tank or in containers, none

of which are near sources of extreme heat, fire, potential explosion sources, or subject to violent reactions. The tanks are vented and the containers 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 petroleum-based parts washer solvent is low (2 mm Hg) and it is reactive with strong oxidizers 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" above and "d" below.

d. *damage the structural integrity of the Safety-Kleen facility*--The solvents stored at this facility will not cause deterioration of the tank, containers, or other structural components of the facility.

3. *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.

4. *"NO SMOKING" signs are posted* in areas where solvents are handled or stored.

5. *Fire extinguishers are checked* weekly by Branch personnel.

External Factors

The design of the installation is such that a harmful spill is highly unlikely to occur from most external factors. The storage tanks are inaccessible to non-Safety-Kleen personnel and the pump switches are located inside. Also, the container storage area is in a building which is inaccessible to unauthorized personnel. The paint waste shelter is generally locked.

1. *Vandalism*--Only extreme vandalism would result in a solvent spill or fire. Responses to spills and fires are described in the Contingency Plan (Section 5.0).

2. *Strikes*--A strike would not result in a solvent spill or fire.

3. *Power Failure*--A power failure would not result in a spill or fire. Should a power failure occur, all activities requiring electricity will cease.

4. *Flooding*--The site elevation is above the projected 100-year floodplain.

5. *Storms or Cold Weather*--The solvent return/fill station is roofed to eliminate the possibility of rain or snow entering the dumpsters. No opportunity is foreseen to affect the facility with snow, cold weather, or storm water.

8.3 CONTAINER MANAGEMENT

General Protocols

Container management is of paramount importance to Safety-Kleen. A list of the container specifications and associated waste streams are provided in Table 8.3-1. All containers are routinely inspected (see Section 8.4) to ensure that the containers are in good condition. If rusting or structural defects are visible, or if the container begins to leak, the contents of the container are immediately transferred to a new sound container. Overpack containers commonly are used for the management of containers whose integrity has been compromised.

Wastes are stored primarily in polyethylene and steel containers. Since none of the wastes handled by Safety-Kleen react with metal or polyethylene, compatibility is assured. Immersion cleaner and dry cleaning waste containers are never opened at the branch, and none of the wastes are incompatible.

Hazardous waste containers are always kept closed during storage except when adding or removing waste. Containers are not handled or stored in a manner that could potentially cause a rupture or leak.

Specific Waste Stream Containers

Parts washer solvent is collected in containers and generally emptied at the return/fill station into the wet dumpster, which is piped to the tank farm. The containers are designed and constructed to be compatible with the stored material and to minimize the possibility of breakage and leaking, in accordance with DOT shipping container specifications.

The immersion cleaner is always contained in partially filled covered containers before, during, and after its use. Until received at the recycle facility, the immersion cleaner is never transferred to another container. The containers of used immersion cleaner are returned to the facility and stored in the designated container storage areas before shipment to a Safety-Kleen recycle center.

Dry cleaning waste is stored in steel or polyethylene containers and consists of perchloroethylene-based waste and naphtha-based waste. Dry cleaning filters are stored in steel containers. The contents of the dry cleaning waste containers are not removed or processed at the Orange Park facility. Perchloroethylene-based dry cleaning waste is terminated at the Orange Park facility, where it is stored as permitted waste prior to shipment to a Safety-Kleen recycle center. The naphtha-based dry cleaning waste is handled at the Orange Park facility as transfer waste. All naphtha-based dry cleaning waste is shipped to a Safety-Kleen recycle center within 10 days of arrival at the Orange Park facility.

Paint wastes consist of various lacquer thinners and paints. The waste is collected in containers at the customer's place of business and the containers are then stored in the container storage area of the warehouse. The paint wastes manifests are terminated at that point. The paint wastes are then re-manifested and sent to a Safety-Kleen recycle center.

FRS wastes are stored in steel or polyethylene containers that are compatible with the hazardous waste stream. The FRS wastes are managed as transfer waste, and the manifest is not be terminated at the Branch.

As part of its protocol for handling mercury-containing lamps and devices destined for recycling, the Branch provides customers with four-foot and eight-foot boxes which hold up to 39 lamps. Boxes are inspected prior to transport from the customer to the Branch. Boxes containing broken lamps are not accepted by Safety-Kleen. If the lamps are broken while in custody of Safety-Kleen, the entire contents of the box are sealed in plastic shrink wrap or transferred to another container and closed. The boxes are picked up at customer locations and are stored at the Branch in a designated area within the transfer waste storage area (Figure 8.1-1). This storage area is labeled in accordance with 62-737.700(1)(d) FAC. The boxes are periodically shipped to a permitted mercury recovery or reclamation facility.

8.4 CONTAINER INSPECTION

The purpose of the container inspection plan is to establish a procedure and schedule for the systematic monitoring and inspection of hazardous waste management and other material management facilities to ensure proper operation, maintain compliance, and prevent the release of hazardous wastes to the environment. The Branch Manager or that person's designee is responsible for carrying out the inspections of all hazardous waste management facilities in accordance with the following procedure and schedule.

An example Daily Inspection Log for the container storage area and associated loading/unloading areas is presented as Figure 8.4-1. This Daily Inspection Log, or equivalent, will be used during daily inspections. Weekly container storage area inspections include the following:

- Verify that total volume is within permitted limits;

- Physically examine the condition of containers to verify that leaks have not occurred since the last inspection;

- Verify that all container identification, dates, and hazardous waste labels are attached and current;

- Inspect container placement and stacking such as aisle space, height, and stability of stacks; and

- Examine containment areas to detect signs of deterioration and failure of the containment system such as cracks, breakage, settlement, and spillage.

As deficiencies are detected, the Branch Manager will ensure that they are remedied promptly. Any deficiencies which could create and environmental or human health hazard will be rectified immediately.

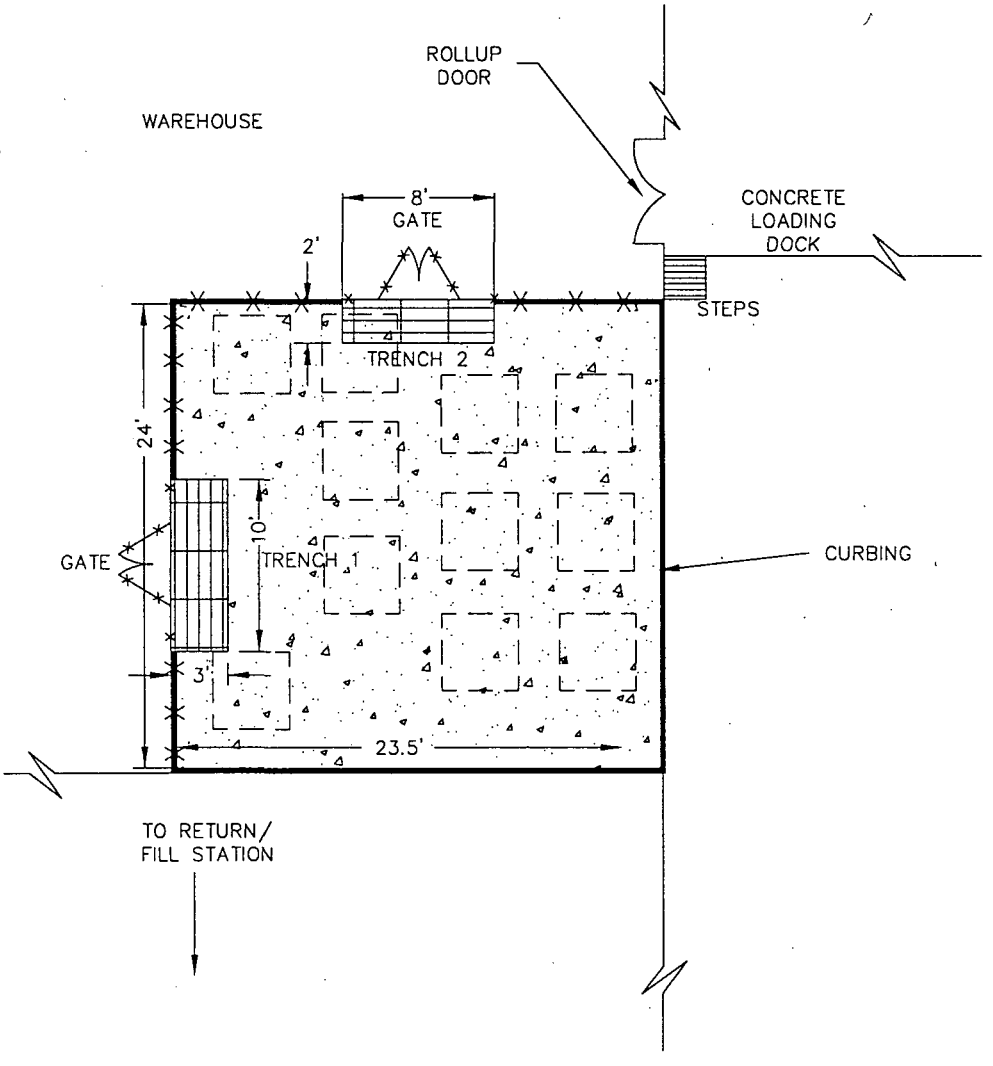
Other inspections at the facility include those performed on a weekly basis for the security systems. These inspections are described in Section 5.0.

8.5 CONTAINER STORAGE AREA CLOSURE PLAN

The container storage area closure plan is provided as part of the overall closure plan for the facility in Section 10.0.

REVISION 0
AUGUST 20, 1997

Figure 8.1-1
Container Storage Area
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- GRATING
- WOOD PALLETS
- CONCRETE
- CURBING (4" CONCRETE)
- FENCE

N

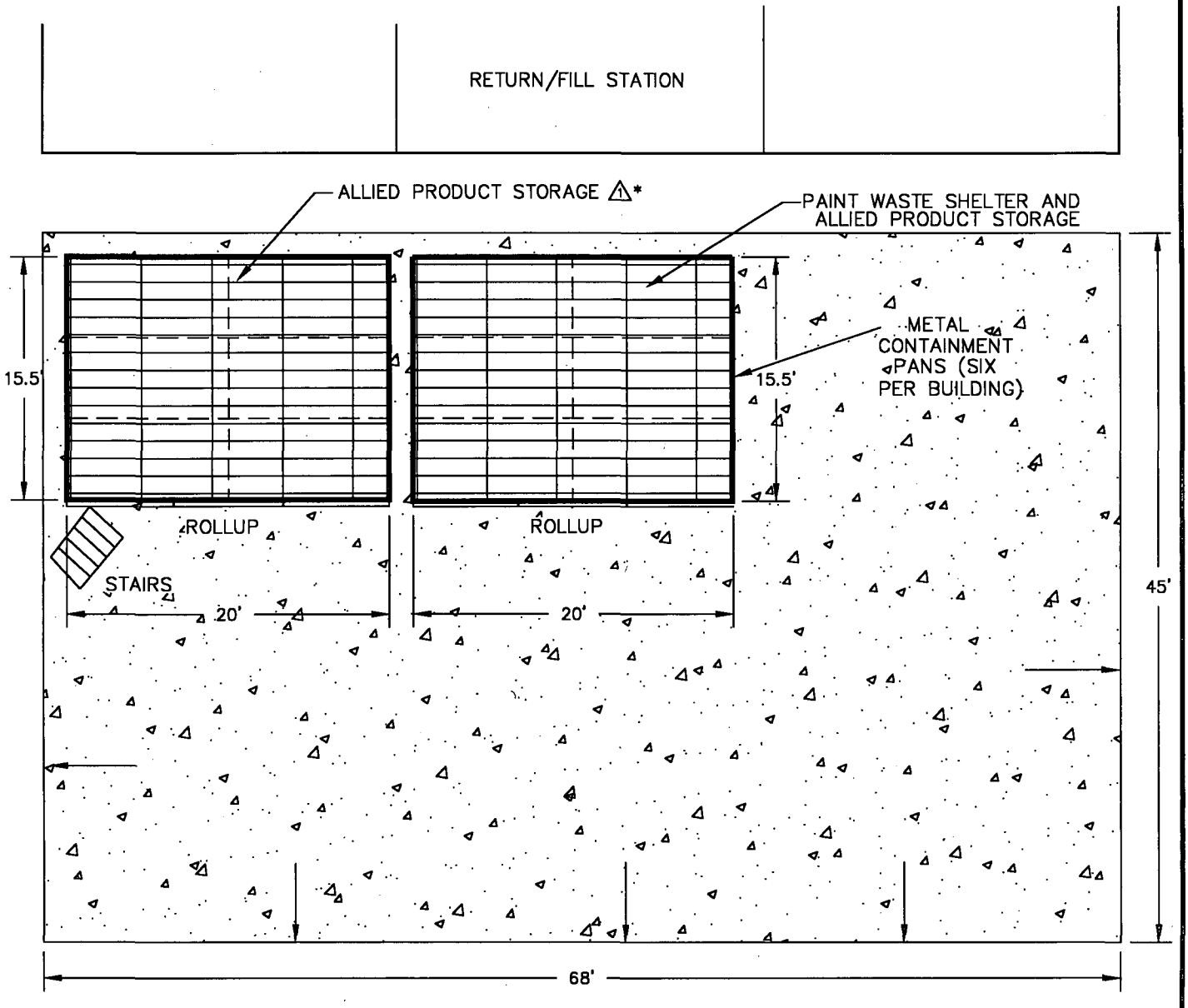
0 APPROXIMATE SCALE 10
FEET

13112.26/31126CS/072192-5

ERM.

⚠1 REVISION 1 (FEB. 2000)

FIGURE 8.1-2
CONTAINER AND PAINT WASTE STORAGE AREA
SAFETY-KLEEN CORP. FACILITY
ORANGE PARK, FLORIDA



LEGEND

- METAL CONTAINMENT PAN (PAN DEPTHS ARE 0.5 FEET)
- GRATING (GRATING IS ELEVATED ~3 FEET ABOVE GROUND SURFACE)
- CONCRETE
- DIRECTION OF SLOPED EDGES

N

0 10

APPROXIMATE SCALE (FEET)

NOTE: THE PAINT WASTE SHELTER/ALLIED PRODUCT STORAGE SHELTERS ARE FULLY ENCLOSED & COVERED SHEDS

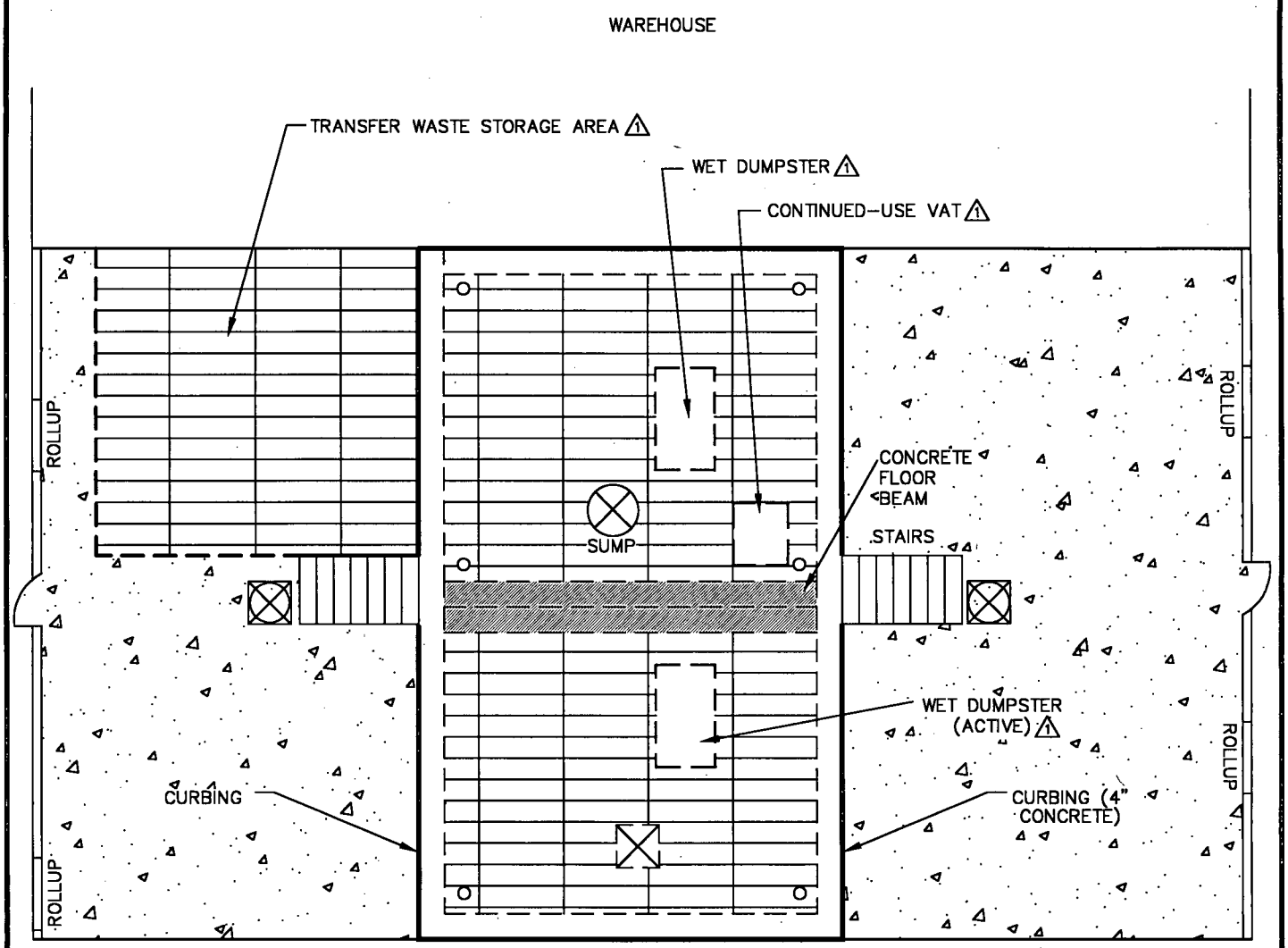
* CLOSED TRANSFER WASTE AREA

5331SAFKLN9\PAINTAREA 2-10-00

ERM

⚠1 REVISION 1 (FEB. 2000)

FIGURE 8.1-3
RETURN/FILL STATION
SAFETY-KLEEN CORP. FACILITY
ORANGE PARK, FLORIDA



LEGEND

- O — FILL NOZZLES
- ⊠ — SUMP
- ▭ — GRATING
- ▬ — CURBING (4" CONCRETE)

N

0 10

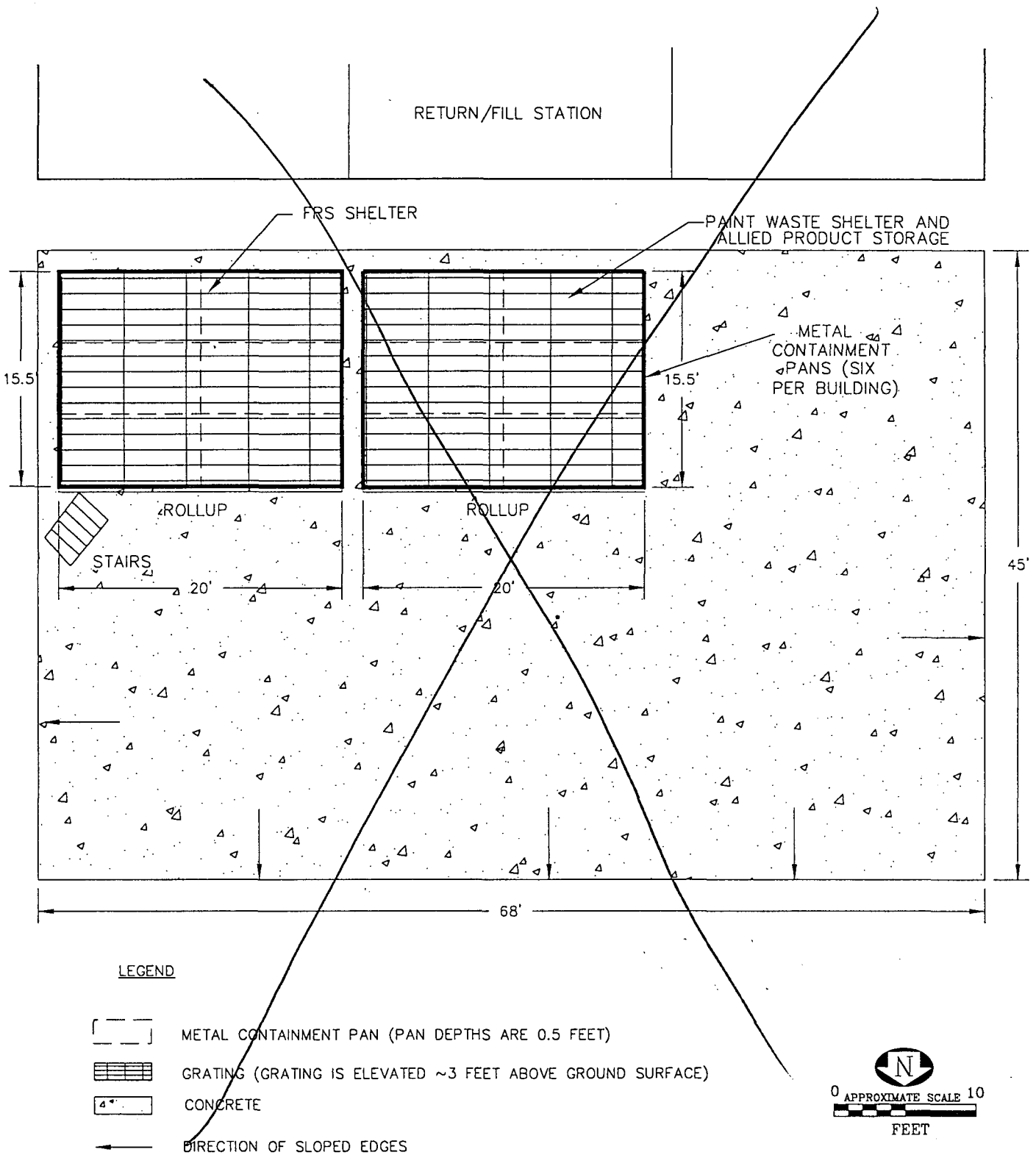
APPROXIMATE SCALE (FEET)

5331SAFKLN9\RETURN2 2-25-00

ERM

REVISION 0
AUGUST 20, 1997

Figure 8.1-2
Container and Paint Waste Storage Area
Safety-Kleen Corp. Facility
Orange Park, Florida

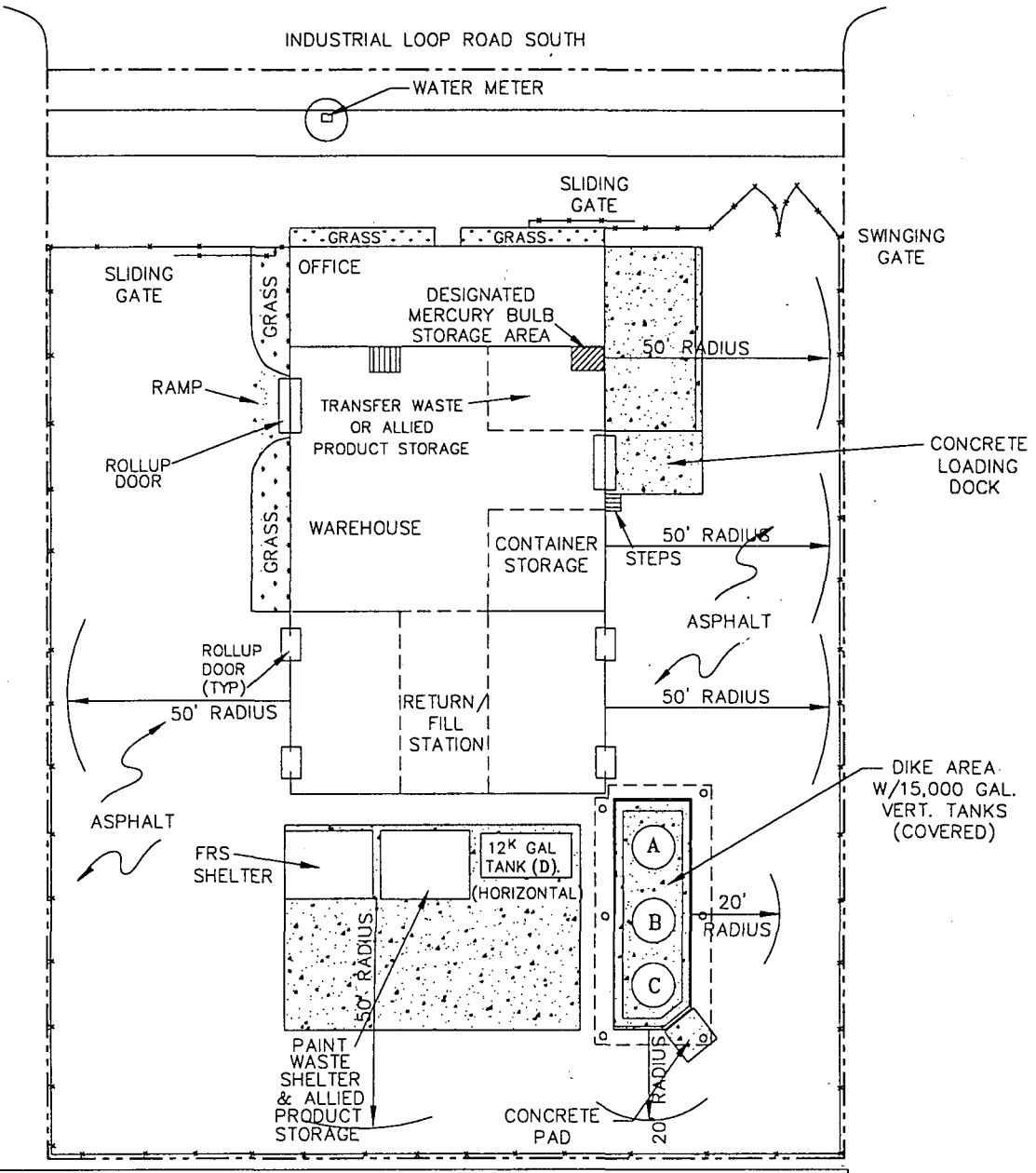


NOTE: THE FRS SHELTER AND PAINT WASTE SHELTER/ALLIED PRODUCT STORAGE SHELTER ARE FULLY ENCLOSED & COVERED SHEDS

311.26/31126PST/072197

ERM

Figure 8.2-1
Fire Distances
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

N

0 APPROXIMATE SCALE 40
FEET

ERM

FIGURE 8.4-1

INSPECTION LOG SHEET FOR:
Daily Inspection of CONTAINER STORAGE AREA
(A separate log must be completed for each storage area.)

DESCRIPTION OF AREA (e.g., metal shelter, northeast corner of warehouse, etc.) _____

_____

PERMITTED STORAGE VOLUME _____

INSPECTOR'S NAME/TITLE _____

INSPECTOR'S SIGNATURE:				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

_____/_____/_____ _____/_____/_____ _____/_____/_____ _____/_____/_____ _____/_____/_____
DATE: (M / D / Y)

_____ _____ _____ _____ _____
TIME

CONTAINERS	MON.	TUES.	WED.	THURS.	FRI.
Total Volume* of _____** waste:					
Total Volume of _____** waste:					
Total Volume of _____** waste:					
Total Volume of _____** waste:					
Total Volume of _____:					
TOTAL VOLUME (IN GALLONS):					
	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 Containers: 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, broken or damaged pallets, other: _____

CONTAINMENT

Curbing, Floor and Sump(s): A N A N A N A N A N

(Any material which spills, leaks or otherwise accumulates in the secondary containment must be completely removed within 24 hours *of it being discovered.)*

If 'N', circle appropriate problem: ponding/wet spots, deterioration (cracks, gaps, etc.), displacement, leaks, inadequate sealant,
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 REPAIRS OF ANY ITEMS INDICATED AS "NOT ACCEPTABLE": _____

_____

_____

* When calculating total volumes, assume the containers are full.
** Enter a short description of the waste (e.g., M.S., I.C., paint, etc.) _____
*** 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)

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

Waste Stream	Container Sizes (gallons)	Construction Material of Container
Spent Parts Washer Solvent	5	Polyethylene
	16	Steel
	30	Steel
Dumpster Mud/Tank Bottoms	16	Steel
	30	Steel
Used Immersion Cleaner #699	16	Steel
Dry Cleaning Waste (Perchloroethylene)	5	Steel
	16	Steel or Polyethylene
	30	Steel or Polyethylene
	Split 30 (also known as 15- or 20-gallon)	Steel
Paint Wastes	5	Steel
	16	Steel
	30	Steel
Fluid Recovery Service Wastes and Transfer Wastes; Branch-Generated Liquids/ Solids (Debris)	Variable Sizes	Variable, only containers which meet DOT specifications will be accepted
Oil Filters	Variable Sizes	Steel
Aqueous Brake Cleaner	5	Polyethylene
Aqueous Parts Washer	Variable Sizes	Steel or Polyethylene
Truck Wash Water	N/A	Pumped directly to used solvent tank

An 85-gallon overpack container may be used with any of the waste streams.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

SPENT PARTS WASHER SOLVENT, AQUEOUS BRAKE CLEANER, AQUEOUS PARTS WASHER, AND DUMPSTER MUD/TANK BOTTOMS

1. 30 gallons, 18-1/4" diameter x 28-1/4" outside height x 20/18 gauge steel, tapered, 2 rolling hoops, painted outside.

   Cover for 30-gallon drums:

   18-1/4" diameter x 20 gauge steel cover and exterior painted.

   18-1/4" diameter x 20 gauge steel cover, exterior painted, 2" Tri-Sure ring near edge.

   Lock ring for 30-gallon drums:

   18-1/4" x 16 gauge galvanized lock ring.

2. 16 gallons, 14" diameter x 26-9/16" outside height x 20/19 gauge steel, tapered, 2 rolling hoops, painted outside.

   Cover for 16-gallon steel drum:

   14" diameter x 22 gauge steel cover painted and fitted with a tubular gasket.

   Lock ring for 16-gallon steel drum:

   14" diameter x 18 gauge galvanized steel lock ring.

3. 5-gallon polyethylene.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

USED IMMERSION CLEANER #699

1. 16 gallons, 14" diameter x 26-9/16" outside height x 18 gauge steel, 2 rolling hoops, exterior painted, fitted with 4 brackets, built to DOT Specification 5B.

   Cover for 16-gallon steel drum:
   14" diameter x 18 gauge steel cover, painted and fitted with a tubular gasket.

   Lock ring for 16-gallon steel drum:
   14" diameter x 18 gauge galvanized steel lock ring or 14" diameter x 12 gauge steel DOT 5B closing ring with nut and bolt installed.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

DRY CLEANER WASTE (PERCHLOROETHYLENE)

1. 15 gallons ("split 30"), 18-1/4" diameter x 16-5/8" outside height x 20/18 gauge steel, tapered, 1 rolling hoop, painted outside and epoxy phenolic lined.

   Cover for 30-gallon drums:

   18-1/4" diameter x 20 gauge steel cover, exterior painted and epoxy phenolic lined inside.

   Lock ring for 30-gallon drums:

   18-1/4" x 16 gauge galvanized lock ring.

2. 30 gallons, 18-1/4" diameter x 30-1/2" outside height x 20/18 gauge steel, tapered, 2 rolling hoops, painted outside and epoxy phenolic lined inside.

   Cover for 30-gallon drums:

   18-1/4" diameter x 20 gauge steel cover, exterior painted and epoxy phenolic lined inside.

   Lock ring for 30-gallon drums:

   18-1/4" x 16 gauge galvanized lock ring.

3. 16 gallons, 14.8" diameter x 26.8" outside height x 1/4" high density polyethylene.

   Cover for polyethylene drum:

   14" diameter x 1/4" high density polyethylene.

   Lock ring for polyethylene drum:

   15/62" diameter x 2.62" x 16 gauge steel closing ring with drawlatch, coated with epoxy paint.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

4. 16 gallons, 14" diameter x 26-9/16" outside height x 20/19 gauge steel, tapered, 2 rolling hoops, painted outside and epoxy phenolic lined.

   Cover for 16-gallon steel drum:

   14" diameter x 20 gauge steel cover painted and fitted with a tubular gasket.

   Lock ring for 16-gallon steel drum:

   14" diameter x 18 gauge galvanized steel lock ring.

5. 5-gallon 11" diameter x 13-19/32" high x 24 gauge steel tighthead pail, with handle and 2" flange and plug, built to DOT Specification 17E, painted exterior and rust inhibited interior.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

PAINT WASTES

1. 5-gallon 11" diameter x 13-19/32" high x 24 gauge steel tighthead pail, with handle and 2" flange and plug, built to DOT Specification 17E, painted exterior and rust inhibited interior.

2. 16 gallons, 14-7/8" diameter x 26-7/8" high x 19 gauge steel closed head drum with 2" bung and 3/4" bung built to DOT Specification 17E, painted exterior.

3. 30 gallons, 18-2/5" diameter x 29-1/4" high x 18-20 gauge steel closed head drum with 2" bung and 3/4" bung built to DOT Specification 17E, painted exterior.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

OVERPACK DRUM

1. 85 gallons, 25-7/8" diameter x 38" height (interior dimensions) x 16 gauge steel, 2 rolling hoops, painted exterior and epoxy phenolic coated interior, built to DOT Salvage Drum specifications.

   Cover for 85-gallon drum:
   27-7/8" diameter x 16 gauge steel cover, painted and fitted with a gasket and a 3/4" fitting with a nylon plug.

   Lock ring for 85-gallon drum:
   27-7/8" x 16 gauge/12 gauge closing ring with nut and bolt installed.

8.0 CONTAINERS

The hazardous waste container storage areas consist of two areas: the container storage area located in the warehouse and the paint waste/allied product storage shelter located north of the main building. These areas are shown in Figures 8.1-1 and 8.1-2.

8.1 CONTAINMENT SYSTEM

Container Storage Area

The container storage area shown in Figure 8.1-1 occupies a portion of the main site building. This warehouse area has concrete floors, concrete berms, and a central collection trench to form a spill containment system within the area.

The permitted container storage area has a 25' 5" x 24' concrete floor with 6-inch curbing on exposed sides and two containment trenches with a combined containment capacity of 261.8 gallons. The maximum hazardous waste storage capacity of this area, therefore, is 2,618 gallons (the containment volume is 10% of the allowable storage capacity). Waste allowed for storage is immersion cleaner, dry cleaning solvent, parts washer solvent dumpster mud, tank bottoms, and oil filters. The types and number of each type of container may vary; however, the storage capacity will not be exceeded. Containment volume calculations are provided as Appendix C.

Paint Waste Shelter

The permitted paint waste shelter consists of a 45' x 68' concrete pad underlying a 15.5' x 20' shelter with metal containment pans. This shelter is divided into a paint waste storage area and an allied product storage area. Allied products are unused or "virgin" materials. The storage shed consists of six metal containment pans each measuring 5' x 10'. The pans have overlapping lips which prevent liquids from migrating between the pans and onto the concrete. Total containment capacity is 1,122 gallons. Based on this, the maximum potential storage capacity is 11,220 gallons. Due to space constraints, however, the

maximum actual capacity is less. The currently permitted storage capacity for the paint waste shelter is 1,280 gallons. Materials allowed for storage includes virgin flammable and flammable paint-related wastes. The types and number of each type of container may vary; however, the storage capacity will not be exceeded. Containment volume calculations are provided in Appendix C.

FRS Wastes and Transfer Wastes

Transfer wastes may be stored in the southwest portion of the warehouse. FRS wastes may be stored in the outdoor shelter adjacent to the paint waste shelter. Since FRS wastes are transfer wastes only, they are not required to have containment. Allied products and mercury-containing lamps may also be stored in the transfer waste area as shown in Figure 8.2-1.

Containment

The containment system in the warehouse is free of cracks and is sufficiently impervious to prevent seepage into and through the concrete. The flooring beneath the paint waste shelter (which has a metal floor and metal containment pans) is also concrete. Concrete is fully compatible with the wastes stored. Studies performed with the Canadian Portland Cement Association revealed that the average permeability of concrete is 1×10^{-10} cm/s, which should prevent infiltration should a release occur. Copies of documentation supporting this conclusion on the permeability of concrete are presented in Appendix D. The warehouse is completely enclosed so no precipitation can enter it.

Handling of Spills

Spills from containers are removed by a hand-held, portable electric pump, wet-dry vacuum cleaner, or sorbent materials. Since the characteristics of the stored wastes are known, no analyses are performed for the materials collected from the containment area. All collected materials are sent to a RCRA-permitted recycling/reclamation facility.

Any small spill in the warehouse containment storage area which might occur would generally puddle where it was spilled. The spilled material would be cleaned up where it puddled or be manually directed to the containment trench. In the event that a large spill were to occur, some dispersion would be expected to occur based on the direction, force, and pathway obstacles presented by and to the spill. Only a catastrophic event would result in an exceedance of the 261.8-gallon containment capacity. In this case, once outside the containment area, the wastes would flow onto paved surfaces inside the building. All containers are stored on pallets which prevent the containers from coming in contact with spilled, accumulated liquids.

In the paint waste shelter, the containment pans would serve to collect any spilled liquids. Because the containers are stored on metal grating above the pans, contact with spilled liquids should not occur. Also, the entire structure is elevated, with a total containment capacity of 1,122 gallons, so only a catastrophic event would result in a release to the surrounding paved surfaces outside the building.

Container Handling

In the container storage area, containers are handled with a hand-truck or forklift that is free of sharp points and stacked by hand. Every time a drum is moved, a chance exists that it will be tipped over, dropped, or punctured. To minimize the possibility of spillage, containers are tightly covered and kept in an upright position. A small portable electric pump is available to quickly transfer the liquid from any leaking container into another safe container. Each route truck is equipped with an electric hoist. This hoist is used in the loading/unloading operation to minimize chances for spillage and/or employee injury. Trucks used for shipping containers between the recycle center and Branch have lift gates for drum loading/unloading. With the exception of mineral spirits, all drummed wastes are loaded/unloaded from the trucks at the docks located on the north or west sides of the building. The used parts washer solvent is loaded/unloaded at the return/fill station, which is described in Section 9.0.

All containers are transported, moved, and stored carefully in an upright position. In the warehouse area, the immersion cleaner, parts washer solvent dumpster mud containers, and

dry cleaning waste containers are moved with two-wheel hand trucks and stacked by hand. Containers are palletized whenever possible to facilitate shipping and storage. Pallets may be stacked up to six feet high, or two high (whichever is higher), while in storage. This practice will prevent the containers from contacting standing liquid while they are in storage. A two-foot aisle space will be provided immediately adjacent to containment walls. There are two-foot aisle spaces located between parallel rows.

Total Allowable Capacity

The container storage areas for the spent solvents and the paint waste shelter have a total potential waste capacity of 25,058 gallons based on containment volumes. However, the currently permitted waste capacity is 3,898 gallons. The types and numbers of each container may vary, with the maximum container being up to 55 gallons. However, the total volume of waste stored will never exceed the maximum permitted volume.

8.2 *INCOMPATIBLE, IGNITABLE, AND REACTIVE WASTE MANAGEMENT*

All material at the Orange Park Branch is managed in accordance with local fire protection code and fire department recommendations. The following distances, based on NFPA 30, are illustrated in Figure 8.2-1:

- 50-foot distance from property line to flammable container storage;
- 20-foot distance from property line to flammable tank storage; and
- 5-foot distance from a flammable tank to a major structure.

The facility does not routinely manage unwashed containers that may previously have held materials that would be incompatible with wastes stored at the facility. Also, the used parts washer solvents and used aqueous parts washer solvents consist of materials that are compatible and suitable for bulking.

Procedure for Managing Waste Types

The solvents stored at this facility are compatible with each other and with other materials handled at this facility with respect to reactivity. Therefore, special waste segregation procedures are not necessary at this facility. However, the wastes are the primary source of feed stock for regenerating the clean solvents. For ease of inventory control and product integrity, separation and grouping of both used and unused solvents is a standard practice at the Branch. All containers are designed and constructed to be compatible with the stored material and to minimize the possibility of breakage and leaking, in accordance with DOT shipping container specifications.

Wastes are stored primarily in polyethylene and steel containers. Since none of the waste handled by Safety-Kleen reacts with metal or polyethylene, compatibility is assured. Since none of the wastes handled by Safety-Kleen react with metal or polyethylene, compatibility is assured. Immersion cleaner and dry cleaning waste containers are never opened at the Branch, and none of the wastes are incompatible. Overpack containers are used for the management of containers whose integrity has been compromised.

Potential Fire Sources

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

1. *All wastes and products are kept away from ignitable sources*--Personnel must confine smoking and open flames to the Branch designated area which is located outside the south door of the office area. No other smoking areas are designated. The parts washer solvent handling area and the aboveground storage tanks are remote from the office area to minimize the potential for a fire to spread or injury to personnel to occur.

2. *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 parts washer solvent waste is stored in a tank or in containers, none

of which are near sources of extreme heat, fire, potential explosion sources, or subject to violent reactions. The tanks are vented and the containers 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 petroleum-based parts washer solvent is low (2 mm Hg) and it is reactive with strong oxidizers 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" above and "d" below.

d. *damage the structural integrity of the Safety-Kleen facility*--The solvents stored at this facility will not cause deterioration of the tank, containers, or other structural components of the facility.

3. *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.

4. *"NO SMOKING" signs are posted* in areas where solvents are handled or stored.

5. *Fire extinguishers are checked* weekly by Branch personnel.

External Factors

The design of the installation is such that a harmful spill is highly unlikely to occur from most external factors. The storage tanks are inaccessible to non-Safety-Kleen personnel and the pump switches are located inside. Also, the container storage area is in a building which is inaccessible to unauthorized personnel. The paint waste shelter is generally locked.

1. *Vandalism*--Only extreme vandalism would result in a solvent spill or fire. Responses to spills and fires are described in the Contingency Plan (Section 5.0).

2. *Strikes*--A strike would not result in a solvent spill or fire.

3. *Power Failure*--A power failure would not result in a spill or fire. Should a power failure occur, all activities requiring electricity will cease.

4. *Flooding*--The site elevation is above the projected 100-year floodplain.

5. *Storms or Cold Weather*--The solvent return/fill station is roofed to eliminate the possibility of rain or snow entering the dumpsters. No opportunity is foreseen to affect the facility with snow, cold weather, or storm water.

8.3 CONTAINER MANAGEMENT

General Protocols

Container management is of paramount importance to Safety-Kleen. A list of the container specifications and associated waste streams are provided in Table 8.3-1. All containers are routinely inspected (see Section 8.4) to ensure that the containers are in good condition. If rusting or structural defects are visible, or if the container begins to leak, the contents of the container are immediately transferred to a new sound container. Overpack containers commonly are used for the management of containers whose integrity has been compromised.

Wastes are stored primarily in polyethylene and steel containers. Since none of the wastes handled by Safety-Kleen react with metal or polyethylene, compatibility is assured. Immersion cleaner and dry cleaning waste containers are never opened at the branch, and none of the wastes are incompatible.

Hazardous waste containers are always kept closed during storage except when adding or removing waste. Containers are not handled or stored in a manner that could potentially cause a rupture or leak.

Specific Waste Stream Containers

Parts washer solvent is collected in containers and generally emptied at the return/fill station into the wet dumpster, which is piped to the tank farm. The containers are designed and constructed to be compatible with the stored material and to minimize the possibility of breakage and leaking, in accordance with DOT shipping container specifications.

The immersion cleaner is always contained in partially filled covered containers before, during, and after its use. Until received at the recycle facility, the immersion cleaner is never transferred to another container. The containers of used immersion cleaner are returned to the facility and stored in the designated container storage areas before shipment to a Safety-Kleen recycle center.

Dry cleaning waste is stored in steel or polyethylene containers and consists of perchloroethylene-based waste and naphtha-based waste. Dry cleaning filters are stored in steel containers. The contents of the dry cleaning waste containers are not removed or processed at the Orange Park facility. Perchloroethylene-based dry cleaning waste is terminated at the Orange Park facility, where it is stored as permitted waste prior to shipment to a Safety-Kleen recycle center. The naphtha-based dry cleaning waste is handled at the Orange Park facility as transfer waste. All naphtha-based dry cleaning waste is shipped to a Safety-Kleen recycle center within 10 days of arrival at the Orange Park facility.

Paint wastes consist of various lacquer thinners and paints. The waste is collected in containers at the customer's place of business and the containers are then stored in the container storage area of the warehouse. The paint wastes manifests are terminated at that point. The paint wastes are then re-manifested and sent to a Safety-Kleen recycle center.

FRS wastes are stored in steel or polyethylene containers that are compatible with the hazardous waste stream. The FRS wastes are managed as transfer waste, and the manifest is not be terminated at the Branch.

As part of its protocol for handling mercury-containing lamps and devices destined for recycling, the Branch provides customers with four-foot and eight-foot boxes which hold up to 39 lamps. Boxes are inspected prior to transport from the customer to the Branch. Boxes containing broken lamps are not accepted by Safety-Kleen. If the lamps are broken while in custody of Safety-Kleen, the entire contents of the box are sealed in plastic shrink wrap or transferred to another container and closed. The boxes are picked up at customer locations and are stored at the Branch in a designated area within the transfer waste storage area (Figure 8.1-1). This storage area is labeled in accordance with 62-737.700(1)(d) FAC. The boxes are periodically shipped to a permitted mercury recovery or reclamation facility.

8.4 CONTAINER INSPECTION

The purpose of the container inspection plan is to establish a procedure and schedule for the systematic monitoring and inspection of hazardous waste management and other material management facilities to ensure proper operation, maintain compliance, and prevent the release of hazardous wastes to the environment. The Branch Manager or that person's designee is responsible for carrying out the inspections of all hazardous waste management facilities in accordance with the following procedure and schedule.

An example Daily Inspection Log for the container storage area and associated loading/unloading areas is presented as Figure 8.4-1. This Daily Inspection Log, or equivalent, will be used during daily inspections. Weekly container storage area inspections include the following:

- Verify that total volume is within permitted limits;
- Physically examine the condition of containers to verify that leaks have not occurred since the last inspection;

- Verify that all container identification, dates, and hazardous waste labels are attached and current;

- Inspect container placement and stacking such as aisle space, height, and stability of stacks; and

- Examine containment areas to detect signs of deterioration and failure of the containment system such as cracks, breakage, settlement, and spillage.

As deficiencies are detected, the Branch Manager will ensure that they are remedied promptly. Any deficiencies which could create and environmental or human health hazard will be rectified immediately.

Other inspections at the facility include those performed on a weekly basis for the security systems. These inspections are described in Section 5.0.

8.5 CONTAINER STORAGE AREA CLOSURE PLAN

The container storage area closure plan is provided as part of the overall closure plan for the facility in Section 10.0.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

Waste Stream	Container Sizes (gallons)	Construction Material of Container
Spent Parts Washer Solvent	5	Polyethylene
	16	Steel
	30	Steel
Dumpster Mud/Tank Bottoms	16	Steel
	30	Steel
Used Immersion Cleaner #699	16	Steel
Dry Cleaning Waste (Perchloroethylene)	5	Steel
	16	Steel or Polyethylene
	30	Steel or Polyethylene
	Split 30 (also known as 15- or 20-gallon)	Steel
Paint Wastes	5	Steel
	16	Steel
	30	Steel
Fluid Recovery Service Wastes and Transfer Wastes; Branch-Generated Liquids/ Solids (Debris)	Variable Sizes	Variable, only containers which meet DOT specifications will be accepted

An 85-gallon overpack container may be used with any of the waste streams.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

SPENT PARTS WASHER SOLVENT AND DUMPSTER MUD/TANK BOTTOMS

1. 30 gallons, 18-1/4" diameter x 28-1/4" outside height x 20/18 gauge steel, tapered, 2 rolling hoops, painted outside.

   Cover for 30-gallon drums:

   18-1/4" diameter x 20 gauge steel cover and exterior painted.

   18-1/4" diameter x 20 gauge steel cover, exterior painted, 2" Tri-Sure ring near edge.

   Lock ring for 30-gallon drums:

   18-1/4" x 16 gauge galvanized lock ring.

2. 16 gallons, 14" diameter x 26-9/16" outside height x 20/19 gauge steel, tapered, 2 rolling hoops, painted outside.

   Cover for 16-gallon steel drum:

   14" diameter x 22 gauge steel cover painted and fitted with a tubular gasket.

   Lock ring for 16-gallon steel drum:

   14" diameter x 18 gauge galvanized steel lock ring.

3. 5-gallon polyethylene.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

USED IMMERSION CLEANER #699

1. 16 gallons, 14" diameter x 26-9/16" outside height x 18 gauge steel, 2 rolling hoops, exterior painted, fitted with 4 brackets, built to DOT Specification 5B.

   Cover for 16-gallon steel drum:
   14" diameter x 18 gauge steel cover, painted and fitted with a tubular gasket.

   Lock ring for 16-gallon steel drum:
   14" diameter x 18 gauge galvanized steel lock ring or 14" diameter x 12 gauge steel DOT 5B closing ring with nut and bolt installed.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

DRY CLEANER WASTE (PERCHLOROETHYLENE)

1. 15 gallons ("split 30"), 18-1/4" diameter x 16-5/8" outside height x 20/18 gauge steel, tapered, 1 rolling hoop, painted outside and epoxy phenolic lined.

   Cover for 30-gallon drums:

   18-1/4" diameter x 20 gauge steel cover, exterior painted and epoxy phenolic lined inside.

   Lock ring for 30-gallon drums:

   18-1/4" x 16 gauge galvanized lock ring.

2. 30 gallons, 18-1/4" diameter x 30-1/2" outside height x 20/18 gauge steel, tapered, 2 rolling hoops, painted outside and epoxy phenolic lined inside.

   Cover for 30-gallon drums:

   18-1/4" diameter x 20 gauge steel cover, exterior painted and epoxy phenolic lined inside.

   Lock ring for 30-gallon drums:

   18-1/4" x 16 gauge galvanized lock ring.

3. 16 gallons, 14.8" diameter x 26.8" outside height x 1/4" high density polyethylene.

   Cover for polyethylene drum:

   14" diameter x 1/4" high density polyethylene.

   Lock ring for polyethylene drum:

   15/62" diameter x 2.62" x 16 gauge steel closing ring with drawlatch, coated with epoxy paint.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

4. 16 gallons, 14" diameter x 26-9/16" outside height x 20/19 gauge steel, tapered, 2 rolling hoops, painted outside and epoxy phenolic lined.

   Cover for 16-gallon steel drum:

   14" diameter x 20 gauge steel cover painted and fitted with a tubular gasket.

   Lock ring for 16-gallon steel drum:

   14" diameter x 18 gauge galvanized steel lock ring.

5. 5-gallon 11" diameter x 13-19/32" high x 24 gauge steel tighthead pail, with handle and 2" flange and plug, built to DOT Specification 17E, painted exterior and rust inhibited interior.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

PAINT WASTES

1. 5-gallon 11" diameter x 13-19/32" high x 24 gauge steel tighthead pail, with handle and 2" flange and plug, built to DOT Specification 17E, painted exterior and rust inhibited interior.

2. 16 gallons, 14-7/8" diameter x 26-7/8" high x 19 gauge steel closed head drum with 2" bung and 3/4" bung built to DOT Specification 17E, painted exterior.

3. 30 gallons, 18-2/5" diameter x 29-1/4" high x 18-20 gauge steel closed head drum with 2" bung and 3/4" bung built to DOT Specification 17E, painted exterior.

TABLE 8.3-1

WASTE STREAMS AND CONTAINER SIZES

OVERPACK DRUM

1. 85 gallons, 25-7/8" diameter x 38" height (interior dimensions) x 16 gauge steel, 2 rolling hoops, painted exterior and epoxy phenolic coated interior, built to DOT Salvage Drum specifications.

   Cover for 85-gallon drum:
   27-7/8" diameter x 16 gauge steel cover, painted and fitted with a gasket and a 3/4" fitting with a nylon plug.

   Lock ring for 85-gallon drum:
   27-7/8" x 16 gauge/12 gauge closing ring with nut and bolt installed.

SECTION

9

9.0 TANK SYSTEM

9.1 ENGINEERING ASSESSMENT OF TANK SYSTEM

An engineering assessment of the various components of the tank system at the Orange Park facility was completed in August 1997 by AST Inspection Services, Inc. A copy of the engineering assessment report is included in Appendix E. An engineering assessment report entitled *Design and Integrity Assessment - Used Solvent Storage Tank System and Design and Installation Assessment - Used Antifreeze Storage Tank System* was prepared by Tera, Inc. in January 1992. This report was included in the previous permit application for the facility and is on file with the FDEP. A metal canopy has been installed at the tank farm to cover the three aboveground storage tanks and associated containment structure, as well as a portion of the truck loading area. It should be noted at the time of the Tera report, the tanks were not grounded. The tanks were grounded following issuance of the Tera report.

9.2 TANK SYSTEM SPECIFICATIONS

The facility includes three grounded vertical aboveground steel tanks (Figure 9.2-1). Used parts washer solvent is returned from Safety-Kleen's customers in containers and the solvent is transferred via the wet dumpsters into a 15,000-gallon tank (10' 6" diameter x 23' 3" in height) , prior to bulk shipment to a Safety-Kleen recycle center. A second 15,000-gallon tank is used to store fresh parts washer solvent and is therefore not considered a RCRA hazardous waste tank. The third 15,000-gallon aboveground tank is permitted to store hazardous ethylene glycol (i.e., used antifreeze mixed with used oil). This waste stream previously was considered hazardous by the State of Florida. However, the FDEP has subsequently determined this waste stream to be nonhazardous. Based on this redesignation, Safety-Kleen intends to "close" the ethylene glycol tank (in accordance with FDEP approval). After the closure has been completed, Safety-Kleen will use the tank as an accumulation point for waste antifreeze/used oil. The tank then will be emptied on a periodic, as-needed basis and the contents transported to the BIDS terminus for rail shipment as described in Section 7.1.7. A closure plan for the ethylene glycol tank is included in Appendix F.

9.0 TANK SYSTEM

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A fourth, horizontal aboveground storage tank (12,000-gallon capacity) currently exists onsite outside the tank secondary containment area. This tank is double-walled and contains virgin solvent.

Material Compatibility

Waste stored in the RCRA tank at this facility is used parts washer solvent. The parts washer solvent is compatible with the mild steel tank structure; in fact, petroleum products often are used as a light hydrocarbon coating to prevent rusting of metal parts. As with all petroleum storage vessels, water will accumulate over time due to condensation and the addition of aqueous parts washer solvent and aqueous brake cleaner. The aqueous parts washer solvent and aqueous brake cleaner have a specific gravity less than water and the water will accumulate in the bottom of the tank.

All material at the Orange Park Branch is managed in accordance with local fire protection code and fire department recommendations. The following distances, based on NFPA 30, are illustrated in Figure 9.2-2:

- 50-foot distance from property line to flammable container storage;
- 20-foot distance from property line to flammable tank storage; and
- 5-foot distance from a flammable tank to a major structure.

Also, the used parts washer solvents and used aqueous parts washer solvents consist of materials that are compatible and suitable for bulking.

Tank Operation Procedures and Design

Used spent parts washer solvent from parts washers is accumulated in the 15,000-gallon aboveground storage tank by transfer through the return/fill station. Used solvent is returned from customers via containers and poured into the wet dumpsters which have barrel washers enclosed within them to facilitate container reuse. The container is then placed on roller brushes within the barrel washer (detailed information on the barrel washers is provided in

Appendix G). As the machine is turned on, the container rotates on the brush and the outside of the container is cleaned. A nozzle in the barrel washer sprays a stream of solvent into the bottom of the container to clean the inside of the container. The machine is then turned off and the container is removed. The procedure takes several seconds per container. The container is then refilled with clean solvent using a pump and nozzle assembly (Figure 1 in Appendix H) similar to a gasoline dispenser. The waste is transferred to the tank via piping and a pump (Figure 2 in Appendix H).

The used solvent is fed to a sump in the bottom of the wet dumpster and automatically pumped to the used parts washer solvent storage tank. A basket within the sump collects sludge from the cleaning operations. Periodically, this basket is removed and sludge is removed and placed into a sludge drum for recycling. The wet dumpsters are located in the return/fill station, which is underlain by a secondary containment structure.

A drum rinsing unit was installed in the northwest portion of the return/fill station in 1997. The purpose of the drum rinsing unit is to provide a final rinse for some of the containers that are being reused to ensure Safety-Kleen provides the cleanest nonhazardous grade of solvent possible. Rinsate from the drum rinsing unit is contained in a reservoir beneath the unit and subsequently emptied to the used solvent tank. A description of the drum rinsing system operation and engineering specifications of the system are provided in Appendix I.

The used solvent storage tank is designed and constructed to be compatible with the materials stored. Typical construction and installation standards for the aboveground tank are shown in Figures 3 through 5 in Appendix H. The tank is vented in accordance with National Fire Protection Association (NFPA) standards, and is equipped with a high-level alarm. The design and installation of the tank alarm system is shown in Figures 6a through 6f in Appendix F. The tank seams are lapped with full fillet welds. The weld was performed with an E70 electrode and can withstand a 4-psi air pressure test (which is performed by the manufacturer). The used solvent tank was installed new in March 1985.

The January 1992 Tank Assessment Report prepared by Tera, Inc. includes a description of the tank system components and operation. The following is a concise description of the main features of the tank system.

The tank is aboveground, supported on an 8-inch metal skid placed on the concrete foundation slab, which is surrounded by a 4-foot high wall. Therefore, no surface run-on will contact the wastes stored at the site and no run-off collection system is required. To minimize the amount of precipitation that may collect inside the containment area, a canopy has been installed over the tank farm. If rainwater does accumulate in the containment area and it has been verified that no spill has occurred, then rainwater will be discharged to the ground surface. Only the Branch Manager or someone operating under his/her direct orders may discharge to the ground surface. If it is not possible to verify that a spill has not occurred, then the rainwater will be pumped into drums and added to the used parts washer solvent tank via the wet dumpsters.

The tank farm dike and the return/fill station have been sealed with a chemical resistant coating. Level gauges (Figure 7 in Appendix H) are used to measure liquid levels in tanks. Float switch-activated automatic high level alarms (which consist of a strobe light and siren) signal the tank's being 95 percent full. This alarm allows an operator more than two minutes to stop operations and avoid overfilling the tank. In addition, the gauges of the tank are read before filling and before and during the filling of a tanker truck (the available volume of which is noted prior to emptying the tank) to prevent overfilling of the truck or tank. A tank truck provided with a suction pump is used to withdraw used parts washer solvent 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/fill station is cleaned within 24 hours of a spill.

Controls and Spill Prevention

Equipment used in the operation of the aboveground tank for used parts washer solvent includes gauges for measuring liquid levels in the tank and an automatic high level alarm. The high level alarm will sound when the tank is filled to 95 percent of capacity. Filling of the tank must cease when the alarm sounds to prevent overfilling of the tank. In addition, the gauges of the tank must be read before filling and before and during the filling of a tanker truck (the available volume of which must be noted prior to emptying the tank) to prevent overfilling of the truck. A suction pump equipped with the tanker truck is used to withdraw the content from the tank. No other equipment or standby equipment is used in the operation of the aboveground tanks. The tank should be operated at a maximum volume of 14,250 gallons (95 percent of capacity).

9.3 TANK SYSTEM SECONDARY CONTAINMENT

Tank Containment

All tanks are aboveground, underlain by a 49' 7" x 18' 8" (length and width) concrete slab, surrounded by 4' concrete walls. The wall height in the containment varies slightly with the floor slope and directs flow toward an approximately 16-gallon blind sump. No surface run-on or precipitation will contact the wastes stored in the tank, and no run-off collection and management system is required. A metal canopy installed over the tank farm minimizes the chance of precipitation accumulation inside the containment area. The layout of the tank farm is shown in Figure 9.2-1. The containment volume was estimated to be approximately 20,000 gallons (excluding rainfall), as shown in the calculations presented in Appendix C. This volume represents greater than 100 percent of the capacity of the largest tank within the containment area.

Return/Fill Containment

The return/fill station is a 40' x 22' structure (Figure 9.3-1) located between the office area and the warehouse. It overlies a 40' x 25' concrete pad which is curbed. It contains two active wet dumpsters which handle the flow of solvent to the tank. These dumpsters are not intended for storage but can hold a maximum of 216 gallons (108 gallons per dumpster). A third inactive dumpster is located in this area, as shown in Figure 9.3-1.

The area is designed such that the route trucks can be backed into the containment area. The roof extends over the truck unloading area so that no precipitation can get into the return/fill station containment area. The containment for the return/fill station is provided by two blind sumps, with a total capacity of approximately 35 gallons. The floor in the return/fill station is sloped to direct flow toward the two sumps. The floor in the return/fill station is sloped to direct flow toward the two sumps. The total containment volume was estimated to be 2,606 gallons, as shown in Appendix C.

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All tanks are aboveground, underlain by a 49' 7" x 18' 8" (length and width) concrete slab, surrounded by 4' concrete walls. The wall height in the containment varies slightly with the floor slope and directs flow toward an approximately 16-gallon blind sump. No surface run-on or precipitation will contact the wastes stored in the tank, and no run-off collection and management system is required. A metal canopy installed over the tank farm minimizes the chance of precipitation accumulation inside the containment area. The layout of the tank farm is shown in Figure 9.2-1. The containment volume was estimated to be approximately 20,000 gallons (excluding rainfall), as shown in the calculations presented in Appendix C. This volume represents greater than 100 percent of the capacity of the largest tank within the containment area.

Return/Fill Containment

The return/fill station is a 40' x 22' structure (Figure 9.3-1) located between the office area and the warehouse. It overlies a 40' x 25' concrete pad which is curbed. It contains two active wet dumpsters which handle the flow of solvent to the tank. These dumpsters are not intended for storage but can hold a maximum of 1,008 gallons (504 gallons per dumpster). A third inactive dumpster is located in this area, as shown in Figure 9.3-1.

The area is designed such that the route trucks can be backed into the containment area. The roof extends over the truck unloading area so that no precipitation can get into the return/fill station containment area. The containment for the return/fill station is provided by two blind sumps, with a total capacity of approximately 35 gallons. The floor in the return/fill station is sloped to direct flow toward the two sumps. The floor in the return/fill station is sloped to direct flow toward the two sumps. The total containment volume was estimated to be 2,130 gallons, as shown in Appendix C.

9.4 TANK SYSTEM INSPECTIONS

The purpose of the inspection plan is to establish a procedure and schedule for the systematic monitoring and inspection of hazardous waste management and other material management facilities to ensure proper operation and maintain compliance. The Branch Manager or that person's designee is responsible for carrying out the inspections of all hazardous waste management facilities in accordance with the following procedure and schedule.

Figure 9.4-1 is an example Daily Inspection Log for the tank system. This Daily Inspection Log, or equivalent, will be used during daily inspections. Daily inspections of the tank and dumpsters will consist of the following:

- Note volume in tank.
- Observe tank exterior for loose anchoring, wet stops, leaks.
- Check the automatic high level alarm.
- Inspect secondary containment walls and piping.
- Inspect transfer pumps for leaking seals and overheated motors.
- Inspect the solvent dispensing hose, fittings, and valve for any leaks, damage, or wear that could cause a leak to develop.
- Inspect the valves for proper seat. Stem leaks from worn glands and warped valve bodies should be repaired. If the valve cannot be repaired, replace the unit.

Daily inspection of the solvent return receptacle (wet dumpster) will consist of an inspection for leaks and excess dumpster mud build-up.

9.5 *TANK SYSTEM CLOSURE AND CONTINGENT POST-CLOSURE PLAN*

The tank system closure plan is provided as part of the overall closure plan for the facility in Section 10.0. As discussed below, a contingent post-closure plan for the tanks is not required.

9.6 *TANK SYSTEM CONTINGENT POST-CLOSURE PLAN*

The tank system at the Orange Park facility meets the secondary containment requirements of 40 CFR 264.193, and is, therefore, not required to have a contingent post-closure plan under 40 CFR 264.197(c). In addition, Safety-Kleen intends to remove or decontaminate all tank system components, associated containment systems, and contaminated soils (if any) at the time of closure. However, should future conditions indicate that all contaminated soils and tank system components cannot practicably be decontaminated or removed, then a plan to perform post-closure care in accordance with the post-closure care requirements that apply to landfills (40 CFR 264.310) will be prepared for implementation upon FDEP approval.

9.7 *RESPONSE TO LEAKS AND DISPOSITION OF UNFIT-FOR-USE TANK SYSTEMS*

In the event that a leak or spill were to occur from a tank system or secondary containment system, the actions identified herein will be undertaken.

Immediate Response

All waste flow to the tank system in question will be ceased immediately. An inspection will be undertaken to identify the cause of the release. Waste flow to the tank system will not be resumed until the tank system has been inspected, repaired, and declared fit for use.

In order to prevent further releases, or to allow inspection and a repair of the system, it may be necessary to remove the waste from the tank system. This waste removal will occur within 24 hours after detection of the leak, or at the earliest practicable time.

All material released to the secondary containment area will be removed within 24 hours, or in as timely a manner as possible, to prevent harm to human health and the environment. Every reasonable effort will be made to prevent migration of the release to soils or surface water. If necessary, visible contamination of surface water and soil will be removed and properly disposed of.

Notifications

If a spill is less than one pound and is immediately contained and cleaned up, no notifications are required. All other releases require notification as described in the Contingency Plan (Section 5.0).

Subsequent Reporting

Within 30 days of detection of a release to the environment, a report must be submitted to the Regional Administrator and FDEP. The report must contain the following information:

1. Likely route of migration of the release.

2. Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate).

3. Results of any monitoring or sampling conducted in connection with the release. If sampling has occurred and sampling results are not available within 30 days, the results must be submitted as soon as available.

4. Proximity to downgradient drinking water, surface water, and populated areas.

5. Description of response actions taken or planned.

Repair or Closure

If the integrity of the containment system has not been damaged, then the system may be returned to service as soon as the released waste is removed and repairs, if necessary, are made. If the tank was the source of the release, then the tank must be repaired prior to returning the tank system to service.

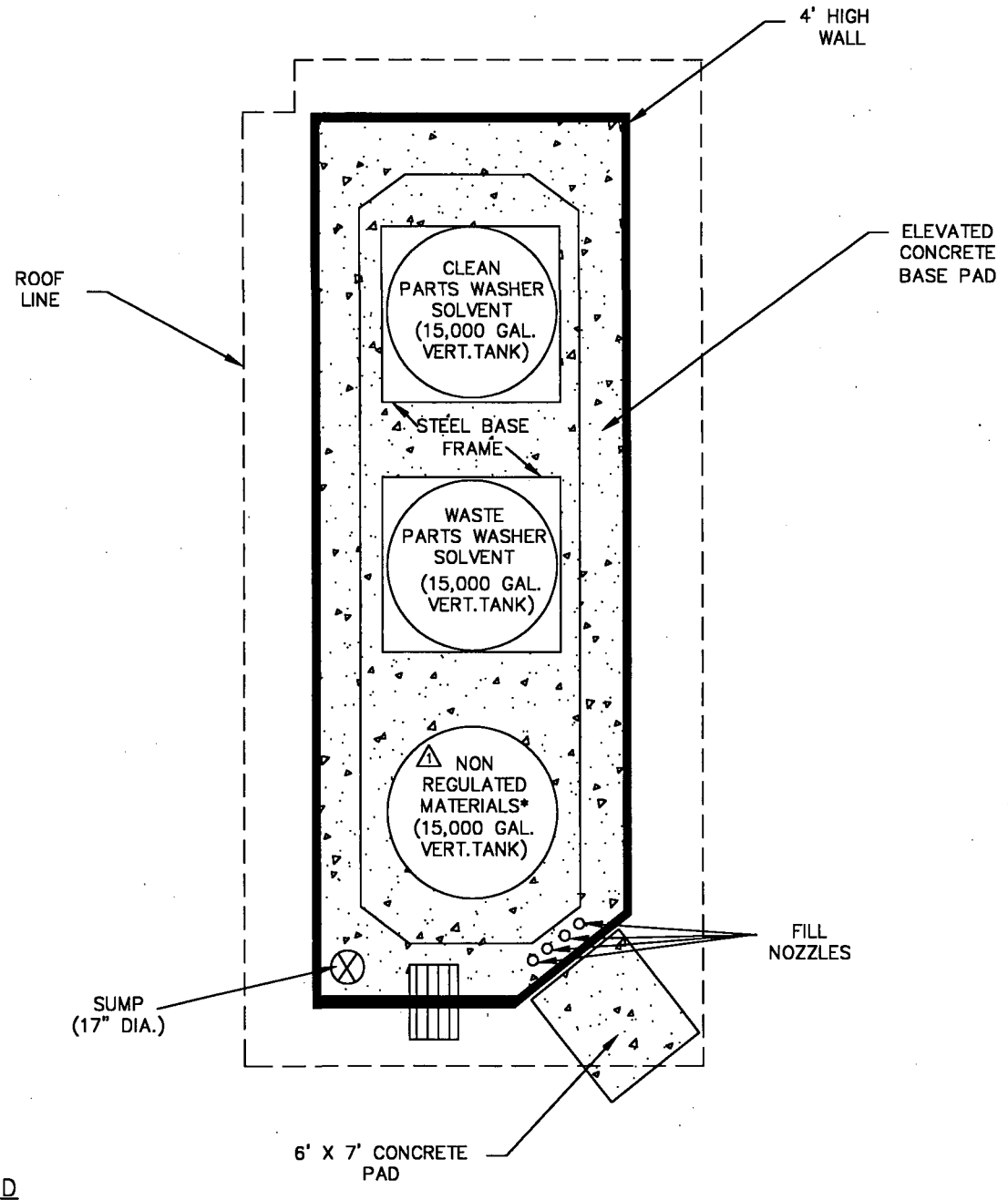
If the release was from a tank system component which did not have secondary containment, then secondary containment must be provided for this component before the system can be returned to service. The exception to this is if the component can be visually inspected. In this instance, the component may be repaired and returned to service. If a component is replaced, then the component must satisfy the requirements for new tank systems and components.

All major repairs must be certified by an independent, registered, professional engineer in accordance with 40 CFR 270.11(d). The engineer must certify that the repaired system is capable of handling hazardous wastes without release for the intended life of the system. This report must be filed with the Agency within seven days after returning the tank system to use.

If repairs that meet these requirements cannot be performed, then the tank system must be closed in accordance with the closure plan.

⚠1 REVISION 1 (FEB. 2000)

FIGURE 9.2-1
TANK STORAGE AREA
SAFETY-KLEEN CORP. FACILITY
ORANGE PARK, FLORIDA



LEGEND

- CONCRETE
- CONCRETE WALL (4')
- STAIRS
- ROOF (CORRUGATED METAL)

N

0 10

APPROXIMATE SCALE (FEET)

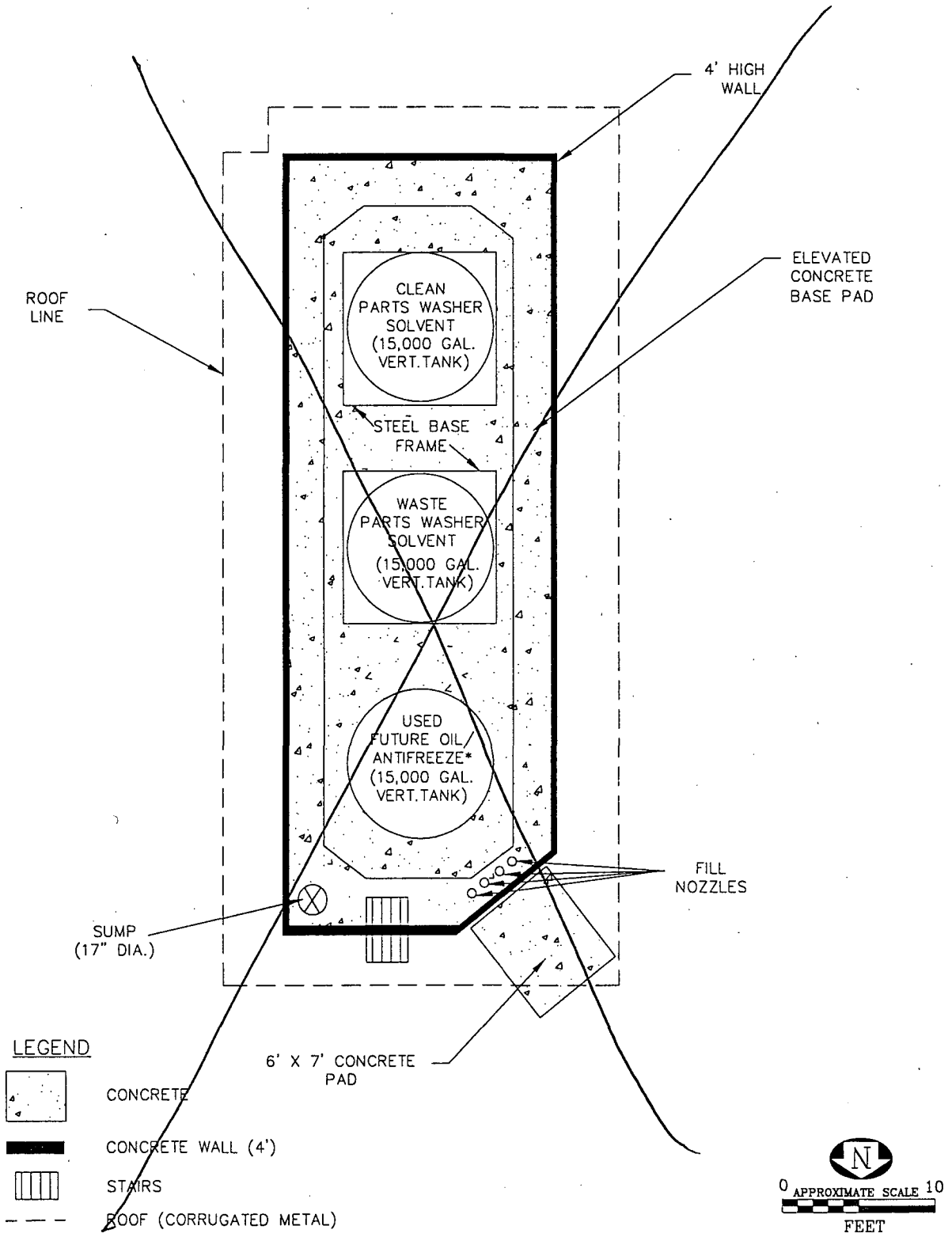
* NEVER PLACED INTO HAZARDOUS WASTE SERVICE. CLEAN CLOSURE RECEIVED FROM FDEP 10/22/99. ⚠1 USE FOR NON-REGULATED MATERIAL ONLY.

5331SAFKLN9\TANKAREA 2-10-00

ERM

REVISION 0
AUGUST 20, 1997

Figure 9.2-1
Tank Storage Area
Safety-Kleen Corp. Facility
Orange Park, Florida

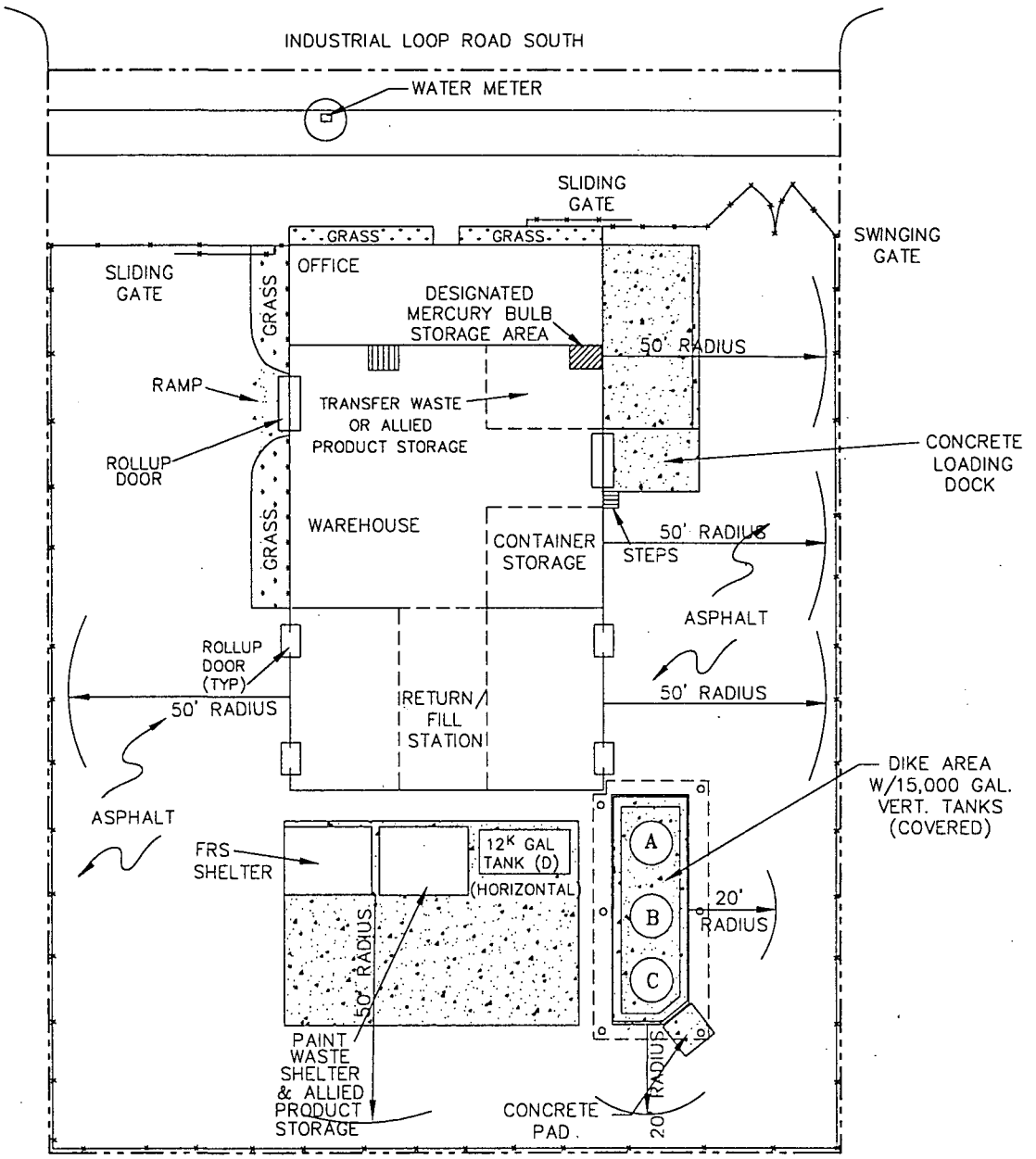


*TANK TO BE CLOSED BY 12/31/97 AND PUT INTO NEW SERVICE FOR USED OIL & ANTIFREEZE

ERM

REVISION 0
AUGUST 20, 1997

Figure 9.2-2
Fire Distances
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) (FUTURE) WASTE OIL & ANTIFREEZE
- (D) VIRGIN SOLVENT

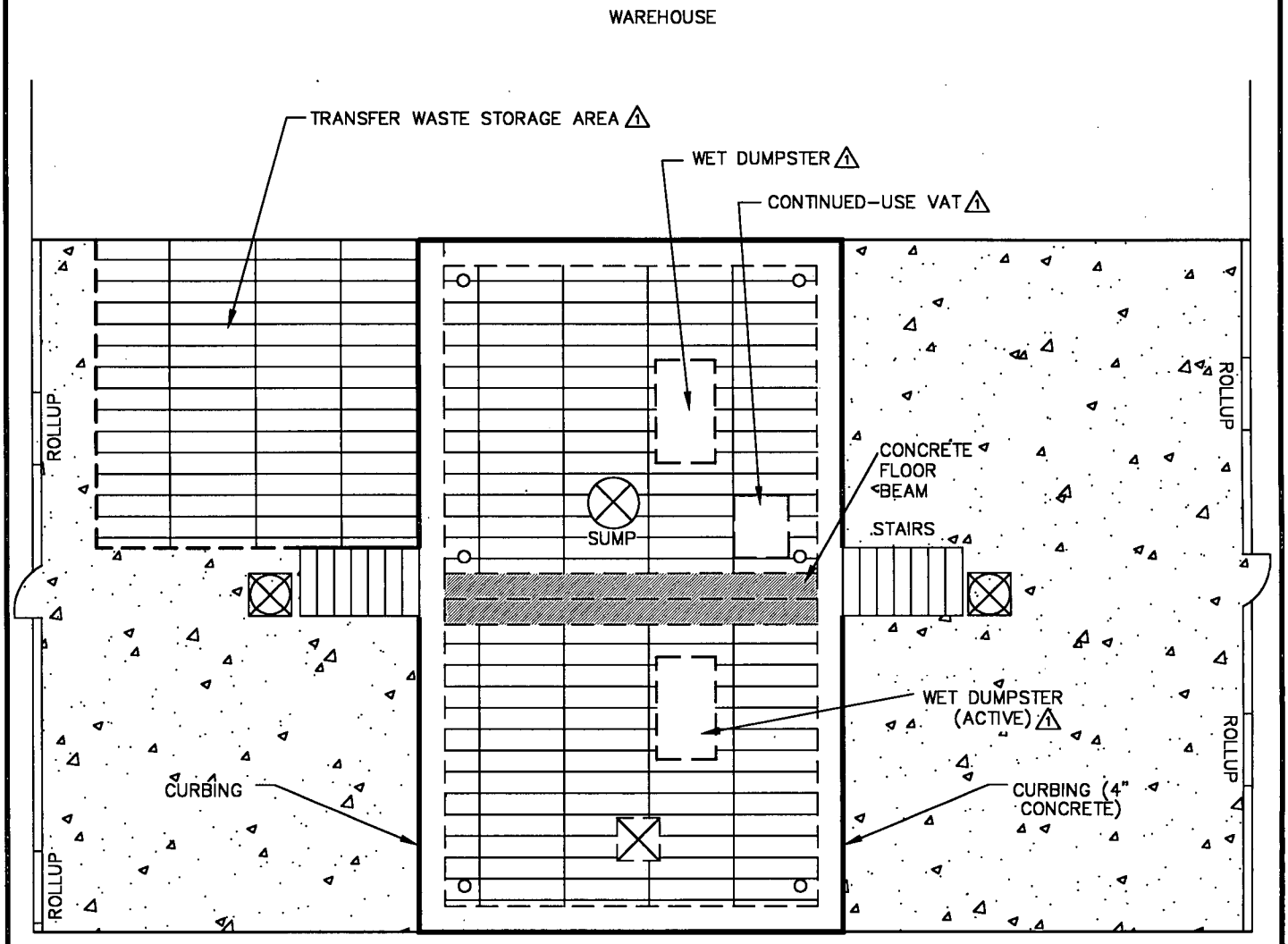
N

0 APPROXIMATE SCALE 40
FEET

ERM

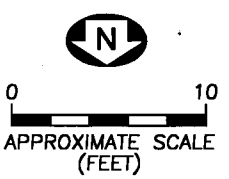
⚠1 REVISION 1 (FEB. 2000)

FIGURE 9.3-1
RETURN/FILL STATION
SAFETY-KLEEN CORP. FACILITY
ORANGE PARK, FLORIDA



LEGEND

- O — FILL NOZZLES
- ⊠ — SUMP
- ▤ — GRATING
- ━ — CURBING (4" CONCRETE)

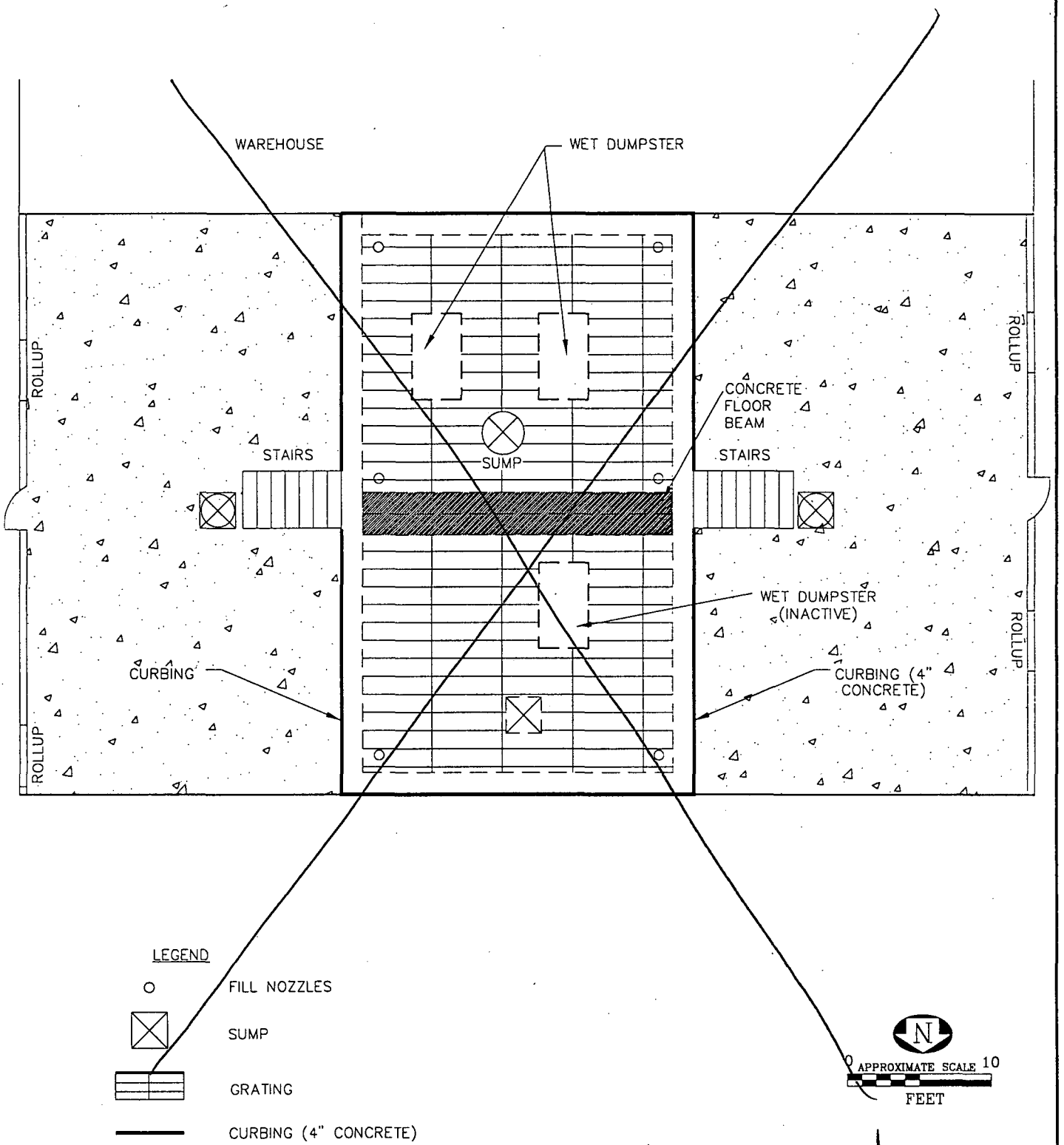


5331SAFKLN9\RETURN 2-10-00

ERM

REVISION 0
AUGUST 20, 1997

Figure 9.3-1
Return/Fill Station
Safety-Kleen Corp. Facility
Orange Park, Florida



13112.26/31126RF/021192-2

ERM

FIGURE 9.4-1

INSPECTION LOG SHEET FOR:
Daily Inspection of STORAGE TANK SYSTEM
(A separate log must be completed for each tankfarm which contains a hazardous waste storage tank.)

INSPECTOR'S NAME/TITLE _____

INSPECTOR'S SIGNATURE:				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

_____/_____/_____ DATE: (M / D / Y)

_____ TIME

STORAGE TANKS:
(TANKS MUST NEVER BE MORE THAN 95% FULL!)

	MON.	TUES.	WED.	THURS.	FRI.
_____ *Tank (in.)	/	/	/	/	/
_____ 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)

Any material which spills, leaks or otherwise accumulates in the dike, including rainwater, must be completely removed within 24 hours.

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, sealant is pitted, cracked, or chipped, deterioration, displacement, 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 REPAIRS OF ANY ITEMS INDICATED AS "NOT ACCEPTABLE": _____

*Fill in the Waste Type (e.g. Mineral Spirits) **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)

FIGURE 9.4-1 (Con't)

INSPECTION LOG SHEET FOR:
Daily Inspection of STORAGE TANK SYSTEM

INSPECTOR'S NAME/TITLE _____

INSPECTOR'S SIGNATURE:				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

	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, 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: 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: 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 REPAIRS OF ANY ITEMS INDICATED AS "NOT ACCEPTABLE": _____

*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)

FIGURE 9.4-1 (Con't)

INSPECTION LOG SHEET FOR:
Daily Inspection of TANK EQUIPMENT

INSPECTOR'S NAME/TITLE _____

INSPECTOR'S SIGNATURE:				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

_____/_____/_____ _____/_____/_____ _____/_____/_____ _____/_____/_____ _____/_____/_____

DATE: (M / D / Y)

_____ _____ _____ _____ _____

TIME

Pump, Flange, or Valve Number	MON.		TUES.		WED.		THURS.		FRI.	
1 _____*	A**	N	A	N	A	N	A	N	A	N
2 _____	A	N	A	N	A	N	A	N	A	N
3 _____	A	N	A	N	A	N	A	N	A	N
4 _____	A	N	A	N	A	N	A	N	A	N
5 _____	A	N	A	N	A	N	A	N	A	N
6 _____	A	N	A	N	A	N	A	N	A	N
7 _____	A	N	A	N	A	N	A	N	A	N
8 _____	A	N	A	N	A	N	A	N	A	N
9 _____	A	N	A	N	A	N	A	N	A	N
10 _____	A	N	A	N	A	N	A	N	A	N
11 _____	A	N	A	N	A	N	A	N	A	N
12 _____	A	N	A	N	A	N	A	N	A	N
13 _____	A	N	A	N	A	N	A	N	A	N
14 _____	A	N	A	N	A	N	A	N	A	N
15 _____	A	N	A	N	A	N	A	N	A	N
16 _____	A	N	A	N	A	N	A	N	A	N
17 _____	A	N	A	N	A	N	A	N	A	N
18 _____	A	N	A	N	A	N	A	N	A	N
19 _____	A	N	A	N	A	N	A	N	A	N
20 _____	A	N	A	N	A	N	A	N	A	N
21 _____	A	N	A	N	A	N	A	N	A	N
22 _____	A	N	A	N	A	N	A	N	A	N
23 _____	A	N	A	N	A	N	A	N	A	N
24 _____	A	N	A	N	A	N	A	N	A	N
25 _____	A	N	A	N	A	N	A	N	A	N
26 _____	A	N	A	N	A	N	A	N	A	N
27 _____	A	N	A	N	A	N	A	N	A	N
28 _____	A	N	A	N	A	N	A	N	A	N
29 _____	A	N	A	N	A	N	A	N	A	N
30 _____	A	N	A	N	A	N	A	N	A	N
31 _____	A	N	A	N	A	N	A	N	A	N
32 _____	A	N	A	N	A	N	A	N	A	N
33 _____	A	N	A	N	A	N	A	N	A	N
34 _____	A	N	A	N	A	N	A	N	A	N
35 _____	A	N	A	N	A	N	A	N	A	N
36 _____	A	N	A	N	A	N	A	N	A	N
37 _____	A	N	A	N	A	N	A	N	A	N
38 _____	A	N	A	N	A	N	A	N	A	N
39 _____	A	N	A	N	A	N	A	N	A	N
40 _____	A	N	A	N	A	N	A	N	A	N

If 'N', enter pump or valve # _____ and circle appropriate problem: potential leak, active leak, sticking, wear, does not operate smoothly, other: _____

For all leaks and potential leaks, the Leak Detection and Repair Record must be completed.

* Add short descriptions of unit being inspected (e.g. gate valve, dumpster flange, dumpster pump, etc.)

** A = Acceptable N = Not Acceptable

Draw a line through valve and pump I.D. numbers which do not apply.

SECTION

10

10.0 CLOSURE PLAN

Safety-Kleen constructed the Orange Park Branch with the intent that it will be a long-term facility for the distribution of Safety-Kleen products. No onsite disposal activity occurs at the facility and, hence, no disposal capacity will be exhausted that will necessitate closure of the facility. Based on current business and facility conditions, the Orange Park facility is expected to remain in operation at least until the year 2025.

In the event that some presently unforeseen circumstance(s) would result in the discontinuance of operations and permanent closure or sale of the facility, this closure plan identifies the steps necessary to close the facility at any point during its intended life. This plan should be applied to the tank system, container storage area, and equipment used by the facility for hazardous waste management to accomplish the closure performance standard of 40 CFR 264.111. It is intended that all closures will be complete and final with removal of waste and decontamination of the facility and associated equipment. This will eliminate the need for maintenance after closure and the possibility of escape of hazardous waste constituents into the environment. The closure activities presented in this plan have been selected to minimize effects on human health and the environment by eliminating releases of contaminants (e.g., capture of decontamination fluids) and use of appropriate personal protective equipment.

Please note that closure of the former ethylene glycol hazardous waste tank is discussed in Appendix F and is not addressed in this section. Closure costs for the ethylene glycol tank are provided in Appendix F and are not included here because it is anticipated that the closure of the tank will be complete before processing of this permit application is complete.

10.1 FACILITY DATA

1. Waste Management Facility Descriptions

    a. Aboveground Storage Tank: The tank is a 15,000-gallon vertical steel tank used for the storage of used parts washer solvent. This tank is located within a

containment system consisting of a 49' 7" by 18' 8" concrete foundation slab with 4' perimeter walls.

b. Solvent Return/Fill Station: The station is a 40' x 25' concrete portion of the building located between the office area and the warehouse. The station is surrounded by a 5" concrete curb. It contains three wet dumpsters (one of which is inactive). The two active dumpsters are used to receive returned solvent from containers and pump it to the used parts washer solvent tank. These dumpsters are not intended for storage but can hold a maximum of 216 gallons (108 gallons each).

   The third (inactive) dumpster is slated for closure prior to permit issuance. A separate closure plan will be submitted for this dumpster. Closure costs for the third dumpster are *not* included here because it is anticipated that the closure of the third dumpster will be complete before processing of this permit application is complete.

c. Container Storage Area: The container storage area has a 25' 5" x 24' concrete floor with 6-inch curbing on exposed sides and two containment trenches with a combined containment capacity of 255.3 gallons. The maximum hazardous waste storage capacity of this area, therefore, is 2,553 gallons (the containment volume is 10% of the allowable storage capacity). Waste allowed for storage is immersion cleaner, dry cleaning solvent, parts washer solvent dumpster mud, tank bottoms, and oil filter containers.

d. Paint Waste Storage Area: The paint waste shelter consists of a 45' x 68' concrete pad underlying a 15.5' x 20' shelter with metal containment pans. This shelter is divided into a paint waste storage area and an allied product storage area. Allied products are unused or "virgin" materials. The storage shed consists of six metal containment pans each measuring 5' x 10'. The pans have overlapping lips which prevent liquids from migrating between the pans and onto the concrete. Total containment capacity is 1,122 gallons; therefore, the maximum potential storage

capacity is 11,220 gallons. Due to space constraints, however, the maximum actual capacity is 4,800 gallons.

2. Maximum Inventory of Wastes

   a. Used Parts Washer Solvent: 15,000 gallons.

   b. Wet Dumpsters: 216 gallons.

   c. Containerized Waste: 2,553 gallons in the container storage area and 4,800 gallons in the paint waste storage area (permitted capacity), for a total of 7,353 gallons. [NOTE: This includes any combination of 5-, 16-, 20-, 30-, 55-, or 85-gallon containers used for various management purposes].

   All wastes will be disposed offsite in accordance with appropriate hazardous waste regulations.

10.2 CLOSURE PROCEDURES

Container Storage Area and Paint Waste Storage Area

- At closure, all containers present at the facility will be sent to a Safety-Kleen recycle center, where the contents in the containers will be reclaimed and the containers cleaned for reuse. The containers will be removed and transported with proper packaging, labeling, and manifesting.

- In the container storage area, the concrete floor and two spill containment trenches will be scrubbed with a detergent solution and rinsed with clean water to remove waste residuals from the surface. Final rinsate samples will be collected and analyzed to determine the effectiveness of decontamination. Unless otherwise designated in the formal closure plan, one rinsate sample will be collected and analyzed for the eight RCRA metals, and for volatile and semivolatile organics by EPA Methods 8015, 8240,

and 8270. The area will continue to be scrubbed and rinsed until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit.

- The pans, grating, and floor beneath the pans in the paint waste shelter will be cleaned by appropriate means to remove visible contamination. Safety-Kleen intends to recycle the metal components (e.g., pans and grating) in accordance with 40 CFR 261.6(a)(3)(ii) or to reuse them at another Safety-Kleen facility. Accordingly, decontamination of these components is required only to the extent necessary for safe demolition, storage, and transportation of the scrap.

  Unless otherwise designated in the formal closure plan, one rinsate sample will be collected from the concrete floor beneath the metal pans and analyzed for the eight RCRA metals and for volatile and semivolatile organics by EPA Methods 8015 8240, and 8270. The area will continue to be scrubbed and rinsed until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit.

- Decontamination (i.e., detergent wash and clean rinse) fluids will be collected and contained for proper management. One representative sample of the contained fluids will be collected to determine whether the water is hazardous. This determination will be made by laboratory analysis of the sample for the metals and organics (excluding pesticides/herbicides) on the TCLP list. [Note: This wash water will be from all areas undergoing decontamination, not just from the container storage area.]

- If the wash water or other wastes generated in the closure process are determined to be hazardous, they will be disposed of properly as a hazardous waste. Otherwise, the material will be disposed of as a nonhazardous waste. Based on an assumed decontamination water usage rate of four gallons per square foot, approximately 43,425 gallons of rinsate will require disposal. This amount includes rinsate from all structures at the facility, including the container storage area, paint waste storage area, return/fill station, and the tank containment vault. This value has been used in the closure cost estimates in Section 10.5. However, it is anticipated that substantially less water will be generated for disposal, and the generated water is expected to be nonhazardous based on Safety-Kleen's experience from other facility closures.

Safety-Kleen has the option of not analyzing the decontamination water and disposing of it as hazardous waste. The closure cost estimates in Section 10.5 are based on a worst-case scenario in which decontamination wash water is sampled and analyzed, and then disposed of as hazardous waste.

- Equipment to be used to clean this area includes mops, pails, scrub brushes, a wet/dry vacuum, and containers. The mops, pails, and scrub brushes will be containerized and disposed of as hazardous waste. The wet/dry vacuum and containers used will be washed with a detergent solution and rinsed to decontaminate them.

Solvent Return/Fill Station

- At closure, any sludge in the wet dumpsters ("dumpster mud") will be cleaned out and containerized, labeled, and manifested for proper disposal at a permitted facility.

- The metal superstructure components of the station (i.e., the wet dumpsters and the dock grating) will be cleaned by appropriate means to remove visible contamination. Safety-Kleen intends to recycle these components as scrap metal in accordance with 40 CFR 261.6(a)(3)(ii), or to reuse them at another Safety-Kleen facility. Accordingly, decontamination of the components is required only to the extent necessary for safe demolition, storage, and transportation of the scrap.

- The concrete floor in the return/fill station will be scrubbed with a detergent solution and rinsed with clean water to remove waste residuals from the surface. Two final rinsate samples will be collected and analyzed to determine the effectiveness of decontamination. Unless otherwise designated in the formal closure plan, the rinsate samples will be analyzed for the same constituents as the container storage area rinsate samples. The area will continue to be scrubbed and rinsed until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit.

- A soil sample will be collected near each of the containment sumps in the return/fill station, for a total of two soil samples.

Aboveground Storage Tank System

Metal Components of the Storage Tank System

- At closure, the contents of the tank will be removed to a tanker truck using existing unloading equipment and subsequently transported to a Safety-Kleen recycle center.

- Once the contents have been drained, the tank will be opened by removing the manways and vented by supplying fresh air to the interior space of the tank. Any residual wastes will be removed via vacuum for recycling with the previously drained wastes.

- The interior of the tank as well as all associated piping and appurtenant equipment will then be cleaned by appropriate means to remove visible contamination. Safety-Kleen intends to recycle the tank, piping, and appurtenant equipment as scrap metal in accordance with 40 CFR 261.6(a)(3)(ii), or to reuse them at another Safety-Kleen facility. Accordingly, decontamination of the metal components is required only to the extent necessary for the safe demolition, storage, and transportation of the scrap.

Concrete Containment System

- Final disposition of the concrete containment system within which the waste tank is located will depend in part upon the presence or absence of underlying soil contamination. To make that determination, the upper six inches of soil immediately below the concrete slab will be sampled at three locations, as follows:

  - Under the waste tank;
  - At the containment system sump; and
  - Beneath the most prominent of any cracks observed in the slab.

  As previously mentioned, one soil sample will be collected near each of the containment sumps in the return/fill station. The sample locations may be adjusted as actual field conditions warrant, but a minimum of five soil samples will be retrieved.

These samples will be analyzed for the eight RCRA metals and for volatile and semivolatile organics by EPA Methods 8015, 8240, and 8270.

- The perimeter walls and foundation slab of the secondary containment area will be scrubbed with a detergent solution and rinsed with clean water to remove waste residuals from the surface. Two final rinsate samples will be collected and analyzed to determine the effectiveness of decontamination. Unless otherwise designated in the formal closure plan, the rinsate samples will be analyzed for the same constituents as the container storage area rinsate samples. The area will continue to be scrubbed, rinsed, and resampled until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit. Safety-Kleen anticipates that proper maintenance of the concrete containment system will allow the slab to remain in place at closure.

- Safety-Kleen will proceed with demolition of the perimeter walls. If it is determined that soil contamination exists beneath the foundation slab, Safety-Kleen will demolish the entire concrete structure and complete a further delineation of the extent of soil contamination to be removed to complete closure. An additional work plan will be prepared to guide the soil assessment, removal, and disposal activities that Safety-Kleen will implement to address residual soil contamination.

- Prior to demolition of the perimeter walls, one representative composite sample of the construction materials will be collected and submitted for analyses (by TCLP) of metals and organics (excluding pesticides and herbicides) unless an alternate analytical protocol is required by the selected disposal facility. The representative composite sample will include biased grab samples collected from areas of staining. If no stained areas are evident, the grab sample locations will be randomly selected. If the construction materials are classified as nonhazardous using TCLP, then they will be disposed of as construction debris in an appropriately permitted disposal facility. In the event the construction materials are identified as hazardous using TCLP, the construction materials will be disposed of as a hazardous waste in accordance with RCRA regulations.

- If the foundation slab must be removed, it will be demolished and the construction materials tested using TCLP in the same manner as that described above for the walls of the secondary containment system.

- If soil removal becomes necessary, Safety-Kleen will backfill the excavated area with clean, compacted general fill material graded to match existing surfaces and to preclude ponding of water. To ensure backfill is clean (i.e., is not contaminated with constituents at concentrations above Florida soil cleanup goals or site background (whichever is higher)), one representative composite sample of the backfill will be collected and analyzed prior to emplacement of the fill. The backfill sample will be analyzed for the eight RCRA metals and by EPA Methods 8015, 8240, and 8270.

10.3 FACILITY CLOSURE SCHEDULE AND CERTIFICATION

- 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 will amend the plan any time changes in operating plans or facility design affect the closure plan or whenever a change occurs in the expected year of closure of the facility. The plan will be amended within 60 days of the changes.

- Safety-Kleen will notify the FDEP of its intent to close the facility by submitting an application for a closure permit pursuant to Chapter 62-730.260(1) FAC. This application will be submitted no later than 60 days before the final receipt of hazardous wastes by the facility or at the time specified in the current operating permit.

- Within 90 days of receiving the final volume of hazardous wastes, or 90 days after issuance of a closure permit, if that is later, Safety-Kleen will 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:

1. The activities required to comply with this paragraph will, of necessity, take longer than 90 days to complete; or

2. 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.

- Safety-Kleen will complete closure activities in accordance with the approved closure plan within 180 days after receiving the final volume of wastes or 180 days after approval of the closure plan, whichever is later. When closure is completed, all facility equipment and structures shall have been properly disposed of, or decontaminated by removing all hazardous waste and residues.

- Within 60 days of closure completion, Safety-Kleen will submit certification by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

Figure 10.3-1 presents a typical closure schedule anticipated for the Orange Park facility.

10.4 CONTINGENT POST-CLOSURE PLAN

The tank system at the Orange Park facility meets the secondary containment requirements of 40 CFR 264.193, and is, therefore, not required to have a contingent post-closure plan

under 40 CFR 264.197(c). In addition, Safety-Kleen intends to remove or decontaminate all tank system components, associated containment systems, and contaminated soils (if any) at the time of closure. However, should future conditions indicate that all contaminated soils and tank system components cannot practicably be decontaminated or removed, then a plan to perform post-closure care in accordance with the post-closure care requirements that apply to landfills (40 CFR 264.310) will be prepared for implementation upon FDEP approval.

10.5 CLOSURE COST ESTIMATE

The cost for closure of the facility is estimated in the following worksheets and summarized as follows:

•	Closure of Container Storage Area	=	$136,940*
•	Closure of Tank System	=	$ 8,299
	Total Estimated Closure Cost	=	$145,239

* Includes facility costs for decontamination and waste transportation and disposal.

under 40 CFR 264.197(c). In addition, Safety-Kleen intends to remove or decontaminate all tank system components, associated containment systems, and contaminated soils (if any) at the time of closure. However, should future conditions indicate that all contaminated soils and tank system components cannot practicably be decontaminated or removed, then a plan to perform post-closure care in accordance with the post-closure care requirements that apply to landfills (40 CFR 264.310) will be prepared for implementation upon FDEP approval.

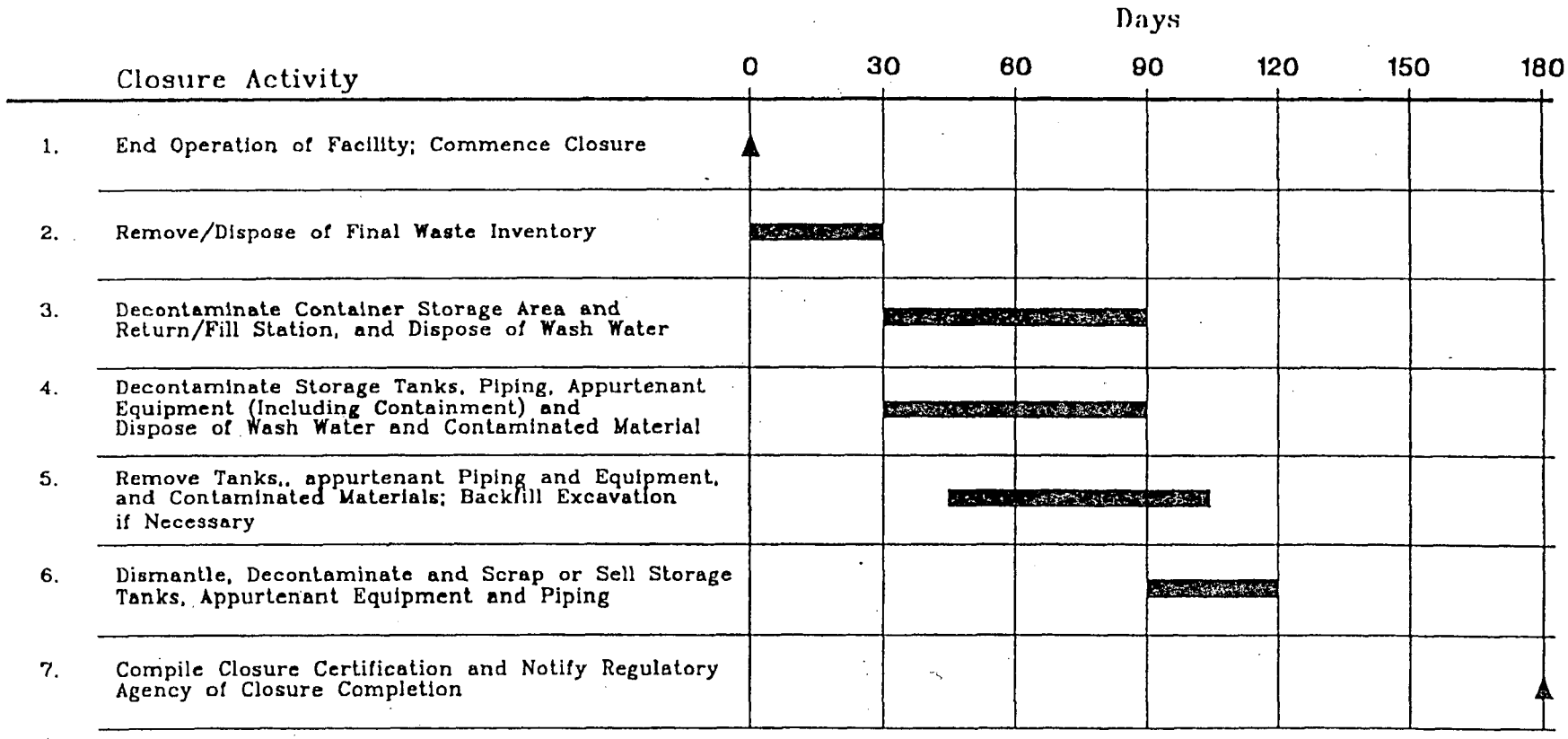
10.5 CLOSURE COST ESTIMATE

The cost for closure of the facility is estimated in the following worksheets and summarized as follows:

• Closure of Container Storage Area	=	$124,712*
• Closure of Tank System	=	$ 8,299
Total Estimated Closure Cost	=	$133,011

* Includes facility costs for decontamination and waste transportation and disposal.

Figure 10.3-1
Typical Closure Schedule
Safety-Kleen Corp. Facility
Orange Park, Florida



ERM

The inventory worksheet will be used in completing the appropriate cost estimating worksheets to determine the costs of closure activities. If the design characteristics of the container storage area being evaluated do not conform to the format of the worksheet below, alternative methods should be used to accurately determine the maximum permitted capacity of the unit, the area of all structures to be decontaminated and demolished, and the volume of all structures and soils to be removed. Depending on the activities being conducted, it may not be necessary to complete each section of the inventory sheet.

1 MAXIMUM PERMITTED CAPACITY

Determine the maximum permitted capacity of waste in the unit to calculate transportation, treatment, and disposal costs.

1.A	Volume of Waste (CSA & paint waste) 2553+ 4800 GAL	7,353 gal
1.B	Supplemental Information on Waste Inventory (In the additional space provided, denote any supplemental information regarding waste characteristics, treatment and disposal methods, and sampling and analysis methods):	

2 SURFACE AREA OF SECONDARY CONTAINMENT SYSTEM PAD (Container Storage Area)

Calculate the surface area of the secondary containment system pad to calculate decontamination and demolition costs. Demolition of the secondary containment system pad is an additional activity that might be conducted if the pad cannot be effectively decontaminated or if the owner or operator elects to demolish the pad.

2.A	Length (excluding any curbs or berm)	— ft	
2.B	Width (excluding any curbs berm)	— ft	
2.C	Surface Area of Containment System Pad (Multiply line 2.A by line 2.B) 1		693 ft²
2.D	Surface Area of Containment System Pad in yd² (Divide line 2.C by 9 ft²/yd²) 1		77 yd²

3 VOLUME OF SECONDARY CONTAINMENT SYSTEM PAD NOT APPLICABLE (Decon until clean)

Calculate the volume of materials constituting the secondary containment system pad to determine removal costs. Removal of secondary containment system pad is an additional activity that might be conducted if the pad cannot be effectively decontaminated.

3.A	Thickness	yd	
3.B	Volume of Containment System Pad (Multiply line 2.D by line 3.A)		yd³

1 See attached calculations

4 SURFACE AREA OF SECONDARY CONTAINMENT SYSTEM BERM (CSA)

Calculate the inside surface area of the secondary containment system berm, or curbing, to determine decontamination and demolition costs. Demolition of the secondary containment system berm is an additional activity that might be conducted if the berm cannot be effectively decontaminated or if the owner or operator elects to demolish the berm.

4.A	Inside perimeter (multiply the sum of lines 2.A and 2.B by 2)	99 ft	
4.B	Height	0.5 ft	
4.C	Surface Area of Containment System Berm (Multiply line 4.A by line 4.B)		50 ft²
4.D	Surface Area of Containment System Berm in yd² (Divide line 4.C by 9 ft²/yd²)		5.6 yd²

5 VOLUME OF SECONDARY CONTAINMENT SYSTEM BERM NOT APPLICABLE - Decon until clean

Calculate the volume of materials constituting the secondary containment system berm, or curbing, to determine the removal costs. Removal of secondary containment system berm is an additional activity that might be conducted if the berm cannot be effectively decontaminated:

5.A	Thickness	yd	
5.B	Volume of Containment System Berm (Multiply line 4.D by line 5.A)		yd³

6 SURFACE AREA OF OTHER STRUCTURES (Paint waste shelter)

Calculate the surface area of additional structures that will be decontaminated or demolished, for example, ramps or sumps. Demolition of other structures is an additional activity that might be conducted if the structures cannot be effectively decontaminated or if the owner or operator elects to demolish the structures.

6.A	Surface Area of Other Structures (Fir bnth shelter only) FLOOR 15X20 = 300 ft² PANS 6x[(5x10)+0.5(5+10)] = 345 sf 645 sf	645 ft²
6.B	Surface Area of Other Structures in yd² (Divide line 6.A by 9 ft²/yd²)	39 yd²

7 VOLUME OF OTHER STRUCTURES NOT APPLICABLE

Calculate the volume of materials constituting the other structures to be removed.

7	Volume of Other Structures	yd³

[1] See attached calculations

8 VOLUME OF CONTAMINATED SOIL TO BE REMOVED NOT APPLICABLE

Calculate the volume of contaminated soil to be removed. Removal of contaminated soil is an additional activity that might be conducted if soil contamination is identified or if removal of contaminated soil is indicated in the closure plan.

8.A	Length	ft	
8.B	Width	ft	
8.C	Depth	ft	
8.D	Volume of Contaminated Soil to be Removed (Multiply line 8.A by line 8.B by line 8.C)		ft
8.E	Volume of Contaminated Soil to be Removed in yd^3 (Divide line 8.D by 27 ft^3/yd^3)		yd^3

Safety-Kleen Corp. - Orange Park, Florida

Form	Item	Explanation		Value	Units	Comment
CS-1	2C	***Surface Area***				
		Floor	25.5' x 24'	612	sf	
		T1 sides	10' x 3' x 1.5'	20	sf	
		T1 base	10' x 3'	30	sf	
		T2 sides	8' x 2' x 1.5'	15	sf	
		T2 base	8' x 2'	16	sf	
		Total surface area		693	sf	
CS-1	4A	***Surface Area - Berms***				
		Perimeter	2 x (25.5 + 24)	99	lf	

Facility Name: Safety-Kleen Orange Park

SUMMARY WORKSHEET

	Activity Some of the activities listed below are routine. The owner or operator might elect or be required to conduct additional activities. Italic type denotes worksheets for estimating the costs of those additional activities.	Worksheet Number	Cost
1.	*Demolition and Removal of Containment System*	CS-3	$ 0
2.	*Removal of Soil*	CS-4	$ 0
3.	*Backfill*	CS-5	$ 0
4.	Decontamination[a]	DC-1	$ 9815
5.	Sampling and Analysis[b]	SA-2	$ 9339
6.	*Monitoring Well Installation*[c]	MW-1	$ 0
7.	Transportation[d]	TR-1	$ 6376
8.	Treatment and Disposal[e]	TD-1	$ 75758
9.	Subtotal of Closure Costs (Add lines 1 through 8)		$ 101288
10.	Engineering Expenses (Approximately 10% of closure costs, excluding certification of closure [Multiply line 9 by 0.10])		$ 10129
11.	Certification of Closure	CS-6	$ 2700
12.	Subtotal (Add engineering expenses and cost of certification of closure to closure costs [Add lines 9, 10, and 11])		$ 114,117
13.	Contingency Allowance (Allow 20% of closure costs, engineering expenses, and cost of certification of closure [Multiply line 12 by 0.20])		$ 22,823
14.	*Landfill Closure*[f]	LF-2	$ ~~0~~
	TOTAL COST OF CLOSURE *(Add lines 12, 13, and 14)*		$ 136,940

Items 4, 5, 7 & 8 are facilitywide costs

Notes:

[a] Decontamination Worksheets are found in Chapter 12.

[b] Sampling and Analysis Worksheets are found in Chapter 13.

[c] Monitoring Well Installation Worksheets are found in Chapter 14.

[d] Transportation Worksheets are found in Chapter 15.

[e] Treatment and Disposal Worksheets are found in Chapter 16.

[f] Landfill Worksheets are found in Chapter 7. Costs of post-closure care are included in this total.

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Facility Name: Safety-Kleen Orange Park

SUMMARY WORKSHEET

	Activity Some of the activities listed below are routine. The owner or operator might elect or be required to conduct additional activities. Italic type denotes worksheets for estimating the costs of those additional activities.	Worksheet Number	Cost
1.	*Demolition and Removal of Containment System*	CS-3	$ 0
2.	*Removal of Soil*	CS-4	$ 0
3.	*Backfill*	CS-5	$ 0
4.	Decontamination[a]	DC-1	$ 9815
5.	Sampling and Analysis[b]	SA-2	$ 8276
6.	*Monitoring Well Installation*[c]	MW-1	$ 0
7.	Transportation[d]	TR-1	$ 6376
8.	Treatment and Disposal[e]	TD-1	$ 75758
9.	Subtotal of Closure Costs (Add lines 1 through 8)		$ 100225
10.	Engineering Expenses (Approximately 10% of closure costs, excluding certification of closure [Multiply line 9 by 0.10])		$ 1002
11.	Certification of Closure	CS-6	$ 2700
12.	Subtotal (Add engineering expenses and cost of certification of closure to closure costs [Add lines 9, 10, and 11])		$ 103927
13.	Contingency Allowance (Allow 20% of closure costs, engineering expenses, and cost of certification of closure [Multiply line 12 by 0.20])		$ 20785
14.	*Landfill Closure*[f]	LF-2	$ ~~0~~
	TOTAL COST OF CLOSURE *(Add lines 12, 13, and 14)*		$ 124712

Items 4, 5, 7 & 8 are facilitywide costs

Notes:

[a] Decontamination Worksheets are found in Chapter 12.

[b] Sampling and Analysis Worksheets are found in Chapter 13.

[c] Monitoring Well Installation Worksheets are found in Chapter 14.

[d] Transportation Worksheets are found in Chapter 15.

[e] Treatment and Disposal Worksheets are found in Chapter 16.

[f] Landfill Worksheets are found in Chapter 7. Costs of post-closure care are included in this total.

DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM - Page 1 of 2

NOT APPLICABLE

1 DEMOLITION OF CONTAINMENT SYSTEM			
1.A	Area of containment system (Enter from worksheet CS-1; add lines 2.C, 4.C, and 6.A)	ft^2	
1.B	Labor and equipment cost per work hour[a]	$	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 34.98/work hr[b]		
	b. Protection Level C $ 50.91/work hr[c]		
	c. Protection Level B $ 64.45/work hr[c]		
1.C	Work rate to demolish one ft^2 of containment system[d]	0.040 work hr/ft^2	
1.D	Number of hours required to demolish the containment system (Multiply line 1.A by line 1.C) (One hour minimum; round up to the 0.5 hour)	work hrs	
1.E	Cost to Demolish the Containment System (Multiply line 1.B. by line 1.D)		$
2 REMOVAL AND LOADING OF CONTAINMENT SYSTEM			
2.A	Volume of materials constituting the containment system (Enter from worksheet CS-2; add lines 3.B, 5.B, and 7)	yd^3	
2.B	Labor and equipment cost per work hour[e]	$	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 41.18/work hr[f]		
	b. Protection Level C $ 58.04/work hr[g]		
	c. Protection Level B $ 72.51/work hr[g]		
2.C	Work rate to remove and load one yd^3[h]	0.300 work hr/yd^3	
2.D	Number of hours required to remove the containment system (Multiply line 2.A by line 2.C) (One hour minimum; round up to the 0.5 hour)	work hrs	
2.E	Subtotal of labor and equipment costs to remove and load the containment system (Multiply line 2.B by line 2.D)		$
2.F	Number of debris box containers needed to hold containment system (Divide line 2.A by 20 yd^3 per container; round up to the nearest whole number)	containers	

2.G	Cost of one 20-yd^3-capacity debris box container (rent per week)[i]	$ 260/container	
2.H	Cost of containers (Multiply line 2.F by line 2.G)		$
2.I	Cost of mobilization and demobilization (flat rate)[k]		$ 269.00
2.J	**Cost to Remove and Load Containment System (Add lines 2.E, 2.H, and 2.I)**		$
TOTAL COST OF DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM (Add lines 1.E and 2.J) (Enter total on worksheet CS-2, line 1)			$

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 24, item no. 554-2320. Activity described is site demolition, concrete, 6-in thick, no reinforcing.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 506, crew B-39. Crew B-39 consists of one labor foreman, four building laborers, one light equipment operator, one air compressor (250 cubic feet per minute [cfm]), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter).

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 506, crew B-39. Crew B-39 consists of one labor foreman, four building laborers, one light equipment operator, one air compressor (250 cfm), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter). See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 24, item no. 554-2320. Work rate is based on a six-person crew and a 6-in thick concrete slab without reinforcing.

[e] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25, item no. 620-3080. Activity described is loading by machine of demolition rubbish.

[f] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-6. Crew B-6 consists of two building laborers, one light equipment operator, and one 48-horsepower backhoe loader.

[g] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-6. Crew B-6 consists of two building laborers, one light equipment operator, and one 48-horsepower backhoe loader. See Appendix B of this manual for details of the calculation.

[h] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25, item no. 620-0380. Work rate is based on a three-person crew.

[i] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25. Cost is determined by averaging the weekly rental rate of a 10-yd^3-capacity debris box container (item no. 620-0700) and a 30-yd^3-capacity debris box container (item no. 620-0800).

[k] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 48, item no. 274-0010. Cost is based upon an average mobilization and demobilization cost for a 105-horsepower dozer or loader, 3/4-yd^3 shovel or backhoe, 1.0-yd^3 tractor shovel or front-end loader, and a 2 1/4-yd^3 tractor shovel or front-end loader from a location within a 25-mile radius of the site. This cost is added to all activities that require the use of heavy equipment. If equipment has already been mobilized for another activity, it may not be necessary to include this cost.

NOT APPLICABLE

1	Volume of contaminated soil to be removed (Enter from worksheet CS-1, line 8.E)	yd^3	
2	Labor and equipment cost per work hour[a] Choose the appropriate level of PPE: a. Protection Level D $ 59.83/work hr[b] b. Protection Level C $ 79.49/work hr[c] c. Protection Level B $ 96.76/work hr[c]	$	
3	Work rate required to remove one yd^3[3,d]	0.030 work hr/yd^3	
4	Number of hours required to remove soil (Multiply line 1 by line 3) (One hour minimum; round up to the 0.5 hour)	work hrs	
5	*Subtotal of labor and equipment costs to remove soil* (Multiply line 2 by line 4)		$
6	Number of debris box containers needed to hold soil (Divide line 1 by 20 yd^3 per container; round up to the nearest whole number)	containers	
7	Cost of one 20-yd^3-capacity debris box container (rent per week)[e]	$260/container	
8	Cost of containers (Multiply line 6 by line 7)		$
9	Cost of mobilization and demobilization (flat rate)[f]		$ 269.00
TOTAL COST OF REMOVAL OF SOIL (Add lines 5, 8, and 9) (Enter total on worksheet CS-2, line 2)			$

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 43, item no. 242-2020. Activity described is excavating common earth and hauling the common earth 50 ft.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 501, crew B-10L. Crew B-10L consists of one medium equipment operator, one-half building laborer, and one 75-horsepower dozer.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 501, Crew B-10L. Crew B-10L consists of one medium equipment operator, one-half building laborer, and one 75-horsepower dozer. See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 43, item no. 242-2020. Work rate is based on a one-and-one-half-person crew.

[e] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25. Cost is determined by averaging the weekly rental rate of a 10-yd^3-capacity debris box container (item no. 620-0700) and a 30-yd^3-capacity debris box container (item 620-0800).

[f] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 48, item no. 274-0010. Cost is based upon an average mobilization and demobilization cost for a 105-horsepower dozer or loader, 3/4-yd^3 shovel or backhoe, 1.0-yd^3 tractor shovel or front-end loader, and a 2 1/4-yd^3 tractor shovel or front-end loader from a location within a 25-mile radius of the site. This cost is added to all activities that require the use of heavy equipment. If equipment has already been mobilized for another activity, it may not be necessary to include this cost.

NOT APPLICABLE

To calculate backfill costs, an estimate of the total volume of fill material required must be provided. Add the volumes of the containment system pad materials removed and soil excavated to determine the total volume of fill material needed.

1	Volume of fill (Enter from worksheet CS-1; add lines 3.B and 8.E)	yd^3	
2	Compaction factor[a]	0.25	
3	Volume of additional fill required because of compaction factor (Multiply line 1 by line 2)	yd^3	
4	Total volume of fill needed (Add lines 1 and 3) (One yd^3 minimum; round up to the nearest whole number)	yd^3	
5	Labor, material, and equipment cost per yd^3[b]	$11.70/$yd^3$	
6	Subtotal of labor, material, and equipment costs to backfill (Multiply line 4 by line 5)		$
7	Cost of mobilization and demobilization (flat rate)[c]		$ 269.00
TOTAL COST OF BACKFILL (Add lines 6 and 7) (Enter total on worksheet CS-2, line 3)			$

Notes:

[a] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subparts G and H)*, January 1987, EPA/530-SW-87-009, Volume III, pg. 7-10. Compaction factor provided is for native soil for slope and fill.

[b] R.S. Means Company, Inc. *Means Building Construction Cost Data*, 1994, pg. 42, item nos. 212-0200 and 212-0900. Cost is $8.30/$yd^3$ for common borrow plus $3.40/$yd^3$ for hauling the material a distance of 5 miles for a total cost of $11.70/$yd^3$.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 48, item no. 274-0010. Cost is based upon an average mobilization and demobilization cost for a 105-horsepower dozer or loader, 3/4-yd^3 shovel or backhoe, 1.0-yd^3 tractor shovel or front-end loader, and a 2 1/4-yd^3 tractor shovel or front-end loader from a location within a 25-mile radius of the site. This cost is added to all activities that require the use of heavy equipment. If equipment has already been mobilized for another activity, it may not be necessary to include this cost.

1	Number of units requiring certification of closure[a]	1	
2	Cost of certification of closure per unit[b]	$ 2,700	
TOTAL COST OF CERTIFICATION OF CLOSURE (Multiply line 1 by line 2) (Enter total on worksheet CS-2, line 11)			$ 2700

Notes:

[a] Facilities closing multiple container storage areas in the same manner at the same time should incur cost of certification of closure only once.

[b] Assumes performance of the following tasks by an independent registered professional engineer at $56.50/hr: 1) 8 hrs for initial review of closure plan, 2) 16 hrs to perform final closure inspections, and 3) 16 hrs to prepare a certification of closure report [(8 hrs + 16 hrs + 16 hrs) x $56.50/hr = $2,260]. The estimate also includes 20 clerical hrs at a rate of $22/hr (20 hrs x $22/hr = $440). The total cost is $2,260 + $440 = $2,700.

The inventory worksheet will be used in completing the appropriate cost estimating worksheets to determine the cost of closure activities. If the design characteristics of the tank system being evaluated do not conform to the format of the worksheet below, alternative methods should be used to accurately determine the maximum permitted capacity of the unit, the area of all structures to be decontaminated and demolished, and the volume of all structures and soils to be removed. Depending on the activities being conducted, it may not be necessary to complete each section of the inventory sheet.

1 UNIT DESCRIPTION AND MAXIMUM PERMITTED CAPACITY

Describe the unit to determine the activities to be conducted to close it.

1.A	Type of tank system (aboveground, on-ground, in-ground, or underground)	A/G	
1.B	Maximum permitted capacity of the tank[1]	14,466 gal	
1.C	Maximum capacity of ancillary piping[1]	70 gal	
1.D	Maximum capacity of tank and ancillary piping (Add lines 1.B and 1.C)	14,536 gal	
1.E	Total length of ancillary piping	~100 ft	
1.F	Type of secondary containment system	___ Double-wall tank X Vault ___ Lined containment system (external to tank) ___ Other (explain)	
1.G	Supplemental Information on Waste Inventory (In the additional space provided, denote any supplemental information regarding waste characteristics, treatment and disposal methods, and sampling and analysis methods):		

2 SURFACE AREA OF TANK SYSTEM

Determine the surface area of the tank system to determine decontamination costs.

2.A	Tank (incl. dumpsters)[1]	1,140 ft²	
2.B	Ancillary piping (and grating in r/f station)[1]	1,870 ft²	
2.C	Surface Area of Tank System (Add lines 2.A and 2.B)		3,010 ft²
2.D	Surface Area of Tank System in yd² (Divide line 2.C by 9 ft²/yd²)		334.4 yd²

[1] See attached calculations

3 VOLUME OF TANK SYSTEM TO BE REMOVED NOT APPLICABLE

Determine the volume of in-ground or underground materials constituting components of the tank system to be removed to determine volume of soil needed to backfill. Complete this section only if tank is in-ground or underground.

3.A	Volume of Tank System to be Removed (Divide line 1.B by 7.48 gal/ft³)	—	ft³
3.B	Volume of Tank System to be Removed in yd³ (Divide line 3.A by 27 ft³/yd³)	—	yd³

4 SURFACE AREA OF SECONDARY CONTAINMENT SYSTEM PAD

Calculate the area of the secondary containment system pad for an aboveground or on-ground tank to calculate decontamination and demolition costs. Demolition of containment system pad is an additional activity that might be conducted if the pad cannot be effectively decontaminated or if the owner or operator elects to demolish the pad.

4.A	Length [1]	— ft	
4.B	Width [1]	— ft	
4.C	Surface Area of Secondary Containment System Pad (Multiply line 4.A by line 4.B) [1]	928	ft²
4.D	Surface Area of Secondary Containment System Pad in yd² (Divide line 4.C by 9 ft²/yd²)	309.3	yd²

5 VOLUME OF SECONDARY CONTAINMENT SYSTEM PAD NOT APPLICABLE

Calculate the volume of the secondary containment system pad to determine removal costs. Removal of secondary containment system pad is an additional activity that might be conducted if the pad cannot be effectively decontaminated.

5.A	Thickness	yd	
5.B	Volume of Secondary Containment System Pad (Multiply line 4.D by line 5.A)		yd³

6 SURFACE AREA OF SECONDARY CONTAINMENT SYSTEM BERM

Calculate the area of the secondary containment system berm, or curbing, to determine the cost of decontamination and demolition costs. Demolition of secondary containment system berm is an additional activity that might be conducted if the berm cannot be effectively decontaminated or if the owner or operator elects to demolish the berm.

6.A	Total Length 2x(49.5+18.5)	136 ft	
6.B	Height	4 ft	
6.C	Surface Area of Secondary Containment System Berm (Multiply line 6.A by line 6.B)	544	ft²
6.D	Surface Area of Secondary Containment System Berm in yd² (Divide line 6.C by 9 ft²/yd²)	60.4	yd²

[1] See attached calculation.

7 VOLUME OF SECONDARY CONTAINMENT SYSTEM BERM

Calculate the volume of the secondary containment system berm, or curbing, to determine the removal costs. Removal of secondary containment system berm is an additional activity that might be conducted if the berm cannot be effectively decontaminated.

7.A	Thickness (4")	0.11 yd	
7.B	Volume of Secondary Containment System Berm (Multiply line 6.D by line 7.A)		6.71 yd^3

8 SURFACE AREA OF OTHER STRUCTURES IN SECONDARY CONTAINMENT SYSTEM

Calculate the surface area of additional structures that will be decontaminated or demolished, for example, ramps or sumps. Demolition of other structures is an additional activity that might be conducted if the structures cannot be effectively decontaminated or if the owner or operator elects to demolish the structures.

8.A	*Surface Area of Other Structures* [1]	1,091 ft^2
8.B	*Surface Area of Other Structures* in yd^2 (Divide line 8.A by 9 ft^2/yd^2	121.2 yd^2

9 VOLUME OF OTHER STRUCTURES IN SECONDARY CONTAINMENT SYSTEM NOT APPLICABLE

Calculate the volume of materials constituting other structures to determine removal costs. Removal of other structures is an additional activity that might be conducted if the structures cannot be effectively decontaminated.

9	Volume of Other Structures NOT APPLICABLE	yd^3

10 VOLUME OF CONTAMINATED SOIL TO BE REMOVED NOT APPLICABLE

Calculate the volume of contaminated soil to be removed. Removal of contaminated soil is an additional activity that might be conducted if soil contamination is identified or if removal of contaminated soil is indicated in the closure plan.

10.A	Length	ft	
10.B	Width	ft	
10.C	Depth	ft	
10.D	Volume of Contaminated Soil to be Removed (Multiply line 10.A by line 10.B by line 10.C)		ft^3
10.E	Volume of Contaminated Soil to be Removed in yd^3 (Divide line 10.D by 27 ft^3/yd^3		yd^3

[1] See attached calculations

Surface Areas for Various Tank Capacities
Reference for Line 2.A

Capacity (gal)	Approximate Diameter (ft)	Approximate Height or Length (ft)	Surface Area[a] (ft^2)
TYPICAL VERTICAL TANK DIMENSIONS			
5,000	9	10.5	424
10,000	11.5	13	575
15,000	13	15	745
20,000	15	15	884
25,000	16	17	1,055
30,000	17	18	1,188
TYPICAL HORIZONTAL TANK DIMENSIONS			
5,000	6	23	490
10,000	8	26	750
15,000	8	29	1,080
20,000	10	34	1,225
25,000	10	38	1,350
30,000	11	42	1,640

Standard Equations for Calculating Surface Area of a Tank System
Reference for Line 2.A

Shape	Equation[b]
Cylinder	$2\pi rh$
Circle	πr^2
Cone	$\pi r\sqrt{r^2 + h^2}$

Notes:

[a] Includes top and bottom.

[b] r = radius
h = height

Properties of Standard Wall Steel Pipe[a]
Reference for Lines 1.C and 2.B

Nominal Size (inches)	Inside Diameter (inches)	Inside Volume (gal/ft)[b]	Inside Surface Area (ft^2/ft)[c]
.75	0.824	0.0276	0.217
1	1.049	0.0448	0.274
1.25	1.380	0.0776	0.362
1.5	1.610	0.106	0.421
2	2.067	0.174	0.540
2.5	2.469	0.248	0.646
3	3.068	0.384	0.802
4	4.026	0.661	1.06
6	6.065	1.500	1.59
8	7.981	2.59	2.09
10	10.020	4.09	2.62
12	12.090	5.95	3.17
14	13.250	7.17	3.46
16	15.250	9.48	3.99
18	17.250	12.09	4.52
20	19.250	15.19	5.04
24	23.250	22.13	6.08

Notes:

[a] Modified from Carrier Air Conditioning Company, Inc., *Carrier System Design Manual*, 1973, Chapter 1, page 3-2

[b] Gallons per linear foot of straight pipe

[c] Square foot per linear foot of straight pipe

Safety-Kleen Corp. - Orange Park, Florida

Form	Item	Explanation		Value	Units	Comment
TS-1	1B	***Tank volume***				
		Tank permitted capacity		14,250	gal	(95% of 15,000 gal)
		Dumpster capacity	2 @ 108 gal/ea	216	gal	
		Total volume		14,466	gal	
TS-1	1C	***Piping volume***				
		100 ft times 0.66 gal/ft		70	gal	Rounded from 66.1 gal
TS-1	2A	***Surface area of tanks and dumpsters***				
		Dumpsters	2 @ est. 100 sf each	200	sf	
		Tank	10.5' diameter by 23.25 ft height	940	sf	(PI x Diameter x Ht) + (2 PI D^2/4)
		Total surface area		1,140	sf	
TS-1	2B	***Surface area of piping and grating***				
		Piping	100 ft x 1.06 gal/ft	110	sf	
		Grating	22 ft x 40 ft x 2	1,760	sf	Decon top and bottom
		Total surface area		1,870	sf	
TS-1	4C	***Surface area of 2nd-ary containment pad***				
		Floor	49.5' x 18.6'	921	sf	
		Sump walls		6	sf	
		Sump floor		2	sf	
		Total surface area		928	sf	
TS-1	8A	***Surface area of return/fill shelter***				
		Floor Area	40' x 25'	1,000	sf	
		Floor curbing	(max) x (2 x (40+25)) + (25 x 2	75	sf	
		Sump floor		5	sf	
		Sump walls		11	sf	
		Total surface area		1,091	sf	

Facility Name: Safety-Kleen Orange Park

SUMMARY WORKSHEET

	Activity Some of the activities listed below are routine. The owner or operator might elect or be required to conduct additional activities. Italic type denotes worksheets for estimating the costs of those additional activities.	Worksheet Number	Cost
1.	Removal of Waste	TS-3	$ 255
2.	Tank System Purging (ignitable wastes *only*)	TS-4	$ 269
3.	*Flushing the Tank and Piping*	TS-5	$ 510
4.	*Excavation, Disassembly, and Loading*	TS-6	$ 1470
5.	*Demolition and Removal of Containment System*	TS-7	$ 1402
6.	*Removal of Soil*	TS-8	$ 0
7.	*Backfill*	TS-9	$ 0
8.	Decontamination[a] 2	DC-1	$ 0
9.	Sampling and Analysis[b] 2	SA-2	$ 0
10.	*Monitoring Well Installation*[c] 2	MW-1	$ 0
11.	Transportation[d] 2	TR-1	$ 0
12.	Treatment and Disposal[e] 2	TD-1	$ 0
13.	Subtotal of Closure Costs (Add lines 1 through 12)		$ 3,906
14.	Engineering Expenses (Approximately 10% of closure costs, excluding certification of closure [Multiply line 13 by 0.10])		$ 310
15.	Certification of Closure	TS-10	$ 2700
16.	Subtotal (Add engineering expenses and cost of certification of closure to closure costs [Add lines 13, 14, and 15])		$ 6916
17.	Contingency Allowance (Allow 20% of closure costs, engineering expenses, and cost of certification of closure [Multiply line 16 by 0.20])		$ 1383
18.	*Landfill Closure*[f]	LF-2	$ 0
	TOTAL COST OF CLOSURE *(add lines 16, 17, and 18)*		$ 8299

Notes: 2 - Refer to sheet CS-2; costs included facility-wide.

[a] Decontamination Worksheets are found in Chapter 12.

[b] Sampling and Analysis Worksheets are found in Chapter 13.

[c] Monitoring Well Installation Worksheets are found in Chapter 14.

[d] Transportation Worksheets are found in Chapter 15.

[e] Treatment and Disposal Worksheets are found in Chapter 16.

[f] Landfill Summary Worksheets are found in Chapter 7. Costs of post-closure care are included in this total.

REMOVAL OF WASTE - Page 1 of 1

1	Maximum volume of waste to be removed from the tank and ancillary piping (Enter from worksheet TS-1, line 1.D)	14,536 gal	
2	Labor and equipment cost per work hour[a] Choose the appropriate level of PPE: a. Protection Level D $ 101.90/work hr[b] b. Protection Level C $ 127.87/work hr[c] c. Protection Level B $ 151.45/work hr[c]	$ 101.90	
3	Work rate required to remove waste from tank and ancillary piping[d]	0.00017 work hr/ gal capacity	
4	Number of hours required to remove waste from tank and ancillary piping (Multiply line 1 by line 3) (One hour minimum; round up to the 0.5 hour)	2.5 work hrs	
TOTAL COST OF REMOVAL OF WASTE FROM TANK AND ANCILLARY PIPING (Multiply line 2 by line 4) (Enter total on worksheet TS-2, line 1)			$ 255

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0310. Activity described is removing sludge, water, and remaining waste from bottom of tank with a vacuum truck.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 499, crew A-13. Crew A-13 consists of one equipment operator and one large production vacuum loader.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 499, crew A-13. Crew A-13 consists of one equipment operator and one large production vacuum loader. See Appendix B of this manual for details of the calculation.

[d] Rate derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0310. A waste removal estimate of one hour for a one-person crew is required for one, 6,000-gallon tank.

TANK SYSTEM PURGING - Page 1 of 2

Complete this worksheet *only* if the contents of the tank are ignitable.

1	Maximum capacity of tank system (Enter from worksheet TS-1, line 1.D)	14,536 gal	
2	Amount of solid carbon dioxide (dry ice) needed per gal capacity[a]	1.5 lbs/ 100 gal capacity	
3	Amount of dry ice needed to purge tank system (Divide line 1 by 100 gal and multiply value by 1.5 lbs)	218 lbs	
4	Cost of dry ice[a]	$ 0.75/lb	
5	Cost of dry ice needed to purge tank system (Multiply line 3 by line 4)		$ 164
6	Labor cost per work hour[b]	$ 30.10	
	Choose the appropriate level of PPE:		
	a. Protection Level D	$ 30.10/work hr[c]	
	b. Protection Level C	$ 45.30/work hr[d]	
	c. Protection Level B	$ 58.11/work hr[d]	
7	Work rate required to purge tank per gal capacity[a]	0.00024 work hr/ gal capacity	
8	Number of hours required to purge tank system (Multiply line 1 by line 7) (One hour minimum; round up to the 0.5 hour)	3.5 work hrs	
9	Labor cost to purge tank system (Multiply line 6 by line 8)		$ 105
TOTAL COST OF TANK SYSTEM PURGING (Add lines 5 and 9) (Enter total on worksheet TS-2, line 2)			$ 269

Notes:

[a] Material requirements derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 37, item no. 880-0401.

[b] Labor requirements derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 37, item no. 880-0401. One common laborer is specified for this activity.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 499, crew A-1. Total cost for one common laborer is $29.10/hr.

[d] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 499, crew A-1. Total cost for one common laborer is $29.10/hr. See Appendix B of this manual for details of the calculation.

° Rate derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 37, item no. 880-0401. The work rate was estimated assuming the work hours required per pound of dry ice as follows: 0.016 work hr/lb of dry ice x 1 ½ lbs of dry ice/100-gal capacity = 0.00024 work hr/gal capacity.

FLUSHING THE TANK AND PIPING - Page 1 of 2

1	Maximum capacity of the tank and ancillary piping (Enter from worksheet TS-1, line 1.D)	14,536 gal	
2	Number of times tank and ancillary piping are flushed (If unknown, assume 1)	1	
3	Total volume of flushing solution (Multiply line 1 by line 2)	14,536 gal	
4	Labor and equipment cost per work hour[a]	$ 101.90	
	Choose the appropriate level of PPE:		
	a. Protection Level D ($101.90/work hr[b])		
	b. Protection Level C $ 127.87/work hr[c]		
	c. Protection Level B $ 151.45/work hr[c]		
5	Work rate required to flush tank and ancillary piping[d]	0.00034 work hr/ gal capacity	
6	Number of hours required to flush tank and ancillary piping (Multiply line 3 by line 5) (One hour minimum; round up to the 0.5 hour)	5.0 work hrs	
7	Subtotal of labor and equipment costs to flush tank and ancillary piping (Multiply line 4 by line 6)		$ 510
8	Total volume of flushing solution (Enter from line 3). (The volume of flushing solution generated may be disposed of either in drums or as bulk liquid. If the volume is too large to be handled effectively by placement in drums, use worksheet TD-3 (for water-based flushing solution) or TR-1 and TD-2 (for a solvent solution) to calculate the transportation, treatment, and disposal cost. If the flushing solution is to be placed in drums, complete lines 9 through 11.)	14,536 gal (Tanker)	
9	Number of drums required to contain flushing solution (Divide line 8 by 55 gallons per drum; round up to the nearest whole number)	0 drums	
10	Cost of one drum[e]	$ 62.95/drum	
11	Cost of drums needed to contain flushing solution (Multiply line 9 by line 10)		$ 0
	TOTAL COST TO FLUSH TANK AND ANCILLARY PIPING (Add lines 7 and 11) (Enter total on worksheet TS-2, line 3)		$ 510

Remember to calculate costs for transporting, treating, and disposing of the wastes in drums generated from this activity. Use worksheets TR-1 and TD-2 found in Chapters 15 and 16, respectively.

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0310. Activity described is removing sludge, water, and remaining waste from bottom of tank with a vacuum truck.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 499, crew A-13. Crew A-13 consists of one equipment operator and one large production vacuum loader.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 499, crew A-13. Crew A-13 consists of one equipment operator and one large production vacuum loader. See Appendix B of this manual for details of the calculation.

[d] Rate derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0310. The work rate for a 1-person crew was derived based on the waste removal rate for a 6,000-gal tank as follows: 1 hr/6,000-gal tank x 2 = 0.00034 work hr/gal capacity, because the tank must be filled and emptied to flush it.

[e] Lab Safety Supply, *General Catalog*, pg. 354, 55-gallon, lock-ring, open-head, 18-gauge steel drum.

EXCAVATION, DISASSEMBLY, AND LOADING - Page 1 of 3

This worksheet can be used to determine the costs of excavation and disassembly of tanks and ancillary piping for aboveground, on-ground, in-ground, and underground tanks. To determine costs for in-ground and underground tanks, complete sections 1 and 2; to determine costs for on-ground and aboveground tanks, complete sections 2 and 3.

1 EXCAVATION AND LOADING (FOR IN-GROUND AND UNDERGROUND TANKS ONLY) N/A			
1.A	Capacity of tank (Enter from worksheet TS-1, line 1.B)	gal	
1.B	Labor and equipment cost per work hour[a]	$	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 36.16/work hr[b]		
	b. Protection Level C $ 52.27/work hr[c]		
	c. Protection Level B $ 65.99/work hr[c]		
1.C	Work rate required to remove and load tank per gallon capacity[d]	0.002 work hr/ gal capacity	
1.D	Number of hours required to excavate and load tank (Multiply line 1.A by line 1.C) (One hour minimum; round up to the 0.5 hour)	work hrs	
1.E	Cost to Excavate and Load Tank (Multiply line 1.B by line 1.D)		$ 0
2 DISASSEMBLY OF ANCILLARY PIPING			
2.A	Length of ancillary piping to be disassembled (Enter from worksheet TS-1, line 1.E)	100 ft	
2.B	Labor and equipment cost per work hour[a]	$ 41.18	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 41.18/work hr[f]		
	b. Protection Level C $ 58.04/work hr[g]		
	c. Protection Level B $ 72.51/work hr[g]		
2.C	Work rate required to disassemble 1 ft of pipe[h]	0.150 work hr/ft	
2.D	Number of hours required to disassemble ancillary piping (Multiply line 2.A by line 2.C) (One hour minimum; round up to the 0.5 hour)	15 work hrs 6 grating 21	
2.E	Cost of disassembly of ancillary piping (Multiply line 2.B by line 2.D)		$ 865

3 LOADING (FOR ON-GROUND AND ABOVEGROUND TANKS ONLY)			
3.A	Capacity of tank (Enter from worksheet TS-1, line 1.B)	14,466 gal	
3.B	Labor and equipment cost per work hour[j]	$ 41.72	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 41.72/work hr[k]		
	b. Protection Level C $ 58.66/work hr[l]		
	c. Protection Level B $ 73.22/work hr[l]		
3.C	Work rate required to load tank per gallon capacity[m]	0.001 work hr/ gal capacity	
3.D	Number of hours required to load tank (Multiply line 3.A by line 3.C) (One hour minimum; round up to the 0.5 hour)	14.5 work hrs	
3.E	Cost to Load Tank (Multiply line 3.B by line 3.D)		$ 605
TOTAL COST OF EXCAVATION, DISASSEMBLY, AND LOADING (Add lines 1.E, 2.E, and 3.E) (Enter total on worksheet TS-2, line 4)			$ 1470

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0120. Activity described is excavating an underground tank and loading it into a trailer.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 503, crew B-14. Crew B-14 consists of one labor foreman, four building laborers, one equipment operator, and one backhoe loader.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 495, crew B-14. Crew B-14 consists of one labor foreman, four building laborers, one equipment operator, and one backhoe loader. See Appendix B for details of the calculation.

[d] Rate derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0120. An excavation and loading estimate of 12 work hours for a six-person crew is required for one 6,000 gallon tank. Therefore, the per gallon work rate is 12 work hrs/6,000-gal capacity = 0.002 work hr/gal capacity.

[e] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 24, item no. 554-3200. activity described is demolition of 4-in steel pipe with welded connections.

[f] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-6. Crew B-6 consists of two building laborers, one light equipment operator, and one 48-horsepower backhoe loader.

[g] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-6. Crew B-6 consists of two building laborers, one light equipment operator, and one 48-horsepower backhoe loader. See Appendix B of this manual for details of the calculation.

[h] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 24, item no. 554-3200. Work rate is based on a three-person crew.

[i] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0120. Activity described is excavating an underground tank and loading it into a trailer. Activity and crew costs are modified to exclude excavation and cost only loading of a tank.

[k] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 503, crew B-13. Crew B-13 consists of one labor foreman, four building laborers, one crane operator, one equipment operator oiler, and one 25-ton hydraulic crane.

[l] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 503, crew B-13. Crew B-13 consists of one labor foreman, four building laborers, one crane operator, one equipment operator oiler, and one 25-ton hydraulic crane. See Appendix B for details of the calculation.

[m] Rate derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 37, item no. 880-0120. An excavation and loading time of 12 hours for a six-person crew is required for one 6,000-gallon underground tank. Therefore, an estimate of 6 hours (half the time) is assumed for one 6,000-gallon aboveground tank. Calculation of the work rate of 0.001 work hour per gallon capacity was derived as follows: 6 hrs/tank x 1 tank/6,000 gal = 0.001 work hr/gal capacity.

DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM - Page 1 of 2

1	DEMOLITION OF CONTAINMENT SYSTEM (Demo tank berm only)		
1.A	Area of containment system (Enter from worksheet TS-1; add lines 4.C, (6.C) and 9)	544 ft²	
1.B	Labor and equipment cost per work hour[a]	$ 34.98	
	Choose the appropriate level of PPE:		
	a. Protection Level D $(34.98)/work hr[b]		
	b. Protection Level C $ 50.91/work hr[c]		
	c. Protection Level B $ 64.45 work hr[c]		
1.C	Work rate to demolish one ft² of containment system[d]	0.040 work hr/ft²	
1.D	Number of hours required to demolish the containment system (Multiply line 1.A by line 1.C) (One hour minimum; round up to the 0.5 hour)	22 work hrs	
1.E	Cost to Demolish the Containment System (Multiply line 1.B by line 1.D)		$ 770
2	REMOVAL AND LOADING OF CONTAINMENT SYSTEM (walls only)		
2.A	Volume of the containment system (Enter from worksheet TS-1; add lines 5.B (7.B) and 9)	6.71 yd³	
2.B	Labor and equipment cost per work hour[e]	$ 41.18	
	Choose the appropriate level of PPE:		
	a. Protection Level D $(41.18)/work hr[f]		
	b. Protection Level C $ 58.04/work hr[g]		
	c. Protection Level B $ 72.51/work hr[g]		
2.C	Work rate to remove and load one yd³[h]	0.300 work hr/yd³	
2.D	Number of hours required to remove the containment system (Multiply line 2.A by line 2.C) (One hour minimum; round up to the 0.5 hour)	2.5 work hrs	
2.E	Subtotal of labor and equipment costs to remove and load the containment system (Multiply line 2.B by line 2.D)		$ 103
2.F	Number of debris box containers needed to hold containment system (Divide line 2.A by 20 yd³ per container; round up to the nearest whole number)	1 containers	
2.G	Cost of one 20-yd³-capacity debris box container (Rent per week)[i]	$ 260/container	

2.H	Cost of containers (Multiply line 2.F by line 2.G)	$ 260
2.I	Cost of mobilization and demobilization (flat rate)[k]	$ 269.00
2.J	Cost to Remove and Load Containment System (Add lines 2.E, 2.H, and 2.I)	$ 632
TOTAL COST OF DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM (Add lines 1.E and 2.J) (Enter total on worksheet TS-1, line 5)		$ 1402

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994 pg. 24, item no. 554-2320. Activity described is site demolition, concrete, 6-in-thick, no reinforcing.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 506, crew B-39. Crew B-39 consists of one labor foreman, four building laborers, one light equipment operator, one air compressor (250 cubic feet per minute [cfm]), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter).

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 506, crew B-39. Crew B-39 consists of one labor foreman, four building laborers, one light equipment operator, one air compressor (250 cfm), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter). See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 24, item no. 554-2320. Work rate is based on a six-person crew and a 6-in-thick concrete slab without reinforcing.

[e] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25, item no. 620-3080. Activity described is loading by machine of demolition rubbish.

[f] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-6. Crew B-6 consists of two building laborers, one light equipment operator, and one 48-horsepower backhoe loader.

[g] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-6. Crew B-6 consists of two building laborers, one light equipment operator, and one 48-horsepower backhoe loader. See Appendix B of this manual for details of the calculation.

[h] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25, item no. 620-3080. Work rate is based on a three-person crew.

[i] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25. Cost is determined by averaging the weekly rental rate of a 10-yd^3-capacity debris box container (item no. 620-0700) and a 30-yd^3-capacity debris box container (item no. 620-800).

[k] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 48, item no. 274-0020. Cost is based upon an average mobilization and demobilization costs for a 105-horsepower dozer or loader, 3/4-yd^3 shovel or backhoe, 1.0-yd^3 tractor shovel or front-end loader, and a 2 1/4-yd^3 tractor shovel or front-end loader from a location within a 25-mile radius of the site. The cost is added to all activities that require the use of heavy equipment. If equipment has already been mobilized for another activity, it may not be necessary to include this cost.

REMOVAL OF SOIL - Page 1 of 2

NOT APPLICABLE

1	Volume of contaminated soil to be removed (Enter from worksheet TS-1, line 10.E)	yd^3	
2	Labor and equipment cost per work hour[a] Choose the appropriate level of PPE: a. Protection Level D $ 59.83/work hr[b] b. Protection Level C $ 79.49/work hr[c] c. Protection Level B $ 96.76/work hr[c]	$	
3	Work rate required to remove one yd^3[d]	0.030 work hr/yd^3	
4	Number of hours required to remove soil (Multiply line 1 by line 3) (One hour minimum; round up to the 0.5 hour)	work hrs	
5	Cost to remove soil (Multiply line 2 by line 4)		$
6	Number of debris box containers needed to contain soil (Divide line 1 by 20 yd^3 per container; round up to the nearest whole number)	containers	
7	Cost of one 20-yd^3-capacity debris box container (rent per week)[e]	$260/container	
8	Cost of containers (Multiply line 6 by line 7)		$
9	Cost of mobilization and demobilization (flat rate)[f]		$ 269.00
	TOTAL COST OF REMOVAL OF SOIL (Add lines 5, 8, and 9) (Enter total on worksheet TS-2, line 6)		$

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 43, item no. 242-2020. Activity described is excavating common earth and hauling the common earth 50 ft.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 501, crew B-10L. Crew B-10L consists of one medium equipment operator, one-half building laborer, and one 75-horsepower dozer.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 501, crew B-10L. Crew B-10L consists of one medium equipment operator, one-half building laborer, and one 75-horsepower dozer. See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 43, item no. 242-2020. Work rate is based on a one-and-one-half-person crew.

[e] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 25. Cost is determined by averaging the weekly rental rate of a 10-yd^3-capacity debris box container (item no. 620-0700) and a 30-yd^3-capacity debris box container (item no. 620-800).

[f] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 48, item no. 274-0020. Cost is based upon an average mobilization and demobilization costs for a 105-horsepower dozer or loader, 3/4-yd^3 shovel or backhoe, 1.0-yd^3 tractor shovel or front-end loader, and a 2 1/4-yd^3 tractor shovel or front-end loader from a location within a 25-mile radius of the site. The cost is added to all activities that require the use of heavy equipment. If equipment has already been mobilized for another activity, it may not be necessary to include this cost.

BACKFILL - Page 1 of 1

NOT APPLICABLE

To calculate backfill costs, an estimate of the total volume of fill material required must be provided. Add the volumes of all materials removed to determine the total volume of fill material needed.

1	Volume of fill (Enter from worksheet TS-1; add lines 3.B, 5.B, and 10.E, as appropriate)	yd^3	
2	Compaction factor[a]	0.25	
3	Volume of additional fill required because of compaction factor (Multiply line 1 by line 2)	yd^3	
4	Total volume of fill needed (Add lines 1 and 3) (One yd^3 minimum; round up to the nearest whole number)	yd^3	
5	Labor, material, and equipment cost per yd^3[b]	$11.70/$yd^3$	
6	Subtotal of labor, material, and equipment costs to backfill (Multiply line 4 by line 5)		$
7	Cost of mobilization and demobilization (flat rate)[c]		$259.00
TOTAL COST OF BACKFILL (Add lines 6 and 7) (Enter total on worksheet TS-2, line 7)			$

Notes:

[a] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subparts G and H)*, January 1987, EPA/530-SW-87-009, Volume III, pg. 7-10. Compaction factor provided is for native soil for slope and fill.

[b] R.S. Means Company, Inc. *Means Building Construction Cost Data*, 1994, pg. 42, item nos. 212-0200 and 212-0900. Cost is $8.30/$yd^3$ for common borrow plus $3.40/$yd^3$ for hauling the material a distance of 5 miles for a total cost of $11.70/$yd^3$.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 48, item no. 274-0020. Cost is based upon an average mobilization and demobilization costs for a 105-horsepower dozer or loader, 3/4-yd^3 shovel or backhoe, 1.0-yd^3 tractor shovel or front-end loader, and a 2 1/4-yd^3 tractor shovel or front-end loader from a location within a 25-mile radius of the site. The cost is added to all activities that require the use of heavy equipment. If equipment has already been mobilized for another activity, it may not be necessary to include this cost.

CERTIFICATION OF CLOSURE - Page 1 of 1

1	Number of units requiring certification of closure[a]	1	
2	Cost of certification of closure per unit[b]	$ 2,700	
TOTAL COST OF CERTIFICATION OF CLOSURE (Multiply line 1 by line 2) (Enter total on worksheet TS-2, line 15)			$ 2,700

Notes:

[a] Facilities closing multiple tanks in the same manner at the same time should incur cost of certification of closure only once.

[b] Assumes performance of the following tasks by an independent registered professional engineer at $56.50/hr: 1) 8 hrs for initial review of closure plan, 2) 16 hrs to perform final closure inspections, and 3) 16 hrs to prepare a certification of closure report [(8 hrs + 16 hrs + 16 hrs) x $56.50/hr = $2,260]. The estimate also includes 20 clerical hrs at a rate of $22/hr (20 hrs x $22/hr = $440). The total cost is $2,260 + $440 = $2,700.

Facility Name: Safety-Kleen – Orange Park

SUMMARY WORKSHEET

	Activity Some of the activities listed below are routine. The owner or operator might elect or be required to conduct additional activities. Italic type denotes worksheets for estimating the costs of those additional activities.	Worksheet Number	Cost
1.	Decontamination of Unit by Steam Cleaning or Pressure Washing	DC-2	$ 6541
2.	Decontamination of Unit by Sand Blasting	DC-3	$ 0
3.	Decontamination of Heavy Equipment	DC-4	$ 3274
TOTAL COST OF DECONTAMINATION *(Add lines 1, 2, and 3)*			$ 9815

Use this worksheet when the proposed method of decontaminating the unit is steam cleaning or pressure washing.

Facilitywide

1	Area of unit to be decontaminated (Enter from appropriate unit inventory worksheet)	6,961 * ft²	
2	Labor and equipment cost per work hour[a]	$ 34.79	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 34.79/work hr[b]		
	b. Protection Level C $ 50.69/work hr[c]		
	c. Protection Level B $ 64.21/work hr[c]		
3	Work rate to steam clean or pressure wash one ft²[d]	0.027 work hrs/ft²	
4	Number of hours required to steam clean or pressure wash the unit (Multiply line 1 by line 3) (One hour minimum; round up to the 0.5 hour)	188 work hrs	
5	Subtotal of labor and equipment costs to decontaminate unit by steam cleaning or pressure washing (Multiply line 2 by line 4)		$ 6541
6	Volume of decontamination fluid (Multiply line 1 by 4 gal/ft²)[e] (The volume of decontamination fluids generated may be disposed of either in drums or as bulk liquid. If the volume is too large to be handled effectively by placement in drums, use worksheet TD-3 in Chapter 16 to calculate the transportation, treatment, and disposal cost. If the decontamination fluids are to be placed in drums, complete lines 7 through 9.)	27,844 gal	
7	Number of drums required to contain decontamination fluid for removal (Divide line 6 by 55 gallons per drum; round up to the nearest whole number)	Tanker ~~drums~~	
8	Cost of one drum[f]	$ 62.95/drum	
9	Cost of drums needed to contain decontamination fluid (Multiply line 7 by line 8)		$ ~~0~~ **
	TOTAL COST OF DECONTAMINATION OF UNIT BY STEAM CLEANING OR PRESSURE WASHING (For bulk liquids, obtain cost from line 5. For drummed liquids, add lines 5 and 9.) (Enter total on worksheet DC-1, line 1)		$ 6541

Remember to calculate costs for transporting, treating, and disposing of the wastes in drums generated from this activity. Use worksheets TR-1 and TD-2 found in Chapters 15 and 16, respectively.

*See attached calculation

** cost of tanker is included on page 16-14

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 111, item no. 166-0100. Activity described is steam cleaning a building.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-9. Crew B-9 consists of one labor foreman, four building laborers, one air compressor (250 cfm), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter).

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-9. Crew B-9 consists of one labor foreman, four building laborers, one air compressor (250 cfm), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter). See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 111, item no. 166-0100. Work rate is based on a five-person crew.

[e] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subparts G and H)*, November 1986, EPA/530-SW-87-009, Volume III, pg. 5-3. The generation rate provided for decontamination fluid is for steam cleaning and pressure washing.

[f] Lab Safety Supply, *General Catalog*, 1993, pg. 354, 55-gallon, lock-ring, open-head, 18-gauge steel drum.

Safety-Kleen Corp. - Orange Park, Florida

Form	Item	Explanation	Value	Units	Comment
DC-2	1	***Area to be Decontaminated***			
		Container storage area, including trenches	693	sf	
		Container storage area curbing	50	sf	
		Paint waste shelter pad beneath bldg and pans	645	sf	
		Tank and dumpsters	1,140	sf	
		Piping and grating	1,870	sf	
		Tank storage area floor	928	sf	
		Tank storage area berm	544	sf	
		Return/fill station	1,091	sf	
		Total surface area	6,961	sf	

DECONTAMINATION OF UNIT BY SANDBLASTING - Page 1 of 2

NOT APPLICABLE

Use this worksheet when the proposed method of decontaminating the unit is sandblasting.

1	Area of unit to be decontaminated (Enter from appropriate unit inventory worksheet)	ft^2	
2	Labor and equipment cost per work hour[a] Choose the appropriate level of PPE: a. Protection Level D $ 34.79/work hr[b] b. Protection Level C $ 50.69/work hr[c] c. Protection Level B $ 64.21/work hr[c]	$	
3	Work rate to sandblast one ft^2.[d]	0.027 work hrs/ft^2	
4	Number of hours required to sandblast the unit (Multiply line 1 by line 3) (One hour minimum; round up to the 0.5 hour)	work hrs	
5	Subtotal of labor and equipment costs to decontaminate unit by sandblasting (Multiply line 2 by line 4)		$
6	Volume of material used for sandblasting (Multiply line 1 by 2 lbs/ft^2)[e]	lbs	
7	Number of drums required to contain decontamination sands for removal (Divide line 6 by 808.89 lbs per drum; round up to the nearest whole number)[f]	drums	
8	Cost of one drum[g]	$ 62.95/drum	
9	Cost of drums needed to contain decontamination sands (Multiply line 7 by line 8)		$
	TOTAL COST OF DECONTAMINATION OF UNIT BY SANDBLASTING (Add lines 5 and 9) (Enter total on worksheet DC-1, line 2)		$

Remember to calculate costs for transporting, treating, and disposing of the wastes in drums generated from this activity. Use worksheets TR-1 and TD-2 found in Chapters 15 and 16, respectively.

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 110, item no. 150-5000. Activity described is sand blasting (dry system) a building.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-9. Crew B-9 consists of one labor foreman, four building laborers, one air compressor (250 cfm), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter).

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-9. Crew B-9 consists of one labor foreman, four building laborers, one air compressor (250 cfm), two air tools and accessories, and two 50-ft air hoses (1.5-in diameter). See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 110, item no. 150-5000. Work rate is based on a five-person crew.

[e] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subparts G and H)*, January 1987, EPA/530-SW-87-009, Volume III, pg. 5-3. The generation rate provided for decontamination sand is for sand blasting (dry system).

[f] Unit weight of medium sand, on average, equals 110 lbs/ft3. Using the conversions of 0.1337 ft^3/gal and 55-gal/drum, the calculation is: 110 lbs/ft^3 x 0.1337 ft^3/gal x 55 gal/drum = 808.89 lb/drum.

[g] Lab Safety Supply, *General Catalog*, 1993, pg. 354, 55-gallon, lock-ring, open-head, 18-gauge steel drum.

Decontamination of heavy equipment typically will be conducted for equipment that will come into direct contact with hazardous waste.

1	Number of hours needed to decontaminate all heavy equipment used during closure of the unit (Enter from attachment to this worksheet)	10 work hrs	
2	Cost of steam cleaner rental per hour[a]	$ 5.98/hr	
3	Subtotal steam cleaner rental costs (Multiply line 1 by line 2)		$ 60
4	Labor cost per work hour[b]	$ 30.10	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 30.10/work hr[b]		
	b. Protection Level C $ 45.30/work hr[c]		
	c. Protection Level B $ 58.11/work hr[c]		
5	Subtotal of labor costs (Multiply line 1 by line 4)		$ 301
6	Volume of decontamination fluid (Multiply line 1 by 100 gallons per hour)[d] (The volume of decontamination fluids generated may be disposed of either in drums or as bulk liquid. If the volume is too large to be effectively handled by placement in drums, use TD-3 worksheet in Chapter 16 to calculate the transportation, treatment and disposal cost. If the decontamination fluids are to be placed in drums, complete lines 7 through 9.)	1,000 gal	
7	Number of drums required to contain decontamination fluid for removal (Divide line 6 by 55 gallons per drum and round up to the nearest whole number)	19 drums	
8	Cost of one drum[e]	$ 62.95/drum	
9	Cost of drums (Multiply line 7 by line 8)		$ 1196
10	Cost of construction of temporary decontamination area for heavy equipment (Include this cost if permanent decontamination area does not exist)[f] NOTE: THIS COST SHOULD ONLY BE INCURRED ONCE FOR THE CLOSURE OF ALL UNITS		$ 1,225.71

11	Cost of demolition of temporary decontamination area for heavy equipment (Include this cost if permanent decontamination area does not exist)[g] NOTE: THIS COST SHOULD ONLY BE INCURRED ONCE FOR THE CLOSURE OF ALL UNITS	$ 852.10
	TOTAL COST OF DECONTAMINATION OF HEAVY EQUIPMENT (Add lines 3, 5, 9, 10, and 11) (Enter total on worksheet DC-1, line 3)	$ 3274

Remember to calculate costs for transporting, treating, and disposing of the wastes in drums generated from this activity. Use Worksheets TR-1 and TD-2 found in Chapters 15 and 16, respectively.

Notes:

[a] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 19, item no. 420-6300. Rental cost per hour was derived by dividing the daily rental rate by hours per day and adding the hourly operating cost: ($45/day ÷ 8 hrs/day) + $0.35/hr = $5.98/hr.

[b] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 499, crew A-1. The cost provided is the hourly rate for one building laborer.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 499, crew A-1. The cost provided is the hourly rate for one building laborer. See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 19, item no. 420-6300. Production rate of steam cleaner is 100 gal/hr.

[e] Lab Safety Supply, *General Catalog*, 1993, pg. 354, 55-gallon, lock-ring, open head, 18-gauge steel drum.

[f] Assume the temporary decontamination area is 25.5 ft by 17 ft and is constructed on a 3/4-in plywood base, with 6-in-by-8-in-by 8.5-ft railroad tie curbs and 2-in-by-8-in-by-16-in concrete blocks that hold the 6-mil polyethylene sheeting that covers the decontamination area.

Plywood - R.S. Means Company, Inc., *Means Site Work and Landscape Cost Data*, 1994, pg. 166, item no. 164-0200. The cost per ft^2 is $0.56. A total of 433.5 ft^2 of plywood is needed to cover the decontamination area. The cost of the plywood was calculated by multiplying the cost per ft^2, $0.56, by the number of ft^2, 433.5 = $242.76.

Railroad Ties - R.S. Means Company, Inc., *Means Site Work and Landscape Cost Data*, 1994, pg. 62, item no. 258-0600. The cost per ft is $2.25. A total of 10 railroad ties is needed to construct a curb around the decontamination area. The cost of the railroad ties was calculated by multiplying the cost per foot, by the length of each railroad tie, and by the number of railroad ties needed: $2.25/ft x 8.5 ft x 10 = $191.30.

Polyethylene Sheeting - Lab Safety Supply, *General Catalog*, 1993, pg. 635, 20-ft-by-100-ft roll of 6-mil polyethylene sheeting. The cost per roll is $54.95. A total of one roll is needed to cover the decontamination area.

Concrete Blocks - R.S. Means Company, Inc., *Means Site Work and Landscape Cost Data*, 1994, pg. 140, item no. 204-0020. The cost per block is $0.70. A total of 15 concrete blocks is needed to hold the polyethylene sheeting. The cost of the blocks was calculated by multiplying the cost of one block by the number of blocks needed: $0.70/block x 15 = $10.50.

Labor to Construct Decontamination Area - R.S. Means Company, Inc., *Means Site Work and Landscape Cost Data*, 1994, pg. 449, crew A-1. Assume that two building laborers at $30.10 per hour will construct the decontamination area in eight hours. The cost of the labor was calculated by multiplying the cost per

hour for one building laborer, by the number of work hours needed to construct the decontamination area: $30.10/hr x 16 = $481.60.

Equipment Rental - R.S. Means Company, Inc., *Means Site Work and Landscape Cost Data*, 1994, pg. 17, item no. 420-2020. One forklift will be needed to move the railroad ties into place. The cost of renting one forklift for one day was calculated by multiplying the operational cost per hour by 8 hours and adding the daily rental cost: (8.95/hr x 8 hrs) + $173 = $244.60.

The total cost of constructing the decontamination area is $242.76 + $191.30 + 54.95 + 10.50 + $481.60 + $244.60 = $1,225.71.

Costs for demolition of the temporary decontamination area were derived as follows:

Labor to Demolish Decontamination Area - R.S. Means Company, Inc., *Means Site Work and Landscape Cost Data*, 1993, pg. 451, crew A-1. Assume that two building laborers, at $30.10/hr, demolish the decontamination area in eight hours. The cost of the labor was calculated by multiplying the cost per hour for one building laborer, by the number of work hours needed to demolish the decontamination area: $30.10/hr x 16 hrs = $481.60.

Equipment Rental - R.S. Means Company, Inc., *Means Site Work and Landscape Cost Data*, 1993, pg. 17, item no. 420-2020. One forklift will be needed to move the railroad ties into place. The cost of renting one forklift for one day (8 hours) was calculated by multiplying the operational cost per hour by 8 hours and adding the daily rental cost: ($8.95/hr x 8 hrs) + $173 = $244.60.

Drums to Contain Contaminated Polyethylene Sheeting - Lab Safety Supply, *General Catalog*, 1993, pg. 354, 55-gallon, lock-ring, open head, 18-gauge steel drum. The cost of one drum is $62.95. Two drums are needed to contain the polyethylene sheeting. The cost of purchasing drums was calculated as follows: $62.95/drum x 2 drums = $125.90.

The total cost of demolishing the decontamination area is $481.60 + $244.60 + $125.90 = $852.10.

Decontamination Times for Heavy Equipment[a] Reference for Line 1

Use the following time estimates to calculate the total number of hours needed to decontaminate all heavy equipment. Assume that each piece of heavy equipment will be decontaminated at least once for the closure of each unit.

Equipment	Decontamination Time (Hrs)
Forklift	✓ 1
Rotary disc	1
Tractor	2
Tank wagon	2
Front-end loader	✓ 3
Dozer	✓ 3
Backhoe	✓ 3
Front shovel	3

Notes:

[a] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subparts G and H)*, January 1987, EPA/530-SW-87-009, Volume III, pg. 5-2.

SAMPLING AND ANALYSIS SA-1

The inventory worksheet will be used in completing the appropriate cost estimating worksheets to determine the cost of sampling and analysis during closure. Depending on the activities being conducted, it may not be necessary to complete each section of the inventory sheet.

1 NUMBER OF BORING AND SUBSURFACE SOIL SAMPLES

In the additional space below, identify the number of boring and subsurface soil samples being collected for each individual unit. Add the number of samples and record the total in the box provided.

1	Number of Boring and Subsurface Soil Samples	⊖ samples

2 NUMBER OF CONCRETE CORE SAMPLES

In the additional space below, identify the number of concrete core samples being collected for each individual unit. Add the number of samples and record the total in the box provided.

2	Number of Concrete Core Samples	⊖ samples

3 NUMBER OF WIPE SAMPLE LOCATIONS

In the additional space below, identify the number of wipe sample locations for each individual unit. Add the number of sample locations and record the total in the box provided.

3	Number of Wipe Sample Locations	⊖ sample locations

4 NUMBER OF AQUEOUS SAMPLE LOCATIONS

In the additional space below, identify the number of aqueous sample locations being collected for each individual unit. Add the number of sample locations and record the total in the box provided.

4	Number of Aqueous Sample Locations WASH WATER	RETURN/FILL 2 TANK CONT. 2 CONTAINER STORAGE/ PAINT WASTE 2	6 sample locations

5 NUMBER OF NONAQUEOUS SAMPLE LOCATIONS

In the additional space below, identify the number of nonaqueous sample locations for each individual unit. Add the number of sample locations and record the total in the box provided.

5	Number of Nonaqueous Sample Locations TANK CONTAINMENT RETURN/FILL → minimum of 5 5 sample locations

6 NUMBER OF GROUNDWATER SAMPLE LOCATIONS

In the additional space below, identify the number of groundwater sample locations for each individual unit. Add the number of sample locations and record the total in the box provided.

6	Number of Groundwater Sample Locations ~~0~~ sample locations

7 NUMBER OF LYSIMETERS TO BE SAMPLED

In the additional space below, identify the number of lysimeters to be sampled. Record the number in the box provided.

7	Number of Lysimeters to be Sampled ~~0~~ samples

8 NUMBER OF SUBSURFACE SOIL SAMPLES COLLECTED DURING MONITORING WELL INSTALLATION

In the additional space below, identify the number of subsurface soil samples collected during monitoring well installation.

8	Number of Subsurface Soil Samples Collected During Monitoring Well Installation ~~0~~ samples

Facility Name: Safety-Kleen Orange Park

SUMMARY WORKSHEET

	Activity	Worksheet Number	Cost
1.	Boring and Subsurface Soil Sample	SA-3	$ 0
2.	Concrete Core Sample	SA-4	$ 0
3.	Wipe Sample	SA-5	$ 0
4.	Aqueous Sample	SA-6	$ 4,668
5.	Nonaqueous Sample	SA-7	$ 4671
6.	Groundwater Sample	SA-8	$ 0
7.	Soil-Pore Liquid Sample	SA-9	$ 0
8.	Analysis of Subsurface Soil Sample (from Monitoring Well Installation)	SA-10	$ 0
TOTAL SAMPLING AND ANALYSIS COST *(Add lines 1 through 8)*			$ 9339

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Facility Name: Safety-Kleen Orange Park

SUMMARY WORKSHEET

	Activity	Worksheet Number	Cost
1.	Boring and Subsurface Soil Sample	SA-3	$ 0
2.	Concrete Core Sample	SA-4	$ 0
3.	Wipe Sample	SA-5	$ 0
4.	Aqueous Sample	SA-6	$ 4120
5.	Nonaqueous Sample	SA-7	$ 4156
6.	Groundwater Sample	SA-8	$ 0
7.	Soil-Pore Liquid Sample	SA-9	$ 0
8.	Analysis of Subsurface Soil Sample (from Monitoring Well Installation)	SA-10	$ 0
TOTAL SAMPLING AND ANALYSIS COST *(Add lines 1 through 8)*			$ 8276

Use this worksheet when you are estimating the cost to collect soil or rock samples at depth. This worksheet estimates cost by using a drill rig or other mechanical equipment to bore or core soil and rock using various drilling methods.

1 BORING AND SUBSURFACE SOIL SAMPLE COSTS - 2-1/2-INCH-DIAMETER HOLE			
1.A	Number of borings to be drilled (Enter from worksheet SA-1; line 1)	⊖ borings	
1.B	Enter total of bore depths (Add all depths. If the depth is not provided, use the average boring depth and multiply by line 1.A)	ft	
1.C	Labor and equipment cost per work hour (Enter costs from Attachment A to this worksheet)	$ /work hr	
1.D	Work rate to drill 2-1/2-inch-diameter hole (Enter work rates from Attachment B to this worksheet)	work hr/ft	
1.E	Number of hours required to drill 2-1/2-inch-diameter hole (Multiply line 1.B by line 1.D) (One hour minimum; round up to the 0.5 hour)	work hrs	
1.F	Cost to Drill 2-1/2-inch Borings (Multiply line 1.C by line 1.E)		$ ⊖

2 BORING AND SUBSURFACE SOIL SAMPLE COSTS - 4-INCH-DIAMETER HOLE			
2.A	Number of borings to be drilled (Enter from worksheet SA-1; line 1)	borings	
2.B	Enter total of bore depths (Add all depths. If depth is not provided, use the average depth and multiply by line 2.A)	ft	
2.C	Labor and equipment cost per work hour (Enter costs from Attachment A to this worksheet)	$ /work hr	
2.D	Work rate to drill 4-inch-diameter hole (Enter work rates from Attachment B to this worksheet)	work hr/ft	
2.E	Number of work hours required to drill 4-inch-diameter hole (Multiply line 2.B by line 2.D) (One hour minimum; round up to the 0.5 hour)	work hrs	
2.F	Cost to Drill 4-inch Borings (Multiply line 2.C by line 2.E)		$ ⊖

3 ANALYSIS OF BORING SAMPLE			
3.A	Using the table in Attachment C to this worksheet, calculate the cost of analysis per sampling event for boring or soil core samples (Enter cost from Attachment C to this worksheet)	$ /event	
3.B	Enter the number of sampling events	events	
3.C	Cost to Analyze Soil Samples (Multiply line 3.A by line 3.B)		$ 0
TOTAL COST OF SAMPLING AND ANALYSIS OF BORING AND SOIL CORE SAMPLES (Add line 1.F, 2.F, and 3.C) (Enter total on worksheet SA-2, line 1)			$ 0

Drilling Labor and Equipment Costs Reference for Lines 1.C and 2.C

Drilling Method	Drilling Labor and Equipment Cost Per Work Hour ($) for 2-1/2-Inch and 4-Inch Diameter Boreholes		
	Level D	Level C	Level B
Hollow-Stem Auger	57.04[a]	76.28[b]	93.13[b]
Cased Borings	57.04[a]	76.28[b]	93.13[b]
BX-size Rock Core	69.41[c]	90.51[d]	109.21[d]
NX-size Rock Core	69.41[c]	90.51[d]	109.21[d]

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 507, crew B-55. Crew B-55 consists of two building laborers, one truck driver, one flatbed truck with auger, and one 3-ton truck.

[b] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 507, crew B-55. Crew B-55 consists of two building laborers, one truck driver, one flatbed truck with auger, and one 3-ton truck. See Appendix B of this manual for details of the calculation.

[c] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 507, crew B-56. Crew B-56 consists of one building laborer, one light equipment operator, one 4-in crawler-type drill, one 600-cfm air compressor, and one 3-in-diameter, 50-ft air hose.

[d] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 507, crew B-56. Crew B-56 consists of one building laborer, one light equipment operator, one 4-in crawler type drill, one 600 cfm air compressor, and one 3-in-diameter, 50-ft air hose. See Appendix B of this manual for details of the calculation.

Drilling Work Rate
Reference for Lines 1.D and 2.D

Drilling Method	Borehole Diameter (in)	Drilling Rate (Work Hour/Foot)
Hollow-Stem Auger (with sample collection)	2-1/2 4	0.457[a] 0.534[b]
Cased Borings (with sample collection)	2-1/2 4	0.432[c] 0.736[d]
BX-size Rock Core (with casing and sample collection)	2-1/2	0.505[e]
NX-size Rock Core (with casing and sample collection)	4	0.640[f]

Notes:

[a] Work rate derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 123-0600. Work rate is based on a three-person crew. Activities include augering 2-1/2-in-diameter holes in earth. Assume a 50 percent decrease in drilling rate efficiency for collection of continuous split-spoon samples.

[b] Work rate derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 123-0650. Work rate is based on a three-person crew. Activities include augering 4-in-diameter holes in earth. Assume a 50 percent decrease in drilling rate efficiency for collection of continuous split-spoon samples.

[c] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 123-0800. Work rate is based on a three-person crew. Activities include cased borings in earth, with samples, 2-1/2-in-diameter.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 123-0850. Work rate is based on a three-person crew. Activities include cased borings in earth, with samples, 4-in-diameter.

[e] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 123-1050. Work rate is based on a two-person crew. Activities include drilling a "BX" core, in rock, with casing and sampling.

[f] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 123-1250. Work rate is based on a two-person crew. Activities include drilling a "NX" core in rock, with casing and sampling.

Cost of Analysis per Sampling Event
Reference for Line 3.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
NOT APPLICABLE			
TOTAL COST FOR ANALYSIS OF SOIL SAMPLES (Total of all costs in column 4)			$ -0- /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

Coring may be necessary for collecting bulk samples from hard surfaces, such as concrete.

1 COLLECTION OF CORE SAMPLE			
1.A	Number of corings to be drilled (Enter from worksheet SA-1; line 2)	⊖ coring samples	
1.B	Labor and equipment cost per work hour[a] *Choose the appropriate level of PPE:* a. Protection Level D $ 38.29/work hr[b] b. Protection Level C $ 54.72/work hr[c] c. Protection Level B $ 68.76/work hr[c]	$	
1.C	*Work rate to drill each core sample to a 6-inch depth*[d]	0.400 work hr/sample	
1.D	Number of hours required to drill 3-inch-diameter boring (Multiply line 1.A by Line 1.C) (One hour minimum; round up to the 0.5 hour)	work hrs	
1.E	**Cost to Collect Core Samples (Multiply line 1.B by line 1.D)**		$ ⊖
2 ANALYSIS OF CORE SAMPLES			
2.A	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for core samples (Enter cost from the attachment to this worksheet)	$ /event	
2.B	Enter the number of sampling events	events	
2.C	**Cost to Analyze Core Samples (Multiply line 2.A by line 2.B)**		$ ⊖
TOTAL COST OF SAMPLING AND ANALYSIS OF CORING SAMPLES (Add line 1.E to line 2.C) (Enter total on worksheet SA-2, line 2)			$ ⊖

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 125-0300. Activities include drilling a 3-in-diameter core in a concrete slabs up to 6-in thick.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 510, crew B-89A. Crew B-89A consists of one skilled worker, one laborer, and one large-core drill.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 510, crew B-89A. Crew B-89A consists of one skilled worker, one laborer, and one large-core drill. See Appendix B of this manual for details of the calculation.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, p. 22, item no. 125-0300. Work rate is based on a two-person crew. The work rate is for coring to a 6-in depth; if the coring sample is deeper than 6 in, add 0.060 to the work rate for each additional inch.

Cost of Analysis per Sampling Event
Reference for Line 2.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
	NOT APPLICABLE		
TOTAL COST FOR ANALYSIS OF CORING SAMPLES (Total of all costs in column 4)			$ -0- /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

Wipe samples are used to assess surface contamination of hard, relatively nonporous surfaces. Wipe sampling should be used only when the contaminant of concern has a heavy, persistent characteristic, meaning it does not easily volatilize or leave the surface being sampled. Contaminants typically sampled by wipe sampling techniques are polychlorinated biphenyls (PCB) and dioxins.

1 COLLECTION OF WIPE SAMPLE			
1.A	*Number of sampling locations (Enter from worksheet SA-1; line 3)*	⊖ *sample locations*	
1.B	Sampling team and equipment cost per work hour[a]	$	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 91.29/work hr[b]		
	b. Protection Level C $ 115.67/work hr[c]		
	c. Protection Level B $ 137.66/work hr[c]		
1.C	Work hours required to collect samples from one sampling location[d]	0.5 work hr/sample location	
1.D	Number of hours required to collect all samples (Multiply line 1.A by line 1.C)	work hrs	
1.E	**Cost to Collect Wipe Samples (Multiply line 1.B by line 1.D)**		$ ⊖
2 ANALYSIS OF WIPE SAMPLE			
2.A	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for wipe samples (Enter cost from the Attachment to this worksheet)	$ /event	
2.B	Enter the number of sampling events	events	
2.C	**Cost to Analyze Wipe Samples (Multiply line 2.A by line 2.B)**		$ ⊖
	TOTAL COST OF SAMPLING AND ANALYSIS OF WIPE SAMPLES (Add line 1.E to line 2.C) (Enter total on worksheet SA-2, line 3)		$ ⊖

Notes:

[a] Includes cost of collection and handling of samples, vehicle rental, and decontamination of sampling team and sampling equipment.

[b] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians.

[c] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians. See Appendix B of this manual for details of the calculation.

[d] Work rate is determined by assuming two wipe samples can be collected in an hour, using the following method: saturate a piece of filter paper or gauze with appropriate solvent. Using a pair of stainless steel forceps or rubber gloves, wipe an area of 100 cm^2 with the saturated filter paper or gauze to obtain the sample. Place the filter paper or gauze in the sample jar, label the sample jar, place the sample jar in an ice chest (cool to 4° C), complete appropriate sample documentation, and move to the next sample location.

Cost of Analysis per Sampling Event
Reference for Line 2.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
	NOT APPLICABLE		
TOTAL COST FOR ANALYSIS OF WIPE SAMPLES (Total of all costs in column 4)			$ /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

Aqueous samples refer to liquid samples, including samples of rinsate and wastewater. Do not use this worksheet for estimating the cost of sampling other aqueous media, such as groundwater.

1 COLLECTION OF AQUEOUS SAMPLE			
1.A	Number of sampling locations (Enter from worksheet SA-1; line 4)	6 sample locations	
1.B	Sampling team and equipment cost per work hour[a]	$ 91.29	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 91.29/work hr[b]		
	b. Protection Level C $ 115.67/work hr[c]		
	c. Protection Level B $ 137.66/work hr[d]		
1.C	Work hours required to collect samples from one sampling location[e]	1 work hr/sample location	
1.D	Number of hours required to collect all samples (Multiply line 1.A by line 1.C)	6 work-hrs	
1.E	Cost to Collect Aqueous Samples (Multiply line 1.B by line 1.D)		$ 548
2 ANALYSIS OF AQUEOUS SAMPLE			
2.A	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for aqueous samples (Enter cost from the Attachment to this worksheet)	$ 4120 /event	
2.B	Enter the number of sampling events	1 events	
2.C	Cost to Analyze Aqueous Samples (Multiply line 2.A by line 2.B)		$ 4120
	TOTAL COST OF SAMPLING AND ANALYSIS OF AQUEOUS SAMPLES (Add line 1.E to line 2.C) (Enter total on cost worksheet SA-2, line 4)		$ 4668

Notes:

[a] Includes cost of collection and handling of samples, vehicle rental, and decontamination of sampling team and sampling equipment.

[b] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians.

[c] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians. See Appendix B of this manual for details of the calculation.

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Aqueous samples refer to liquid samples, including samples of rinsate and wastewater. Do not use this worksheet for estimating the cost of sampling other aqueous media, such as groundwater.

1 COLLECTION OF AQUEOUS SAMPLE			
1.A	Number of sampling locations (Enter from worksheet SA-1; line 4)	6 sample locations	
1.B	Sampling team and equipment cost per work hour[a]	$ 91.29	
	Choose the appropriate level of PPE: a. Protection Level D $ 91.29/work hr[b] b. Protection Level C $ 115.67/work hr[c] c. Protection Level B $ 137.66/work hr[d]		
1.C	Work hours required to collect samples from one sampling location[e]	1 work hr/sample location	
1.D	Number of hours required to collect all samples (Multiply line 1.A by line 1.C)	6 work hrs	
1.E	Cost to Collect Aqueous Samples (Multiply line 1.B by line 1.D)		$ 548
2 ANALYSIS OF AQUEOUS SAMPLE			
2.A	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for aqueous samples (Enter cost from the Attachment to this worksheet)	$ /event	
2.B	Enter the number of sampling events	1 events	
2.C	Cost to Analyze Aqueous Samples (Multiply line 2.A by line 2.B)		$
TOTAL COST OF SAMPLING AND ANALYSIS OF AQUEOUS SAMPLES (Add line 1.E to line 2.C) (Enter total on cost worksheet SA-2, line 4)			$

Notes:

[a] Includes cost of collection and handling of samples, vehicle rental, and decontamination of sampling team and sampling equipment.

[b] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians.

[c] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians. See Appendix B of this manual for details of the calculation.

[d] Work rate obtained by assuming two aqueous samples can be collected in an hour using the following methods:

Rinsate Sample - Using laboratory prepared de-ionized water or an appropriate solvent, pour water over an area of the surface to be sampled. Collect the water or solvent in a precleaned sample container. Preserve the sample, label the sample jar, place the sample in an ice chest (cool to 4° C), complete the appropriate sample documentation, and move to the next sample location.

Wastewater and other aqueous samples - Various sample collection devices (bailers, kemmerer samples, Van Dorn samples, peristaltic pump, and others) can be used to collect wastewater and other aqueous samples. Samples are collected with the appropriate device and the liquid is poured into sample containers. The samples are then preserved, labeled, and placed in an ice chest (cooled to 4° C). Sample documentation is completed, the sampling equipment is decontaminated, and the samplers move to the next location.

Cost of Analysis per Sampling Event
Reference for Line 2.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
8 RCRA METALS (TOTAL)	$90	8	$720
8015	$55	8	$440
8240	$120	8	$960
8270	$250	8	$2000
	(incl. 2	QC spls)	
TOTAL COST FOR ANALYSIS OF AQUEOUS SAMPLES (Total of all costs in column 4)			$ 4120 /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

Nonaqueous samples refer to sludge, chip, or surface soil samples. These samples are shallow samples, that is, they are collected at depths of less than 1.5 feet below ground surface.

1 COLLECTION OF NONAQUEOUS SAMPLE			
1.A	Number of sampling locations (Enter from worksheet SA-1; line 5)	5 sample locations	
1.B	Sampling team and equipment cost per work hour[a]	$ 91.29	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 91.29/work hr[b]		
	b. Protection Level C $ 115.67/work hr[c]		
	c. Protection Level B $ 137.66/work hr[c]		
1.C	Work hours required to collect samples from one sampling location[d]	1 work hr/sample location	
1.D	Number of hours required to collect all samples (Multiply line 1.A by line 1.C)	5 work hrs	
1.E	Cost to Collect Nonaqueous Samples (Multiply line 1.B by line 1.D)		$ 456
2 ANALYSIS OF NONAQUEOUS SAMPLE			
2.A	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for nonaqueous samples (Enter costs from the attachment to this worksheet)	$ /event 4215	
2.B	Enter the number of sampling events	1 events	
2.C	Cost to Analyze Nonaqueous Samples (Multiply line 2.A by line 2.B)		$ 4215
	TOTAL COST OF SAMPLING AND ANALYSIS OF NONAQUEOUS SAMPLES (Add line 1.E to line 2.C) (Enter total on worksheet SA-2, line 5)		$ 4,671

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Notes:

[a] Includes cost of collection and handling of samples, vehicle rental, and decontamination of sampling team and sampling equipment.

[b] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians.

[c] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians. See Appendix B of this manual for details of the calculation.

[d] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subpart G and H)*, January 1987, EPA/530-SW-009, Volume III, pg. 2-16.

Cost of Analysis per Sampling Event
Reference for Line 2.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
8 RCRA METALS	$90	7	$ 630
8015	$55	7	$ 385
8240	$120	7	$ 840
8270	$250	7	$ 1750
TCLP METALS & ORGANICS	$610 (incl. 2 QC spls)	1	$ 610
TOTAL COST FOR ANALYSIS OF NONAQUEOUS SAMPLES (Total of all costs in column 4)			$ 4,215 /event

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Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

Nonaqueous samples refer to sludge, chip, or surface soil samples. These samples are shallow samples, that is, they are collected at depths of less than 1.5 feet below ground surface.

1	COLLECTION OF NONAQUEOUS SAMPLE		
1.A	Number of sampling locations (Enter from worksheet SA-1; line 5)	5 sample locations	
1.B	Sampling team and equipment cost per work hour[a]	$ 91.29	
	Choose the appropriate level of PPE: a. Protection Level D $ 91.29/work hr[b] b. Protection Level C $ 115.67/work hr[c] c. Protection Level B $ 137.66/work hr[c]		
1.C	Work hours required to collect samples from one sampling location[d]	1 work hr/sample location	
1.D	Number of hours required to collect all samples (Multiply line 1.A by line 1.C)	5 work.hrs	
1.E	Cost to Collect Nonaqueous Samples (Multiply line 1.B by line 1.D)		$ 456
2	ANALYSIS OF NONAQUEOUS SAMPLE		
2.A	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for nonaqueous samples (Enter costs from the attachment to this worksheet)	$ 3700 /event	
2.B	Enter the number of sampling events	1 events	
2.C	Cost to Analyze Nonaqueous Samples (Multiply line 2.A by line 2.B)		$ 3700
	TOTAL COST OF SAMPLING AND ANALYSIS OF NONAQUEOUS SAMPLES (Add line 1.E to line 2.C) (Enter total on worksheet SA-2, line 5)		$ 4156

Notes:

[a] Includes cost of collection and handling of samples, vehicle rental, and decontamination of sampling team and sampling equipment.

[b] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians.

[c] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians. See Appendix B of this manual for details of the calculation.

[d] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subpart G and H)*, January 1987, EPA/530-SW-009, Volume III, pg. 2-16.

Cost of Analysis per Sampling Event
Reference for Line 2.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
8 RCRA METALS	$90	6	$ 540
8015	$55	6	$ 330
8240	$120	6	$ 720
8270	$250	6	$ 1500
TCLP METALS & ORGANICS	$610	1	$ 610
		(incl. 2 QC sp(s))	
TOTAL COST FOR ANALYSIS OF NONAQUEOUS SAMPLES (Total of all costs in column 4)			$ 3700 /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

NOT APPLICABLE

Use this worksheet to estimate the cost of sampling and analysis of groundwater monitoring wells.

1 COLLECTION OF GROUNDWATER SAMPLE FOR CLOSURE			
1.A	Number of sampling locations (Enter from worksheet SA-1; line 6)	sample locations	
1.B	Sampling team and equipment cost per work hour[a]	$	
	Choose the appropriate level of PPE: a. Protection Level D $ 91.29/work hr[b] b. Protection Level C $ 115.67/work hr[c] c. Protection Level B $ 137.66/work hr[c]		
1.C	Work hours required to collect samples from one sampling location[d]	4 work hrs/sample location	
1.D	Number of hours required to collect all samples (Multiply line 1.A by line 1.C)	work hrs	
1.E	Cost to Collect Groundwater Samples for Closure (Multiply line 1.B by line 1.D)		$
2 ANALYSIS OF GROUNDWATER SAMPLE FOR CLOSURE			
2.A	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for groundwater samples (Enter costs from the attac'ment to this worksheet)	$ /event	
2.B	Enter the number of sampling events	events	
2.C	Cost to Analyze Groundwater Samples for Closure (Multiply line 2.A by line 2.B)		$
	TOTAL COST OF SAMPLING AND ANALYSIS OF GROUNDWATER FOR CLOSURE (Add line 1.E to line 2.C) (Enter total on worksheet SA-2, line 6)		$
3 COLLECTION OF GROUNDWATER SAMPLE FOR POST-CLOSURE CARE			
3.A	Cost to sample groundwater wells for one sampling event (Enter from line 1.E)	$ /event	
3.B	Enter the number of sampling events per year	events/yr	
3.C	Cost to Collect Groundwater Samples Annually for Post-Closure Care (Multiply line 3.A by line 3.B)		$ /yr

4 ANALYSIS OF GROUNDWATER SAMPLE FOR POST-CLOSURE CARE			
4.A	Cost to analyze groundwater samples for one event (Enter from line 2.A)	$ /event	
4.B	Enter the number of analysis events per year	events/yr	
4.C	Cost to Analyze Groundwater Samples Annually for Post-Closure Care (Multiply line 4.A by line 4.B)		$ /yr
	TOTAL COST OF SAMPLING AND ANALYSIS OF GROUNDWATER ANNUALLY FOR POST-CLOSURE CARE (Add line 3.C to line 4.C) (Enter total on line 2 of groundwater monitoring worksheet PC-6 or line 3.A of post-closure care land treatment unit worksheet LT-6.)		$ /yr

Notes:

[a] Includes cost of collection and handling of samples, vehicle rental, and decontamination of sampling team and sampling equipment.

[b] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians.

[c] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians. See Appendix B of this manual for details of the calculation.

[d] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subpart G and H)*, January 1987, EPA/530-SW-009, Volume III, pg. 2-4. This rate includes the time required to purge the well, allow well recovery, sample the well, document the sampling, and move to the next sampling location.

Cost of Analysis per Sampling Event
Reference for Line 2.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
TOTAL COST FOR ANALYSIS OF GROUNDWATER SAMPLES (Total of all costs in column 4)			$ /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

Use this worksheet to estimate the cost of sampling and analysis for land treatment facilities.

1	COLLECTION OF SOIL-PORE LIQUID SAMPLE FOR CLOSURE NA		
1.A	Number of lysimeters to be sampled (Enter from worksheet SA-1; line 7)	lysimeters	
1.B	Labor and equipment cost per work hour[a]	$	
	Choose the appropriate level of PPE:		
	a. Protection Level D $ 91.29/work hr[b]		
	b. Protection Level C $ 115.67/work hr[c]		
	c. Protection Level B $ 137.66/work hr[c]		
1.C	Work rate required to sample one lysimeter[d]	1 work hr/lysimeter	
1.D	Number of hours required to sample all lysimeters (Multiply line 1.A by line 1.C)	work hrs	
1.E	Cost to Collect Soil-Pore Liquid Samples for Closure (Multiply line 1.B by line 1.D)		$ -0-
2	ANALYSIS OF SOIL-PORE LIQUID SAMPLE FOR CLOSURE		
2.A	Using the table from the attachment, calculate the analysis cost per sampling event for soil-pore liquid samples (Enter costs from attachment)	$ /event	
2.B	Enter the number of sampling events	event	
2.C	Cost to Analyze Soil-Pore Liquid Samples for Closure (Multiply line 2.A by line 2.B)		$ -0-
	TOTAL COST OF SAMPLING AND ANALYSIS OF SOIL-PORE LIQUID SAMPLES FOR CLOSURE (Add line 1.E to line 2.C) (Enter total on worksheet SA-2, line 7)		$ -0-
	TOTAL COST OF SAMPLING AND ANALYSIS OF SOIL-PORE LIQUID FOR POST-CLOSURE CARE (Add line 1.E to line 2.A) (Enter total on line 1.A of post-closure care of land treatment worksheet LT-6)		$ -0- /event

Notes:

[a] Includes cost of collection and handling of samples, vehicle rental, and decontamination of sampling team and sampling equipment.

[b] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians.

[c] Cost derived from price quotes provided by EPA Region 4 vendors. Crew consists of two sampling technicians. See Appendix B of this manual for details of the calculation.

[d] U.S. Environmental Protection Agency, *Final Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subpart G and H)*, January 1987, EPA/530-SW-009, Volume III, pg. 2-14.

Cost of Analysis per Sampling Event
Reference for Line 2.A

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
	NOT APPLICABLE		
TOTAL COST FOR ANALYSIS OF SOIL-PORE LIQUID SAMPLES (Total of all costs in column 4)			$ /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

ANALYSIS OF SUBSURFACE SOIL SAMPLE - Page 1 of 2

Use this worksheet to estimate the cost of analysis of samples collected during installation of a groundwater monitoring well.

ANALYSIS OF SUBSURFACE SOIL SAMPLE NA			
1	Using the table in the attachment to this worksheet, calculate the cost of analysis per sampling event for subsurface soil samples (Enter costs from the attachment to this worksheet)	$ ⊖ /event	
2	Enter the number of sampling events	events	
TOTAL COST FOR ANALYSIS OF SUBSURFACE SOIL SAMPLES (Multiply line 1 by line 2) (Enter total on worksheet SA-2, line 8)			$ ⊖

Cost of Analysis per Sampling Event
Reference for Line 1

Column 1 Analytical Parameter and Method Reference[a]	Column 2 Cost of Analysis ($) per Parameter[b]	Column 3 Number of Analyses, including QC Analyses[c]	Column 4 Total Cost of Analysis ($) per Parameter per Event (Multiply Column 2 by Column 3)
	NOT APPLICABLE		
TOTAL COST FOR ANALYSIS OF SUBSURFACE SOIL SAMPLES (Total of all costs in column 4)			$ /event

Notes:

[a] List analytical parameter(s) and method number(s) from the sampling and analysis attachment to this chapter that correspond most closely with those specified in the work plan or permit. If a method of analysis is not specified, choose the appropriate SW-846 method from the sampling and analysis attachment to this chapter.

[b] Choose a unit analysis cost from the sampling and analysis attachment to this chapter for each parameter. Note that unit cost may differ according to the method of analysis used, the type of medium (solid or liquid) sampled, and the number of analyses performed.

[c] Identify the number of sampling locations and analyses specified in the work plan or permit. The number of quality control (QC) samples is typically 20 percent of the total number of samples to be analyzed.

TRANSPORTATION OF WASTE - Page 1 of 1

Facility Name: Safety-Kleen — Orange Park

Depending on the activities being conducted, it may not be necessary to complete each section of the transportation worksheet. From TSA, CSA, paint shelter

1 TRANSPORTATION OF DRUMMED WASTE			
1.A	Number of drums of waste (SA, paint waste) *	134 drums	
1.B	Cost to transport one truckload of 55-gallon drums 250 miles[a]	$ 1,062.50/truckload	
1.C	Number of truckloads needed to transport waste in drums (Divide line 1.A by 80 drums per truckload; round up to the nearest whole number)	2 truckloads	
1.D	Cost to Transport Drummed Waste (Multiply line 1.B by line 1.C)		$ 2125
2 TRANSPORTATION OF BULK LIQUIDS			
2.A	Gallons of liquid waste (Tank, dpstrs, piping)	14,536 gal	
2.B	Cost to transport one truckload of bulk liquids 250 miles[b]	$ 1,062.50/truckload	
2.C	Number of truckloads needed to transport bulk free liquid waste (Divide line 2.A by 6,900 gallons per truckload; round up to the nearest whole number)	3 truckloads	
2.D	Cost to Transport Bulk Liquid Waste (Multiply line 2.B by line 2.C)		$ 3188
3 TRANSPORTATION OF BULK WASTE			
3.A	Number of waste debris boxes	1 debris boxes	
3.B	Cost to transport one truckload of bulk waste 250 miles[a]	$ 1,062.50/truckload	
3.C	Number of truckloads needed to transport bulk waste (Assume one debris box can be hauled on every truck)	1 truckloads	
3.D	Cost to Transport Bulk Solid Waste (Multiply line 3.B by line 3.C)		$ 1063
	TOTAL COST OF TRANSPORTATION OF WASTE (Add lines 1.D, 2.D, and 3.D) (Enter total on appropriate unit summary worksheet)		$ 6376

Notes: * See attached calculation

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 30, item no. 717-1270. Activity described is transporting one truckload of solid waste. Maximum capacity of truck is 80 drums or 25 yd^3 and the cost per mile is $4.25. Assume a 250-mi trip to transport waste. The cost is calculated as follows: $4.25/mi x 250 mi = 1,062.50.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 30, item no. 717-3400. Activity described is transporting one truckload of bulk free liquid waste. Maximum capacity of truck is 6,900 gallons, and the cost per mile is $4.25. Assume a 250-mi trip to transport waste. The cost is calculated as follows: $4.25/mi x 250 mi = 1,062.50.

Safety-Kleen Corp. - Orange Park, Florida

Form	Item	Explanation		Value	Units	Comment
TR-1	1A	***Number of drums of waste***				
		From CSA and paint shelter	7353	134	drums	Assumes 55-gallon drums

TREATMENT AND DISPOSAL TD-1

Facility Name: Safety-Kleen — Orange Park

SUMMARY WORKSHEET			
	Activity	Worksheet Number	Cost
1.	Treatment and Disposal of Waste	TD-2	$ 29,782
2.	Transportation and Disposal of Decontamination Fluids	TD-3	$ 45,976
	TOTAL COST OF TREATMENT AND DISPOSAL *(Add lines 1 and 2)*		$ 75758

TREATMENT AND DISPOSAL TD-2

1	TREATMENT AND DISPOSAL OF WASTE 1 CSA/PW		
1.A	Volume of Waste to be treated or disposed of (in yd^3) (Refer to Appendix A of this manual or conversion factors, if needed)	134 drums ~~yd^3~~	
1.B	Density of waste. Select the density of the material that most closely resembles the waste (Refer to Attachment A to this worksheet)	— lb/yd^3	
1.C	Amount of waste to be treated as disposed of (Multiply line 1.A by line 1.B)	— lb	
1.D	Amount of waste to be treated or disposed of in tons (Divide line 1.C by 2,000 lb/ton)	— tons	
1.E	Treatment cost (Enter cost from Attachment B, C, or D to this worksheet)* *	$ 100/dr ~~ton~~	
1.F	Cost to Treat and Dispose of Waste 1 (Multiply line 1.D by line 1.E)		$ 13400
2	TREATMENT AND DISPOSAL OF WASTE 2 TANK		
2.A	Volume of waste to be treated or disposed of (in yd^3) (Refer to Appendix A of this manual for conversion factors, if needed)	14536 gal ~~yd^3~~	
2.B	Density of waste. Select the density of the material that most closely resembles the waste (Refer to Attachment A to this worksheet)	— lb/yd^3	
2.C	Amount of waste to be treated as disposed of (Multiply line 2.A by line 2.B)	— lb	
2.D	Amount of waste to be treated or disposed of in tons (Divide line 2.C by 2,000 lb/ton)	— tons	
2.E	Treatment cost (Enter cost from Attachment B, C, or D to this worksheet)*	$ 1/gal * ~~ton~~	
2.F	Cost to Treat and Dispose of Waste 2 (Multiply line 2.D by line 2.E)		$ 14536

* Lower cost due to ability to treat waste at remote S-K facility.

TREATMENT AND DISPOSAL TD-2

3	TREATMENT AND DISPOSAL OF WASTE 3 Debris		
3.A	Volume of waste to be treated or disposed of (in yd^3) (Refer to Appendix A of this manual for conversion factors, if needed)	7 yd^3	
3.B	Density of waste. Select the density of the material that most closely resembles the waste (Refer to Attachment A to this worksheet)	4050 lb/yd^3	
3.C	Amount of waste to be treated as disposed of (Multiply line 3.A by line 3.B)	28350 lb	
3.D	Amount of waste to be treated or disposed of in tons (Divide line 3.C by 2,000 lb/ton)	14.2 tons	
3.E	Treatment cost (Enter cost from Attachment B, C, or D to this worksheet)*	$ 130 /ton	
3.F	Cost to Treat and Dispose of Waste 3 (Multiply line 3.D by line 3.E)		$ 1846
4	TREATMENT AND DISPOSAL OF WASTE 4		
4.A	Volume of waste to be treated or disposed of (in yd^3) (Refer to Appendix A of this manual for conversion factors, if needed)	yd^3	
4.B	Density of waste. Select the density of the material that most closely resembles the waste (Refer to Attachment A to this worksheet)	lb/yd^3	
4.C	Amount of waste to be treated as disposed of (Multiply line 4.A by line 4.B)	lb	
4.D	Amount of waste to be treated or disposed of in tons (Divide line 4.C by 2,000 lb/ton)	tons	
4.E	Treatment cost (Enter cost from Attachment B, C, or D to this worksheet)*	$ /ton	
4.F	Cost to Treat and Dispose of Waste 4 (Multiply line 4.D by line 4.E)		$
	TOTAL COST OF TREATMENT AND DISPOSAL (Add lines 1.F, 2.F, 3.F, and 4.F) (Enter total on worksheet TD-1, line 1)		$ 29,782

Notes:

* Depending on information available, treatment costs per unit may be determined by using either Attachment B (based on waste characteristics) or Attachments C and D (based on treatment and disposal technologies).

Bulk Densities[a]

Bulk Densities of Selected Materials	
Material	Bulk Density Range (lb/yd^3)
Water	1,685.8
Sludge	1,620 - 2,430
Soil[b]	2,025 - 3,240
Incinerator Ash	945 - 1,350
Cement[c]	4,050
Demolition Rubble	2,430 - 3,240
Steel[c]	13,230

Notes:

[a] Densities derived from OSWER Policy Directive #9476.00-6, 1987.

[b] Soils rich in organic matter and soils with large amounts of fine particles have lower bulk density compared with soils poor in organic matter and rich in sand particles.

[c] Densities derived from Standard Handbook for Civil Engineering, 3rd Edition, 1983.

Treatment and Disposal Prices by Waste Type

Prices for Various Waste Type*		
Waste Type	Average Price ($/Ton)	Price Range ($/Ton)
CONTAMINATED SOIL AND DEBRIS		
Hazardous due to inorganic toxicity characteristic		
Free liquids present	1,060	940 - 1,220
No free liquids present	740	560 - 920
Hazardous due to organic toxicity characteristic (no pesticides)		
Free liquids present	1,200	860 - 1,480
No free liquids present	800	360 - 1,180
Hazardous due to inorganic and organic toxicity characteristic (no pesticides)		
Free liquids present	1,330	940 - 1,640
No free liquids present	940	420 - 1,580
Hazardous due to pesticides		
Free liquids present	1,660	N/A
No free liquids present	1,640	N/A
Hazardous due to F001-F005 solvents		
Free liquids present	1,580	N/A
No free liquids present	940	420 - 1,540
Hazardous due to P and U listed organic hazardous wastes		
Meets LDR standards	580	540 - 640
Does not meet LDR standards	1,680	1,420 - 1,920
Hazardous due to P and U listed inorganic hazardous wastes		
Meets LDR standards	580	560 - 620
Does not meet LDR standards	1,440	1,320 - 1,560
Hazardous due to F006-F012, F019 wastes		
Meets LDR standards	580	520 - 620

Treatment and Disposal
Prices by Waste Type (continued)

Prices for Various Waste Type*	
Waste Type	**Average Price ($/Ton)**
AQUEOUS WASTES	
Hazardous due to inorganic toxicity characteristic	
Drums	980
Bulk	900
Hazardous due to organic toxicity characteristic (no pesticides)	
Drums	920
Bulk	820
Hazardous due to inorganic and organic toxicity characteristic (no pesticides)	
Drums	1,100
Bulk	920
Hazardous due to pesticides	
Drums	1,400
Bulk	1,060
Hazardous due to F001-F005 solvents (Does not meet LDR standards)	
Drums $1,140 / 2000 lbs · 8 lb / gal = $4.56/gal; $250/drum	1,280
Bulk	1,140
Hazardous due to P and U listed organic hazardous wastes (Does not meet LDR standards)	
Drums	1,480
Bulk	1,140
Hazardous due to P and U listed inorganic hazardous wastes (Does not meet LDR standards)	
Drums	1,420
Bulk	1,140
Hazardous due to F006-F012, F019 wastes (Does not meet LDR standards)	
Drums	1,220
Bulk	1,060

Treatment and Disposal
Prices by Waste Type (continued)

Prices for Various Waste Type*	
Waste Type	**Average Price ($/Ton)**
SLUDGES	
Hazardous due to inorganic toxicity characteristic	
Drums	1,080
Bulk	980
Hazardous due to organic toxicity characteristic	
Drums	1,300
Bulk	1,240
Hazardous due to inorganic and organic toxicity characteristic	
Drums	1,480
Bulk	1,280
Hazardous due to F001-F005 solvents	
Drums	1,680
Bulk	1,360

Notes:

* Prices based on a survey of several waste brokers and storage companies, and TSDF companies. The prices include handling, labeling, monitoring, sampling, and profiling of wastes. The actual unit price may vary in different regions of the U.S. and according to the actual quantity of wastes to be treated or disposed of and the type and level of contamination.

Treatment and Disposal
Prices for Established Technologies

Price Ranges for Established Treatment and Disposal Technologies[a]			
Treatment / Disposal Method	Waste Type	Typical Price ($ / Ton)	Price Range ($ / Ton)
Incineration	Bulk Liquids (Liquid Injection)	653	130 - 1,175
	Bulk Solids (Rotary Kiln)	1,305	653 - 1,958
	Liquids in Containers (Liquid Portion Only-Liquid Injection)	816	196 - 1,435
	Solids or Sludges in Containers (Rotary Kiln)	1,305	653 - 1,958
Deep Well Injection	Oily Wastewaters	66	22 - 87
	Toxic Wastewaters (Requiring Pretreatment)	326	157 - 376
Land Treatment	All Wastes That Can Be Land Treated	27	7 - 29
Hazardous Waste Treatment	Acidic or Alkaline Wastes	130	18 - 267
	Contaminated Leachate or Runoff, Moderately Toxic Wastes	261	125 - 314
	Cyanides, Heavy Metals, Highly Toxic Wastes	653	267 - 1,881
Landfill Disposal (No free liquids)	Bulk Solids	130	97 - 196
	Solids or Sludges in Containers	261	163 - 359
Landfill Disposal (Solidification required)	Bulk Liquids	261	229 - 326
	Liquids or Sludges in Containers	392	293 - 489
Solidification or Stabilization[b]	Bulk Solids	257	103 - 410

Notes:

[a] Costs are derived from the OSWER Policy Directive #9476.00-6, 1987. Rates are in 1994 dollars, using standard inflation factors.

[b] Cost range for solidification or stabilization is based on engineering expertise. Factors that can increase the cost of solidification or stabilization include the need for screening or extensive mixing, high content of organic contaminants and complex combinations of contaminants.

Treatment
Prices for Innovative Technologies

Price Ranges for Innovative Treatment Technologies[a]		
Technology	Number of Vendors Having Cost Data	Price Range $ / Ton
Bioremediation - Slurry Phase	8	30 - 700
Bioremediation - Solid Phase	18	15 - 400
Chemical Treatment - Dechlorination	2	100 - 300
Chemical Treatment - Other	2	25 - 500
Materials Handling/Physical Separation	3	5 - 150
Soil Washing	12	25 - 300
Solvent Extraction	6	50 - 900
Thermal Desorption - General	3	50 - 1,000
Vitrification - Off-Gas Treated	6	40 - 1,000

Notes:

[a] Source: U.S. EPA VISITT 2.0 Database

[b] This price assumes a bulk density of 2,000 lbs/yd^3. For additional conversions, see Appendix A of this manual.

If the amount of wastewater generated during unit closure activities exceeds a volume that can be handled effectively by placing the waste in drums, wastewater may be handled and disposed of as a bulk liquid. This worksheet may be used to determine the cost to transport and dispose of wastewater generated during closure as a bulk hazardous liquid.

1	Determine the volume of decontamination fluid generated from closure activities. Add all volumes calculated from closure activity worksheets to determine the total volume of liquid to be transported and disposed of. 19x55 dr 14536 gal TANK FL. 27844 gal GEN DECON 1045 gal EQPT " _____ gal _____ gal	43425 total gal	
2	Labor and equipment cost per work hour[a] Choose the appropriate Level of PPE: a. Protection Level D $39.24/work hr[b] b. Protection Level C $55.81/work hr[c] c. Protection Level B $69.99/work hr[c]	$ 39.24	
3	Work rate to pump decontamination fluid to a holding tank (per gallon)[d]	0.0000667 work hrs/ gallon	
4	Number of hours required to pump decontamination fluid to a holding tank (Multiply line 1 by line 3) (One hour minimum; round up to the 0.5 hour)	3 work hours	
5	Subtotal of labor and equipment costs to pump decontamination fluid to a holding tank (multiply line 2 by line 4)		$ 118
6	Number of days required to rent holding tank (Round up line 4 to nearest 8 hours; divide by 8 hours per day)	1 days	
7	Holding tank rental fee (10,000 gallon capacity) (Flat rate per tank per day)[e]	$345.00/day	
8	Number of tanks required (Divide line 1 by 10,000 gallons; round up to the nearest whole number)	5 tanks	
9	Subtotal of tank rental costs (Multiply lines 6, 7, and 8)		$ 1725
10	Removal costs for bulk liquid (Multiply line 1 by $1.05 per gallon)[f]		$ 44133
TOTAL COST TO TRANSPORT AND DISPOSE OF DECONTAMINATION FLUID AS A BULK LIQUID (Add lines 5, 9, and 10) (Enter total on worksheet TD-1, line 2)			$ 45976

Notes:

[a] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pgs. 18 and 38, item nos. 420-4300 and 404-0900. The activity described is pumping liquid with a 3-inch centrifugal gas pump at a rate of 15,000 gallons per hour.

[b] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-10J. Crew B-10J consists of one equipment operator, 0.5 building laborers, and one 3-inch centrifugal gas pump and accessories.

[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-10J. Crew B-10J consists of one equipment operator, one-half building laborer, and one 3-inch centrifugal water pump and accessories. See Appendix B of this manual for details of the calculations.

[d] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 18, item no. 420-4300. The work rate is obtained by determining the time required to pump one gallon of decontamination fluid ((1 hour ÷ 15,000 gallons).

[e] R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 19, item no. 420-7000. The cost is based on the daily cost of renting a 10,000-gallon-capacity liquid holding tank.

[f] Cost for removal of 1 gallon of decontamination fluid is based on 1994 price quotes from several commercial hazardous waste management companies. The cost includes transport, treatment, and disposal of bulk, water-based, hazardous liquids by a third-party contractor.

10.0 CLOSURE PLAN

Safety-Kleen constructed the Orange Park Branch with the intent that it will be a long-term facility for the distribution of Safety-Kleen products. No onsite disposal activity occurs at the facility and, hence, no disposal capacity will be exhausted that will necessitate closure of the facility. Based on current business and facility conditions, the Orange Park facility is expected to remain in operation at least until the year 2025.

In the event that some presently unforeseen circumstance(s) would result in the discontinuance of operations and permanent closure or sale of the facility, this closure plan identifies the steps necessary to close the facility at any point during its intended life. This plan should be applied to the tank system, container storage area, and equipment used by the facility for hazardous waste management to accomplish the closure performance standard of 40 CFR 264.111. It is intended that all closures will be complete and final with removal of waste and decontamination of the facility and associated equipment. This will eliminate the need for maintenance after closure and the possibility of escape of hazardous waste constituents into the environment. The closure activities presented in this plan have been selected to minimize effects on human health and the environment by eliminating releases of contaminants (e.g., capture of decontamination fluids) and use of appropriate personal protective equipment.

Please note that closure of the former ethylene glycol hazardous waste tank is discussed in Appendix F and is not addressed in this section. Closure costs for the ethylene glycol tank are provided in Appendix F and are not included here because it is anticipated that the closure of the tank will be complete before processing of this permit application is complete.

10.1 FACILITY DATA

1. Waste Management Facility Descriptions

    a. Aboveground Storage Tank: The tank is a 15,000-gallon vertical steel tank used for the storage of used parts washer solvent. This tank is located within a

containment system consisting of a 49' 7" by 18' 8" concrete foundation slab with 4' perimeter walls.

b. Solvent Return/Fill Station: The station is a 40' x 25' concrete portion of the building located between the office area and the warehouse. The station is surrounded by a 5" concrete curb. It contains three wet dumpsters (one of which is inactive). The two active dumpsters are used to receive returned solvent from containers and pump it to the used parts washer solvent tank. These dumpsters are not intended for storage but can hold a maximum of 1,008 gallons (504 gallons each).

   The third (inactive) dumpster is slated for closure by the end of 1997. A separate closure plan will be submitted for this dumpster. Closure costs for the third dumpster are not included here because it is anticipated that the closure of the third dumpster will be complete before processing of this permit application is complete.

c. Container Storage Area: The container storage area has a 25' 5" x 24' concrete floor with 6-inch curbing on exposed sides and two containment trenches with a combined containment capacity of 261.8 gallons. The maximum hazardous waste storage capacity of this area, therefore, is 2,618 gallons (the containment volume is 10% of the allowable storage capacity). Waste allowed for storage is immersion cleaner, dry cleaning solvent, parts washer solvent dumpster mud, tank bottoms, and oil filter containers. The container storage area is permitted to store up to 2,618 gallons of hazardous waste.

d. Paint Waste Storage Area: The paint waste shelter consists of a 45' x 68' concrete pad underlying a 15.5' x 20' shelter with metal containment pans. This shelter is divided into a paint waste storage area and an allied product storage area. Allied products are unused or "virgin" materials. The storage shed consists of six metal containment pans each measuring 5' x 10'. The pans have overlapping lips which prevent liquids from migrating between the pans and onto the concrete. Total containment capacity is 1,122 gallons; therefore, the maximum potential storage

capacity is 11,220 gallons. Due to space constraints, however, the maximum actual capacity is less. The currently permitted storage capacity for the paint waste shelter is 1,280 gallons.

2. Maximum Inventory of Wastes

   a. Used Parts Washer Solvent: 15,000 gallons.

   b. Wet Dumpsters: 1,008 gallons.

   c. Containerized Waste: 2,618 gallons in the container storage area and 1,280 gallons in the paint waste storage area (permitted capacity), for a total of 3,898 gallons. [NOTE: This includes any combination of 5-, 16-, 20-, 30-, 55-, or 85-gallon containers used for various management purposes].

   All wastes will be disposed offsite in accordance with appropriate hazardous waste regulations.

10.2 CLOSURE PROCEDURES

Container Storage Area and Paint Waste Storage Area

- At closure, all containers present at the facility will be sent to a Safety-Kleen recycle center, where the contents in the containers will be reclaimed and the containers cleaned for reuse. The containers will be removed and transported with proper packaging, labeling, and manifesting.

- In the container storage area, the concrete floor and two spill containment trenches will be scrubbed with a detergent solution and rinsed with clean water to remove waste residuals from the surface. Final rinsate samples will be collected and analyzed to determine the effectiveness of decontamination. Unless otherwise designated in the formal closure plan, one rinsate sample will be collected and analyzed for the eight

RCRA metals, and for volatile and semivolatile organics by EPA Methods 8015, 8240, and 8270. The area will continue to be scrubbed and rinsed until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit.

- The pans, grating, and floor beneath the pans in the paint waste shelter will be cleaned by appropriate means to remove visible contamination. Safety-Kleen intends to recycle the metal components (e.g., pans and grating) in accordance with 40 CFR 261.6(a)(3)(ii) or to reuse them at another Safety-Kleen facility. Accordingly, decontamination of these components is required only to the extent necessary for safe demolition, storage, and transportation of the scrap.

  Unless otherwise designated in the formal closure plan, one rinsate sample will be collected from the concrete floor beneath the metal pans and analyzed for the eight RCRA metals and for volatile and semivolatile organics by EPA Methods 8015 8240, and 8270. The area will continue to be scrubbed and rinsed until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit.

- Decontamination (i.e., detergent wash and clean rinse) fluids will be collected and contained for proper management. One representative sample of the contained fluids will be collected to determine whether the water is hazardous. This determination will be made by laboratory analysis of the sample for the metals and organics (excluding pesticides/herbicides) on the TCLP list. [Note: This wash water will be from all areas undergoing decontamination, not just from the container storage area.]

- If the wash water or other wastes generated in the closure process are determined to be hazardous, they will be disposed of properly as a hazardous waste. Otherwise, the material will be disposed of as a nonhazardous waste. Based on an assumed decontamination water usage rate of four gallons per square foot, approximately 44,100 gallons of rinsate will require disposal. This amount includes rinsate from all structures at the facility, including the container storage area, paint waste storage area, return/fill station, and the tank containment vault. This value has been used in the closure cost estimates in Section 10.5. However, it is anticipated that substantially less water will be generated for disposal, and the generated water is expected to be

nonhazardous based on Safety-Kleen's experience from other facility closures. Safety-Kleen has the option of not analyzing the decontamination water and disposing of it as hazardous waste. The closure cost estimates in Section 10.5 are based on a worst-case scenario in which decontamination wash water is sampled and analyzed, and then disposed of as hazardous waste.

- Equipment to be used to clean this area includes mops, pails, scrub brushes, a wet/dry vacuum, and containers. The mops, pails, and scrub brushes will be containerized and disposed of as hazardous waste. The wet/dry vacuum and containers used will be washed with a detergent solution and rinsed to decontaminate them.

Solvent Return/Fill Station

- At closure, any sludge in the wet dumpsters ("dumpster mud") will be cleaned out and containerized, labeled, and manifested for proper disposal at a permitted facility.

- The metal superstructure components of the station (i.e., the wet dumpsters and the dock grating) will be cleaned by appropriate means to remove visible contamination. Safety-Kleen intends to recycle these components as scrap metal in accordance with 40 CFR 261.6(a)(3)(ii), or to reuse them at another Safety-Kleen facility. Accordingly, decontamination of the components is required only to the extent necessary for safe demolition, storage, and transportation of the scrap.

- The concrete floor in the return/fill station will be scrubbed with a detergent solution and rinsed with clean water to remove waste residuals from the surface. Two final rinsate samples will be collected and analyzed to determine the effectiveness of decontamination. Unless otherwise designated in the formal closure plan, the rinsate samples will be analyzed for the same constituents as the container storage area rinsate samples. The area will continue to be scrubbed and rinsed until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit.

- A soil sample will be collected near one of the containment sumps in the return/fill station.

Aboveground Storage Tank System

Metal Components of the Storage Tank System

- At closure, the contents of the tank will be removed to a tanker truck using existing unloading equipment and subsequently transported to a Safety-Kleen recycle center.

- Once the contents have been drained, the tank will be opened by removing the manways and vented by supplying fresh air to the interior space of the tank. Any residual wastes will be removed via vacuum for recycling with the previously drained wastes.

- The interior of the tank as well as all associated piping and appurtenant equipment will then be cleaned by appropriate means to remove visible contamination. Safety-Kleen intends to recycle the tank, piping, and appurtenant equipment as scrap metal in accordance with 40 CFR 261.6(a)(3)(ii), or to reuse them at another Safety-Kleen facility. Accordingly, decontamination of the metal components is required only to the extent necessary for the safe demolition, storage, and transportation of the scrap.

Concrete Containment System

- Final disposition of the concrete containment system within which the waste tank is located will depend in part upon the presence or absence of underlying soil contamination. To make that determination, the upper six inches of soil immediately below the concrete slab will be sampled at three locations, as follows:

  - Under the waste tank;
  - At the containment system sump; and
  - Beneath the most prominent of any cracks observed in the slab.

  These sample locations may be adjusted as actual field conditions warrant, but a minimum of four samples (including the previously mentioned soil sample near one of the return/fill station containment sumps) will be retrieved. These samples will be

analyzed for the eight RCRA metals and for volatile and semivolatile organics by EPA Methods 8015, 8240, and 8270.

- The perimeter walls and foundation slab of the secondary containment area will be scrubbed with a detergent solution and rinsed with clean water to remove waste residuals from the surface. Two final rinsate samples will be collected and analyzed to determine the effectiveness of decontamination. Unless otherwise designated in the formal closure plan, the rinsate samples will be analyzed for the same constituents as the container storage area rinsate samples. The area will continue to be scrubbed, rinsed, and resampled until rinsate concentrations meet action limits established in the formal closure plan and/or closure permit. Safety-Kleen anticipates that proper maintenance of the concrete containment system will allow the slab to remain in place at closure.

- Safety-Kleen will proceed with demolition of the perimeter walls. If it is determined that soil contamination exists beneath the foundation slab, Safety-Kleen will demolish the entire concrete structure and complete a further delineation of the extent of soil contamination to be removed to complete closure. An additional work plan will be prepared to guide the soil assessment, removal, and disposal activities that Safety-Kleen will implement to address residual soil contamination.

- Prior to demolition of the perimeter walls, one representative composite sample of the construction materials will be collected and submitted for analyses (by TCLP) of metals and organics (excluding pesticides and herbicides) unless an alternate analytical protocol is required by the selected disposal facility. The representative composite sample will include biased grab samples collected from areas of staining. If no stained areas are evident, the grab sample locations will be randomly selected. If the construction materials are classified as nonhazardous using TCLP, then they will be disposed of as construction debris in an appropriately permitted disposal facility. In the event the construction materials are identified as hazardous using TCLP, the construction materials will be disposed of as a hazardous waste in accordance with RCRA regulations.

- If the foundation slab must be removed, it will be demolished and the construction materials tested using TCLP in the same manner as that described above for the walls of the secondary containment system.

- If soil removal becomes necessary, Safety-Kleen will backfill the excavated area with clean, compacted general fill material graded to match existing surfaces and to preclude ponding of water. To ensure backfill is clean (i.e., is not contaminated with constituents at concentrations above Florida soil cleanup goals or site background (whichever is higher)), one representative composite sample of the backfill will be collected and analyzed prior to emplacement of the fill. The backfill sample will be analyzed for the eight RCRA metals and by EPA Methods 8015, 8240, and 8270.

10.3 FACILITY CLOSURE SCHEDULE AND CERTIFICATION

- 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 will amend the plan any time changes in operating plans or facility design affect the closure plan or whenever a change occurs in the expected year of closure of the facility. The plan will be amended within 60 days of the changes.

- Safety-Kleen will notify the FDEP of its intent to close the facility by submitting an application for a closure permit pursuant to Chapter 62-730.260(1) FAC. This application will be submitted no later than 60 days before the final receipt of hazardous wastes by the facility or at the time specified in the current operating permit.

- Within 90 days of receiving the final volume of hazardous wastes, or 90 days after issuance of a closure permit, if that is later, Safety-Kleen will 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:

1. The activities required to comply with this paragraph will, of necessity, take longer than 90 days to complete; or

2. 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.

- Safety-Kleen will complete closure activities in accordance with the approved closure plan within 180 days after receiving the final volume of wastes or 180 days after approval of the closure plan, whichever is later. When closure is completed, all facility equipment and structures shall have been properly disposed of, or decontaminated by removing all hazardous waste and residues.

- Within 60 days of closure completion, Safety-Kleen will submit certification by an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

Figure 10.3-1 presents a typical closure schedule anticipated for the Orange Park facility.

10.4 CONTINGENT POST-CLOSURE PLAN

The tank system at the Orange Park facility meets the secondary containment requirements of 40 CFR 264.193, and is, therefore, not required to have a contingent post-closure plan

under 40 CFR 264.197(c). In addition, Safety-Kleen intends to remove or decontaminate all tank system components, associated containment systems, and contaminated soils (if any) at the time of closure. However, should future conditions indicate that all contaminated soils and tank system components cannot practicably be decontaminated or removed, then a plan to perform post-closure care in accordance with the post-closure care requirements that apply to landfills (40 CFR 264.310) will be prepared for implementation upon FDEP approval.

10.5 CLOSURE COST ESTIMATE

The cost for closure of the facility is estimated in the following worksheets and summarized as follows:

• Closure of Container Storage Area	=	$126,722*
• Closure of Tank System	=	$ 8,620
Total Estimated Closure Cost	=	$135,342

* Includes facility costs for decontamination and waste transportation and disposal.

SECTION

11

Section 11.0 A. AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS

1. REQUIREMENTS AND INFORMATION FOR EQUIPMENT - SUBPART BB

The requirements of 40 CFR 264 Subpart BB - Air Emission Standards for Equipment Leaks *do* apply to certain equipment associated with the used parts washer solvent storage tank system. **Figure 11-0** plots the facility layout with the location of the hazardous waste management unit that utilizes equipment subject to Subpart BB. This equipment contains or contacts hazardous wastes with VOC concentrations >10% by weight. The Subpart BB requirements apply to pumps, valves, flanges, etc. which are part of the used parts washer solvent storage tank system. **Figure 11-1** shows the specific equipment items which are considered to be in "heavy liquid service" for the purposes of Subpart BB. Compliance with the applicable sections of 40 CFR 264.1052 through .1063 has been achieved by the implementation of the procedures outlined in **Enclosure 11-1** and other procedures detailed below.

2. IMPLEMENTATION SCHEDULE

All facilities subject to these regulations were required to be in compliance by the date specified in the final rule. This facility has been in compliance since that date (see Enclosure 11-1).

3. *SCHEDULE AND PROCEDURES FOR INSPECTIONS*

Pursuant to Subpart BB of 40 CFR Part 264 and 40 CFR 270.25, Safety-Kleen inspects all regulated units for leaks on a daily basis. An inspection checklist, example shown in **Figure 11-2**, is utilized for this purpose. All valves, pumps, and flanges are visually inspected. The inspection items have been properly tagged in accordance with 40 CFR 264.1050(d), and are inventoried on the environmental piping schematic diagrams included in Figure 11-1. In the event that a leak is detected, repairs will be implemented in accordance with the applicable provisions of Subpart BB (first attempt at repair within 5 days; repair completed or equipment placed "out of service" within 15 days. For such repairs, a "Leak Detection and Repair Record" will be completed (see **Figure 11-3** for an example).

Due to the inherent properties of the waste parts washer solvent stored in the tank, the use of a screening device such as a photoionization detector (PID) is impractical. The liquids are heavy and have low vapor pressures, therefore a release would be visible in a liquid phase rather than a vapor. The parts washer solvent has a maximum of 2,000 ppm concentration in the vapor phase.

4. ALTERNATIVE CONTROL DEVICES

No alternative control devices are in use at this facility.

5. DOCUMENTATION OF COMPLIANCE

5.a. Pumps in Light Liquid Service (40 CFR 264.1052)

Safety-Kleen manages parts washer solvent (mineral spirits) that has vapor pressure less than 0.3 kilopascals at 20 deg. C. Therefore, pursuant to 40 CFR 264.1030, these materials are classified as heavy liquids.

The existing pumps that manage hazardous wastes at the Orange Park facility are identified and listed for use in heavy liquid service. Therefore, the Orange Park facility does not have any pumps that are in light liquid service subject to the requirements of 40 CFR 264.1052.

5.b. ***Compressors (40 CFR 264.1053)***

The Safety-Kleen Orange Park facility does not have any compressors that are in contact with organic chemicals. Therefore, 40 CFR 264.1053 is not applicable.

5.c. ***Pressure Relief Devices in Gas/Vapor Service (40 CFR 264.1054)***

The Orange Park facility does not have any pressure relief devices subject to the requirements of 40 CFR 264.1054.

5.d. ***Sampling Connecting Systems (40 CFR 264.1055)***

The Orange Park facility does not have any sampling connecting systems or in situ sampling systems.

5.e. ***Open-Ended Valves or Lines (40 CFR 264.1056)***

Safety-Kleen has identified the location of each open-ended valve and line and included it in the inspection record. The open-ended valves and lines that are subject to the requirements of 40 CFR 264.1056 are identified in the facility's environmental piping schematic drawing (Figure 11-1). This equipment is either equipped with caps, second valves, or double block and bleed system.

A cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring hazardous waste stream flow through the open-ended valve or line.

Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the hazardous waste stream end is closed before the second valve is closed.

When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves.

5.f. ***Valves in Gas/Vapor Service or in Light Liquid Service (264.1057)***

All existing valves that come in contact with hazardous wastes are in heavy liquid service. Therefore, they are not subject to the requirements of 40 CFR 264.1057. If their use is changed to light liquid service, then the valves will be monitored for leaks using a portable organic vapor analyzer in accordance with Method 21.

5.g. ***Pumps and Valves in Heavy Liquid Service, Pressure Relief Devices in Light Liquid or Heavy Liquid Service, and Flanges and Other Connectors (40 CFR 264.1058)***

At the present time, the pumps, valves, flanges, and other connectors at the Orange Park facility are used for heavy liquid service. As defined in 40 CFR 264.1031, the mineral spirits solvents managed at the facility are considered to be heavy liquid because the solvents have the vapor pressure less than 0.3 kilopascals at 20°C. Furthermore, no single contaminant is present in the wastes that has vapor pressure greater than 0.3 kilopascals in concentrations in excess of 20 percent by weight.

In addition, the wastes presently managed in the equipment at the Orange Park facility have a maximum of 2,000 ppm concentration in the vapor phase. Therefore, portable organic vapor analyzer will not detect leaks at 10,000 ppm and a leak will be observed based on visible liquid leak rather than by a portable organic analyzer.

The first attempt at repair will be made no later than five calendar days after each leak is detected. Pursuant to the requirements of 40 CFR 264.1058, if a visual leak is observed, then the affected equipment will be repaired no later than 15 days after it is detected. Whenever a leak is detected as specified in §264.1064(c) will apply:

- A weatherproof and readily visible identification attached to the leaking equipment shall be marked with the following information: the equipment identification number, the date that evidence of a potential leak was found in accordance with §264.1058(a), and the date the leak was detected.

- The identification on equipment, except on a valve, may be removed after it has been repaired.

- The identification on a valve may be removed after it has been monitored for two successive months as specified in §264.1057(c) and no leak has been detected during those two months.

Whenever a leak is detected as specified in §264.1058, the following information shall be recorded, as deemed appropriate, in an inspection log and shall be kept as part of the facility operating record:

- The instrument, operator, and equipment identification numbers.

- The date that evidence of a potential leak was found in accordance with §264.1058(a).

- The date the leak was detected and the dates of each attempt to repair the leak.

- Repair methods applied in each attempt to repair the leak.

- "Above 10,000 ppm" if the maximum instrument reading measured by the methods specified in §264.1063(b) after each repair attempt is equal to or greater than 10,000 ppm.

- "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

- Documentation supporting the delay of repair of a valve in compliance with §264.1059(c).

- The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a hazardous waste management unit shutdown.

- The expected date of successful repair of the leak, if the leak is not repaired within 15 calendar days.

The date of successful repair of the leak.

5.h. *Recordkeeping Requirements*

Pursuant to the requirements of 40 CFR 264.1064, Safety-Kleen has identified all affected equipment by number and location (Equipment Schedule) as shown in Figure 11-1.

The following records will be maintained at the Orange Park service center and maintained as part of the facility's operating record.

- Type of equipment: valve, pump, flange, etc.

- Service: light liquid or heavy liquid.

- Percent-by-weight is not necessary for the equipment because the facility manages wastes that are nearly 100 percent organics by weight.

- Method of compliance: daily inspections.

- Identification on the equipment, if they are found leaking, will be implemented.

- Leak monitoring results and any repairs conducted at the facility.

6. ***Closed-Vent Systems and Control Devices (40 CFR 264.1060)***

Since neither a closed vent system nor a control device is required for, or as part of, the equipment ancillary to the facility's hazardous waste storage tank (equipment subject to Subpart BB), demonstrations of compliance with applicable design, operation and maintenance specifications are not required. The Orange Park service center will maintain records as part of the facility's operating record that indicate the name and identification of each equipment (i.e., pumps, valves, flanges, open-ended valves, etc.) at the facility. The record will include the type of chemicals managed in each equipment (i.e., light liquid, heavy liquid, etc.) and the state of the chemicals (i.e., gas, vapor, liquid, etc.) and any leaks detected (i.e., visual, >10,000 ppm, etc.) and the date and type of repair performed to repair the leaking equipment.

Since Safety-Kleen manages organic chemicals that are nearly 100 percent by weight organic, it is not required to maintain in the records the concentration of organic chemicals in the waste stream (40 CFR 264.1064(b)(1)(iv)).

B. AIR EMISSION STANDARDS APPICABLE TO TANKS AND CONTAINERS

Safety-Kleen's Orange Park branch manages wastes that range in Volatile Organic concentrations up to 100%. Therefore, all wastes managed in containers and in storage tanks are handled as being subject to 40 CFR 264 Subpart CC requirements based on the knowledge of the wastes managed at the facility. Therefore, no analytical waste determination is required. Figure 11-0 depicts the location and type of hazardous waste management units subject to Subpart CC located at the facility.

1. Subpart CC Tank Standards (40 CFR 265.1084)

The Safety-Kleen Orange Park facility manages hazardous wastes in a tank system that consists of one 15,000 gallon storage tank. The tank in this system is subject to Subpart CC requirements as a Level 1 Tank based on tank dimensions and maximum vapor pressure of volatile organic materials managed in this tanks (see following table). A list of tanks, tank dimensions and maximum vapor pressure of volatile organics managed in tanks subject to Level 1 Tank controls is provided in the following table.

Applicability of Standards Level 1 Tanks	
Tank Capacity	Maximum Vapor Pressure
> 151 cubic meters (39800 gallons)	< 5.2 kPa (0.76 psia)
>19800 gallons <39800 gallons	27.6 kPa (4.05 psia)
< 19800 gallons	76.6 kPa (11.26 psia)

Tanks that meet the above size and vapor pressure limits and that are not heated to a temperature that would increase the vapor pressure of the materials above these limits are required to meet Level 1 Tank Standards. See **Table 11-1** for a summary of the tank at the Orange Park branch subject to the requirements of Subpart CC, and the applicable controls.

1.a. *Level 1 Tank Requirements (40 CFR 264.1084(c))*

i. Safety-Kleen waste parts washer solvent has a vapor pressure of less than 0.3 kilopascals at 20 deg. C. The tank used for storing this waste has a capacity of 15,000 gallons. A complete description of the tank system is found in Part II.C., particularly Attachment II.C.2, and diagrams for the tanks are provided herein Figure II.C.2-4. Waste materials stored in these tanks are spent Safety-Kleen 105 Solvent Recycled and Safety-Kleen Premium Gold Solvent. Specifications for each of these products can be found in Section 5.0, Appendix A - Material Safety Data Sheets.

ii. The storage tanks meeting Level 1 requirements are equipped with fixed roofs with the following specifications:

(A) The fixed roof and its closure devices forms a continuous barrier over the entire surface area of the hazardous waste in the tank.

(B) There are no visible cracks, holes, gaps, or other open spaces between roof section and the tank wall.

(C) Each opening in the fixed roof is equipped with a closure device designed to operate such that when the closure device is secured in closed position, there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device or connected to a control device (control is not required for Level 1 Tanks).

1.b. *Inspection requirements for Level 1 Tanks are as follows:*

(i) The fixed roof and its closure devices are visually inspected to check for defects that could result in air emissions. Defects include, but are not limited to, visible cracks, holes or gaps in the roof sections; broken, cracked, or damaged seals or gaskets on closure devices; broken or missing hatches, access covers, caps, or other closure devices. A description of inspections and example logs for tanks can be found in Section 9.4 of this permit renewal application.

(ii) The copy of the most recent tank assessment is included in this permit renewal application in Section 9.0, Appendix A.

1.c. ***Level 2 Tanks (40 CFR 265.1084(d))***

There are no level 2 tanks at this facility.

2. ***Subpart CC Container Standards (40 CFR 264.1086)***

This section is applicable to containers that are greater than 26 gallons that are used to manage hazardous wastes with greater than 500 ppm volatile organic contents. Hazardous waste containers that are filled (generated) at the facility as well as hazardous waste containers that are received from off site are subject to this rule. **Table 11-2** provides a summary of the areas, and types of containers managed, at the Orange Park, FL branch for which Subpart CC is applicable.

2.a. ***Level 1 Containers (40 CFR 265.1086(c))***

Containers greater than 26 gallons but less than 119 gallons and containers greater than 119 gallons used in heavy material service (<0.038 psia) are to be controlled in accordance with one of the following Level 1 container standards as follows:

1. Containers that meet DOT standards are in compliance with Subpart CC Level 1 container design standards. Safety-Kleen drums meet DOT's standards; or

2. A container equipped with a cover and closure devices that form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. The cover may be a separate cover installed on the container such as a lid on a drum or a tarp on a roll-off box; or

3. An open-top container in which an organic-vapor suppressing barrier is placed on or over the hazardous waste in the container such that no hazardous waste is exposed to the atmosphere.

2.b. ***Level 1 Container Operating Requirements (40 CFR 264.1086(c)(3)):***

Whenever a hazardous waste is in a container using Level 1 controls, the covers shall be maintained in closed position except as follows:

i. Adding hazardous waste or other material to the container:

If the container is filled in one continuous operation, the container is closed upon conclusion of the filling operation. In the case of discrete or batch filling the container is be closed:

(A) upon filling the container to the intended final level;
(B) the completion of a batch loading after which no additional waste will be added within 15 minutes;
(C) the person performing the loading operation leaving the immediate vicinity of the container; or
(D) the shutdown of the process generating waste being added to the container.

ii. Removing hazardous waste from the container:

When discrete quantities of hazardous waste are removed from the container, covers shall be promptly secured upon completion of a batch removal after which no additional material will be removed from the container within 15 minutes or the person performing the unloading operation leaves the immediate vicinity of the container. RCRA empty containers may be open to the atmosphere at any time.

iii. Sampling wastes, measuring depth or quantity of wastes:

Containers may be opened when sampling and/or measuring hazardous wastes, as well as adding or removing hazardous wastes from them. Covers must be replaced and secured on containers once such activities are completed.

2.c. *Level 1 Container Inspection Requirements*

All Level 1 Containers that are not emptied upon receipt at the facility, are inspected upon arrival and each day thereafter until the container is transferred to a recycle center. Each Level 1 Container and its cover and closure devices are inspected for visible cracks, holes, gaps, or other open spaces. No container remains at the facility over 1 year.

If a defect is detected for the container, cover, or closure devices, a repair shall be conducted within 24 hours after detection, and repair shall be completed as soon as possible but no later than 5 calendar days. The container will be overpacked in a DOT approved container as a means of repair. A description of the types of inspections and example logs for containers can be found in Section 8.5 of this permit renewal application.

2.d. ***Level 2 Containers - 265.1086(d)***

Hazardous waste containers with design capacity greater than 119 gallons and that are in

light material service are subject to Level 2 container standards. These include totes, roll-off boxes that are greater than 119 gallons in capacity, and bulk tankers and rail car tankers. Level 2 containers are not stored at this facility, therefore 40 CFR 265.1087(d) does not apply at this location. However, these types of containers may undergo 10-day transfer at the facility, but since they will be considered "still in the course of transportation" Subpart CC will not be applicable.

3. Documentation of Compliance

Safety -Kleen prepared a written compliance plan for those units subject to Subpart CC, and instituted the plan on December 6, 1996. A copy of this plan is included in **Enclosure 11-2**.

Figure 11-0

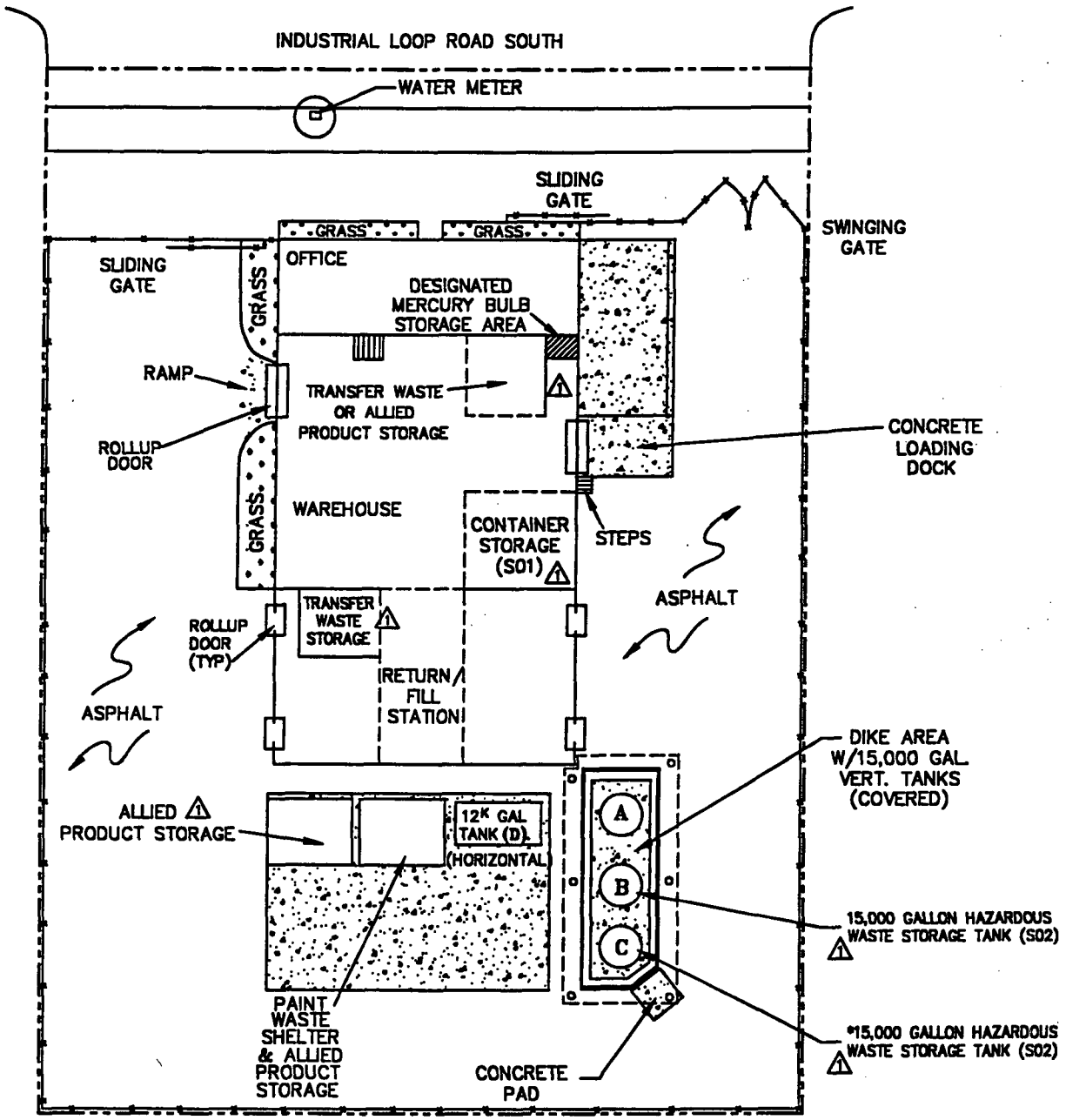
Facility Layout

Safety-Kleen Orange Park Branch

4/17/00

⚠1 REVISION 1 (FEB. 2000)

FIGURE 11-0
LOCATIONS OF HAZARDOUS WASTE STORAGE AREAS
SAFETY-KLEEN CORP. FACILITY
ORANGE PARK, FLORIDA



LEGEND

- PROPERTY BOUNDARY
- FENCE
- UTILITY EASEMENT
- TRUCK TRAFFIC PATTERNS
- CONCRETE

TANK CONTENTS

- (A) VIRGIN SOLVENT
- (B) WASTE SOLVENT
- (C) CLEAN CLOSED 10/22/99 USE FOR NON-REGULATED MATERIAL ONLY
- (D) VIRGIN SOLVENT

* NEVER PLACED WTO HAZARDOUS WASTE STORAGE. CLEAN CLOSURE APPROVED 10/22/99. TO BE USED FOR NON-REGULATED MATERIALS ONLY. ⚠1

N

0 40

APPROXIMATE SCALE (FEET)

5331SAFKLN9\HAZWASTE 2-10-00

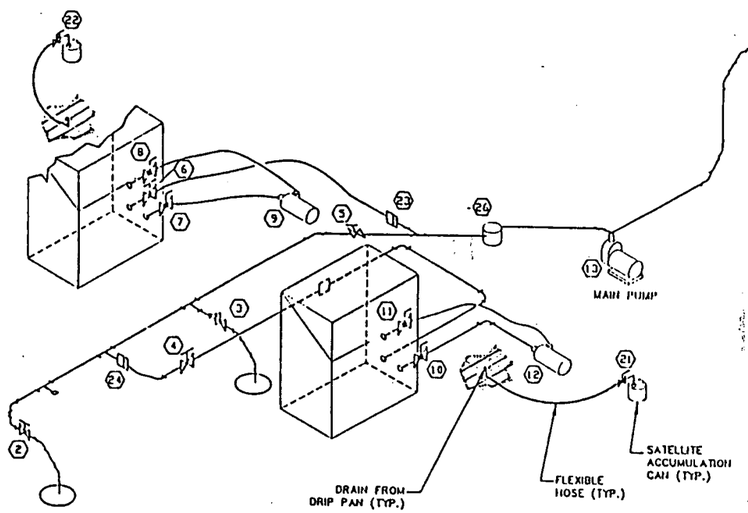
4/17/00

ERM.

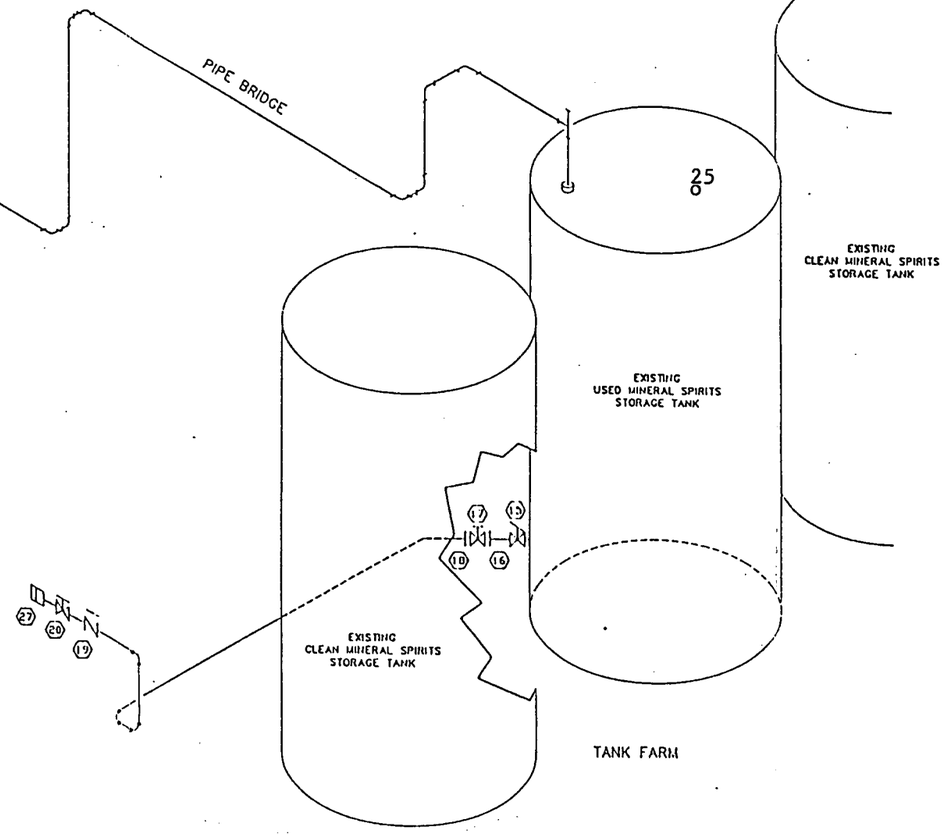
Figure 11-1

40 CFR 264 Subpart BB Equipment List

4/17/00



RETURN & FILL AREA



TANK FARM

EQUIPMENT SCHEDULE
WASTE MINERAL SPIRITS

MARK	DESCRIPTION
1	
2	2" THREADED BALL VALVE
3	2" THREADED BALL VALVE
4	2" THREADED GATE VALVE
5	2" THREADED GATE VALVE
6	2" THREADED GATE VALVE
7	1 1/2" THREADED BALL VALVE
8	1 1/4" THREADED BALL VALVE
9	WASTE M.S. RECIRCULATION PUMP
10	1 1/2" THREADED BALL VALVE
11	1 1/4" THREADED BALL VALVE
12	WASTE M.S. RECIRCULATION PUMP
13	WASTE MINERAL SPIRITS PUMP
14	2" THREADED CHECK VALVE
15	3" THREADED INTERNAL EMERGENCY VALVE
16	3" FLANGED CONNECTION
17	3" FLANGED GATE VALVE
18	3" FLANGED CONNECTION
19	3" THREADED CHECK VALVE
20	3" THREADED GATE VALVE
21	1" THREADED BALL VALVE
22	1" THREADED BALL VALVE
23	2" CAM LOCK
24	2" CAM LOCK
25	CONSERVATION VENT *
26	STRAINER ASSY.
27	3" CAM LOCK

GENERAL NOTES

1.) ACTUAL PIPING CONFIGURATION MAY VARY.

2.) NON-PERMITTED TANKS AND EQUIPMENT MAY CHANGE.

* Difficult to Access

NO.	DESCRIPTION	BY	CHK	APPR	DATE
06	REMOVED WASTE ANTIFREEZE TANK & SCHEDULE REMOVED DUMPSTER & VALVES 1 & 25	MBH	KJH	DP	022195
05	ADDED TAGS 23, 24, 25, 26 & 27	MBH	KJH	-	120192
04	ADDED TAGS 21 & 22	MBH	KJH	-	111992
03	MISC. REVISIONS	JBC	TYJ	-	042192
02	ADDED VACUM VENT (TAG #25)	MBH	-	-	031192
01	REVISED GLYCOL PIPING & VALVES	MBH	-	-	012292

REVISIONS

Figure 11.0-1
4/17/00

TITLE
ENVIRONMENTAL PIPING SCHEMATIC FOR WASTE M.S. – EXISTING

Safety-Kleen Corp.
1000 NORTH RANDALL ROAD ELGIN, ILLINOIS 60123
PHONE (708)697-8460

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
NTS	MBH	-	-		080391

SERVICE CENTER LOCATION

SC-DWG NUMBER
316301-2003B

REV. NO.
06

Figure 11-2

Example Daily Inspection Log for Subpart BB Equipment

4/17/00

INSPECTION LOG SHEET FOR: Daily Inspection List of EQUIPMENT

INSPECTOR'S NAME/TITLE: _____

INSPECTOR'S SIGNATURE: _____

	MON	TUES	WED	THURS	FRI
DATE: (M/D/Y)	____	____	____	____	____
TIME:	____	____	____	____	____

Pump or Valve Number

1	A*	N	A	N	A	N	A	N	A	N
2	A	N	A	N	A	N	A	N	A	N
3	A	N	A	N	A	N	A	N	A	N
4	A	N	A	N	A	N	A	N	A	N
5	A	N	A	N	A	N	A	N	A	N
6	A	N	A	N	A	N	A	N	A	N
7	A	N	A	N	A	N	A	N	A	N
8	A	N	A	N	A	N	A	N	A	N
9	A	N	A	N	A	N	A	N	A	N
10	A	N	A	N	A	N	A	N	A	N
11	A	N	A	N	A	N	A	N	A	N
12	A	N	A	N	A	N	A	N	A	N
13	A	N	A	N	A	N	A	N	A	N
14	A	N	A	N	A	N	A	N	A	N
15	A	N	A	N	A	N	A	N	A	N
16	A	N	A	N	A	N	A	N	A	N
17	A	N	A	N	A	N	A	N	A	N
18	A	N	A	N	A	N	A	N	A	N
19	A	N	A	N	A	N	A	N	A	N
20	A	N	A	N	A	N	A	N	A	N
21	A	N	A	N	A	N	A	N	A	N
22	A	N	A	N	A	N	A	N	A	N
23	A	N	A	N	A	N	A	N	A	N
24	A	N	A	N	A	N	A	N	A	N
25	A	N	A	N	A	N	A	N	A	N
26	A	N	A	N	A	N	A	N	A	N
27	A	N	A	N	A	N	A	N	A	N
28	A	N	A	N	A	N	A	N	A	N
29	A	N	A	N	A	N	A	N	A	N
30	A	N	A	N	A	N	A	N	A	N
31	A	N	A	N	A	N	A	N	A	N
32	A	N	A	N	A	N	A	N	A	N
33	A	N	A	N	A	N	A	N	A	N
34	A	N	A	N	A	N	A	N	A	N
35	A	N	A	N	A	N	A	N	A	N
36	A	N	A	N	A	N	A	N	A	N
37	A	N	A	N	A	N	A	N	A	N
38	A	N	A	N	A	N	A	N	A	N
39	A	N	A	N	A	N	A	N	A	N

If "N", enter pump or valve # _____ and circle appropriate problem: potential leak, actual leak, sticking, wear, does not operate smoothly, other: _____.

For all leaks and potential leaks, the Leak Detection and Repair Record must be completed.

* A = ACCEPTABLE
N = NOT ACCEPTABLE

Draw a line through valve and pump I.D. numbers which do not apply.

4/M/00

Figure 11-3

Example Leak Detection and Repair Record

4/17/00

FIGURE 11-3

Leak Detection and Repair Record (Example)

Safety-Kleen Systems, Inc.
Orange Park, FL

Equipment ID #: _____ Branch #: _____

Description: _____ Other: _____

Date Inspector's Signature

How was potential or actual leak detected?

_____

_____

Describe the potential or actual leak:

_____

_____

(1.) Instrument Monitoring within 5 days

Results: _____

(2.) Repair Attempt

Method: _____

Results: _____

(3.) Repair Attempt

Method: _____

Results: _____

(4.) Date of Successful Repair
(Must be completed within 15 days)

Method: _____

Results: _____

Followup Monthly Valve Monitoring

(5.) Results: _____

(6.) Results: _____

Monitoring Summary

	(Reference Number -- see above)					
	(1)	(2)	(3)	(4)	(5)	(6)
Instrument # / Operator	____	____	____	____	____	____
Calibration	____	____	____	____	____	____
Background Reading	____	____	____	____	____	____
Reading at Equipment	____	____	____	____	____	____
Leak Detected?	____	____	____	____	____	____

Attach any documentation prepared by consultant(s).

4/19/00

Enclosure 11-1

Subpart BB Compliance Plan

4/17/00

MEMORANDUM

SUBJECT: Subpart BB Requirements
Anti-freeze/Coolants

DATE: February 13, 1992

TO: Regional Environmental Engineers
Jeff Bard
Ellen Jurczak
Catherine McCord

FROM: Desi Chari
DMC 92-122

cc: Bill Constantelos
Dan Dowling
Gary King
Rick Peoples
Ken Snell
Stan Walczynski

During the recent environmental staff meeting questions were raised regarding the applicability of Subpart BB Air Emission Standards for Equipment Leaks requirements for used antifreeze managed at the Service Centers and Recycle Centers.

Pursuant to 40 CFR 264 and 265.1050-1064, the equipment (pumps, valves and flanges) that come into contact with waste organic compounds are subject to the requirements of the equipment leak standards. Pumps, valves and flanges that come into contact with waste antifreeze must be identified in a process flow diagram and must be tagged.

The vapor pressure of ethylene glycol, which constitutes greater than fifty percent of antifreeze (remaining being water), is 0.01 PSIA (0.069 Kilo Pascals) at standard temperature and pressure. This shows that the waste antifreeze is less volatile than mineral spirits.

Therefore, as per 40 CFR 264 and 265.1031, waste antifreeze is defined as a heavy liquid and the equipment that come into contact with waste antifreeze is subject to 264 and 265.1058 standards applicable to heavy liquid service. Therefore, we must comply with air emission leak detection and repair standards based on visual inspection similar to the standards applicable to waste mineral spirit solvents.

Because the waste antifreeze exhibits a very low vapor pressure (0.01 PSIA), the portable organic analyzers <u>will not</u> detect more than 1000 ppm of organics at the liquid-surface. However, the standard for leak detection using portable analyzer is 10,000 ppm. Therefore visual inspection is adequate to detect leaks and portable instruments are not required.

The attached equilibrium calculation shows that the maximum concentration of ethylene glycol in air at standard conditions will be 680 ppm volume. This calculation must be kept in file at the facility to justify that portable instrument monitoring is not required.

4/17/00

264 and 265.1058 require that if a visual leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is detected. The first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

If you have any questions regarding this update, please contact me at X2579.

4/17/00

Theoretical (Equilibrium) Saturation Concentration of Ethylene Glycol in Air at Atmospheric Pressure (760 mm Hg) and Ambient Temperature (68 0 F).

Concentration of Ethylene Glycol in Air , PPM Volume = 1 - Mole Fraction of Air x 1,000,000

Atmospheric Pressure	= 760 mm Hg
Weight of Air	= 1.0 pounds
Ambient Temperature	= 68 OF
Vapor Pressure of Ethylene Glycol	= 0.517 mm Hg

CALCULATIONS

Partial Pressure of Air = Atmospheric Pressure - Vapor Pressure
= 760 mm Hg - 0.517 mm Hg
= 759.483 mm Hg

Mol. Fraction of Air = Partial Pressure/Atmospheric Pressure
= 759.483/760 mm Hg
= 0.99932

Equilibrium Concentration PPM Volume =(1-Mol Fraction) x 1,000,000

ppm Volume of Ethylene Glycol =(1-0.99932) x 1,000,000

= 680 ppm Ethylene Glycol <<<< 10,000 ppm

4/17/00

Safety-Kleen Corp.

MEMORANDUM

SUBJECT: RCRA Air Emission Standards
Immediate Action Required

DATE: December 17, 1990

TO: Branch Managers

FROM: Ellen Jurczak

cc: Reg. Engrs.
Rick Peoples
Anita Pendry
Jennifer Jendras
Melissa Hlebasko
Reg. Mgrs.
Div. V.P.'s
Bill Heyn
Dan Dowling

On December 21, 1990, new EPA rules take effect which regulate air emissions from equipment (such as pumps and valves) used to manage hazardous wastes. Included are requirements for equipment marking and identification, inspection, recordkeeping and specific repair procedures.

Enclosed are some new inspection forms which you must complete to comply with these rules. An explanation of the forms follows:

1. Equipment Inventory Form

This form must be completed and kept in file 1070 (with a copy sent to EHS, Elgin). SITE PLANS SHOWING THE I.D. NUMBER AND LOCATION OF ALL EQUIPMENT WILL BE SENT TO YOU BY TECH SERVICES. Each valve and pump which is associated with the hazardous waste tank(s) (i.e. from the dumpster/barrel washer to the tank and from the tank to the fill pipes) must be marked and listed on this form. The site plan shows the location and newly assigned (by Tech Services) I.D. numbers of all the equipment. You should verify this information to make sure it is correct and use the same I.D. numbers when completing the inventory forms. Tags are used to mark the equipment with its I.D. number. In the column headed Hazardous Waste Management Unit, enter "storage tank". If there are two tanks at the branch, (e.g. waste mineral spirits and waste antifreeze) differentiate between the two for equipment which is only associated with one tank. In the columns headed Pump Description or Valve Type, enter a descriptive term such as spent solvent pump, dumpster shutoff valve, gate valve or check valve.

4/19/00

SEP 02 '99 15:48

2. Revised Facility Inspection Record

An additional page has been added to the facility inspection record (file 1210) for the daily inspection of equipment. You should begin using it on December 21, 1990. If a potential leak is discovered (by visual evidence or excessive odor) note it as "N" on the form and follow procedures in #3 below.

3. Leak Detection and Repair Record

After detection of a potential or actual leak, a pump or valve must be monitored with a photoionizer-type instrument within five days. If the instrument reading is 10,000 ppm or greater, a leak is confirmed and a repair must be made within 15 days. Contact your Regional Environmental Engineer immediately to arrange for the equipment to be monitored by a local environmental consultant.

The third form must only be completed for each potential or actual leak detected. The piece of equipment must be tagged with the I.D. number, date of potential or actual leak detection and date of leak confirmation. Tags may be obtained from Tech. Services. After a valve has been repaired, it must be monitored monthly by a consultant using a photoionization detector. After two successive months with no leak detection, the identification may be removed and monitoring discontinued. For other equipment, such as pumps, the tag may be removed after a successful repair. This form must be kept in a new file (1220.2 - Leak Detection and Repair Record).

4117100

Enclosure 11-2

Subpart CC Compliance Plan

4/17/00

SUBPART CC COMPLIANCE PLAN
Orange Park, FL

The Safety-Kleen Orange Park, FL facility shall control air pollutant emissions from waste management units at this facility pursuant to the requirements of RCRA, Subpart CC, through implementation of this compliance plan.

The following plan describes this facility's waste determination procedures, tank and container design/management practices, organic emission controls, inspection and monitoring, and record keeping and reporting, pursuant to requirements/standards promulgated under of RCRA, Subpart CC

Waste Determination Procedures
For purposes of waste determination, the facility utilizes knowledge developed in the Waste Characteristics portion of the Operation Plan/Permit. For those hazardous wastes which are managed on a transfer basis, and which are not described in the Operation Plan/Permit, the Subpart CC regulation does not apply. However, the owner/operator may use knowledge of the waste based on information included in manifests, shipping papers, or waste certification notices to confirm waste determination for the generator or the ultimate receiving facility.

Based upon this knowledge, it has been determined that all wastes managed in tanks or containers at this facility may display an average volatile organic compound concentration of greater than 500 ppm at the point of waste origination. Therefore, all hazardous wastes managed in tanks or containers at this facility shall be managed in accordance with the applicable Subpart CC standards.

Point of Waste Origination
The point of waste origination for all wastes generated offsite and transported to the site in closed containers, which are subsequently managed in tanks or containers at this facility, is effectively the boundary at the entrance gate.

For those hazardous wastes generated onsite, the point of waste origination is the point ofd waste generation, as previously defined in RCRA.

Tanks
Tanks which manage organic wastes at this facility are described in detail in the Operation Plan/Permit. Certain features of these units, as they relate to Subpart CC standards, are described below.

Waste mineral spirits aboveground storage tanks (ASTs) are fixed roof, non-pressurized, quiescent tanks. All waste tanks at the facility are Level 1 tanks under Subpart CC. The tank design capacity is less than 20,000 gallons and the waste in these tanks exhibits a vapor pressure of less than 5.2 kPa (11.1 psi). The actual vapor pressure of the waste managed in tanks is ~0.2 psia. The maximum organic vapor pressure is determined using knowledge of the waste pursuant to 40 CFR 265.1084(c)(4). Documentation for the basis of this determination is found in the Waste Characteristics portion of the Operation Plan/Permit.

These tanks are designed so that all cover openings can be closed with no visible gaps, holes, cracks, or other open space into the interior of the tank. The cover and all cover openings operate with no detectable emissions when in a closed position. Cover openings are maintained in a closed position at all times except when waste is being added to or removed from the tank, or when necessary sampling or repair/maintenance is performed on the tanks.

These tanks are vented to the atmosphere through a safety device (conservation vent) which has been designed to operate with no detectable organic emissions when the device I in the closed position. In addition, the tanks are designed with a long-bolted manway pressure relief device, which remains in the closed position when not used to relieve pressure.

4/17/00

Containers

Containers which manage organic wastes at this facility are described in detail in the Operations Plan/Permit. Certain features of these units, as they relate to Subpart CC standards, are described below.

Containers managing hazardous wastes at this facility generally fall into three categories. (1) Those hazardous waste containers that are less than 26 gallons in capacity are wholly exempt from consideration under subpart CC. In addition, containers of wastes that are transferred through the facility are still "in the course of transportation," and therefore are exempt from Subpart CC. (2) Containers with capacities between 26 and 122 gallons are all Level 1 containers, and generally meet the Level 1 standards as covered containers designed and operated with no gaps, holes, cracks, or other open spaces into the container. In addition, all Safety-Kleen containers used to manage waste meet applicable US DOT regulations on packaging hazardous materials for transportation. (3) Containers of greater than 122 gallons that manage hazardous wastes at this facility are not in light material service and are Level 1 covered containers designed and operated with no gaps, holes, cracks, or other open spaces into the container. In addition, all Safety-Kleen containers used to manage waste meet applicable US DOT regulations on packaging hazardous materials for transportation.

Inspections and Monitoring

Hazardous wastes accepted from offsite generators are already containerized when the facility accepts the waste. Such containers are visually inspected either at the time they are unloaded for storage or staged for transfer at the facility, or during the daily facility inspection. The inspection occurs within 24 hours of the waste's arrival at the facility. This written plan and schedule to perform the inspections is incorporated in the facility inspection plan by this reference.

An initial visual tank inspection was conducted by Safety-Kleen. No defects were on the single waste solvent tank which could result in air pollutant emissions.

Visual tank inspections shall be conducted on an annual basis.

Recordkeeping

Documentation of tank and tank cover design: See Operation Plan/Permit.

Documentation of waste determination: See Waste Characteristics portion of Operation Plan/Permit.

Records of all visual inspection: See daily facility records, and enclosed record of initial tank inspection.

Listing of all tanks, by unique identifying number, which are difficult or unsafe to inspect: See enclosed.

Results of the determination of the maximum vapor pressure of waste in tanks and record of the tank dimensions and design capacity: See Operation Plan/Permit.

4/11/00

Table 11-1

Summary of Tank Management Units Subject to Subpart CC

4/19/00

TABLE 11-1
SUMMARY OF TANK MANAGEMENT UNITS SUBJECTED TO SUBPART CC
SAFETY-KLEEN SYSTEMS, INC., ORANGE PARK, FL
EPA ID No.: FLD 984 171 165

HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION OF HAZARDOUS WASTE MANAGEMENT UNIT	EPA HAZARDOUS WASTE CODES MANAGED	BREIF WASTE DESCRIPTION	AVERAGE VOLITALE ORGANIC CONCENTRATION OF THE HAZARDOUS WASTE	SUBPART CC STATUS	CONTROL OPTION (See Table 11-3)
Waste Parts Washer Solvent Tank (15,000 gallons)	See Figure 11-0	D001 and codes listed in Note below	Waste Parts Washer Solvent (Petroleum Naphtha)	≥ 500	Level 1 Control	1

Note:
1. D004 through D011, D018, D019, D021 through D030, and D032 through D043

4117160

Table 11-2

Summary of Container Management Units Subject to Subpart CC

4/19/00

TABLE 11-2
SUMMARY OF CONTAINER MANAGEMENT UNITS SUBJECTED TO SUBPART CC
SAFETY-KLEEN SYSTEMS, INC., ORANGE PARK, FL
EPA ID No.: FLD 984 171 165

HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION OF HAZARDOUS WASTE MANAGEMENT UNIT	EPA HAZARDOUS WASTE CODES MANAGED	BREIF WASTE DESCRIPTION	AVERAGE VOLITALE ORGANIC CONCENTRATION OF THE HAZARDOUS WASTE	CONTAINER TYPE	SUBPART CC STATUS	CONTROL OPTION (See Table 11-3)
Container Storage Area – Warehouse	See Figure 11-0	D001, F001, F002, F003, F005, AND Codes listed on Note 1 below.	Waste Parts Washer Solvent (Petroleum Naphtha), Dry Cleaner Wastes	≥ 500	Type A	Container Level 1 Controls per 264.1086(c)	11
Return and Fill Area	See Figure 11-0	D001 and codes listed in Note below	Waste Parts Washer Solvent (Petroleum Naphtha)	≥ 500	Type A	Container Level 1 Controls per 264.1086(c)	11

Note:
1. D004 through D011, D018, D019, D021 through D030, and D032 through D043

Table 11-3

Subpart CC Control Options

4/11/00

TABLE 11-3

SUBPART CC CONTROL OPTIONS (See Tables 11-1 and 11-2)

Tanks

1. These tanks shall comply with Tank Level 1 controls which require tanks to have a fixed roof with no visible cracks, holes, gaps, or other spaces in accordance with 40 CFR 284.1084(c). The tank shall be visually inspected for defects prior to the tank becoming subject to these requirements and at least once a year thereafter [40 CFR 284.1084(c)].

2. These tanks are fixed roof tanks equipped with an internal floating roof and shall comply with Tank Level 2 controls in accordance with 40 CFR 284.1084(e). The internal floating roof shall be visually inspected for defects at least once every twelve months after initial fill unless complying with the alternative inspection procedures in 40 CFR 284.1084(e)(3)(iii). [40 CFR 284.1084(d)(1)]

3. These tanks are equipped with an external floating roof and shall comply with Tank Level 2 controls in accordance with 40 CFR 284.1084(f). The external floating roof seal gaps shall be measured in accordance with the procedures contained in 40 CFR 284.1084(f)(3)(l) within 60 days and at least once every 5 years thereafter. The external floating roof shall be visually inspected for defects at least once every 12 months after initial fill. [40 CFR 284.1084(d)(2)]

4. These tanks are vented through a closed-vent system to control device and shall comply with Tank Level 2 controls in accordance with 40 CFR 284.1084(g). The tank shall be equipped with a fixed roof and closure devices which shall be visually inspected for defects initially and at least once every year. The closed-vent system and control device shall be inspected and monitored in accordance with 40 CFR 284.1087. [40 CFR 284.1084(d)(3)]

5. These tanks are pressure tanks which shall comply with Tank Level 2 controls in accordance with 40 CFR 284.1084(h). [40 CFR 284.1084(d)(4)]

6. These tanks are located inside an enclosure that is vented through a closed-vent system to an enclosed combustion control device and shall comply with Tank Level 2 controls in accordance with 40 CFR 284.1084(l). The closed-vent system and control device shall be inspected and monitored in accordance with 40 CFR 284.1087 [40 CFR 284.1084(d)(5)]

7. These tanks have covers which have been specified as "unsafe to inspect and monitor" and shall comply with the requirements of 40 CFR 284.1084(l)(1) [40 CFR 284.1084(f) & (g)]

Surface Impoundments

8. These surface impoundments shall have a floating membrane cover in accordance with 40 CFR 284.1085(c). The floating membrane cover shall be visually inspected for defects initially and at least once each year. [40 CFR 264.1085(b)(1)]

9. These surface impoundments shall have a cover that is vented through a closed-vent system to a control device in accordance with 40 CFR 284.1085(d). The surface impoundment cover and its closure device shall be visually inspected for defects initially and at least once a year. The closed-vent system and control device shall be inspected and monitored in accordance with 40 CFR 284.1087. [40 CFR 284.1085(b)(2)]

10. These surface impoundments have covers which has been designated as "unsafe to inspect and monitor" and shall comply with the requirements of 40 CFR 284.1085(g). [40 CFR 284.1085(c) & (d)]

Containers

11. These containers have a design capacity greater than 0/1 m^3 and less than or equal to 0.46 m^3 and meet the applicable US DOT regulations under the Container Level 1 standards. The container shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1086(b)(1)(i) & (o)(1)(i)]

12. These containers have a design capacity greater than 0/1 m^3 and less than or equal to 0.46 m^3 and are equipped with a cover and closure devices which form a continuous barrier over container openings. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1086(b)(1)(i) & (c)(1)(ii)]

13. These containers have a design capacity greater than 0/1 m^3 and less than or equal to 0.46 m^3 and are open-top containers in which an organic-vapor surpressing is placed on or over the hazardous waste in a container. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1086(b)(1)(i) & (c)(1)(iii)]

14. These containers have a design capacity greater than 0.46 m^3, are not in light material service and meet the applicable US DOT regulations under Container Level 1 standards. The container shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1086(b)(1)(ii) & (c)(1)(i)]

15. These containers have a design capacity greater than 0.46 m^3, are not in light material service and are equipped with a cover and closure devices which form a continuous barrier over container openings. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1086(b)(1)(ii) & (c)(1)(ii)]

16. These containers have a design capacity greater than 0.46 m^3, are not in light material service and are open-top containers in which an organic-vapor surpressing is placed on or over the hazardous waste in a container. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1086(b)(1)(ii) & (c)(1)(iii)]

17. These containers have a design capacity greater than 0.46 m^3, are in light material service and meet the applicable US DOT regulations under Container Level 2 standards. The container shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1086(b)(1)(iii) & (d)(1)(i)]

18. These containers have a design capacity greater than 0.46 m^3, are in light material service and operate with no detectable organic emissions as defined in 40 CFR 265.1081. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1088(b)(1)(iii) & (d)(1)(ii)]

19. These containers have a design capacity greater than 0.46 m^3, are in light material service and that have been demonstrated within the preceding 12 months to be vapor tight using 40 CFR Part 60, Appendix A, Method 27. The container and its cover and closure devices shall be visually inspected for defects at the time the container first manages hazardous waste or is accepted at a facility. If a container remains at a facility for 1 year or more, it shall be visually inspected for defects at least once every twelve months. [40 CFR 284.1088(b)(1)(ii) & (c)(1)(i)]

20. These containers have a design capacity greater than 0.1 m^3 that are used for treatment of a hazardous waste by a waste stabilization process and are vented directly through a closed-vent system to a control device in accordance with 40 CFR 284.1086(e)(2)(ii). The closed-vent system and control devices shall be inspected and monitored as specified in 40 CFR 284.1087. [40 CFR 284.1088(b)(2) & (e)(1)(i)]

21. These containers have a design capacity greater than 0.1 m^3 that are used for treatment of a hazardous waste by a waste stabilization process and are vented inside an enclosure which is exhausted through a closed-vent system to a control device in accordance with 40 CFR 284.1086(a)(2)(i) & (ii).). The closed-vent system and control devices shall be inspected and monitored as specified in 40 CFR 284.1087. [40 CFR 284.1088(b)(2) & (e)(1)(ii)]

11.0 AIR EMISSION STANDARDS

The Orange Park Branch has been granted an air permit exemption from FDEP due to low emissions of volatile organic compounds and hazardous air pollutants. However, certain air emission standards promulgated under the hazardous waste management rules affect facility operations and are discussed below.

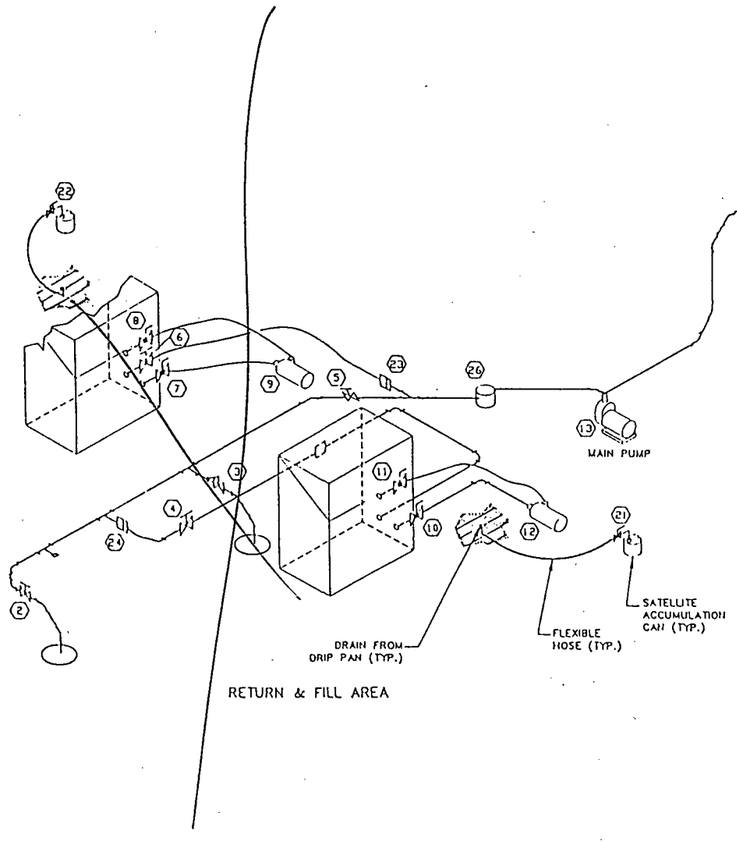
The Orange Park Branch manages hazardous wastes containing volatile organic compounds (VOCs) which subject it to certain provisions of the air emissions standards promulgated under 40 CFR Part 264. The requirements of 40 CFR Part 264 Subpart AA: Air Emission Standards for Process Vents ***do not*** apply since the facility is strictly a storage facility. No process vents are present.

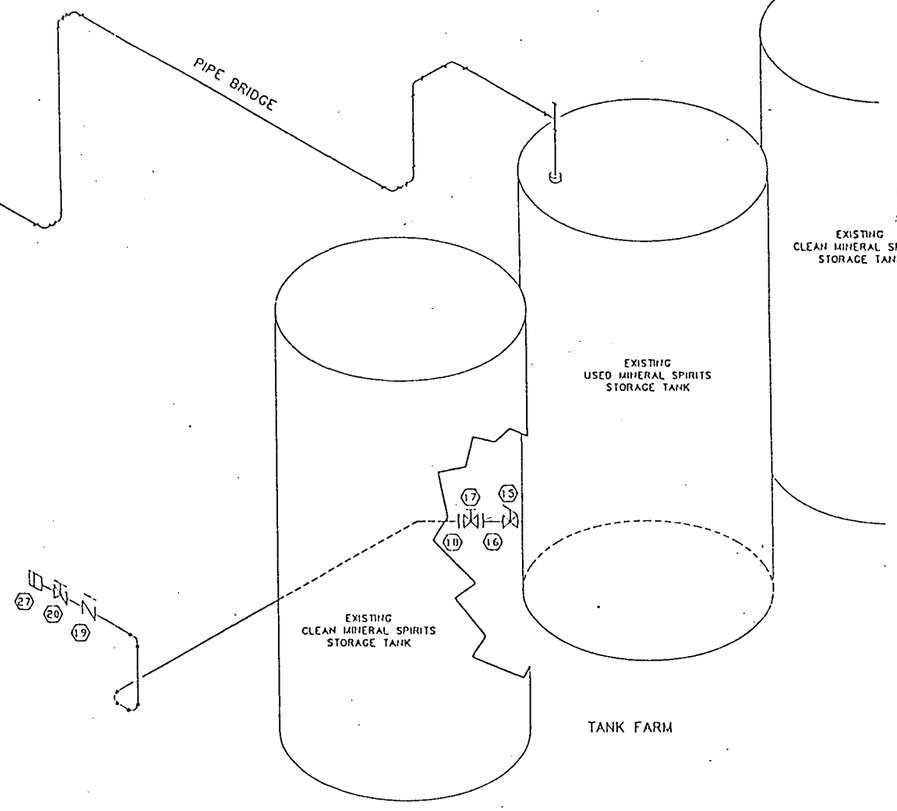
The requirements of 40 CFR Part 264 Subpart BB: Air Emission Standards for Equipment Leaks *do* apply to certain equipment associated with the used parts washer solvent storage tank system. This equipment contains or contacts hazardous wastes with VOC concentrations greater than 10 percent by weight. The Subpart BB requirements apply to pumps, flanges, and valves which are part of the used parts washer solvent storage tank system. Figure 11.0-1 shows the specific equipment items which are considered to be in heavy liquid service for Subpart BB compliance. Compliance with the applicable portions of 40 CFR 264.1052 through 1063 will be achieved through implementation of the procedures detailed in Appendix J. This appendix also contains example forms which show the minimum information which Safety-Kleen will keep to comply with the recordkeeping requirements of 40 CFR 264.1064. Safety-Kleen will comply with the reporting requirements of 40 CFR 264.1065.

Safety-Kleen maintains an operating record in the facility. This record provides a place in which the required information is recorded under 40 CFR 264.1064. The forms and plans in Appendix J contain the necessary information.

Revised 11/2000

REVISION 0 - 08/20/97





EQUIPMENT SCHEDULE
WASTE MINERAL SPIRITS

MARK	DESCRIPTION
1	
2	2" THREADED BALL VALVE
3	2" THREADED BALL VALVE
4	2" THREADED GATE VALVE
5	2" THREADED GATE VALVE
6	2" THREADED GATE VALVE
7	1 1/2" THREADED BALL VALVE
8	1 1/4" THREADED BALL VALVE
9	WASTE M.S. RECIRCULATION PUMP
10	1 1/2" THREADED BALL VALVE
11	1 1/4" THREADED BALL VALVE
12	WASTE M.S. RECIRCULATION PUMP
13	WASTE MINERAL SPIRITS PUMP
14	2" THREADED CHECK VALVE
15	3" THREADED INTERNAL EMERGENCY VALVE
16	3" FLANGED CONNECTION
17	3" FLANGED GATE VALVE
18	3" FLANGED CONNECTION
19	3" THREADED CHECK VALVE
20	3" THREADED GATE VALVE
21	1" THREADED BALL VALVE
22	1" THREADED BALL VALVE
23	2" CAM LOCK
24	2" CAM LOCK
25	
26	STRAINER ASSY.
27	3" CAM LOCK

GENERAL NOTES

1.) ACTUAL PIPING CONFIGURATION MAY VARY.

2.) NON-PERMITTED TANKS AND EQUIPMENT MAY CHANGE.

Revised 4/2000

Figure 11.0-1

NO.	DESCRIPTION	BY	CHK	APPR	DATE
06	REMOVED WASTE ANTIFREEZE TANK & SCHEDULE REMOVED DUMPSTER & VALVES 1 & 25	MHH	KJM	DP	022195
05	ADDED TAGS 23, 24, 25, 26 & 27	MBH	KJM	-	120192
04	ADDED TAGS 21 & 22	MBH	KJM	-	111992
03	MISC. REVISIONS	JBC	TYJ	-	042192
02	ADDED VACUM VENT (TAG #24)	MBH	-	-	031192
01	REVISED GLYCOL PIPING & VALVES	MBH	-	-	012292

REVISIONS

TITLE

ENVIRONMENTAL PIPING SCHEMATIC FOR WASTE M.S. – EXISTING

Safety-Kleen Corp.
1000 NORTH RANDALL ROAD ELGIN, ILLINOIS 60123
PHONE (708)697-8460

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
NTS	MBH	-	-		080321

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
TAMPA, FL.	316301-2003B	06

APPENDICES

Appendix A

Site Photographs

Safety-Kleen Corp.
Orange Park, Florida

Photograph 1a: Container storage area.

Photograph 1b: Loading/unloading dock outside container storage area.

Safety-Kleen Corp.
Orange Park, Florida

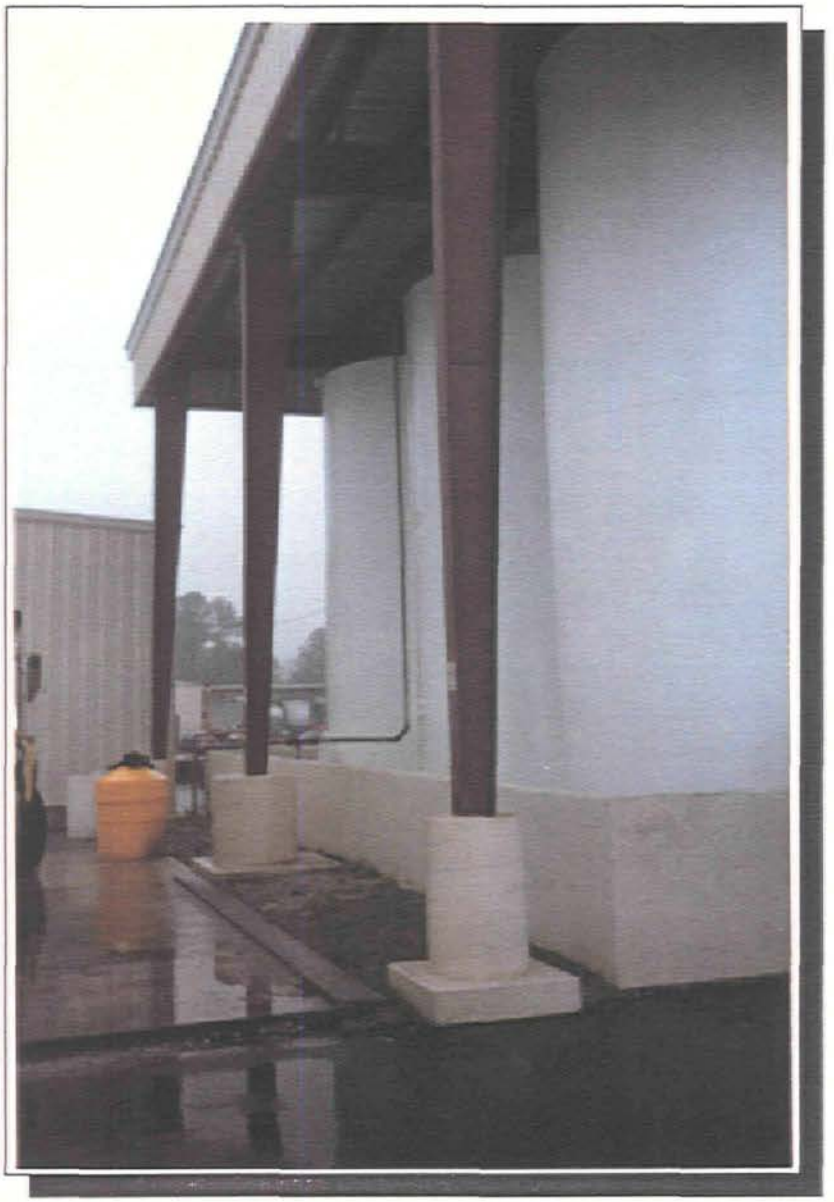
Photograph 2a: Return/fill shelter.

Photograph 2b: Return/fill shelter.

Safety-Kleen Corp.
Orange Park, Florida

Photograph 3a: Permitted waste and FRS shelters.

Photograph 3b: FRS shelter.

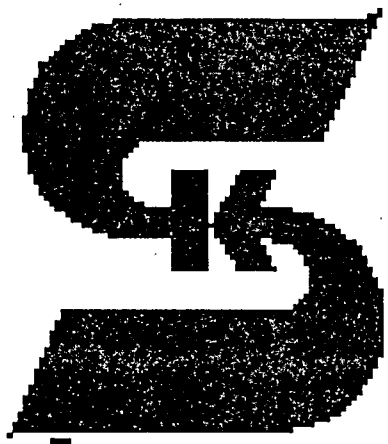


Photograph 4: Tank farm showing roof and containment.

Photograph 5: Tank farm showing skids and concrete pad.

Appendix B

Chemical Analysis Reports



1996
ANNUAL WASTE STREAM RECHARACTERIZATION

FINAL REPORT
12/16/96

1996
ANNUAL WASTE STREAM RECHARACTERIZATION SAMPLING SITE CODES

BI, Bismark, ND
BU, Buffalo, NY
CO-E, Englewood, CO
CO-GJ, Grand Junction, CO
CO-P, Pueblo, CO
DE, Denton, TX (Recycle Center)
DO, Dolton, IL (Recycle Center)
RE, Reedley, CA (Recycle Center)
FA, Fargo, ND
GA-C, Columbus, GA
GA-G, Garden City, GA
GA-M, Macon, GA
GA-m, Morrow, GA
GA-N, Norcross, GA
ID-B, Boise, ID
IL-D, Dolton, IL
KS-D, Dodge City, KS
KS-E, Edwardsville, KS
KS-W, Wichita, KS
LA-K, Kenner, LA
LA-P, Pineville, LA
MN-B, Blaine, MN
MS-J, Jackson, MS
NC-R, Raliegh, NC
ND-B, Bismark, ND
NE-GI, Grand Island, NE
NE-O, Omaha, NE
NJ-B, Bound Brook, NJ
NJ-N, Newark, NJ
NJ-S, Southampton, NJ
NM-A, Albuquerque, NM
NM-F, Farmington, NM
NY-A, Avon, NY
NY-C, Colonie, NY
NY-D, Dewitt, NY
NY-L, Lackawanna, NY
NY-N, N. Amityville, NY
NY-S, Syracuse, NY
NY-T, Thornwood, NY
NY-W, Woodside, NY
OK-T, Tulsa, OK
SC-G, Greer, SC
SD-S, Sioux Falls, SD
TECH CTR, SK Technical Center, Elk Grove Vlg.
WA-L, Lynnwood, WA
WA-S, Spokane, WA
WV-N, Nitro, WV
WV-W, Wheeling, WV

AQUEOUS BRAKE CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	4.37	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	4.66	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.19	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	**2.62**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.31	**3.73**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<0.40	0.21	**3.28**	<0.20	<0.35	0.02	<0.75	<0.15
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.24	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.14	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	**5.92**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.36	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	2.42	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	0.96	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.09	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.25	<1.0	<2.0	**5.85**	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.15	**1.62**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.7	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	**1**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.55	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.52	**3.28**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	3.03	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-E	8.98	0.998	85*	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-D	8.40	1.016	134*	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-W	7.52	1.002	102*	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	WA-L	9.01	1	**104**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-C	9.08	0.993	**126**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-G	8.94	0.993	>200	<4.0	1.79	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5

AQUEOUS BRAKE CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1
LAB	SITE										
SK-95	NJ-N	9.00	0.991	>200	<4.0	1.19	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NJ-B	9.21	1.00	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	ID-B	9.24	1.007	>200	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45
SK-95	NY-S	8.74	1.01	>200	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45
SK-95	NY-W	8.90	0.99	>200	<4.0	1.36	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-A	8.93	1.002	>200	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45
SK-95	NJ-S	9.12	0.996	>200	<4.0	2.07	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-T	7.56	0.995	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-C	9.01	0.996	>200	<4.0	1.36	1.73	<2.0	<4.0	<0.04	<0.45
SK-95	NY-L	9.01	1.01	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	GA-m	9.08	0.099	126	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-N	9.28	0.986	>200	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45
SK-95	GA-M	8.91	0.991	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-96	GA-m	9.07	0.996	>200	<5.00	2.48	<0.500	<0.500	<4.00	<0.04	<0.45
SK-96	GA-M	9.16	0.99	>200	<5.00	0.83	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	GA-G	9.10	1	>142	<5.00	1.39	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	GA-N	8.83	0.98	79	<5.00	1.79	0.848	<0.500	<4.00	<0.040	<0.452
SK-96	GA-C	7.85	1	>200	<5.00	0.88	<0.50	<0.50	<4.00	<0.04	<0.45
SK-96	KS-W	9.12	0.99	>200	<5.00	0.838	<0.500	<0.500	<4.0	<0.040	<0.45
SK-96	KS-E	9.03	1	>200	<5.0	0.816	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	KS-D	8.41	1.02	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	WA-L	9.15	0.99	142	<5.00	1.21	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	MO-C	9.34	1.01	>200	<5.00	1.03	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-L	7.65	1.04	>200	<5.00	0.722	<0.500	<0.500	<4.00	<0.040	<0.450
SK-96	NY-L	9.02	1.015	>200	<5.00	1.02	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-C	8.28	1.01	>200	<5.00	48.1	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-C	8.62	1.041	>200	<5.00	0.628	0.736	<0.500	<4.00	<0.040	<0.45
SK-96	NY-C	9.06	1.019	>200	<5.00	0.699	2.24	<0.500	<4.00	<0.040	<0.45
SK-96	NY-N	8.19	0.97	>200	<5.00	1.2	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-N	8.42	1.009	>200	<5.00	0.787	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-S	8.97	0.999	>200	<5.00	0.819	<0.500	<0.500	<4.00	<0.040	<0.45

AQUEOUS BRAKE CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-S	9.30	1.00	>200	<5.00	1.34	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-S	8.97	1.00	>200	<5.00	4.02	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NM-F	9.15	1.01	>200	<5.00	1.88	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-A	8.68	1.01	>200	<5.00	1.41	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	DE	8.26	0.99	151	<5.00	1.82	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NE-G	8.9	1.01	>200	<5.00	0.8	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-A	8.72	0.998	>200	<5.00	0.723	<0.500	<0.500	<4.00	<0.04	<0.45	<0.500
SK-96	NY-A	8.54	1.0	>200	>5.00	0.628	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-A	8.74	0.99	>200	<5.00	0.681	<0.500	<0.500	<4.00	<0.04	<0.45	<0.500
Total # 0f Samples		71										
# of Hits		0	0	4	0	0	9	0	1	0	0	0
	MAX	9.34	1.041	151	0	48.1	5.92	0	5.85	0.02	0	0
	MIN	7.52	0.099	104	0	0.21	0.736	0	5.85	0.02	0	0

*RESAMPLE CONFIRMS FLASH POINT RESULT >200.

AQUEOUS BRAKE CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	TECH CTR	<0.48	<0.36	<0.68	<0.96	<0.78	<0.31	<4.49	<0.45	<0.23	<0.30
SK-95	TECH CTR	<0.238	<0.180	<0.340	<0.480	<0.390	<0.155	<2.24	<0.225	<0.113	<0.148
SK-95	TECH CTR	<0.190	<0.144	<0.272	<0.384	<0.312	<0.124	<1.79	0.23	<0.090	<0.118
SK-95	TECH CTR	<0.240	<0.180	<0.350	<0.480	<0.400	<0.160	<2.20	<0.220	<0.110	<0.150
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<0.71	<0.54	<1.0	<1.4	<1.2	<0.46	<6.8	<0.68	<0.23	<0.44
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<0.95	<0.72	<1.4	<1.9	<1.6	<0.62	<9.0	<0.90	<0.45	<0.59
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<0.95	<0.72	<1.4	<1.9	<1.6	<0.62	<9.0	<0.90	<0.45	<0.59
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
SK-95	TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
SK-95	TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
SK-95	TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
SK-95	TECH CTR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
SK-95	TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	KS-E	<0.48	<0.36	<0.68	<0.96	<0.78	<0.31	<4.49	<0.45	<0.23	<0.30
SK-95	KS-D	<0.190	<0.144	<0.272	<0.384	<0.312	<0.124	<1.794	<0.180	<0.090	<0.118
SK-95	KS-W	<4.8	<3.6	<7.0	<9.5	<8.0	<3.1	<45.0	<4.5	<2.2	<3.0
SK-95	WA-L	<0.19	<0.14	<0.28	<0.38	<0.32	<0.12	<1.8	<0.18	<0.09	<0.12
SK-95	GA-C	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	GA-G	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118

AQUEOUS BRAKE CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	NJ-N	<0.95	<0.72	<1.4	<1.9	<1.6	<0.62	<9.00	<0.90	<0.45	<0.59
SK-95	NJ-B	<1.90	<1.40	<2.80	<3.80	<3.20	<1.20	<18.00	<1.80	<0.90	<1.20
SK-95	ID-B	<1.0	<1.0	<2.0	<3.0	<3.0	<2.0	<0.60	<2.0	<2.0	<2.0
SK-95	NY-S	<1.4	<1.2	<1.7	<3.0	<3.0	<1.6	<0.60	<1.8	<1.8	<1.9
SK-95	NY-W	<0.700	<0.580	<0.850	<1.50	<1.50	<0.800	<0.300	<0.900	<0.900	<0.950
SK-95	NY-A	<1.4	<1.2	<1.7	<3.0	<3.0	<1.6	<0.6	<1.8	<1.8	<1.9
SK-95	NJ-S	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	NY-T	<0.280	<0.230	<0.340	<0.590	<0.600	<0.320	<0.120	<0.360	<0.360	<0.380
SK-95	NY-C	<0.70	<0.58	<0.85	<1.5	<1.5	<5.6	<0.30	<0.90	<0.90	<0.95
SK-95	NY-L	<1.4	<1.2	<1.7	<3.0	<3.0	<1.6	<0.60	<1.8	<1.8	<1.9
SK-95	GA-m	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
SK-95	NY-N	<2.8	<2.3	<3.4	<5.9	<6.0	<3.2	<1.2	<3.6	<3.6	<3.8
SK-95	GA-M	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-96	GA-m	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	GA-M	<0.450	<0.450	<0.500	<0.720	<0.720	<0.580	<0.780	<0.900	<0.480	<0.450
SK-96	GA-G	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	GA-N	<0.900	<0.900	<1.00	<1.740	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	GA-C	<0.85	<0.90	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.95	<0.90
SK-96	KS-W	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<35	<35	<7.0	<7.0
SK-95	KS-E	<70*	<70*	<70*	<70*	<70*	<70*	<350*	<350*	<70*	<70*
SK-96	KS-D	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	WA-L	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	MO-C	<1.40	<1.20	<1.70	<3.00	<3.00	<1.60	<0.600	<1.80	<1.80	<1.90
SK-96	NY-L	<9.00	<9.00	<10.0	<14.5	<14.5	<11.5	<15.5	<18.0	<9.50	<9.00
SK-96	NY-L	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NY-C	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-C	<1.70	**0.27**	**0.92**	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NY-C	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NY-N	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-N	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NY-S	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900

AQUEOUS BRAKE CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-S	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-S	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NM-F	<1.70	<0.150	<1.70	<3.00	<3.00	<1.60	<0.600	<0.700	<0.370	<0.470
SK-96	NM-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	DE	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NE-G	<9.00	<9.00	<10.0	<14.5	<14.5	<11.5	<15.5	<18.0	<9.50	<9.00
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-A	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
Total # 0f Samples		71									
# of Hits		0	1	1	0	0	0	0	0	0	0
	MAX	0	0.27	0.92	0	0	0	0	0.23	0	0
	MIN	0	0.27	0.92	0	0	0	0	0.23	0	0

AQUEOUS BRAKE CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.14	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.14	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.53	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.13	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.53	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.19	<0.10	<0.14
SK-95	TECH CTR	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	29	<0.50	<0.50	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2.2	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.43	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**4.0**	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.11	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.91	**127**	**0.51**	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9.6	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.37	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.26	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	196	<5.0	<5.0	<7.0
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**61.4**	**20.5**	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**1.6**	0.25	<0.14
SK-95	TECH CTR	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**5020**	<5.0	<7.0
SK-95	TECH CTR	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**543**	<5.0	<7.0
SK-95	TECH CTR	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1.2	<0.25	<0.25	<0.14
SK-95	KS-E	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**56**	<5.0	<7.0
SK-95	KS-D	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	59	**2.4**	<1.0	<1.4
SK-95	KS-W	0.29	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**301**	**348**	<0.10	<0.14
SK-95	WA-L	**12**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.4
SK-95	GA-C	<25	<25	<25	<25	<25	<25	<25	<125	**178**	<25	<35
SK-95	GA-G	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**59**	**17**	<1.4

AQUEOUS BRAKE CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	NJ-N	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.42	<0.10	<0.14
SK-95	NJ-B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.4
SK-95	ID-B	<100	<100	<100	<100	<100	<100	<100	<500	**952**	<100	<140
SK-95	NY-S	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0
SK-95	NY-W	<10	<10	<10	<10	<10	<10	<10	<50	**76.2**	<10	<14
SK-95	NY-A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**1.6**	<1.0	<1.0
SK-95	NJ-S	<100	<100	<100	<100	<100	<100	<100	<500	**989**	<100	<140
SK-95	NY-T	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**12.2**	<1.0	<1.4
SK-95	NY-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**9.6**	<0.10	<0.14
SK-95	NY-L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**30.2**	**2.6**	<0.14
SK-95	GA-m	<25	<25	<25	<25	<25	<25	<25	<125	**178**	<25	<35
SK-95	NY-N	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**7.6**	<0.10	<0.14
SK-95	GA-M	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.27	<0.10	<0.14
SK-96	GA-m	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.14
SK-96	GA-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	GA-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.9**	<0.100	<0.140
SK-96	GA-N	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**10.5**	<1.00	<1.40
SK-96	GA-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	3.7	**2220**	0.42	<0.14
SK-96	KS-W	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**32.8**	0.27	<0.140
SK-96	KS-E	<10	<10	<10	<10	<10	<10	<10	158	**1580**	<10	<10
SK-96	KS-D	**0.92**	<0.100	<100.0	<0.100	<100.0	<0.100	<0.100	**253**	**2650**	0.16	<0.140
SK-96	WA-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**93.4**	**3.6**	<0.140
SK-96	MO-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.49	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.46	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**117**	<0.100	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.1**	<0.100	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.4**	<0.100	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.5	**15.1**	<0.100	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**19.1**	**2.2**	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.25	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	11.6	**50.4**	<0.100	<0.140

AQUEOUS BRAKE CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**33.1**	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**230**	**67.1**	<0.140
SK-96	NM-F	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	48.8	**0.93**	<0.100	<0.140
SK-96	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	DE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**35.6**	**5.80**	<0.140
SK-96	NE-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.92**	<0.100	<0.140
SK-95	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1250**	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**42.5**	<0.100	<0.140
SK-95	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**3200**	<0.100	<0.140
Total # Of Samples		71										
# of Hits		**2**	0	0	0	0	0	0	**2**	**41**	**8**	0
	MAX	12	0	0	0	0	0	0	301	5020	67.1	0
	MIN	0.15	0	0	0	0	0	0	0.91	0.11	0.16	0

AQUEOUS PARTS CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-S	10.1	0.999	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-S	9.7	1.01	>200	<5.00	4.5	<0.500	<0.500	**5.59**	<0.040	<0.452	<0.500
SK-96	NY-N	9.63	1.013	>200	<5.00	2.04	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	9.64	0.996	>200	<5.00	2.06	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	LA-K	9.00	1	>200	<5.00	1.38	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-A	9.24	1.01	>200	<5.00	3.86	<0.500	<0.500	4.64	<0.040	<0.45	<0.500
SK-96	DE	9.8	1.02	151	<5.00	5.72	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-A	8.45	1.00	>200	<5.00	1.08	<0.500	<0.500	<0.040	<0.040	<0.452	<0.500
SK-96	NY-A	9.64	1.013	>200	<5.00	3.86	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-A	9.78	1.015	>200	<5.00	2.54	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.2	NA	>142	<5.00	1.25	**1.65**	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.57	NA	>142	<5.00	1.32	**5.09**	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	9.28	NA	>142	<5.00	0.922	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.91	NA	>142	<5.00	1.14	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	9.76	NA	>142	<5.00	1.45	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	6.23	NA	>142	<5.00	1.27	**8.07**	1.58	<4.00	<0.040	<0.45	1.56
SK-96	TECH CTR	9.35	NA	>142	<5.00	0.727	<0.500	1.79	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	7.97	NA	>142	<5.00	1.9	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.4	NA	>142	<5.00	0.835	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.51	NA	>142	<5.00	0.727	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.8	NA	>142	<5.00	0.978	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.87	NA	>142	<5.00	1.04	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.76	NA	>142	<5.00	0.906	<0.500	4.22	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.5	NA	>142	<5.00	1.07	**1.5**	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	9.49	NA	>142	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.62	NA	>142	<5.00	1.3	0.929	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	9.46	NA	>142	<5.00	1.23	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.41	NA	>142	<5.00	0.625	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	10.04	NA	>142	<5.00	1.03	<0.500	<0.500	<4.00	<0.040	<0.012	<0.500
SK-96	TECH CTR	8.22	NA	>142	<5.00	0.55	**1.01**	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	TECH CTR	8.13	NA	>142	<5.00	0.823	**3.37**	0.561	<4.00	<0.040	<0.45	<0.500

AQUEOUS PARTS CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	TECH CTR	9.04	NA	>142	<5.00	0.619	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
TOTAL # OF SAMPLES		32										
	#OF HITS	0.00	0	0	0	0	6	0	1	0	0	0
	MAX	10.1	1.02	151	0	5.72	8.07	4.22	5.59	0	0	1.56
	MIN	6.23	0.996	151	0	0.55	0.929	0.561	4.64	0	0	1.56

AQUEOUS PARTS CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-S	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-S	<18.0	<18.0	<20.0	<29.0	<29.0	<23.0	<31.0	<36.0	<19.0	<18.0
SK-96	NY-N	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NY-N	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	LA-K	<9.00	<9.00	<10.00	<14.5	<14.5	<11.5	<15.5	<18.0	<9.50	<9.00
SK-96	NM-A	<1.70	<0.150	<1.70	<3.00	<3.00	<1.60	<0.600	<0.700	<0.370	<0.470
SK-96	DE	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-A	<3.60	<3.60	<4.00	<5.80	<5.80	<4.60	<6.20	<7.20	<3.80	<3.60
SK-96	NY-A	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NY-A	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<1.40	<1.20	<1.70	<3.00	<3.00	<1.60	<0.600	<1.80	<1.80	<1.90
SK-96	TECH CTR	<2.80	<2.30	<3.40	<5.90	<6.00	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<2.80	<2.30	<3.40	<5.90	<6.00	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
SK-96	TECH CTR	<2.80	<2.30	<3.40	<5.90	<6.00	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	TECH CTR	<2.80	<2.30	<3.40	<5.90	<6.00	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	TECH CTR	<2.80	<2.30	<3.40	<5.90	<6.00	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	TECH CTR	<2.80	<2.30	<3.40	<5.90	<6.00	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	TECH CTR	<0.056	<0.046	<0.068	<0.120	<0.120	<0.064	<0.024	<0.072	<0.072	<0.076
SK-96	TECH CTR	<21.2	<20.0	<20.0	<20.9	<42.7	<22.2	<20.0	<20.0	<20.0	<21.0
SK-96	TECH CTR	<42.4	<40.0	<40.0	<41.8	<85.4	<44.4	<40.0	<40.0	<40.0	<42.0
SK-96	TECH CTR	<21.2	<20.0	<20.0	<20.9	<42.7	<22.2	<20.0	<20.0	<20.0	<21.0
SK-96	TECH CTR	<42.4	<40.0	<40.0	<41.8	<85.4	<44.4	<40.0	<40.0	<40.0	<42.0
SK-96	TECH CTR	<0.280	<0.230	<0.340	<0.590	<0.600	<0.320	<0.120	<2.00	<0.360	<0.380

AQUEOUS PARTS CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	TECH CTR	<21.2	<20.0	<20.0	<20.9	<42.7	<22.2	<20.0	<20.0	<20.0	<21.0
TOTAL # OF SAMPLES		32									
	#OF HITS	0	0	0	0	0	0	0	0	0	0
	MAX	0	0	0	0	0	0	0	0	0	0
	MIN	0	0	0	0	0	0	0	0	0	0

AQUEOUS PARTS CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.22	<0.100	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**3.7**	<0.100	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.28	<0.100	<0.140
SK-96	LA-K	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**181**	<0.100	<0.140
SK-96	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.12	<0.100	<0.140
SK-96	DE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	4.3	<0.100	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**41.5**	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	NY-A	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<1.20	0.34	<0.250	<0.350
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.9	**6**	0.42	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.4**	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.67	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.79**	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.5	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.29	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.76**	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**85.3**	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.2	**182**	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**2.6**	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	0.105	<0.100	<0.100	<0.500	0.27	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	**48**	0.456	<0.140
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140

AQUEOUS PARTS CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	TECH CTR	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.305	<0.100	**0.852**	<0.100
TOTAL # OF SAMPLES		32										
	#OF HITS	0	0	0	0	0	0	0	0	11	1	0
	MAX	0	0	0	0	0.105	0	0	4.3	182	0.852	0
	MIN	0	0	0	0	0.105	0	0	0.305	0.12	0.42	0

DRY CLEANER FILTER POWDER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	KS-E	6.9	0.647	>200	<0.40	0.21	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	KS-W	6.54	1.08	>200	<0.40	0.33	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-A	6.62	1.439	>200	<0.40	0.23	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-T	6.33	N/A	>200	<0.40	0.2	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	DE	6.74	0.791	>200	<0.40	0.497	<0.10	0.28	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-C	7.17	NA	>200	<4.0	0.252	0.110	0.273	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-GI	5.75	1.38	>200	<0.40	0.298	0.129	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-O	6.11	1.32	>200	<0.40	0.418	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-L	6.28	1.03	>200	<0.40	0.24	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NM-A	6.26	0.905	>200	<0.40	0.237	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-N	6.57	1.17	>200	<0.40	0.518	<0.10	0.445	<0.35	<0.0008	<0.75	<0.15
SK-96	KS-E	5.66	1.31	>200	<0.500	0.0296	0.071	0.058	<0.400	<0.0008	<0.600	<0.050
SK-96	KS-W	5.63	1.33	>200	<0.500	0.581	0.111	0.084	<0.400	<0.0008	<0.600	<0.050
SK-96	MO-C	5.85	1.37	>200	<0.500	0.283	0.06	0.079	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	6.32	0.98	>200	<0.500	0.176	0.113	0.099	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	6.00	1.591	>200	<0.500	0.175	<0.050	0.061	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	5.85	1.598	>200	<0.500	0.161	<0.050	0.061	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-m	6.29	1.42	>200	<0.500	0.254	0.052	0.072	<0.400	<0.0008	<0.600	<0.050
SK-96	MS-J	6.96	1.28	>200	<0.500	0.181	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NM-A	7.27	1.03	>200	<0.500	0.381	<0.050	0.232	0.488	<0.0008	<0.600	<0.050
SK-96	GA-N	6.67	1.05	>200	<0.500	0.252	<0.050	0.065	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-N	6.15	1.66	>200	<0.500	0.299	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-N	2.65	1.427	>200	<5.00	0.661	<0.500	**9.49**	<4.00	<0.040	<0.452	<0.500
SK-96	NY-N	5.86	1.142	>200	<0.500	0.163	0.069	0.428	<0.400	<0.0008	<0.600	<0.050
SK-96	DE	6.05	0.78	>200	<0.500	0.076	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	LA-P	NA*	NA*	NA*	<0.500	0.318	0.065	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	5.85	1.01	N/A	<0.500	0.176	<0.050	0.065	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	6.24	1.1	>200	<0.500	0.266	0.108	0.1	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	6.10	1.39	>200	<0.500	0.228	0.099	0.095	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-C	6.12	1.14	>200	<0.500	0.184	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-G	5.98	1.59	>200	<0.500	0.35	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050

DRY CLEANER FILTER POWDER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	LA-K	N/A	N/A	N/A	<0.500	0.262	0.06	0.094	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-A	6.21	0.92	>200	<0.500	0.237	<0.050	0.069	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-A	6.20	1.02	>200	<0.500	0.168	<0.050	0.063	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-A	6.10	1.04	>200	<0.500	0.24	<0.050	0.075	<0.400	<0.0008	<0.600	<0.050
TOTAL # OF SAMPLES		35										
# of Hits		0	0	0	0	0	0	1	0	0	0	0
	MAX	7.27	1.66	0	0	0.661	0.129	9.49	0.488	0	0	0
	MIN	2.65	0.647	0	0	0.0296	0.052	0.058	0.488	0	0	0

DRY CLEANER FILTER POWDER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	KS-E	0.035	<0.042	<0.044	<0.098	<0.120	<0.069	<0.350	<0.142	<0.041	<0.142
SK-95	KS-W	0.14	<0.044	<0.044	<0.10	<0.12	<0.068	<0.35	<0.14	<0.040	<0.14
SK-95	NY-A	<0.040	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.042
SK-95	NY-T	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	DE	<0.040	<0.044	<0.044	<0.100	<0.120	<0.068	<0.350	<0.140	<0.040	<0.140
SK-95	NY-C	0.052	<0.046	<0.068	<0.120	<0.120	<0.064	<0.024	<0.072	<0.072	<0.076
SK-95	NE-GI	<0.040	<0.044	<0.044	<0.100	<0.120	<0.068	<0.350	<0.140	<0.040	<0.140
SK-95	NE-O	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	NY-L	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	NM-A	<0.040	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.042
SK-95	NY-N	<0.040	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.042
SK-96	KS-E	<0.040	<0.040	<0.040	<0.040	<0.090	<0.040	<0.040	<0.040	<0.040	<0.040
SK-96	KS-W	<0.042	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.040
SK-96	MO-C	0.091	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.040
SK-96	NY-L	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-L	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-L	<0.040	<0.040	<0.040	<0.050	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	GA-m	<0.040	<0.040	<0.040	<0.050	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	MS-J	<0.040	<0.040	<0.040	<0.05	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	NM-A	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	GA-N	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	DE	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	LA-P	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	0.059	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	0.057	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	GA-C	<0.042	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	GA-G	<0.040	<0.040	<0.040	<0.050	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040

DRY CLEANER FILTER POWDER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	LA-K	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
TOTAL # OF SAMPLES		35									
# of Hits		0	0	0	0	0	0	0	0	0	0
	MAX	0.14	0	0	0	0	0	0	0	0	0
	MIN	0.035	0	0	0	0	0	0	0	0	0

DRY CLEANER FILTER POWDER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DCIB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	KS-E	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**134**	0.45	<0.14
SK-95	KS-W	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**116**	<0.10	<0.14
SK-95	NY-A	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	**129**	<0.005	<0.005
SK-95	NY-T	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**186**	<0.10	<0.14
SK-95	DE	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	NY-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**105**	**1.9**	<0.14
SK-95	NE-GI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**43.6**	**2.9**	<0.14
SK-95	NE-O	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**1870**	**0.51**	<0.14
SK-95	NY-L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**131**	<0.10	<0.14
SK-95	NM-A	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**105**	0.1	<0.14
SK-95	NY-N	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.84	**106**	<0.10	<0.14
SK-96	KS-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**119**	0.150	<0.140
SK-96	KS-W	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**277**	<0.100	<0.140
SK-96	MO-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**156**	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	0.11	<0.100	<0.100	<0.100	<0.500	**134**	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**102**	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**193**	<0.100	<0.140
SK-96	GA-m	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**111**	**0.8**	<0.140
SK-96	MS-J	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**145**	0.34	<0.140
SK-96	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1110**	0.22	<0.140
SK-96	GA-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**261**	0.2	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**230**	<0.100	<0.140
SK-96	NY-N	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**11200**	**2.9**	<2.00
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**176**	0.26	<0.140
SK-96	DE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**210**	<0.100	<0.140
SK-96	LA-P	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**389**	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**218**	0.36	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**159**	0.15	0.14
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**162**	0.16	<0.140
SK-96	GA-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**174**	<0.100	<0.140
SK-96	GA-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<125	**214**	<0.100	<0.140

DRY CLEANER FILTER POWDER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	LA-K	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**436**	<0.100	<0.140
SK-96	NY-A	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	**1090**	**243**	<10.00	<14.0
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1030**	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**283**	<0.100	<0.140
TOTAL # OF SAMPLES		35										
# of Hits		0	0	0	0	0	0	0	1	34	5	0
	MAX	0	0	0	0.11	0	0	0	1090	11200	2.9	0.14
	MIN	0	0	0	0.11	0	0	0	0.84	43.6	0.1	0.14

DRY CLEANER BOTTOMS

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E/AC	5.7	1.21	145	<0.40	0.47	<0.10	0.26	**26.9**	<0.0008	<0.75	<0.15
SK-95	SD-S	10.9	1.106	**81**	<0.40	0.37	<0.10	<0.20	<0.35	<0.008	<0.75	<0.15
SK-95	KS-W	7.27	1.29	>200	<0.40	1.1	<0.10	3.98	<0.35	<0.0008	<0.75	<0.15
SK-95	KS-E	7.77	1.19	>200	<0.40	0.39	<0.10	0.24	<0.35	<0.0008	<0.75	<0.15
SK-95	GA-C	4.46	1.14	145	<4.0	2.76	<1.0	**18.11**	3.85	<0.04	<0.45	<1.5
SK-95	GA-G	4.92	1.42	>200	<4.0	1.57	<1.0	**18.15**	4.55	<0.04	<0.45	<1.5
SK-95	NJ-N	3.66	1.29	>142	<4.0	1.64	<1.0	**13.95**	<3.5	<0.04	<0.45	<1.5
SK-95	LA-K	4.82	1.175	>200	<4.00	3.14	<1.00	**18.40**	**14.1**	<0.04	<0.45	<2.0
SK-95	ID-B	5.11	1.03	>200	<0.40	0.688	<0.10	1.43	0.46	0.0017	<0.75	<0.15
SK-95	LA-P	9.05	1.091	>200	<0.40	<0.10	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-S	4.94	1.23	>200	<5.0	<20	**2.09**	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-W	7.15	1.29	>200	<0.40	0.11	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NM-A	8.25	1.14	>200	<0.40	0.392	<0.10	0.688	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-A	5.78	1.217	>200	<0.40	0.18	<0.10	2.62	1.0	<0.0008	<0.75	<0.15
SK-95	NJ-S	4.91	1.23	>200	<0.40	0.18	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-C	5.95	1.19	>200	<4.0	1.8	<1.0	**14.1**	**6.84**	<0.04	<0.45	<2.0
SK-95	NY-N	4.10	1.35	>200	<4.0	1.34	<1.0	**20.4**	<4.0	<0.04	<0.45	<2.0
SK-95	NY-T	4.17	1.11	>200	<1.25	<2.0	0.28	**30.25**	**32.11**	<0.04	<0.90	<3.0
SK-95	NY-L	4.83	1.28	>200	<4.0	3.23	<1.0	**23.3**	**6.78**	<0.04	<0.45	<1.5
SK-95	GA-m	4.46	1.14	145	<4.0	2.76	<1.0	**18.11**	3.85	<0.04	<0.45	<1.5
SK-95	NE-O	6.43	1.34	>200	<0.40	0.172	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-GI	7.29	1.27	>200	<0.40	<0.10	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	DE	9.29	1.11	>200	<4.0	0.116	<0.10	<0.20	1.54	<0.0008	<0.75	<0.15
SK-95	MS-J	5.20	0.972	>200	<0.40	0.768	<0.10	1.59	<0.35	<0.0008	<0.75	<0.15
SK-95	GA-N	5.62	1.29	>200	<0.40	0.12	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-96	CO-E/AC	5.68	0.86	>200	<0.500	0.34	0.087	1.24	<0.400	<0.0008	<0.600	<0.050
SK-96	DE	5.97	1.27	>200	<5.00	1.46	<0.500	**19.7**	**7.4**	<0.040	<0.45	<0.500
SK-96	SD-S	5.59	1.19	>200	<0.500	0.33	0.084	0.80	<0.400	<0.0008	<0.600	<0.050
SK-96	KS-E	6.13	1.29	>142	<0.500	0.92	<0.050	0.30	<0.400	<0.0008	<0.600	<0.050
SK-96	KS-W	4.32	1.24	>200	<0.500	0.25	<0.050	0.71	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-m	4.08	1.14	>200	<1.25	1.96	<1.00	**12.1**	1.13	<0.080	<0.903	<1.00

DRY CLEANER BOTTOMS

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	GA-N	4.39	1.20	>142	<0.500	0.11	<0.050	0.12	<0.400	<0.0008	<0.600	<0.05
SK-96	MO-C	5.49	1.29	>200	<0.500	0.105	<0.050	0.084	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-C	5.77	1.33	>200	<5.00	1.6	<0.50	**13.3**	<4.00	0.048	<0.452	<0.50
SK-96	NY-L	5.70	1.25	>200	<5.00	0.87	<0.500	**9.13**	<4.00	<0.040	<0.452	<0.500
SK-96	NY-L	6.75	1.004	>200	<5.00	0.575	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-L	6.75	1.005	>200	<5.00	0.697	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	GA-G	6.76	1	>142	<0.500	0.405	<0.050	0.07	<0.40	<0.0008	<0.600	<0.050
SK-96	MS-J	5.97	1.3	>200	<0.500	0.224	<0.050	0.12	<0.400	<0.0008	<0.600	<0.050
SK-96	NM-A	7.22	0.98	155	<5.00	9.41	<0.500	**12.8**	**48.5**	<0.040	<0.45	0.986
SK-96	NM-A	5.88	0.85	>200	<0.500	0.366	<0.050	0.08	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	5.01	1.13	**136**	<5.00	51.1	**2.77**	**128**	**56**	**0.22**	<0.452	0.618
SK-96	NY-S	6.40	0.9	>200	<0.500	0.112	<0.050	0.096	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	2.83	1.15	>200	<5.00	**100**	**5.1**	**458**	**72.2**	0.14	0.51	2.29
SK-96	NE-GI	4.10	1.05	>200	<0.500	0.848	<0.050	0.966	0.611	<0.0008	<0.600	<0.050
SK-96	NE-G	4.66	1.315	>200	<0.500	0.407	<0.050	0.738	<0.400	<0.0008	<0.600	<0.050
SK-96	SC-G	6.65	1.39	153	<5.00	1.19	<0.500	**5.03**	<4.00	<0.040	<0.452	<0.501
SK-96	NY-N	6.83	1.29	>200	<5.00	1.27	<0.500	2.65	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.30	1.46	>200	<4.33	0.45	<0.430	1.04	<3.46	<0.0341	<0.470	<0.430
SK-96	NY-N	2.59	1.424	>200	<5.00	<0.500	<0.500	**9.82**	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.58	1.425	>200	<5.00	1.95	<0.500	**8.12**	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	5.63	1.492	>200	<0.500	0.14	<0.050	0.106	<0.400	<0.0008	<0.600	<0.050
SK-96	LA-K	4.65	1.22	>200	<0.500	0.209	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	LA-P	6.38	1.3	>200	<5.00	0.545	<0.500	4.26	<4.00	<0.040	<0.452	<0.500
SK-96	NY-A	5.69	1.33	>200	<0.500	0.595	0.104	1.1	0.4	<0.0008	<0.600	<0.050
SK-96	NY-A	4.82	1.24	>200	<5.00	35.5	**4.37**	**602**	**79**	0.05	<0.45	<0.500
SK-96	NY-A	6.19	1.37	>200	<0.500	0.512	<0.050	0.332	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-C	8.01	1.241	>200	<5.00	0.591	<0.500	**6.65**	<4.00	<0.040	<0.452	<0.500
SK-96	NY-C	5.20	1.242	>200	<0.500	0.99	<0.050	0.989	0.457	<0.0008	<0.600	<0.050
SK-96	NY-C	5.16	1.222	>200	<5.00	2.62	<0.500	**98.7**	<4.00	0.042	<0.452	0.855
SK-96	NE-O	9.29	1.31	>200	<5.00	2.07	**1.11**	**7.45**	**5.9**	<0.040	<0.45	<0.500
SK-96	DE	7.82	1.03	>150	<5.00	0.723	<0.500	<0.500	<4.00	<0.040	<0.452	<0.050

DRY CLEANER BOTTOMS

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-N	4.77	1.03	>200	<1.25	7.77	<1.00	1.16	2.53	<0.080	<0.45	<1.00
TOTAL # OF SAMPLES		63										
	#OF HITS	0	0	**2**	0	0	**5**	**23**	**11**	**1**	0	0
	MAX	10.9	1.492	155	0	100	5.1	602	79	0.22	0.51	2.29
	MIN	2.59	0.85	81	0	0.105	0.084	0.074	0.413	0.0017	0.51	0.618

DRY CLEANER BOTTOMS

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E/AC	<190	<144	<272	<384	<312	<124	<1790	<180	<90	<118
SK-95	SD-S	<0.048	<0.036	<0.068	<0.096	<0.078	<0.031	<0.449	<0.045	<0.023	<0.030
SK-95	KS-W	<0.572	<0.440	<0.440	<1.0	<1.2	<0.680	<3.5	<1.4	<0.400	<1.4
SK-95	KS-E	<0.048	<0.036	<0.068	<0.096	<0.078	<0.031	<0.449	<0.045	<0.023	<0.030
SK-95	GA-C	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	GA-G	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	NJ-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	LA-K	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	ID-B	<0.140	<0.120	<0.170	<0.300	<0.300	<0.160	<0.060	<0.180	<0.180	<0.190
SK-95	LA-P	0.18	<0.058	<0.085	<0.150	<0.150	0.14	<0.030	<0.090	<0.090	<0.095
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NM-A	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	NY-A	<0.028	<0.023	<0.034	<0.059	<0.060	<0.032	<0.012	<0.036	<0.036	<0.038
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-T	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-m	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	NE-O	<0.700	<0.580	<0.850	<1.50	<1.50	<0.800	<0.300	<0.900	<0.900	<0.950
SK-95	NE-GI	<0.040	<0.044	<0.044	<0.100	<0.120	<0.068	<0.350	<0.140	<0.040	<0.140
SK-95	DE	0.072	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	MS-J	<2.8	<2.3	<3.4	<5.9	<6.0	<3.2	<1.2	<3.6	<3.6	<3.8
SK-95	GA-N	<0.110	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-96	CO-E/AC	<0.07	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-96	DE	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	SD-S	<2.80	<2.30	<3.40	<5.90	<6.0	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	KS-E	<1.40	<1.20	<1.70	<3.00	<3.00	<1.60	<0.600	<1.80	<1.80	<1.90
SK-96	KS-W	<2.80	<2.30	<3.40	<5.90	<6.00	<3.20	<1.20	<3.60	<3.60	<3.80
SK-96	GA-m	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380

DRY CLEANER BOTTOMS

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	GA-N	<0.70	<0.58	<0.85	<1.50	<1.50	<0.80	<0.30	<0.90	<0.90	<0.95
SK-96	MO-C	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-96	GA-C	<170	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-L	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-L	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	GA-G	<0.70	<0.58	<0.85	<1.50	<1.50	<0.80	<0.30	<0.90	<0.90	<0.95
SK-96	MS-J	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	0.95	<0.900
SK-96	NM-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NM-A	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-GI	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NE-G	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	SC-G	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<27.0	<27.2	<30.2	<43.8	<43.8	<34.7	<46.8	<54.3	<28.7	<27.2
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<0.040	<0.040	<0.040	<0.050	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	LA-K	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	LA-P	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-O	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	DE	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180

DRY CLEANER BOTTOMS

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-N	1.03	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
TOTAL # OF SAMPLES		61									
	#OF HITS	0	0	0	0	0	0	0	0	0	0
	MAX	1.03	0	0	0	0	0.14	0	0	0.95	0
	MIN	0.072	0	0	0	0	0.14	0	0	0.95	0

DRY CLEANER BOTTOMS

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DCIB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E/AC	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**2360**	<0.10	<0.14
SK-95	SD-S	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**597**	<0.10	<0.14
SK-95	KS-W	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**145**	<0.10	<0.14
SK-95	KS-E	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**146**	0.13	<0.14
SK-95	GA-C	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<5000	**366000**	<1000	<1400
SK-95	GA-G	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<50000	**935000**	<10000	<14000
SK-95	NJ-N	<100	<100	<100	<100	<100	<100	<100	<500	**386000**	<100	<140
SK-95	LA-K	<100	<100	<100	<100	<100	<100	<100	<500	**338000**	<100	<140
SK-95	ID-B	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**764**	0.39	<0.14
SK-95	LA-P	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	**639**	<0.005	<0.005
SK-95	NY-S	<100	<100	<100	<100	<100	<100	<100	<500	**80500**	**1160**	<140
SK-95	NY-W	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**178**	<0.10	<0.14
SK-95	NM-A	<100	<100	<100	**1250**	<100	<100	<100	<500	**147000**	<100	<140
SK-95	NY-A	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	**544**	0.011	<0.005
SK-95	NJ-S	<0.10	<0.10	<0.10	1.1	<0.10	<0.10	<0.10	<0.50	**195**	<0.10	<0.14
SK-95	NY-C	<100	<100	<100	<100	<100	<100	<100	<500	**397000**	<100	<140
SK-95	NY-N	<100	<100	<100	<100	<100	<100	<100	<500	**730000**	<100	<140
SK-95	NY-T	<10000	<10000	<10000	<10000	<10000	<10000	<10000	<50000	**273000**	<10000	<14000
SK-95	NY-L	<100	<100	<100	<100	<100	<100	<100	<500	**500000**	<100	<140
SK-95	GA-m	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<5000	**366000**	<1000	<1400
SK-95	NE-O	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**76**	**2.4**	<0.14
SK-95	NE-GI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**43.1**	**1.3**	<0.14
SK-95	DE	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.12	1.9	**40**	**0.53**	<0.14
SK-95	MS-J	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**54700**	0.29	<0.14
SK-95	GA-N	<0.10	<0.10	<0.10	2	<0.10	<0.10	<0.10	<0.50	**218**	0.16	<0.14
SK-96	CO-E/AC	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.50	**6.2**	<0.100	<0.140
SK-96	DE	<200	<200	<200	<200	<200	<200	<400	<1000	**676000**	**876**	<200
SK-96	SD-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	**1360**	<1.00	<1.40
SK-96	KS-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**299**	**1.2**	<0.140
SK-96	KS-W	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<12.5	**3870**	<2.5	<3.50
SK-96	GA-m	**6.5**	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.0	**5570**	**12.8**	<2.00

DRY CLEANER BOTTOMS

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DCIB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	GA-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	2.3	**442**	<0.100	<0.140
SK-96	SK-96	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**171**	<0.100	<0.140
SK-96	GA-C	<2.00	<2.00	<2.00	2.4	**10.2**	<2.00	<4.00	13.2	**18700**	**4.1**	<2.00
SK-96	NY-L	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	<100	**78400**	**25.9**	<20.0
SK-96	NY-L	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<50.0	**103**	<10.00	<14.0
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**24.5**	**1.5**	<0.140
SK-96	GA-G	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<50.0	**191**	<10.0	<14.0
SK-96	MS-J	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**673**	0.400	<0.140
SK-96	NM-A	<2.00	<2.00	<2.00	<2.00	3.8	<2.00	<4.00	12.7	**11200**	**4.8**	<2.00
SK-96	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**327**	0.13	<0.140
SK-96	NY-S	<20.0	<20.0	<20	<20.0	<20.0	<20.0	<40.0	<100	**66800**	**1060**	<20.0
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**220**	0.17	<0.140
SK-96	NY-S	<20.0	<20.0	<20.0	<20.0	34.8	<20.0	<40.0	<10.0	**99500**	**393**	<20.0
SK-96	NE-GI	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<25.0	<125	**3630**	<25.0	<35.0
SK-96	NE-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**476**	0.42	<0.140
SK-96	SC-G	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	<100	**59200**	**166**	<20.0
SK-96	NY-N	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**13000**	**4.6**	<2.00
SK-96	NY-N	<3.59	<3.59	<3.59	<3.59	<3.59	<3.59	<3.59	<17.9	**259**	**3.73**	<5.02
SK-96	NY-N	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	<100.0	**113000**	**30.4**	<20.0
SK-96	NY-N	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	<100.0	**131000**	<20.0	<20.0
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**151**	0.27	<0.140
SK-96	LA-K	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**526**	0.39	<0.140
SK-96	LA-P	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	<100	**58900**	**364**	<20.0
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**301**	0.33	<0.140
SK-96	NY-A	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<100.0	**154000**	**388**	<20.0
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**121**	**0.8**	<0.140
SK-96	NY-C	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	<100.0	**610000**	**899**	<20.0
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**2520**	<0.100	<0.140
SK-96	NY-C	<20.0	<20.0	<20.0	<20.0	**73.8**	<20.0	<40.0	<100.0	**118000**	**111**	<20.0
SK-96	NE-O	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	11.1	**102000**	**760**	<2.00
SK-96	DE	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<50.0	**81**	<10.0	<14.0

DRY CLEANER BOTTOMS

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-N	<0.100	<0.100	<1000	<0.100	<1000	<0.100	<0.100	<0.500	**14400**	**0.62**	<0.140
TOTAL # OF SAMPLES		63										
	#OF HITS	1	0	0	1	2	0	0	0	63	24	0
	MAX	6.5	0	0	1250	73.8	0	0.12	13.2	935000	1160	0
	MIN	6.5	0	0	1.1	3.8	0	0.12	1.9	6.2	0.011	0

PAINT WASTE (16s)

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E/AC	6	0.859	**<70**	<0.40	2.46	<0.10	0.26	<0.35	<0.0008	<0.75	<0.15
SK-95	KS-E	5.40	0.859	**<55**	<0.40	0.73	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	KS-W	5.93	0.884	**<70**	<0.40	3.1	<0.10	1.36	<0.35	<0.0008	<0.75	<0.15
SK-95	GA-C	7.70	0.892	**<74**	<0.4	1.16	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	LA-P	6.35	0.889	**<70**	<0.40	0.81	<0.10	**16.51**	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-S	4.98	0.925	**<70**	<0.40	<0.10	<0.10	4.04	<0.35	<0.0008	<0.75	<0.15
SK-95	LA-K	6.13	0.932	**<80**	<0.40	0.159	<0.10	4.45	0.5	<0.0008	<0.75	<0.15
SK-95	MS-J	5.67	0.877	**<70**	<4.0	<1.0	<1.0	**6.41**	<4.0	<0.04	<0.45	<2.0
SK-95	NY-A	6.60	0.904	**<70**	<0.40	0.31	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NJ-S	4.73	0.867	**<70**	<4.0	9.07	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-T	6.83	0.880	**<60**	<4.0	11.54	<1.0	**5.41**	<3.5	<0.04	<0.45	<1.5
SK-95	GA-N	6.19	0.830	**<70**	<4.0	1.49	<1.0	<2.0	4.97	<0.04	<0.45	<1.5
SK-95	NM-A	6.46	0.895	**<70**	<4.0	0.886	<1.0	<0.20	<4.0	<0.0008	<0.75	<0.15
SK-95	NY-N	6.06	0.864	**<70**	<4.0	11.7	<1.0	**7.29**	<4.0	<0.04	<0.45	<2.0
SK-95	DE	5.86	0.844	**<70**	<0.40	0.515	<0.10	0.51	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-O	5.33	0.869	**<70**	<0.40	1.22	<0.10	0.29	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-GI	5.83	0.869	**<70**	<0.40	2.49	<0.10	1.1	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-L	5.50	0.843	**<75**	<4.0	15.1	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-m	7.70	0.892	**<74**	<0.4	1.16	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-W	6.48	NA	**<60**	<0.40	1.68	<0.10	3.94	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-C	6.40	0.856	**<70**	<4.0	62.2	<1.0	**31**	**156**	<0.04	<0.45	<2.0
SK-95	GA-N	5.34	0.880	**69**	<5.00	5.02	<0.500	2.32	<4.00	<0.04	<0.45	<0.500
SK-96	MO-C	6.93	0.943	**69**	<0.500	2.83	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	KS-E	7.81	0.85	**69**	<5.00	5.04	<0.500	2.48	<4.00	<0.040	<0.45	<0.500
SK-96	KS-W	6.77	0.88	**69**	<5.00	3.25	<0.500	**7.06**	**26.4**	<0.040	<0.45	<0.500
SK-96	CO-E/AC	7.28	1.004	**<70**	<0.500	0.997	<0.050	3.99	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-C	6.22	0.9	**64**	<5.00	3.21	<0.50	3.39	<4.00	<0.04	<0.45	<0.50
SK-96	NY-C	6.01	0.88	**69**	<5.00	**221**	<0.500	**158**	**38.4**	<0.040	<0.450	<0.500
SK-96	NY-C	6.27	0.87	**65**	<5.00	27.1	<0.500	**5.15**	**8.48**	<0.040	<0.452	<0.500
SK-96	NY-C	5.91	0.881	**69**	<5.00	38.2	<0.500	2.63	<4.00	<0.040	<0.45	<0.500
SK-96	NY-L	6.66	0.85	**<70**	<0.500	2.26	<0.050	0.616	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	6.92	0.892	**70**	<5.00	<0.500	<0.500	2.98	<4.00	<0.040	<0.45	<0.500

PAINT WASTE (16s)

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-L	6.78	0.892	70	<5.00	<0.500	<0.500	2.82	<4.00	<0.040	<0.45	<0.500
SK-96	MS-J	5.28	0.85	<70	<5.00	1.02	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-A	6.01	0.87	69	<5.00	124	<0.500	33	143	<0.040	<0.45	<0.500
SK-96	NY-A	6.14	0.874	68	<5.00	1.38	6.7	1.18	17.5	<0.040	<0.45	<0.500
SK-96	NY-A	6.27	0.87	55	<5.00	160	<0.500	21.0	50.4	<0.040	<0.45	<0.500
SK-96	NY-S	7.85	0.799	67	<5.00	26.1	<0.500	210	331	<0.04	<0.45	<0.500
SK-96	NY-S	6.93	0.84	64	<5.00	2.16	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-S	6.17	0.84	53	<5.00	34.2	<0.500	2.77	16.9	<0.040	<0.452	<0.500
SK-96	NY-N	5.93	0.906	66	<5.00	2.14	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.07	0.891	69	<5.00	8.78	<0.500	7.01	5.55	<0.040	<0.45	<0.500
SK-96	NY-N	6.18	0.896	69	<5.00	2.54	<0.500	7.24	<4.00	<0.040	<0.45	<0.500
SK-96	DE	6.47	0.972	72	<0.500	0.561	<0.050	0.097	<0.400	<0.0008	<0.600	<0.050
*	UT-S	6.60		<78	1.5	0.7	<0.05	12.4	22.4	0.02	<0.8	<0.05
*	UT-S	7.33		92	<5.0	1410	<0.8	22	51	<0.2	<20	<0.8
SK-96	NE-O	6.93	0.840	65	<5.00	0.584	<0.500	6.47	<4.00	<0..040	<0.45	<0.500
SK-96	NE-GI	6.36	0.869	67	<5.00	63.2	<0.500	6.52	27.3	<0.040	<0.45	<0.500
SK-96	GA-N	5.34	0.880	69	<5.00	5.02	<0.50	2.32	<4.00	<0.04	<0.45	<0.50
SK-96	LA-P	6.08	0.94	68	<5.00	2780	<0.500	174	221	0.096	<0.452	<0.500
SK-96	LA-K	8.07	0.865	66	<5.00	66.8	<0.500	2.26	4.06	<0.040	<0.45	<0.500
SK-96	NY-A	6.27	0.87	55	<5.00	160	<0.500	21.0	50.4	<0.040	<0.45	<0.500
SK-96	NY-A	6.15	0.921	69	<0.500	2.72	<0.050	0.079	3.61	<0.0008	<0.600	<0.050
SK-96	NE-G	5.01	0.89	65	<0.500	0.652	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	SC-G	6.68	0.85	68	<5.00	11.8	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
Total # of Samples		55										
# of Hits		0	0	55	0	6	1	19	15	0	0	0
	MAX	8.07	1.004	92	1.5	2780	6.7	210	331	0.096	0	0
	MIN	4.73	0.799	53	1.5	0.159	6.7	0.079	0.5	0.02	0	0

PAINT WASTE (16s)

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E/AC	<190	<144	<272	<384	<312	<124	<1790	<180	<90	<118
SK-95	KS-E	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-W	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	GA-C	<0.048	<0.036	<0.070	<0.095	<0.080	0.59	<0.45	2.9	<0.022	<0.030
SK-95	LA-P	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-K	0.53	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	MS-J	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-A	<0.110	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-T	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NM-A	<1.4	<1.2	<1.7	<3.0	<3.0	<1.6	<0.60	<1.8	<1.8	<1.9
SK-95	NY-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DE	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<1.8	<0.090	<0.095
SK-95	NE-O	0.72	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NE-GI	<0.110	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-m	<0.048	<0.036	<0.070	<0.095	<0.080	0.59	<0.45	2.9	<0.022	<0.030
SK-95	NY-W	<0.700	<0.580	<0.850	<1.50	<1.50	<0.800	<0.300	<0.900	<0.900	<0.950
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MO-C	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-96	KS-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	CO-E/AC	<0.056	<0.046	<0.068	<0.120	<0.120	<0.064	<0.024	0.28	<0.072	<0.076
SK-96	GA-C	<170	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-L	0.14	0.067	0.084	<0.072	<0.072	<0.058	<0.078	<0.090	0.07	0.074
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180

PAINT WASTE (16s)

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	MS-J	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NM-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	DE	0.1	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
*	UT-S	<50	<50	<50	<50	<50	<50	<50	<5000	<50	<50
*	UT-S	<200000	<200000	<200000	<200000	<200000	<20000	<1020000	<200000	<1020000	<200000
SK-96	NE-O	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-GI	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	GA-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	LA-P	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	LA-K	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-G	<0.072	<0.072	<0.080	<0.120	<0.120	<0.092	<0.120	<0.140	<0.076	<0.072
SK-96	SC-G	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
Total # of Samples		55									
# of Hits		0	0	0	0	0	0	0	0	0	0
	MAX	0.72	0.067	0.084	0	0	0.59	0	2.9	0.07	0.074
	MIN	0.1	0.067	0.084	0	0	0.59	0	0.28	0.07	0.074

PAINT WASTE (16s)

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DCIB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E/AC	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1440	0.19	<0.10	<0.14
SK-95	KS-E	0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1230	<0.10	<0.10	<0.14
SK-95	KS-W	<100	<100	<100	<100	<100	<100	<100	12400	<100	<100	<140
SK-95	GA-C	0.37	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1020	<0.10	<0.10	<0.14
SK-95	LA-P	0.17	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1480	<0.10	<0.10	<0.14
SK-95	NY-S	0.24	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2610	<0.10	<0.10	<0.14
SK-95	LA-K	0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1460	<0.10	<0.10	<0.14
SK-95	MS-J	<100	<100	<100	<100	<100	<100	<100	12000	<100	<100	<140
SK-95	NY-A	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	256	0.87	<0.10	<0.14
SK-95	NJ-S	104	<100	<100	<100	<100	<100	<100	27900	<100	<100	<140
SK-95	NY-T	<100	<100	<100	<100	<100	<100	<100	20500	<100	<100	<140
SK-95	GA-N	<100	<100	<100	<100	<100	<100	<100	12800	<100	<100	<140
SK-95	NM-A	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1410	0.28	<0.10	<0.14
SK-95	NY-N	<100	<100	<100	<100	<100	<100	<100	54900	<100	<100	<140
SK-95	DE	<25	<25	<25	<25	<25	<25	<25	3020	<25	<25	<0.14
SK-95	NE-O	0.18	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	640	<0.10	<0.10	<0.14
SK-95	NE-GI	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	2180	<0.25	<0.25	<0.35
SK-95	NY-L	<100	<100	<100	<100	<100	<100	<100	12700	<100	<100	<140
SK-95	GA-m	0.37	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1020	<0.10	<0.10	<0.14
SK-95	NY-W	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	229	<0.005	<0.005	<0.005
SK-95	NY-C	<100	<100	<100	<100	<100	<100	<100	10800	<100	<100	<140
SK-95	GA-N	539	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	16400	54.6	2.40	<2.00
SK-96	SK-96	0.14	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	926	0.34	<0.100	<0.140
SK-96	KS-E	24.8	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	15000	6.3	4.50	<2.00
SK-96	KS-W	31	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	28200	3.2	<2.00	<2.00
SK-96	CO-E/AC	0.69	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	245	0.17	<0.10	<0.14
SK-96	GA-C	56.8	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	31700	90.5	2.9	<2.00
SK-96	NY-C	<2.00	<2.00	3.2	<2.00	2.5	<2.00	<4.00	27100	4.4	4.8	<2.00
SK-96	NY-C	144	<100	<100	<100	<100	<100	<100	388000	<100	<100	<140
SK-96	NY-C	112	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	43100	55.1	<20.0	<20.0
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	694	<0.100	<0.100	<0.140
SK-96	NY-L	78.9	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	50900	573	30.4	<20.0

PAINT WASTE (16s)

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-L	**4.4**	<2.00	<2.00	2.3	<2.00	<2.00	<4.00	**2740**	**44.4**	**15.5**	<2.00
SK-96	MS-J	**472**	<2.00	3	<2.00	<2.00	<2.00	<4.00	**34500**	**10.5**	**4.6**	<2.00
SK-96	NM-A	**92.2**	<2.00	<2.00	2.90	2.50	<2.00	<4.00	**29400**	**100**	**5.7**	<2.00
SK-96	NY-A	**7.5**	<2.00	<2.00	**9.6**	<2.00	<2.00	<4.00	**16700**	**2.5**	**2.7**	<2.00
SK-96	NY-A	**83.8**	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**27300**	<20.0	<20.0	<20.0
SK-96	NY-S	**98.2**	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	**12400**	**3.7**	**2.2**	<2.00
SK-96	NY-S	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**55100**	**24.2**	<20.0	<20.0
SK-96	NY-S	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**41200**	<20.0	<20.0	<20.0
SK-96	NY-N	**198**	<2.00	3	**11**	<2.00	**10.5**	<4.00	**21200**	**55.2**	**22.2**	<2.00
SK-96	NY-N	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**102000**	**137**	**32.8**	<20.0
SK-96	NY-N	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**170000**	**272**	**50.5**	<20.0
SK-96	DE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	96.6	<0.100	<0.100	<0.140
*	UT-S	<20	<50	<20	<50	<100	<50	<50	**60000**	<50	<50	<50
*	UT-S											
SK-96	NE-O	**102**	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**6120**	<20.0	<20.0	<20.0
SK-96	NE-GI	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	**1780**	<10.00	<10.00	<14.0
SK-96	GA-N	**539**	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	**16400**	**54.6**	**2.4**	<2.00
SK-96	LA-P	**142**	<100	<100	<100	<100	<100	<100	**9900**	<100	<100	<140
SK-96	LA-K	**41.2**	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**48200**	**20**	**28.6**	<20.0
SK-96	NY-A	**83.8**	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	**27300**	<20.0	<20.0	<20.0
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	**385**	<0.100	<0.100	<0.140
SK-96	NE-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	**3660**	<0.100	<0.100	<0.140
SK-96	SC-G	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	**967**	<10.0	<10.0	<14.0
Total # of Samples		55										
# of Hits		**20**	0	0	**2**	0	**1**	0	**53**	**18**	**15**	0
	MAX	539	0	3.2	11	2.5	10.5	0	388000	573	50.5	0
	MIN	0.006	0	3	2.3	2.5	10.5	0	96.6	0.17	2.2	0

PAINT GUN CLEANER (5s)

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E/AC	8.02	0.842	<70	<0.40	11.18	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	SD-S	7.11	0.848	<65	<4.00	6.62	<1.00	**9.60**	**24.4**	<0.04	<0.45	<1.5
SK-95	KS-E	5.1	0.825	<55	<4.0	1.84	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-W	6.11	0.846	<70	<4.0	1.14	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-C	4.18	0.840	<70	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NJ-N	4.64	0.838	<70	<4.0	3.54	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	ID-B	7.47	0.806	<70	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	LA-K	5.57	0.83	<70	<4.00	<1.00	<1.00	<2.00	<4.00	<0.04	<0.45	<2.0
SK-95	NM-A	4.82	0.819	<70	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	LA-P	6.99	0.842	<70	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-S	7.07	0.849	<60	<4.0	<1.0	<1.0	2.22	<4.0	<0.04	<0.45	<2.0
SK-95	NY-W	5.94	0.858	<70	<5.0	38.85	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	MS-J	5.69	0.840	<70	<4.0	6.75	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NY-A	5.35	0.842	<70	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NJ-S	6.20	0.828	<70	<4.0	<1.0	<1.0	<2.0	4.28	<0.04	<0.45	<1.5
SK-95	NY-T	4.58	0.830	<75	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-N	6.31	0.830	<75	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	DE	5.66	0.811	<70	<4.0	<1.0	<1.0	<2.0	4.42	<0.04	<0.45	<1.5
SK-95	NE-O	5.80	0.862	<70	<0.40	1.23	<0.10	**6.88**	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-GI	5.12	0.839	<70	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-L	7.29	0.864	<75	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-m	4.18	0.840	<70	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-C	5.42	0.859	<70	<4.0	6.78	<1.0	**5.43**	**22.4**	<0.0008	<0.45	<1.5
SK-95	NY-N	5.42	0.825	<70	<4.0	3.89	<1.0	**21.4**	**77.1**	<0.04	<0.45	<1.5
SK-96	SD-S	5.71	0.83	<70	<5.00	0.55	<0.500	<0.500	<4.00	<0.040	<0.45	<0.050
SK-96	KS-E	7.22	0.84	69	<5.00	0.65	<0.500	<0.500	<4.0	<0.040	<0.45	<0.500
SK-96	KS-W	5.66	0.83	69	<5.00	1.89	<0.500	0.666	<4.0	<0.040	<0.45	<0.500
SK-96	GA-N	4.32	0.84	69	<5.00	1.28	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	MO-C	6.53	0.85	69	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	CO-E/AC	7.36	0.84	<70	<5.00	6.35	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	GA-C	4.90	0.830	<70	<5.00	<0.50	0.52	0.5	<4.00	<0.04	<0.45	<0.50

PAINT GUN CLEANER (5s)

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-L	4.73	0.84	<70	<5.00	1.26	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-L	4.27	0.84	69	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-L	4.63	0.841	69	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-C	4.85	0.84	69	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.450	<0.500
SK-96	NY-C	8.93	0.855	69	<5.00	417	<0.500	9.39	47.0	<0.040	<0.45	<0.500
SK-96	NY-C	6.53	0.866	69	<5.00	<0.500	<0.500	0.999	<4.00	<0.040	<0.45	<0.500
SK-96	MS-J	5.23	0.830	<70	<5.00	6.58	<0.500	2.31	6.01	<0.040	<0.45	<0.500
SK-96	NM-A	4.79	0.83	69	<5.00	4.44	<0.500	0.76	<4.00	<0.040	<0.45	<0.500
SK-96	NY-A	4.74	0.852	67	<5.0	0.682	<0.500	<0.500	<4.00	<0.04	<0.45	<0.500
SK-96	NY-A	5.26	0.878	57	<5.0	12.4	<0.500	1.37	<4.00	<0.040	<0.45	<0.500
SK-96	NY-A	4.38	0.83803	69	<50.	3.3	<0.500	15.7	76.4	<0.040	<0.45	<0.500
SK-96	NY-N	5.82	0.854	70	<5.00	2.14	<0.500	0.68	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.60	0.849	69	<5.00	1.57	<0.500	0.889	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.16	0.861	69	<5.00	6.76	<0.500	2.23	<4.00	<0.040	<0.45	<0.500
*	UT-S	6.80		<78	4	0.3	<0.05	<0.05	0.5	0.04	3.1	<0.05
*	UT-S	5.62		153	<1.0	<10	<0.2	70.5	<2	0.0017	<3.0	<0.2
SK-96	DE	6.10	0.845	70	<5.00	0.721	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NE-O	5.00	0.857	67	<5.00	1.7	<0.500	0.582	<4.00	<0.040	<0.452	<0.500
SK-96	NE-GI	5.69	0.865	73	<5.00	2.31	<0.500	0.548	<4.00	<0.040	<0.45	<0.500
SK-96	NY-S	6.73	0.83	68	<5.0	<0.500	<0.500	0.602	4.33	<0.04	<0.45	<0.500
SK-96	NY-S	6.06	0.82	63	<5.00	0.541	<0.500	1.37	<4.00	<0.040	<0.452	<0.500
SK-96	NY-S	4.37	0.82	53	<5.00	0.602	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	LA-P	6.01	0.835	68	<5.00	15.9	<0.500	7.51	<4.00	<0.040	<0.452	<0.500
SK-96	LA-K	4.85	0.816	65	<5.00	1.6	<0.500	1.11	6.48	<0.040	<0.452	<0.500
SK-96	GA-G	7.43	0.85	66	<5.00	1.2	<0.500	1.31	<4.00	<0.040	<0.452	<0.500
Total # of Sample			56									
# of Hits		0.00	0	55	0	1	0	8	7	0	1	0
MAX		8.93	0.87784	153	4	417	0.52	70.5	77.1	0.04	3.1	0
MIN		4.18	0.806	53	4	0.3	0.52	0.5	0.5	0.0017	3.1	0

PAINT GUN CLEANER (5s)

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E/AC	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	SD-S	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-E	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-W	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	GA-C	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	NJ-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	ID-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-K	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NM-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-P	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	MS-J	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-T	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	GA-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NE-O	<0.110	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NE-GI	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-m	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	SD-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-W	<2000	<2000	<2000	<2000	<2000	<2000	<10000	<2000	<2000	<2000
SK-96	GA-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MO-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	CO-E/AC	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-C	<170	<180	<200	<290	<290	<230	<310	<360	<190	<180

PAINT GUN CLEANER (5s)

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	MS-J	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NM-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
*	UT-S	<50	<50	<50	<50	<50	<50	<50	<5000	<50	<50
*	UT-S	0.222	<0.080	<0.080	<0.080	<0.080	<0.080	<0.400	<0.080	<0.080	<0.080
SK-96	DE	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-O	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-GI	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	LA-P	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	LA-K	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	GA-G	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
Total # Of Samples			56								
# of Hits		0	0	0	0	0	0	0	0	0	0
MAX		0.222	0	0	0	0	0	0	0	0	0
MIN		0.222	0	0	0	0	0	0	0	0	0

PAINT GUN CLEANER (5s)

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E/AC	<250	<250	<250	<250	<250	<250	<250	49200	<250	<250	<250
SK-95	SD-S	<100	<100	<100	<100	<100	<100	<100	56600	156	138	<140
SK-95	KS-E	<100	<100	<100	<100	<100	<100	<100	65800	134	209	<140
SK-95	KS-W	<100	<100	<100	<100	<100	<100	<100	68500	<100	<100	<140
SK-95	GA-C	<100	<100	<100	<100	<100	<100	<100	92700	<100	<100	<140
SK-95	NJ-N	<100	<100	<100	<100	<100	<100	<100	63400	<100	<100	<140
SK-95	ID-B	<1000	<1000	<1000	<1000	<1000	<1000	<1000	13700	<1000	<1000	<1400
SK-95	LA-K	<100	<100	<100	<100	<100	<100	<100	37900	<100	<100	<140
SK-95	NM-A	<1000	<1000	<1000	<1000	<1000	<1000	<1000	61400	<1000	<1000	<1.40
SK-95	LA-P	<100	<100	<100	<100	<100	<100	<100	22100	<100	<100	<140
SK-95	NY-S	<100	<100	<100	<100	<100	<100	<100	36200	119	<100	<140
SK-95	NY-W	<1000	<1000	<1000	<1000	<1000	<1000	<1000	30800	<1000	<1000	<1400
SK-95	MS-J	<250	<250	<250	<250	<250	<250	<250	26000	<250	<250	<350
SK-95	NY-A	367	<100	<100	<100	<100	<100	<100	246000	491	194	<140
SK-95	NJ-S	<100	<100	<100	<100	<100	<100	<100	150000	<100	<100	<140
SK-95	NY-T	204	<100	<100	<100	<100	<100	<100	76700	<100	<100	<140
SK-95	GA-N	<1000	<1000	<1000	<1000	<1000	<1000	<1000	40700	<1000	<1000	<1400
SK-95	DE	<1000	<1000	<1000	<1000	<1000	<1000	<1000	50900	<1000	<1000	<1400
SK-95	NE-O	0.24	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1920	0.17	0.34	<0.14
SK-95	NE-GI	<50	<50	<50	<50	<50	<50	<50	52800	161	90	<70
SK-95	NY-L	117	<100	<100	<100	<100	<100	<100	23500	294	<100	<140
SK-95	GA-m	<100	<100	<100	<100	<100	<100	<100	92700	<100	<100	<140
SK-95	NY-C	<100	<100	<100	<100	<100	<100	<100	29900	133	<100	<140
SK-95	NY-N	<100	<100	<100	<100	<100	<100	<100	33600	<100	<100	<140
SK-96	SD-S	91.2	<2.00	3.2	28	<2.00	5.2	6.1	54000	316	226	<2.00
SK-96	KS-E	84.7	<2.0	2.8	26.1	<2.00	5.6	6.6	92600	295	237	<2.00
SK-96	KS-W	51.5	<2.0	<2.0	2.8	<2.00	<2.00	<4.00	51500	84.7	11.3	<2.00
SK-96	GA-N	102	<2.00	<2.00	2.50	<2.00	2.10	<4.00	48700	82.7	136	<2.00
SK-96	MO-C	71.4	2.9	2.8	13.4	<2.00	4.00	6.4	70900	79.2	98.3	<2.00
SK-96	CO-E/AC	37.1	<2.00	<2.00	2.00	<2.00	<2.00	<4.00	40000	57.4	6.9	<2.00
SK-96	GA-C	139	<2.00	2.5	3.2	2.2	3.1	<4.00	68300	64.9	42.1	<2.00

PAINT GUN CLEANER (5s)

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-L	65.7	<2.00	3	2.5	<2.00	<2.00	<4.00	34000	47	31.7	<2.00
SK-96	NY-L	15.6	<2.00	2.3	6.4	<2.00	4.0	<4.00	5160	78	50.4	<2.00
SK-96	NY-L	15.8	<2.00	2.2	6.2	<2.00	4.0	<4.00	5240	80.7	51.6	<2.00
SK-96	NY-C	65.3	<2.00	3.1	3	<2.00	2	<4.00	39900	49	33.3	<2.00
SK-96	NY-C	138	<20.0	<20.0	25.6	<20.0	35.3	<40.0	65800	228	55.2	<20.0
SK-96	NY-C	100.0	<20.0	<20.0	<20.0	<20.0	44.6	<40.0	75200	1010	36.2	<20.0
SK-96	MS-J	74.8	<2.00	3.1	3.4	2.3	<2.00	<4.00	62700	102	27.3	<2.00
SK-96	NM-A	55.2	<2.00	3.2	2.3	<2.00	<2.00	<4.00	61200	63.9	16.4	<2.00
SK-96	NY-A	105	<2.00	<2.00	6.1	<2.00	2.2	<4.00	45800	93.5	48.9	<2.00
SK-96	NY-A	347	<20.0	<20.0	95.5	<20.0	20.7	<40.0	92300	285	199	<20.0
SK-96	NY-A	80.3	<20.0	<20.0	48.7	<20.0	<20.0	<40.0	46700	142	134	<20.0
SK-96	NY-N	66	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	16100	34.5	12.5	<2.00
SK-96	NY-N	188	<20.0	<20.0	22.6	<20.0	106	<40.0	101000	776	85.6	<20.0
SK-96	NY-N	146	<20.0	<20.0	22.0	<20.0	71.1	<40.0	88400	652	78.8	<20.0
*	UT-S	62	<50	<20	<50	<100	<50	<50	81600	146	101	<50
*	UT-S	<12	<12	<12	<12	<12	<12	<12	340	<12	<12	<25
SK-96	DE	38.0	<2.00	3	<2.00	<2.00	<2.00	<4.00	86800	30.6	6.2	<2.00
SK-96	NE-O	259	<20.0	29.4	118	<20.0	<20.0	<40.0	235000	368	362	<20.0
SK-96	NE-GI	46.2	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	82900	134	142	<14.0
SK-96	NY-S	120	<20.0	<20.0	<20.0	<20.0	<20.0	<40.0	71000	66.7	109	<20.0
SK-96	NY-S	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	50000	84.9	47.7	<2.00
SK-96	NY-S	161	<20.0	<20.0	<20.0	<20.0	104	<40.0	73600	470	51.1	<20.0
SK-96	LA-P	15.00	<2.00	3.3	<2.00	2.5	<2.00	<4.00	29000	96.0	5.30	<2.00
SK-96	LA-K	50.0	<2.00	4.4	<2.00	<2.00	<2.00	<4.00	60500	39.8	14.9	<2.00
SK-96	GA-G	144	<2.00	3.2	3.7	2.5	2.7	<4.00	53900	56.6	33.7	<2.00
Total # of Samples			56									
# of Hits		33	1	0	12	0	15	3	56	38	35	0
MAX		367	2.9	29.4	118	2.5	106	6.6	246000	1010	362	0
MIN		0.24	2.9	2.2	2	2.2	2	6.1	340	0.17	0.34	0

PARTS WASHER SOLVENT 105

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E-DE	8.06	0.81	141	<0.40	1.71	**1.02**	<2.0	**7.97**	<0.04	<0.45	<1.5
SK-95	BI	8.03	0.79	**128**	<4.00	3.56	**2.88**	<2.00	**8.81**	<0.04	<0.45	<1.5
SK-95	CO-GJ-RE	7.64	0.8	**131**	<0.40	1.71	<1.0	<2.0	**10.67**	<0.04	<0.45	<1.5
SK-95	CO-P-DE	8.8	0.811	143	<0.40	1.31	<1.0	<2.0	**5.14**	<0.04	<0.45	<1.5
SK-95	FA	7.17	0.811	>142	<4.00	1.8	<1.00	<2.00	**3.88**	<0.04	<0.452	<1.5
SK-95	KS-D	6.84	0.792	>142	<4.0	1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-E	6.75	0.789	**138**	<4.0	3.94	**1.24**	<2.0	**5.16**	<0.04	<0.45	<1.5
SK-95	KS-W	7.13	0.803	144	<4.0	1.26	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	SD-S	7.44	0.795	**134**	<4.00	1.48	**1.32**	<2.00	**11.64**	<0.04	<0.45	<1.5
SK-95	WA-S	7.29	0.812	>142	<4.0	1.88	<1.0	<2.0	**7.43**	<0.04	<0.45	<1.5
SK-95	GA-C	5.35	0.805	148	<4.0	1.3	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-G	4.78	0.783	**137**	<4.0	<1.0	<1.0	<2.0	**13.82**	<0.04	<0.45	<1.5
SK-95	NJ-N	8.36	0.792	**132**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NJ-B	8.84	0.788	**139**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	DE	8.43	0.80	145	<5.0	<20	<1.0	<2.0	**13.49**	<0.04	<0.45	<1.0
SK-95	LA-K	7.29	0.799	146	<4.00	1.98	<1.00	<2.00	<4.00	<0.04	<0.45	<2.0
SK-95	LA-P	6.90	0.789	144	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-S	5.44	0.807	**138**	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-W	7.28	0.78	**130**	<4.0	1.51	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	ID-B	8.02	0.81	**139**	<4.0	5.97	<1.0	<2.0	**5.48**	<0.04	<0.45	<1.5
SK-95	DO	7.76	0.83	**138**	<4.0	1.59	<1.0	<2.0	**8.65**	<0.04	<0.45	<2.0
SK-95	NY-A	7.31	0.192	140	<4.0	1.23	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NJ-S	7.36	0.798	**137**	<4.0	<1.0	<1.0	<2.0	<3.5	0.04	<0.45	<1.5
SK-95	NY-T	7.89	0.804	**120**	<4.0	1.25	<1.0	<2.0	**13.9**	<0.04	<0.45	<1.5
SK-95	GA-N	3.98	0.780	148	<4.0	2.0	<1.0	<2.0	3.83	<0.04	<0.45	<1.5
SK-95	NM-F	8.95	0.787	**120**	<4.0	<1.0	<1.0	<2.0	**5.29**	<0.04	<0.45	<2.0
SK-95	MS-J	6.49	0.789	149	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	GA-M	7.88	0.786	143	<4.0	2.09	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-L	6.57	0.799	140	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-m	5.35	0.805	148	<4.0	1.3	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5

PARTS WASHER SOLVENT 105

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	NY-C	7.70	0.785	142	<4.0	2.52	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-N	8.88	0.796	**124**	<4.0	1.01	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NE-O	7.46	0.795	**129**	<4.0	1.94	<1.0	<2.0	**8.71**	<0.04	<0.45	<1.5
SK-95	NE-GI	6.99	0.804	**136**	<4.0	1.08	<1.0	<2.0	**6.99**	<0.04	<0.45	<1.5
SK-95	DE	8.72	0.793	147	<4.0	1.13	<1.0	<2.0	**8.14**	<0.04	<0.45	<1.5
SK-95	MN-B	6.01	0.797	142	<4.0	1.97	<1.0	<2.0	**7.67**	<0.04	<0.45	<1.5
SK-96	ND-F	7.65	0.80	**138**	<5.00	1.95	0.93	<5.00	**7.42**	<0.04	<0.45	<0.50
SK-96	KS-E	7.24	0.80	**132**	<5.00	<0.500	<0.50	0.67	<4.00	<0.040	<0.45	<0.50
SK-96	KS-W	6.51	0.80	141	<5.00	1.15	0.99	1.30	**7.19**	<0.040	<0.45	<0.50
SK-96	SD-S	7.97	0.87	**136**	<0.500	2.00	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	KS-D	7.77	0.80	145	<5.00	3.01	0.80	<0.500	4.89	<0.040	<0.45	<0.50
SK-96	GA-G	6.79	0.81	141	<5.00	1.39	0.58	<0.50	**5.88**	<0.040	<0.45	<0.50
SK-96	GA-m	5.61	0.79	148	<5.00	1.00	<0.50	<0.50	<4.00	<0.040	<0.45	<0.50
SK-96	GA-N	7.16	0.82	151	<5.00	3.02	0.63	<0.50	**5.07**	<0.04	<0.45	<0.50
SK-96	WA-S	6.59	0.80	**138**	<5.00	2.96	0.82	<0.50	**7.89**	<0.04	<0.45	<0.50
SK-96	MO-C	6.27	0.802	**127**	<5.00	0.755	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	BI	7.21	0.8	>142	<5.00	0.712	<0.500	<0.500	**7.36**	<0.040	<0.45	<0.500
SK-96	NY-L	7.15	0.8	140	<5.00	<0.500	**5.71**	<0.500	<4.00	<0.040	<0.450	<0.500
SK-96	NY-L	8.59	0.799	**120**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	MS-J	7.37	0.8	150	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	GA-M	7.81	0.8	146	<5.00	1.15	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-A	6.54	0.79	141	<5.00	0.537	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-F	8.35	0.81	**115**	<5.00	9.76	**2.35**	0.515	**36.5**	<0.040	<0.45	<0.500
SK-96	NY-N	7.67	0.797	**138**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.73	0.787	**135**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.04	0.787	**132**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-S	7.64	0.781	**131**	<5.0	1.41	0.8	<0.500	**5.17**	<0.04	<0.45	<0.500
SK-96	NY-S	5.50	0.77	**136**	<5.00	<0.500	<0.500	<0.500	<0.400	<0.040	<0.452	<0.500
SK-96	NY-S	6.38	0.77	**124**	<5.00	3.38	<0.500	<0.500	**5.15**	<0.040	<0.452	<0.050
SK-96	NY-C	6.98	0.802	**119**	<5.00	0.912	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-A	6.14	0.801	**136**	<5.00	1.95	<0.500	<0.500	**250**	<0.04	<0.45	<0.500

PARTS WASHER SOLVENT 105

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	LA-P	7.12	0.784	147	<5.00	<0.500	0.503	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	DE	6.37	0.83	155	<5.00	3.73	**1.39**	0.933	**45.2**	<0.040	<0.452	<0.500
SK-96	NE-O	8.33	0.794	140	<5.00	2.17	**1.22**	0.893	**6.73**	<0.040	<0.452	<0.500
SK-96	DO	5.09	0.81	**130**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	DO	7.67	1.05	>200	<5.00	4.84	**1.40**	0.971	**15.2**	<0.040	<0.45	<0.500
SK-96	MN-E	7.46	0.78	156	<5.00	<0.500	**1.64**	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	MN-E	8.06	0.81	**136**	<5.00	1.43	**1.01**	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	MN-E	7.61	0.8	**136**	<5.00	1.31	0.752	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	LA-K	7.17	0.792	160	<5.00	5.21	<0.500	0.561	<4.00	<0.040	<0.45	<0.500
SK-96	SC-G	8.33	0.8	154	<5.00	0.578	**1.75**	0.618	<4.00	<0.040	<0.452	<0.500
	UT-S											
SK-96	NY-A	5.60	0.812	**120**	<5.00	<0.500	<0.500	3.32	**5.55**	<0.04	<0.45	<0.500
SK-96	NY-A	7.35	0.801	**126**	<5.00	0.542	<0.500	<0.500	**6.18**	<0.04	<0.45	<0.500
SK-96	MN-B	7.72	0.8	**138**	<5.00	1.53	0.91	<0.500	**8.3**	<0.040	<0.452	<0.500
SK-96	MN-B	8.23	0.82	**112**	<5.00	1.56	0.551	<0.500	4.91	<0.040	<0.452	<0.500
SK-96	NE-GI	8.57	0.803	**135**	<5.00	2.91	0.734	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	CO-E-DE	7.58	0.810	147	<5.00	2.88	0.83	<0.500	**7.83**	<0.040	<0.45	<0.500
SK-96	CO-P-DE	8.44	0.81	152	<5.00	1.74	<0.500	<0.500	**6.64**	<0.040	<0.452	<0.500
SK-96	CO-GJ-RE	6.71	0.800	144	<5.00	0.89	0.67	<0.500	**11.4**	<0.040	<0.45	<0.500
SK-96	NE-G	8.69	0.831	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
Total # of Samples		81										
# of Hits		0	0	40	0	0	12	0	37	0	0	0
	MAX	8.95	1.053	160	0	9.76	5.71	3.32	250	0.04	0	0
	MIN	3.98	0.192	112	0	0.537	0.503	0.515	3.83	0.04	0	0

PARTS WASHER SOLVENT 105

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E-DE	<190	<144	<272	<384	<312	<124	<1800	<180	<90	<120
SK-95	BI	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<1000	<2000	<2000
SK-95	CO-GJ-RE	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	CO-P-DE	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	FA	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-D	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-E	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-W	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	SD-S	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	WA-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	GA-C	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	GA-G	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	NJ-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NJ-B	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-K	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-P	<280	<230	<340	<590	<600	<2220	<120	<360	<360	<380
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-W	<196	<161	<239	<414	<421	<224	<84	<253	<253	<267
SK-95	ID-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DO	<280	<230	<340	<590	<600	<2220	<120	<360	<360	<380
SK-95	NY-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-T	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NM-F	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	MS-J	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-M	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-m	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120

PARTS WASHEk SOLVENT 105

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-N	<280	<230	<340	<590	<600	<2220	<120	<360	<360	<380
SK-95	NE-O	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NE-GI	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	MN-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	ND-F	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	SD-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-D	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-G	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-m	<280	<230	<340	<<590	<600	<320	<120	<360	<360	<380
SK-96	GA-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	WA-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MO-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	BI	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	NY-L	40.2	<0.073	<0.015	<0.015	<0.015	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-L	28.0	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	MS-J	3.2	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	GA-M	<3600	<3600	<4000	<5800	<5800	<4600	<6200	<7200	<3800	<3600
SK-96	NM-A	15.7	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NM-F	5.5	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	9.8	<0.073	<0.016	<0.034	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	11.8	<0.073	<0.003	0.013	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	10.9	<0.073	<0.003	0.011	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	21.2	<0.073	<0.016	0.108	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	12.4	<0.073	0.85	<1.50	<1.50	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	68.9	<0.073	<0.850	<1.50	<1.50	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-C	56.5	<0.360	<0.003	<0.003	<0.003	<4.00	<1.50	<1.80	<0.920	<1.20
SK-96	NY-A	19.9	<0.073	<0.016	<0.034	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240

PARTS WASHER SOLVENT 105

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	LA-P	<0.850	<0.073	0.035	0.093	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	DE	3.5	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NE-O	38.6	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	DO	63.6	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	DO	60.9	<3.60	<4.00	<5.80	<5.80	<4.60	<6.20	<7.20	<3.80	<3.60
SK-96	MN-E	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	MN-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MN-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	LA-K	5.4	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	SC-G	<0.850	<0.073	<0.016	0.053	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
	UT-S	<365	<365	<365	<365	<365	<365	<365	<365	<3500	<365
SK-96	NY-A	26	<0.73	<0.003	<0.003	<0.003	<8.00	<3.00	<3.50	<1.80	<2.40
SK-96	NY-A	59.1	<0.73	<0.003	<0.003	<0.003	<8.00	<3.00	<3.50	<1.80	<2.40
SK-96	MN-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MN-B	10.8	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NE-GI	28.8	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-95	CO-E-DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	CO-P-DE	16.3	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-95	CO-GJ-RE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	NE-G	10.6	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
Total # of Samples		81									
# of Hits		0	0	0	0	0	0	0	0	0	0
	MAX	68.9	0	0.85	0.108	0	0	0	0	0	0
	MIN	3.2	0	0.035	0.011	0	0	0	0	0	0

PARTS WASHER SOLVENT 105

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E-DE	<100	<100	<100	<100	<100	<100	<100	<500	**662**	<100	<140
SK-95	BI	<100	<100	<100	<100	<100	<100	<100	<500	**1140**	**139**	<140
SK-95	CO-GJ-RE	<100	<100	<100	<100	<100	<100	<100	<500	**1610**	<100	<140
SK-95	CO-P-DE	<100	<100	<100	<100	<100	<100	<100	<500	**784**	<100	<140
SK-95	FA	<100	<100	<100	<100	<100	<100	<100	<500	**311**	<100	<140
SK-95	KS-D	<100	<100	<100	<100	<100	<100	<100	<500	**201**	<100	<140
SK-95	KS-E	<100	<100	<100	<100	<100	<100	<100	<500	**833**	<100	<140
SK-95	KS-W	<100	<100	<100	<100	<100	<100	<100	<500	**1560**	<100	<140
SK-95	SD-S	<100	<100	<100	<100	<100	<100	<100	<500	**761**	<100	<140
SK-95	WA-S	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**2.5**	<1.0	<1.4
SK-95	GA-C	<100	<100	<100	<100	<100	<100	<100	<500	**2260**	<100	<140
SK-95	GA-G	<100	<100	<100	<100	<100	<100	<100	<500	**321**	<100	<140
SK-95	NJ-N	<100	<100	<100	<100	<100	<100	<100	<500	**4120**	<100	<140
SK-95	NJ-B	<10	<10	<10	<10	<10	<10	<10	<50	**246**	<10	<14
SK-95	DE	<100	<100	<100	<100	<100	<100	<100	<500	**558**	<100	<140
SK-95	LA-K	<100	<100	<100	<100	<100	<100	<100	<500	**225**	<100	<140
SK-95	LA-P	**5.7**	<5.0	<5.0	<5.0	**8.6**	<5.0	<5.0	<25	**508**	**31.1**	<7.0
SK-95	NY-S	<100	<100	<100	<100	<100	<100	<100	<500	**1250**	**162**	<140
SK-95	NY-W	<5.0	<5.0	<5.0	<5.0	**12.28**	<5.0	<5.0	<25	**261.2**	**25.51**	<7.0
SK-95	ID-B	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**68.5**	<5.0	<7.0
SK-95	DO	<10	<100	<100	<100	<10	<10	<10	<500	**424**	<100	<140
SK-95	NY-A	<100	<100	<100	<100	<100	<100	<100	<500	**563**	<100	<140
SK-95	NJ-S	<100	<100	<100	<100	<100	<100	<100	<500	**620**	<100	<140
SK-95	NY-T	<100	<100	<100	<100	<100	<100	<100	<500	**185**	<100	<140
SK-95	GA-N	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<12.5	**8**	<2.5	<3.5
SK-95	NM-F	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**1.5**	<1.0	<1.4
SK-95	MS-J	<100	<100	<100	<100	<100	<100	<100	<500	**259**	<100	<140
SK-95	GA-M	<100	<100	<100	<100	<100	<100	<100	<500	**1180**	<100	<140
SK-95	NY-L	<5.0	<5.0	<5.0	<5.0	5.9	<5.0	<5.0	<25	**71.5**	<5.0	<7.0
SK-95	GA-m	<100	<100	<100	<100	<100	<100	<100	<500	**2260**	<100	<140

PARTS WASHER SOLVENT 105

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	NY-C	<100	<100	<100	<100	<100	<100	<100	<500	**288**	<100	<140
SK-95	NY-N	<5.0	<5.0	<5.0	<5.0	**24.6**	<5.0	<5.0	<25	**286**	<5.0	<7.0
SK-95	NE-O	**3.6**	<0.10	<2.5	**13.8**	<2.5	<0.10	<0.10	5.5	**101**	**24.3**	<0.140
SK-95	NE-GI	**2**	<2.5	<2.5	**7.3**	<2.5	<2.5	<2.5	<12.5	**161**	**15.1**	<0.140
SK-95	DE	**2.7**	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1.2	**82.7**	**29.5**	<0.14
SK-95	MN-B	<100	<100	<100	<100	<100	<100	<100	<500	**701**	<100	<140
SK-96	ND-F	**3.60**	<2.00	<2.00	<2.00	**8.00**	<2.00	<4.00	<10.0	**821**	**137**	<2.00
SK-96	KS-E	**3.30**	<2.00	<2.0	<2.0	**13.70**	<2.00	<4.00	<10	**1760**	**71.2**	<2.00
SK-96	KS-W	**9.60**	<2.00	<2.0	<2.0	7.20	<2.00	<4.00	<10	**892**	**12.9**	<2.00
SK-96	SD-S	<2.00	<2.00	<2.00	<2.00	6.50	<2.00	<4.0	18.9	**727**	**9.60**	<2.00
SK-96	KS-D	<2.00	<2.00	3.90	<2.0	7.10	<2.00	<4.00	<10.0	**1010**	**4.80**	<2.00
SK-96	GA-G	**3.10**	<2.00	<2.00	<2.00	**19.30**	<2.00	<4.00	14.90	**3310**	**74.7**	<2.00
SK-96	GA-m	<2.00	<2.00	<2.00	<2.00	**8.50**	<2.00	<4.00	<10.0	**1090**	**2.30**	<2.00
SK-95	GA-N	<2.00	<2.00	<2.00	<2.00	4.60	<2.00	<4.00	16.40	**1030**	**9.10**	<2.00
SK-96	WA-S	**3.90**	<2.00	<2.00	<2.00	**9.60**	<2.00	<4.00	<10.0	**944**	**151**	<2.00
SK-96	MO-C	**2.2**	<2.00	2.2	<2.00	**11.9**	<2.00	<4.00	<10.0	**671**	**36.8**	<2.00
SK-96	BI	**14.4**	<2.00	<2.00	<2.00	**10.3**	<2.00	<4.00	<10.0	**1320**	**39.9**	<2.00
SK-96	NY-L	0.14	<0.100	<10.0	<0.100	<10.0	<0.100	<0.100	<0.500	**184**	**2.8**	<0.140
SK-96	NY-L	<20.0	<20.0	<20.0	<20.0	**26.6**	<20.0	<40.0	<100.0	**2770**	<20.0	<20.0
SK-96	MS-J	<2.00	<2.00	<2.00	<2.00	3.7	<2.00	<4.00	<10.0	**242**	**11.5**	<2.00
SK-96	GA-M	<2.00	<2.00	<2.00	<2.00	**7.7**	<2.00	<4.00	<10.0	**756**	**7.5**	<2.00
SK-96	NM-A	<2.00	<2.00	<2.00	<2.00	4.20	<2.00	<4.00	<10.0	**353**	**6.60**	<2.00
SK-96	NM-F	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**77.1**	<2.00	<2.00
SK-96	NY-N	**3.00**	<0.200	<0.200	<0.200	4.4	<0.200	0.44	17.1	**437**	**29.2**	<0.200
SK-96	NY-N	<0.200	<2.00	<2.00	<2.00	**11.20**	<2.00	<4.00	<1.00	**209**	**3.1**	<2.00
SK-96	NY-N	<0.200	<2.00	<2.00	<2.00	**10.20**	<2.00	<4.00	<1.00	**203**	**3.0**	<2.00
SK-96	NY-S	**1.4**	<0.200	0.98	<0.200	**9.4**	<0.200	<0.400	1.9	**496**	**16.9**	<0.200
SK-96	NY-S	<2.00	<2.00	<2.00	<2.00	**11.4**	<2.00	<4.00	<10.0	**527**	**2.4**	<2.00
SK-96	NY-S	<2.00	<2.00	<2.00	<2.00	**20.8**	<2.00	<4.00	<10.0	**856**	**10.9**	<2.00
SK-96	NY-C	<2.00	<2.00	<2.00	<2.00	**35.2**	<2.00	<4.00	<10.0	**878**	**13.10**	<2.00
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	**10.9**	<2.00	<4.00	<10.00	**381**	**5.9**	<2.00

PARTS WASHER SOLVENT 105

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	LA-P	<2.00	<2.00	3.4	<2.00	5.5	<2.00	<4.00	<10.00	**304**	**14.1**	<2.00
SK-96	DE	**4.3**	<2.00	<2.00	<2.00	3.5	<2.00	<4.00	<10.0	**257**	**69.4**	<2.00
SK-96	NE-O	<2.00	<2.00	<2.00	<2.00	**8.5**	<2.00	<4.00	<10.0	**67.5**	<2.00	<2.00
SK-96	DO	**9.7**	<2.00	3.4	<2.00	**12.40**	<2.00	<4.00	13.4	**1500**	**86.5**	<2.00
SK-96	DO	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	16.9	**1.6**	0.26	<0.140
SK-96	MN-E	<0.200	<0.200	<0.200	<0.200	0.94	<0.200	<0.400	<1.00	0.51	<0.200	<0.200
SK-96	MN-E	**2.9**	<0.200	<0.200	<0.200	**9.5**	<0.200	<0.400	7.2	**243**	**135**	<0.200
SK-96	MN-E	**3.2**	<0.200	<0.200	<0.200	**9.3**	<0.200	<0.400	7.1	**240**	**145**	<0.200
SK-96	LA-K	<2.00	<2.00	<2.00	<2.00	3.4	<2.00	<4.00	<10.00	**205**	**3.1**	<2.00
SK-96	SC-G	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.0	<2.00	<2.00	<2.00
	UT-S	<14	<35	<14	<35	<70	<35	<35	<350	**959**	**39.2**	<35
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	**16.2**	<2.00	<4.00	<10.00	**1540**	**2580**	<2.00
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	**15.7**	<2.00	<4.00	<10.00	**1510**	**2840**	<2.00
SK-96	MN-B	**3.3**	<0.200	<0.200	<0.200	7.3	<0.200	<0.400	7.3	**218**	**65.4**	<0.200
SK-96	MN-B	<2.00	<2.00	<2.00	<2.00	5.4	<2.00	<4.00	13.3	**999**	**34.1**	<2.00
SK-96	NE-GI	<2.00	<2.00	<2.00	<2.00	**9.3**	<2.00	<4.00	<10.00	**563**	<2.00	<2.00
SK-95	CO-E-DE	**6.00**	<2.00	<2.00	<2.00	3.7	<2.00	<4.00	17.5	**1470**	**70.1**	<2.00
SK-95	CO-P-DE	**3.90**	<2.00	<2.00	<2.00	3.2	<2.00	<4.00	<10.0	**450**	**19.8**	<2.00
SK-95	CO-GJ-RE	**8.1**	<0.20	<0.20	<0.20	6.2	0.43	**13.7**	12.5	**2110**	**415**	<0.20
SK-96	NE-G	**4.8**	<2.00	<2.00	<2.00	5.7	<2.00	<4.00	16.4	**1060**	**59.4**	<2.00
Total # of Samples		81										
# of Hits		**23**	0	0	**2**	**26**	0	0	0	**79**	**45**	0
	MAX	14.4	0	3.9	13.8	35.2	0.43	13.7	18.9	4120	2840	0
	MIN	0.14	0	0.98	7.3	0.94	0.43	0.44	1.9	0.51	0.26	0

PARTS WASHER SOLVENT 150

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	KS-E	6.72	0.787	152	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-W	9.14	0.818	153	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	WA-L	6.1	0.821	>142	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-D	7.37	0.813	155	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NJ-B	8.29	0.806	145	<4.0	6.48	<1.00	<2.0	**14.41**	0.048	<0.45	<1.5
SK-95	ID-B	7.72	0.804	**132**	<4.0	2.94	<1.0	<2.0	**7.29**	<0.04	<0.45	<1.5
SK-95	LA-P	7.54	0.801	150	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-S	8.01	0.819	156	<5.0	<20	**3.08**	<2.0	**6.38**	<0.04	<0.45	<1.0
SK-95	NY-W	8.75	0.8	**127**	<4.0	1.24	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	MS-J	8.43	0.783	155	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NY-A	7.09	0.819	158	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	DO	8.41	0.823	148	<4.0	1.02	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NJ-S	9.35	0.804	152	<4.0	1.49	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-T	7.52	0.810	150	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NM-F	9.07	0.798	153	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	LA-K	7.82	0.799	152	<4.00	<1.00	<1.00	<2.00	<4.00	<0.04	<0.45	<2.0
SK-95	NY-L	7.34	0.803	152	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-C	6.66	0.783	153	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NM-A	7.61	0.804	156	<4.0	1.17	**1.69**	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NY-N	5.88	0.789	**130**	<4.0	3.25	<1.0	<2.0	**8.23**	<0.04	<0.45	<2.0
SK-96	KS-E	7.22	0.79	150	<5.00	1.17	0.739	<0.500	**6.76**	<0.04	<0.45	<0.500
SK-96	KS-D	5.56	0.823	144	<5.00	<0.601	0.521	0.56	<4.00	<0.040	<0.45	<0.500
SK-96	KS-W	6.93	0.80	152	<5.00	0.862	<0.500	2.44	<4.00	<0.040	<0.45	<0.500
SK-96	MO-C	5.90	0.81	140	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-C	8.36	0.79	154	<5.00	0.731	<0.500	<0.500	4.66	<0.040	<0.45	<0.500
SK-96	NY-C	7.21	0.76	155	<5.00	1.6	**1.21**	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-C	6.55	0.798	152	<5.00	<0.500	0.584	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	WA-L	9.37	0.82	150	<5.00	7.55	**3.85**	1.65	**13.4**	<0.040	<0.45	<0.500
SK-96	MS-J	8.41	0.81	158	<5.00	**138**	<0.500	0.888	**7.07**	<0.040	<0.45	<0.500
SK-96	NM-A	6.32	0.81	154	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-F	7.45	0.82	**126**	<5.00	3.58	<0.500	<0.500	**6.03**	<0.04	<0.45	<0.500

PARTS WASHER SOLVENT 150

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-L	7.17	0.78	**136**	<5.00	<0.50	<0.50	<0.50	<4.00	<0.04	<0.45	<0.50
SK-96	NY-L	6.68	0.798	**138**	<5.00	2.15	<0.500	<0.500	**5.75**	<0.040	<0.45	<0.500
SK-96	NY-L	7.09	0.792	**138**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-L	7.40	0.799	153	<5.00	0.651	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-N	7.94	0.784	157	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	7.28	0.792	155	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	7.12	0.796	154	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-S	8.33	0.802	153	<5.0	<0.500	<0.500	<0.500	<4.00	<0.04	<0.45	<0.500
SK-96	NY-S	5.65	0.78	164	<5.00	1.58	<0.500	0.572	<4.00	<0.040	<0.452	<0.500
SK-96	NY-S	7.90	0.79	151	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-A	7.08	0.843	**93***	<5.0	0.686	<0.500	<0.500	<0.400	<0.04	<0.45	<0.500
SK-96	LA-P	7.06	0.8	161	<5.00	18.3	0.86	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	LA-K	7.51	0.814	160	<5.00	6.19	<0.500	0.538	<4.00	<0.040	<0.45	<0.500
SK-96	DO	6.59	0.83	140	<5.00	0.522	0.691	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-A	6.89	0.823	153	<5.0	<0.500	<0.500	<0.500	<0.400	<0.04	<0.45	<0.500
SK-96	NY-A	7.13	0.805	152	<5.0	<0.500	<0.500	<0.500	<0.400	<0.04	<0.45	<0.500
SK-96	NE-G	8.55	0.799	158	<5.00	1.61	0.865	<0.500	**66.3**	<0.040	<0.452	<0.500
Total # of Samples		48										
# of Hits		0	0	8	0	1	4	0	10	0	0	0
* Data rejected due to contamination problems.												
	MAX	9.37	0.843	164	0	138	3.85	2.44	66.3	0.048	0	0
	MIN	5.56	0.76	126	0	0.522	0.521	0.538	4.66	0.048	0	0

PARTS WASHER SOLVENT 150

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	KS-E	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-W	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	WA-L	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	KS-D	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	NJ-B	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	ID-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-P	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-W	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	MS-J	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DO	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-T	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NM-F	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-K	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NM-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-N	<280	<230	<340	<590	<600	<2220	<120	<360	<360	<380
SK-96	KS-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-D	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MO-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	NY-C	<0.850	<0.073	<0.015	<0.015	<0.015	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-C	6.9	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-C	<0.850	<0.073	0.009	0.039	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	WA-L	13.8	<0.073	<0.015	<0.015	<0.015	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	MS-J	<0.850	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NM-A	<0.850	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NM-F	28	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240

PARTS WASHER SOLVENT 150

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-L	22.7	<0.073	<0.015	<0.015	<0.015	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-L	31.1	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-L	15.2	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-L	2.18	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	<0.850	<0.073	0.016	0.105	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	<0.850	<0.073	<0.850	<1.50	<1.50	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	<0.850	<0.073	0.021	0.031	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	<0.850	<0.073	<0.016	0.086	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	<0.850	<0.073	<0.850	<1.50	<1.50	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	<0.850	<0.073	<0.850	<1.50	<1.50	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-A	<0.850	<0.073	0.029	<0.034	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	LA-P	5.6	<0.073	<0.016	0.046	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	LA-K	<0.850	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-95	DO	44.3	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-A	<0.850	<5.00	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-A	<0.850	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NE-G	0.86	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
Total # of Samples		48									
# of Hits		0	0	0	0	0	0	0	0	0	0
	MAX	44.3	0	0.029	0.105	0	0	0	0	0	0
	MIN	0.86	0	0.009	0.031	0	0	0	0	0	0

PARTS WASHER SOLVENT 150

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	KS-E	**6.3**	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<12	**7.1**	<2.5	<3.5
SK-95	KS-W	<100	<100	<100	<100	<100	<100	<100	<500	**2810**	<100	<140
SK-95	WA-L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**7**	<0.10	<0.14
SK-95	KS-D	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.4
SK-95	NJ-B	**10.9**	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<25	**52.5**	<5.00	<7.00
SK-95	ID-B	<100	<100	<100	<100	<100	<100	<100	<500	**771**	<100	<140
SK-95	LA-P	<0.5	<0.5	<100	<6	1.4	<0.5	<0.7	<200	**1.0**	<0.5	<0.2
SK-95	NY-S	<0.5	<0.5	<100	<6	0.87	<0.5	<0.7	<200	**21.2**	**20.5**	<0.2
SK-95	NY-W	**41.4**	<0.5	<100	<6	1.4	<0.5	<0.7	8.5	**32.3**	**2.1**	<0.2
SK-95	MS-J	**0.71**	<0.5	<100	<6	0.76	<0.5	<0.7	<200	**508**	0.17	<0.2
SK-95	NY-A	<0.5	<0.5	<100	<6	0.43	<0.5	<0.7	<200	**5.4**	0.27	<0.2
SK-95	DO	0.46	<0.5	37.8	<6	2.9	<0.5	<0.7	3.2	**286**	**14.8**	<0.2
SK-95	NJ-S	<10	<10	<10	<10	<10	<10	<10	<50	**19.7**	<10	<14
SK-95	NY-T	<0.5	<0.5	0.25	<6	2.9	<0.5	<0.7	1.3	**0.87**	<0.5	<0.2
SK-95	NM-F	**12.7**	<0.5	<100	<6	0.51	<0.5	<0.7	<200	**136**	**1.9**	<0.2
SK-95	LA-K	<0.5	<0.5	<100	<6	0.74	<0.5	<0.7	<200	**23.6**	0.18	<0.2
SK-95	NY-L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.26	<0.10	<0.14
SK-95	NY-C	**2**	<0.5	<100	<6	1	<0.5	<0.7	<200	**211**	**45.6**	<0.2
SK-95	NM-A	<0.5	<0.5	<100	<6	0.32	<0.5	<0.7	<200	**17.2**	<0.5	<0.2
SK-95	NY-N	<0.5	<0.5	<100	<6	0.61	<0.5	<0.7	<200	**51.1**	<0.5	<0.2
SK-96	KS-E	**2.1**	<0.200	0.38	<0.200	**11.6**	<0.200	<0.400	<1.0	**141**	**1.8**	<0.200
SK-96	KS-D	**13.3**	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	13	**638**	<2.0	<2.0
SK-96	KS-W	**9.90**	<0.200	<0.200	<0.200	0.46	<0.200	<0.400	<1.00	**3.40**	<0.200	<0.200
SK-96	MO-C	<2.00	<2.00	<2.00	<2.00	6.10	<2.00	<4.00	<10.0	**363**	**10.2**	<2.00
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.11	**4.8**	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	1.3	<0.100	<0.100	<0.500	0.44	<0.100	<0.140
SK-96	NY-C	<0.200	<0.200	<0.200	<0.200	0.77	<0.200	<0.400	<1.00	0.40	<0.200	<0.200
SK-96	WA-L	<2.00	<2.00	<2.00	<2.00	5.00	<2.00	<4.00	<10.0	**795.0**	**3.6**	<2.00
SK-96	MS-J	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	10.7	**2350**	<2.00	<2.00
SK-96	NM-A	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.0	**4.2**	<2.00	<2.00
SK-96	NM-F	**1390**	<2.00	<2.00	<2.00	3.2	<2.00	<4.00	<10.0	<2.00	<2.00	<2.00

PARTS WASHER SOLVENT 150

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-L	<0.200	<0.200	0.32	<0.200	5.5	<0.200	<0.400	<1.00	**84.8**	0.28	<0.200
SK-96	NY-L	<2.00	<2.00	<2.00	<2.00	2.3	<2.00	<4.00	<10.00	**32.5**	<2.00	<2.00
SK-96	NY-L	<0.200	<2.00	<2.00	<2.00	**11.7**	<2.00	<4.00	<1.00	**905**	**24.3**	<2.00
SK-96	NY-L	<0.200	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<1.00	**81.9**	<2.00	<2.00
SK-96	NY-N	<0.200	<0.200	<0.200	<0.200	0.97	<0.200	<0.400	<1.00	0.2	<0.200	<0.200
SK-96	NY-N	<0.200	<0.200	<0.200	<0.200	0.33	<0.200	<0.400	<1.00	0.32	<0.200	<0.200
SK-96	NY-N	<0.200	<0.200	<0.200	<0.200	0.33	<0.200	<0.400	<1.00	0.32	<0.200	<0.200
SK-96	NY-S	<0.200	<0.200	<0.200	<0.200	0.28	<0.200	<0.400	1.5	**6.00**	<0.200	<0.200
SK-96	NY-S	<2.00	<2.00	<2.00	<2.00	2.4	<2.00	<4.00	18.9	**37.50**	<2.00	<2.00
SK-96	NY-S	<0.200	<0.200	<0.200	<0.200	0.34	<0.200	<0.400	<1.00	0.39	<0.200	<0.200
SK-96	NY-A	**1.00**	<0.200	<0.200	<0.200	0.52	<0.200	<0.400	<1.00	0.47	<0.200	<0.200
SK-96	LA-P	<2.00	<2.00	<2.00	<2.00	3.3	<2.00	<4.00	<10.0	**151**	**6.40**	<2.00
SK-96	LA-K	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	19.1	**412**	**214**	<2.00
SK-95	DO	**11.5**	<2.00	3.3	<2.00	**10.6**	<2.00	<4.00	11.4	**1450**	**74.6**	<2.00
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	1	<2.00	<4.00	<1.00	**1.6**	0.32	<2.00
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	0.94	<2.00	<4.00	<1.00	**2.6**	0.32	<2.00
SK-96	NE-G	**3.6**	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**207**	**346**	<2.00
Total # of Samples		48										
# of Hits		**13**	0	0	0	**3**	0	0	0	**37**	**14**	0
	MAX	1390	0	37.8	0	11.7	0	0	19.1	2810	346	0
	MIN	0.46	0	0.25	0	0.28	0	0	1.3	0.11	0.17	0

PARTS WASHER SOLVENT SLUDGE

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E/AC	8.16	1.53	**98**	<0.40	0.94	0.61	<0.2	0.87	<0.0008	<0.75	<0.15
SK-95	BI	8.17	1.48	**129**	<0.40	1.07	**1.03**	<0.20	1.07	<0.0008	<0.75	<0.15
SK-95	FA	7.2	1.359	>142	<0.40	1.05	0.65	<0.20	2.93	<0.0008	<0.75	<0.15
SK-95	SD-S	7.65	1.42	**108**	<0.44	0.89	0.78	<0.22	0.93	<0.001	<0.75	<0.16
SK-95	KS-E	8.42	1.3	**114**	<0.40	1.08	**1.05**	<0.20	**21.43**	<0.0008	<0.75	<0.15
SK-95	KS-W	7.51	0.936	**122**	<0.40	0.47	0.33	<0.20	2.22	0.0077	<0.75	<0.15
SK-95	GA-C	7.47	1.45	**121**	<0.4	0.88	0.4	<0.2	3.3	<0.0008	<0.75	<0.15
SK-95	GA-G	7.16	1.34	143	<0.4	1.56	0.92	<0.2	0.92	<0.0008	<0.75	<0.15
SK-95	NJ-N	7.00	0.828	142	<4.0	3.72	**1.38**	<2.0	**21.59**	0.05	<0.45	<1.5
SK-95	KS-D	7.03	1.65	**138**	<0.87	1.61	0.53	<0.43	**10.6**	<0.0059	<0.71	<0.33
SK-95	NJ-B	7.31	1.24	141	<0.40	0.97	**1.29**	<0.20	1.03	0.0078	<0.75	<0.15
SK-95	DE	7.21	1.58	148	<0.65	1.15	<0.16	<0.33	**5.48**	<0.004	<0.73	<0.24
SK-95	LA-P	8.16	1.37	144	<0.40	1.17	0.59	<0.20	**40.45**	<0.0008	<0.75	<0.15
SK-95	LA-K	8.15	1.526	142	<0.40	0.883	**1.02**	<0.20	**29.7**	<0.0008	<0.75	<0.15
SK-95	NY-S	7.59	1.47	141	<0.40	1.02	0.62	<0.20	0.79	<0.0008	<0.75	<0.15
SK-95	NY-A	7.87	1.744	144	<0.40	0.98	0.24	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NJ-S	7.89	1.229	140	<0.40	1.11	0.67	<0.20	1.24	<0.0008	<0.75	<0.15
SK-95	GA-N	7.23	1.35	144	<0.4	1.16	0.41	<0.2	1.19	<0.0008	<0.75	<0.15
SK-95	MS-J	6.66	1.634	148	<0.40	1.11	0.277	<0.20	1.28	<0.0008	<0.75	<0.15
SK-95	GA-M	7.52	1.631	147	<0.40	1.37	0.57	<0.2	1.41	<0.0008	<0.75	<0.15
SK-95	NM-A	7.38	1.749	154	<0.40	1.04	**1.23**	<0.20	1.95	<0.0008	<0.75	<0.15
SK-95	NY-L	7.94	1.39	**128**	<0.40	0.691	**1.66**	<0.20	2.48	0.0013	<0.75	<0.15
SK-95	GA-m	7.47	1.45	**121**	<0.4	0.88	0.4	<0.2	3.3	<0.0008	<0.75	<0.15
SK-95	NY-C	8.65	1.436	**139**	<0.40	2.23	**3.85**	<0.20	1.09	0.0013	<0.75	<0.15
SK-95	NE-O	7.97	1.43	**128**	<0.40	1.67	0.749	<0.20	2.07	<0.0008	<0.75	<0.15
SK-95	NE-GI	7.29	1.35	143	<0.40	0.738	0.322	<0.20	1.35	<0.0008	<0.75	<0.15
SK-95	NM-F	7.54	1.10	**138**	<0.40	0.537	0.35	<0.20	**44.8**	<0.0008	<0.75	<0.15
SK-95	NY-N	7.55	1.542	**134**	<0.40	1.06	0.826	<0.20	2.01	0.001	<0.75	<0.15
SK-96	CO-E/AC	7.4	1.09	142	<0.680	1.25	0.623	0.51	2.58	<0.002	<0.590	<0.070
SK-96	FA	7.88	1.54	**97**	<0.500	0.677	0.311	<0.050	0.575	<0.0010	<0.600	<0.050
SK-96	BI	6.97	1.32	**138**	<0.500	1	**1.19**	<0.05	**6.89**	<0.0008	<0.600	<0.05

PARTS WASHER SOLVENT SLUDGE

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	SD-S	7.73	1.430	**129**	<0.500	0.871	0.679	0.06	0.55	<0.040	<0.600	<0.050
SK-96	SD-S	7.57	1.41	**139**	<0.500	1.16	0.525	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	KS-W	7.14	1.34	146	<0.500	1.01	0.594	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	KS-E	7.8	1.19	**130**	<0.640	0.98	0.77	0.08	**180**	<0.002	<0.600	<0.06
SK-96	KS-D	6.90	1.17	145	<0.590	1.17	0.483	0.064	4.04	<0.0016	<0.600	<0.060
SK-96	GA-M	8.1	1.21	153	<4.10	0.931	0.467	<0.410	4.04	<0.032	<0.480	<0.410
SK-96	GA-m	7.3	1.23	140	<0.500	1.1	**1.97**	<0.050	0.556	<0.0008	<0.600	<0.050
SK-96	GA-G	7.38	1.55	148	<0.50	0.943	0.314	<0.050	2.63	<0.0008	<0.600	<0.050
SK-96	GA-C	6.8	1.39	**109**	<3.65	0.78	0.39	0.63	**6.94**	<0.03	<0.50	<0.37
SK-96	MO-C	7.53	1.049	**108**	<0.500	0.434	0.619	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	7.89	1.29	144	<0.500	1.78	0.398	<0.050	1.69	<0.0008	<0.600	<0.050
SK-96	NY-L	8.51	1.176	>200	<0.500	0.632	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	8.52	1.186	>200	<0.500	0.68	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	MS-J	7.29	1.22	**116**	<0.500	0.62	0.329	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NM-F	7.69	1.49	150	<0.500	0.707	0.562	<0.050	**83.4**	<0.0008	<0.600	<0.050
SK-96	GA-N	8.39	1.33	>200	<0.500	2.34	0.625	<0.050	0.503	<0.0008	<0.600	<0.050
SK-96	NM-A	7.47	1.34	152	<0.500	1.01	0.552	<0.050	0.698	<0.0008	<0.600	<0.050
SK-96	SC-G	7.84	0.98	150	<0.500	1.53	0.33	<0.050	1.68	<0.0008	<0.600	<0.050
SK-96	NY-N	7.07	1.38	**128**	<0.500	0.378	**1.76**	<0.050	<4.00	0.001	<0.600	<0.050
SK-96	NY-N	8.11	1.284	**75**	<0.500	0.559	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-N	9.15	0.982	152	<0.500	0.076	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	7.71	1.21	**132**	<0.500	0.665	0.1	<0.050	<0.400	0.001	<0.600	<0.050
SK-96	NY-S	6.9	1.36	**138**	<0.550	1.25	0.435	<0.0500	**29.7**	<0.00120	<0.600	<0.050
SK-96	NY-S	7.97	1.00	**138**	<0.500	2.07	0.784	<0.050	**9.29**	0.001	<0.600	<0.050
SK-96	LA-K	6.80	0.81	144	<1.00	6.71	<0.100	<0.100	0.93	<0.00510	<0.580	<0.100
SK-96	LA-P	7.83	0.902	**108**	<0.500	1.22	0.256	<0.050	1.45	<0.0008	<0.600	<0.050
SK-96	NE-O	8.17	0.886	**135**	<0.500	1.83	0.379	0.06	0.587	<0.0008	<0.600	<0.050
SK-96	NE-GI	8.84	1.63	148	<0.500	0.926	0.222	<0.050	**127**	<0.0008	<0.600	<0.050
*	UT-S	8.20		**122**	<0.3	1.83	0.57	0.05	0.8	<0.0002	<0.4	<0.025
*	UT-S	7.93		**103**	<0.10	1.4	0.54	0.04	1.1	0.006	<0.30	<0.02
SK-96	DE	7.77	1.14	140	<0.500	0.697	0.608	<0.050	4.38	<0.0008	<0.600	<0.050

PARTS WASHER SOLVENT SLUDGE

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-A	8.05	1.38	**94**	<0.500	1.16	**1.14**	0.10	1.48	<0.0008	<0.600	<0.050
SK-96	NY-A	7.62	1.95	**136**	0.558	0.864	0.743	<0.050	**5.58**	<0.0008	<0.600	<0.050
SK-96	NY-A	7.54	1.98	**130**	<0.500	0.87	0.873	0.052	**6.67**	<0.0008	<0.600	<0.050
SK-96	NY-C	7.45	0.878	148	<0.500	0.797	**1.79**	0.163	1.77	0.002	<0.600	<0.050
SK-96	NY-C	7.96	0.99	144	<0.500	0.678	**1.18**	<0.050	0.422	0.0012	<0.600	<0.050
SK-96	NY-C	7.88	1.14	**120**	<0.500	0.904	0.835	0.138	1.28	0.0009	<0.600	<0.050
Total # of Samples		68										
	# of Hits	0	0	**34**	0	0	**14**	0	**16**	0	0	0
	MAX	9.15	1.98	154	0.558	6.71	3.85	0.63	180	0.05	0	0
	MIN	6.66	0.81	75	0.558	0.076	0.1	0.04	0.422	0.0009	0	0

PARTS WASHER SOLVENT SLUDGE

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E/AC	<137.5	<112.5	<62.5	<75	<112.5	<75	<150	<362.5	<75	<162.5
SK-95	BI	1.4	<0.029	<0.054	<0.077	<0.062	<0.025	<0.359	<0.036	<0.018	<0.024
SK-95	FA	<190	<160	<88	<100	<160	<100	<210	<510	<100	<160
SK-95	SD-S	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-E	1.6	<0.029	<0.056	<0.076	<0.064	<0.025	<0.36	<0.036	<0.018	<0.024
SK-95	KS-W	1.2	<0.058	<0.109	<0.154	<0.125	0.13	<0.718	<0.072	<0.036	<0.047
SK-95	GA-C	1.2	<0.058	<0.11	<0.15	<0.13	<0.050	<0.72	<0.072	<0.036	<0.047
SK-95	GA-G	<0.076	<0.058	<0.11	<0.15	<0.13	<0.050	<0.72	<0.072	<0.036	<0.047
SK-95	NJ-N	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-D	48	<36.02	<68.04	<96.06	<78.05	<31.02	<448.77	<45.03	<22.51	<29.52
SK-95	NJ-B	<0.48	<0.36	<0.70	<0.95	<0.80	<0.31	<4.50	<0.45	<0.22	<0.30
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-P	0.39	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	LA-K	<0.040	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.042
SK-95	NY-S	<0.110	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NY-A	0.370	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NJ-S	3.2	<0.06	<0.11	<0.15	<0.13	<0.05	<0.72	<0.07	<0.04	<0.05
SK-95	GA-N	2.08	<0.180	<0.270	<0.470	<0.480	<0.260	<0.096	<0.290	<0.290	<0.300
SK-95	MS-J	0.69	<0.046	<0.068	<0.120	<0.120	<0.064	<0.024	<0.072	<0.072	<0.076
SK-95	GA-M	1.97	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NM-A	0.3	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NY-L	<0.110	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	GA-m	1.2	<0.058	<0.11	<0.15	<0.13	<0.050	<0.72	<0.072	<0.036	<0.047
SK-95	NY-C	1	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NE-O	2.4	<0.046	<0.068	<0.120	<0.120	<0.064	<0.024	<0.072	<0.072	<0.076
SK-95	NE-GI	1.51	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	NM-F	<0.34	<0.28	<0.41	<0.71	<0.72	<2.7	<0.14	<0.43	<0.43	<0.46
SK-95	NY-N	1.85	<0.92	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-96	CO-E/AC	<140	<115	<170	<295	<300	<160	<26.0	<180	<<180	<190
SK-96	FA	1.5	<0.230	<0.340	<0.590	<0.600	<0.320	<0.120	<0.360	<0.360	<0.380
SK-96	BI	0.58	<0.09	<0.14	<0.24	<0.24	<0.13	<0.048	<0.14	<0.14	<0.15

PARTS WASHER SOLVENT SLUDGE

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	SD-S	4.2	<0.230	<0.340	<0.590	<0.600	<0.320	<0.120	<0.360	<0.360	<0.380
SK-96	SD-S	0.64	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	KS-W	0.56	<0.046	<0.068	<0.12	<0.120	<0.064	<0.024	<0.072	<0.072	<0.076
SK-96	KS-E	<8.44	<6.94	<10.2	<17.7	<18.1	<9.64	<3.64	<10.8	<10.8	<11.4
SK-96	KS-D	<274	<225	<333	<578	<588	<313	<117	<352	<352	<372
SK-96	GA-M	<72.1	<72.1	<80.1	<116	<116	<92.1	<124	<144	<76.1	<72.1
SK-95	GA-m	1.6	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-96	GA-G	1.1	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-96	GA-C	<3.44	<3.64	<4.04	<5.84	<5.88	<4.64	<6.24	<7.24	<3.84	<3.64
SK-96	MO-C	0.97	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-96	NY-L	0.61	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-L	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-L	0.6	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	MS-J	0.25	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NM-F	1.00	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	GA-N	0.26	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NM-A	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	SC-G	0.57	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	0.83	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	0.149	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	1.5	<0.450	<0.500	<0.720	<0.720	<0.580	<0.780	<0.900	<0.480	<0.450
SK-96	NY-S	<2.40	<1.84	<2.05	<2.97	<2.97	<2.36	<3.18	<3.69	<1.95	<1.84
SK-96	NY-S	3.8	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	LA-K	1.48	<0.0600	<0.0200	<0.0500	<0.280	<0.580	<0.230	<0.270	<0.140	<0.180
SK-96	LA-P	0.42	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NE-O	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NE-GI	0.45	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
*	UT-S	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<5	<0.05	<0.05
*	UT-S	0.63	<0.20	<0.20	<0.20	<0.20	<0.20	<1.00	<0.20	<0.20	<0.20
SK-96	DE	1.17	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045

PARTS WASHER SOLVENT SLUDGE

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-A	2.730	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-A	0.26	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-A	0.24	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-C	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-95	NY-C	<0.450	<0.450	<0.500	<0.720	<0.720	<0.580	<0.780	<0.900	<0.480	<0.450
SK-96	NY-C	2.4	<0.450	<0.500	<0.720	<0.720	<0.580	<0.780	<0.900	<0.480	<0.450
Total # samples			68								
# of Hits		0	0	0	0	0	0	0	0	0	0
MAX		48	0	0	0	0	0.13	0	0	0	0
MIN		0.149	0	0	0	0	0.13	0	0	0	0

PARTS WASHER SOLVENT SLUDGE

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E/AC	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.37	0.36	<0.14
SK-95	BI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**1.2**	0.26	<0.14
SK-95	FA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.1	0.67	<0.10	<0.14
SK-95	SD-S	<100	<100	<100	<100	<100	<100	<100	<500	**341**	<100	<140
SK-95	KS-E	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<1.2	0.56	0.17	<0.14
SK-95	KS-W	**4.4**	**1.5**	<1.0	<1.0	4.6	**1.2**	<1.0	<5.0	**190**	**2.00**	<1.4
SK-95	GA-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.26	<0.10	<0.14
SK-95	GA-G	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.35	<0.10	<0.14
SK-95	NJ-N	<100	<100	<100	<100	<100	<100	<100	<500	**1300**	<100	<140
SK-95	KS-D	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<5.5	**5.8**	<1.1	<1.14
SK-95	NJ-B	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.67	<0.10	<0.14
SK-95	DE	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.88	**16.15**	<0.18	<0.25
SK-95	LA-P	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	LA-K	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.2	0.47	0.19	<0.14
SK-95	NY-S	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**0.73**	<0.10	<0.14
SK-95	NY-A	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.4	<0.10	<0.14
SK-95	NJ-S	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**1.9**	<0.10	<0.14
SK-95	GA-N	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**1.5**	0.38	<0.14
SK-95	MS-J	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	GA-M	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.35	<0.10	<0.14
SK-95	NM-A	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	NY-L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.34	<0.10	<0.14
SK-95	GA-m	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.26	<0.10	<0.14
SK-95	NY-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.23	<0.10	<0.14
SK-95	NE-O	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.5	0.3	<0.14
SK-95	NE-GI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.52	0.12	<0.14
SK-95	NM-F	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.55	0.12	<0.10	<0.14
SK-95	NY-N	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.48	<0.10	<0.14
SK-96	CO-E/AC	0.26	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	1.24	**10.3**	**2.27**	<0.19
SK-96	FA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.500	0.5	<0.10	<0.14
SK-96	BI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.2	0.11	<0.14

PARTS WASHER SOLVENT SLUDGE

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	SD-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.48	0.1	<0.140
SK-96	SD-S	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.54	0.36	<0.100	<0.140
SK-96	KS-W	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.9	0.4	<0.100	<0.140
SK-96	KS-E	0.13	<0.100	<0.100	<0.100	0.12	<0.100	<0.100	2.17	**3.82**	0.32	<0.140
SK-96	KS-D	0.22	<0.100	<0.100	<0.100	0.12	<0.100	<0.100	0.77	**4.59**	0.42	<0.140
SK-96	GA-M	0.15	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**8.64**	0.4	<0.140
SK-95	GA-m	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.50	**1.3**	**1.9**	<0.14
SK-96	GA-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.37	<0.100	<0.140
SK-96	GA-C	<2.45	<2.45	<2.45	<2.45	<2.45	<2.45	<2.45	<12.3	**107**	**10.9**	<3.43
SK-96	MO-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.62	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.3	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.36	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.36	<0.100	<0.140
SK-96	MS-J	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	NM-F	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.11	<0.100	<0.140
SK-96	GA-N	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.48	<0.10	<0.14
SK-96	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.140	<0.100	<0.140
SK-96	SC-G	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.350	<0.10	<0.14
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.36	<0.100	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**2.0**	<0.100	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**3.50**	<0.100	<0.140
SK-96	NY-S	<0.110	<0.110	<0.110	<0.110	<0.110	<0.110	<0.110	0.998	**0.78**	<0.110	<0.160
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.68	**3.9**	**0.7**	<0.140
SK-96	LA-K	0.127	<0.110	<0.110	<0.110	<0.110	<0.110	<0.110	0.92	**1.98**	0.289	<0.150
SK-96	LA-P	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.36	<0.100	<0.140
SK-96	NE-O	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.64	0.36	<0.100	<0.140
SK-96	NE-GI	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.37	<0.100	<0.140
*	UT-S	0.03	<0.05	<0.02	<0.05	<0.1	<0.05	<0.05	<0.5	0.27	0.06	<0.05
*	UT-S	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.28	0.32	<0.050	<0.10
SK-96	DE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.12	0.15	<0.140

PARTS WASHER SOLVENT SLUDGE

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.43	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.64	0.25	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.74**	0.29	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.17	<0.100	<0.140
SK-95	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.15	<0.100	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.15	0.14	<0.140
Total # samples			68									
# of Hits		1	1	0	0	0	1	0	0	21	5	0
MAX		4.4	1.5	0	0	4.6	1.2	0	2.17	1300	10.9	0
MIN		0.03	1.5	0	0	0.12	1.2	0	0.28	0.11	0.06	0

PWS TANK BOTTOMS

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	FA	6.58	1.132	**98**	<0.40	1.19	0.86	<0.20	0.49	<0.0008	<0.75	<0.15
SK-95	DE	7.81	0.856	>200	<0.40	0.21	<0.10	<0.20	3.06	<0.0008	<0.75	<0.15
SK-95	SC-G	7.00	1.14	**136**	<0.58	2.16	0.371	<0.29	1.84	<0.0028	<0.74	<0.22
SK-95	NY-N	5.30	1.02	**128**	<0.58	0.41	**2.19**	<0.29	0.89	<0.003	<0.74	<0.22
SK-95	NE-GI	7.51	1.33	**136**	<0.40	1.36	0.683	<0.20	1.85	<0.0008	<0.75	<0.15
SK-95	NE-O	8.05	1.11	**124**	<0.40	1.53	**1.11**	<0.20	2.26	<0.0008	<0.75	<0.15
SK-95	NY-L	6.53	0.791	**114**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	BI	8.01	1.05	**85**	<0.40	1.7	0.579	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	CO-E	8.17	1.28	140	<0.40	1.19	0.862	<0.20	1.14	<0.0008	<0.75	<0.15
SK-95	DO	6.51	0.876	>200	<0.40	0.314	0.135	<0.20	1.73	<0.0008	<0.75	<0.15
SK-95	ID-B	7.59	1.265	**128**	<0.40	0.86	0.44	<0.20	0.95	0.0017	<0.75	<0.15
SK-96	AZ-T	7.91	1.33	**132**	<0.400	0.853	**1.54**	<0.200	2.18	<0.0008	<0.750	<0.150
SK-96	TX-P	9.60	1.27	>142	<0.500	0.719	0.226	<0.050	**37.9**	<0.0008	<0.045	<0.050
SK-96	MI-P	8.46	1.32	>142	<0.200	1.27	**1.32**	0.107	2.01	0.0018	<0.460	<0.020
SK-96	PA-W	7.91	0.96	**107**	<0.50	1.38	**1.44**	0.05	4.46	<0.0008	<0.60	<0.05
SK-96	GA-G	7.20	1.24	148	<0.730	1.03	0.489	0.091	**5.9**	<0.003	<0.590	<0.070
SK-96	MO-C	8.96	1.32	>200	<0.500	3.57	0.429	<0.050	3.77	<0.0008	<0.600	<0.050
SK-96	NY-C	7.33	1.31	**128**	<0.500	1.72	0.551	0.06	0.952	<0.0008	<0.600	<0.050
SK-96	DE	7.42	0.89	151	<5.00	22.3	**4.83**	**6.19**	**149**	<0.040	**1.01**	<0.500
SK-96	BI	7.90	0.911	**127**	<0.590	1.42	0.92	0.06	0.56	0.0002	<0.600	<0.060
	UT-S	7.94		166	<1.0	<10.0	0.8	<0.3	<2.0	0.0009	<3.0	<0.20
SK-96	NY-N	7.85	1.342	**134**	<0.500	0.344	0.120	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-N	8.00	1.359	**134**	<0.500	0.43	0.126	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-N	8.05	1.444	**135**	<0.500	0.351	0.082	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	7.80	1.1	**114**	<4.33	1.52	0.44	<0.430	**9.78**	<0.0341	<0.470	<0.430
SK-96	NY-L	7.30	1.15	>200	<3.20	1.37	0.34	<0.320	**7.18**	<0.0243	<0.510	<0.320
SK-96	NY-S	8.96	1.16	>200	<0.500	4.04	0.531	0.204	**16.4**	<0.0008	<0.600	<0.050
SK-96	NE-GI	8.08	1.47	**104**	<0.500	1.05	<0.050	0.127	<0.400	<0.0008	<0.600	<0.050
Total # of Samples		28										
# of Hits		0	0	17	0	0	6	1	6	0	1	0

PWS TANK BOTTOMS

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
	MAX	9.60	1.47	166.00	0.00	22.30	4.83	6.19	149.00	0.00	1.01	0.00
	MIN	5.30	0.79	85.00	0.00	0.21	0.08	0.05	0.49	0.00	1.01	0.00

PWS TANK BOTTOMS

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	FA	0.68	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	SC-G	26.9	<11.5	<17.1	<29.6	<30.1	<16.1	<6.02	<18.1	<18.1	<19.1
SK-95	NY-N	23.6	<10.9	<16.1	<28	<28.4	<104	<5.69	<17.1	<17.1	<18
SK-95	NE-GI	<0.040	<0.044	<0.044	<0.100	<0.120	<0.068	<0.350	<0.140	<0.040	<0.140
SK-95	NE-O	1.75	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	BI	2.5	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	CO-E	1.15	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-95	DO	<0.670	<0.550	<0.820	<1.40	<1.40	<0.770	<0.290	<0.860	<0.860	<0.910
SK-95	ID-B	1.32	<0.140	<0.200	<0.350	<0.360	<0.190	<0.072	<0.220	<0.220	<0.230
SK-96	AZ-T	7.00	<0.230	<0.340	<0.590	<0.600	<0.320	<0.120	<0.360	<0.360	<0.180
SK-96	TX-P	2	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-96	MI-P	5.1	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-96	PA-W	<0.90	<0.90	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.95	<0.90
SK-96	GA-G	<155	<127	<187	<325	<330	<176	<66	<198	<198	<209
SK-96	MO-C	1.2	<0.092	<0.140	<0.240	<0.240	<0.130	<0.048	<0.140	<0.140	<0.150
SK-96	NY-C	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	DE	3.72	<0.073	0.073	0.158	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	BI	2.56	<0.050	<0.050	<0.070	<0.080	<0.070	<0.080	<0.100	<0.050	<0.050
	UT-S	<160	<160	<160	<160	<160	<160	<800	<160	<160	<160
SK-96	NY-N	0.74	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	0.75	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	0.74	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-L	<34.2	<34.2	<38.0	<55.2	<55.2	<43.8	<59.0	<68.5	<36.1	<34.2
SK-96	NY-L	11.21	<5.44	<6.05	<8.77	<8.77	<6.96	<9.38	<10.9	<5.75	<5.44
SK-96	NY-S	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NE-GI	0.62	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
Total # of Samples		28									
# of Hits		0	0	0	0	0	0	0	0	0	0

PWS TANK BOTTOMS

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
	MAX	26.90	0.00	0.07	0.16	0.00	0.00	0.00	0.00	0.00	0.00
	MIN	0.62	0.00	0.07	0.16	0.00	0.00	0.00	0.00	0.00	0.00

PWS TANK BOTTOMS

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DCIB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	FA	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.39	0.1	<0.14
SK-95	DE	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	SC-G	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	0.83	0.25	<0.14	<0.20
SK-95	NY-N	<0.42	<0.42	<0.42	<0.42	0.54	<0.42	<0.42	<2.08	**6.37**	<0.42	<0.58
SK-95	NE-GI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.2	0.26	<0.10	<0.14
SK-95	NE-O	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.68	0.32	0.15	<0.140
SK-95	NY-L	<100	<100	<100	<100	<100	<100	<100	<500	**352**	<100	<140
SK-95	BI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.41	0.17	<0.14
SK-95	CO-E	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.27	<0.10	<0.14
SK-95	DO	<0.10	<0.10	<0.10	0.3	<0.10	<0.10	<0.10	<0.50	0.11	<0.10	<0.14
SK-95	ID-B	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**0.79**	<0.10	<0.14
SK-96	AZ_T	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.51	<0.10	<0.14
SK-96	TX-P	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.15	<0.150	<0.140
SK-96	MI-P	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	1.73	0.406	<0.100	<0.140
SK-96	PA-W	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**0.93**	0.13	<0.14
SK-96	GA-G	0.14	<0.100	<0.100	<0.100	0.13	<0.100	0.1	0.82	**1.51**	0.36	<0.140
SK-96	MO-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.29	0.16	<0.140
SK-96	NY-C	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<1.20	**12.9**	**1.5**	<0.350
SK-96	DE	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	4.00	<0.500	<0.500	<0.700
SK-96	BI	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<1.00	**17.1**	**0.75**	<0.280
	UT-S	<120	<120	<120	<120	<120	<120	<120	<500	<120	<120	<250
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**2.2**	0.140	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.86**	0.13	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.4**	0.16	<0.140
SK-96	NY-L	**0.576**	<0.230	<0.230	<0.230	<0.230	<0.230	<0.230	<1.14	**34.4**	**3.5**	<0.320
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.84**	0.14	**0.452**
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.38	**0.54**	<0.140
SK-96	NE-GI	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.96	0.29	<0.100	<0.140
Total # of Samples		28										
# of Hits		1	0	0	0	0	0	0	0	12	4	1

PWS TANK BOTTOMS

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
	MAX	0.58	0.00	0.00	0.30	0.54	0.00	0.10	4.00	352.00	3.50	0.45
	MIN	0.14	0.00	0.00	0.30	0.13	0.00	0.10	0.68	0.11	0.10	0.45

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Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E/AC	10.42	0.933	153	<0.40	<1.0	3.53	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-D	10.10	0.928	>142	<4.0	2.09	11.44	<2.0	41.14	<0.04	<0.45	<1.5
SK-95	KS-E	10.97	0.93	144	<4.0	<1.0	6.87	<2.0	55.4	<0.04	<0.45	<1.5
SK-95	KS-W	10.51	0.947	145	<4.0	<1.0	24.41	13.88	<3.5	<0.04	0.54	<1.5
SK-95	SD-S	10.08	0.931	137	<4.00	<1.00	<1.00	<2.00	8.43	<0.04	<0.45	<1.5
SK-95	GA-C	10.68	0.944	139	<4.0	<1.0	2.35	<2.0	11.78	<0.04	<0.45	<1.5
SK-95	GA-G	9.27	0.935	>200	<4.0	3.26	122.4	7.23	58.2	<0.04	0.65	<1.5
SK-95	NJ-N	10.11	0.935	145	<4.0	<1.0	4.07	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	ID-B	10.70	0.949	>200	<5.0	59.3	2.0	244.63	74.95	<0.04	<0.45	<1.0
SK-95	LA-P	9.41	0.939	138	<5.0	<20	33.81	<2.0	11.78	<0.04	<0.45	<1.0
SK-95	NY-S	10.33	0.948	144	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-W	10.16	0.945	137	<5.0	<20	<1.0	<2.0	6.64	<0.04	<0.45	<1.0
SK-95	LA-K	10.23	0.942	140	<4.00	<1.00	160	<2.00	<4.00	<0.04	<0.45	<2.0
SK-95	NY-A	10.20	0.955	140	<5.0	<20	6.91	<2.0	5.08	<0.04	<0.45	<1.0
SK-95	NJ-S	10.09	0.935	149	<4.0	<1.0	<1.0	<2.0	16.5	<0.04	<0.45	<1.5
SK-95	NM-A	10.85	0.956	134	<4.0	<1.0	1.72	<2.0	13.1	<0.04	<0.45	<2.0
SK-95	NM-F	10.14	0.937	147	<4.0	<1.0	6.56	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NY-T	10.39	0.940	142	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-M	10.27	0.928	148	<4.0	<1.0	<1.0	<2.0	8.6	<0.04	<0.45	<2.0
SK-95	NY-C	10.25	0.923	146	<4.0	<1.0	1.22	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	GA-N	10.26	0.940	139	<4.0	1.2	<1.0	<2.0	59.83	<0.04	<0.45	<1.5
SK-95	NY-L	10.56	0.939	147	<4.0	<1.0	28	<2.0	34.3	<0.04	<0.45	<1.5
SK-95	GA-m	10.68	0.944	139	<4.0	<1.0	2.35	<2.0	11.78	<0.04	<0.45	<1.5
SK-95	NE-O	10.18	0.944	147	<4.0	<1.0	22.3	<2.0	49.1	<0.04	<0.45	<1.5
SK-95	NE-GI	10.4	0.937	>200	<4.0	<1.0	<1.0	<2.0	3.94	<0.04	<0.45	<1.5
SK-95	DE	10.07	0.926	144	<4.0	1.26	30.6	5.14	47.02	<0.04	<0.45	<1.5
SK-95	MS-J	6.66	0.943	148	<4.0	<1.0	2.47	<2.0	7.75	<0.04	<0.45	<2.0
SK-95	NY-N	10.42	0.930	144	<4.0	1.77	6.39	<2.0	22.1	<0.04	<0.45	<1.5
SK-96	CO-E/AC	10.66	0.92	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	KS-W	9.47	0.95	143	<5.00	2.28	32.4	0.85	242	0.17	<0.45	<0.500
SK-96	KS-E	9.60	0.94	147	<5.00	2.35	14.2	0.909	72.8	<0.040	<0.45	<0.500

IMMERSION CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	KS-D	9.56	0.94	144	<5.00	0.759	**26.8**	0.974	**83.9**	0.11	<0.45	<0.500
SK-96	MO-C	10.87	0.944	148	<5.00	<0.500	**2.62**	<0.500	**31.8**	<0.040	<0.45	<0.050
SK-96	GA-N	10.70	0.941	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	GA-G	9.50	0.94	147	<5.00	<0.500	**9.52**	<0.50	**29.4**	<0.040	<0.45	<0.500
SK-96	GA-m	9.43	0.93	>200	<5.00	2.52	**3.17**	1.78	**63.4**	<0.040	<0.45	<0.500
SK-96	GA-C	10.13	0.95	146	<5.00	<0.50	<0.50	<0.50	<4.00	<0.04	<0.45	<0.50
SK-96	NY-C	9.97	0.95	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.450	<0.500
SK-96	NY-C	9.64	0.990	>200	**9.59**	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-C	10.01	0.94896	148	<5.00	<0.500	<0.500	<0.500	**14.4**	<0.040	<0.45	<0.500
SK-96	GA-M	9.85	0.94	148	<5.00	<0.500	**1.94**	0.554	**17.8**	<0.040	<0.45	<0.500
SK-96	NM-F	9.97	1.01	148	<5.00	<0.500	**1.89**	<0.500	<4.00	<0.04	<0.45	<0.500
SK-96	NM-A	9.95	0.96	148	<5.00	<0.500	<0.500	0.536	**35**	<0.040	<0.45	<0.500
SK-96	NY-S	9.60	0.94	>200	<5.00	0.508	0.765	<0.500	**12.9**	<0.040	<0.452	<0.500
SK-96	NY-S	9.67	0.97	147	<5.00	<0.500	**2.36**	<0.500	**7.61**	<0.040	<0.45	<0.500
SK-96	NY-S	10.46	0.936	147	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	9.70	0.912	>200	<5.00	17	**6.99**	2.62	**3040**	<0.040	<0.45	<0.500
SK-96	NY-N	9.97	0.939	148	<5.00	0.713	**7.06**	<0.500	**14.8**	<0.040	<0.45	<0.500
SK-96	NY-N	9.97	0.931	143	<5.00	1.25	**10.3**	<0.500	**23.1**	<0.040	<0.45	<0.500
SK-96	NY-A	9.72	0.93	148	<5.0	0.629	**34**	1.12	**84**	<0.04	<0.45	<0.500
SK-96	LA-P	9.78	0.954	153	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	LA-K	9.71	0.93394	149	<5.00	<0.500	**1.12**	0.726	**15.3**	<0.040	<0.45	<0.500
*	UT-S	10.8		151	<1.0	<10.0	**10.4**	<0.3	<2.0	0.0077	<3.0	<0.2
SK-96	NY-L	9.85	0.94	151	<5.00	<0.500	**2.19**	0.6	**12.9**	<0.040	<0.450	<0.500
SK-96	NY-L	10.57	0.951	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-L	10.57	0.951	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-A	9.96	0.936	148	<5.0	16.7	<0.500	<0.500	**5.15**	<0.04	<0.45	<0.500
SK-96	NY-A	9.93	0.946	147	<5.0	5.17	<0.500	<0.500	**5.91**	<0.04	<0.45	<0.500
SK-96	SC-G	9.78	0.965	180	<5.00	<0.500	**6.32**	<0.500	**25.3**	<0.040	<0.452	<0.500
SK-96	NE-GI	9.95	0.955	143	<5.00	<0.500	**2.95**	<0.500	**8.22**	0.17	<0.45	<0.500
SK-96	NE-O	10.06	0.923	150	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NE-G	10.1	0.926	144	<5.00	<0.500	**2.06**	<0.500	**6.45**	<0.040	<0.452	<0.500

IMMERSION CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	SD-S	9.92	0.94	148	<5.0	0.573	<0.500	<0.500	16.1	<0.040	<0.45	<0.500
SK-96	DE	9.82	0.947	145	<5.00	0.713	0.706	12.4	15.0	<0.040	<0.452	<0.500
Total # of Samples		64										
	# of Hits	0	0	7	1	0	39	5	43	0	0	0
	MAX	10.97	1.01	180.00	9.59	59.30	160.00	244.63	3040.00	0.17	0.65	0.00
	MIN	6.66	0.912	134	9.59	0.508	0.706	0.536	3.94	0.0077	0.54	0

IMMERSION CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E/AC	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-D	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-E	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-W	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	SD-S	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	GA-C	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	GA-G	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	NJ-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	ID-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-P	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-K	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NM-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NM-F	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-T	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-M	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-m	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	NE-O	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NE-GI	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	MS-J	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	CO-E/AC	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380

IMMERSION CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	KS-D	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MO-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-G	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-m	<280	<230	<340	<<590	<600	<320	<120	<360	<360	<380
SK-96	GA-C	<170	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	GA-M	<3600	<3600	<3600	<3600	<3600	<3600	<3600	<3600	<3600	<3600
SK-96	NM-F	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NM-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	LA-P	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	LA-K	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
*	UT-S	<500000	<500000	<500000	<500000	<500000	<500000	<2550000	<500000	<2550000	<500000
SK-96	NY-L	<1800	<1800	<2000	<2900	<2900	<2300	<3100	<3600	<1900	<1800
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	SC-G	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-GI	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-O	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-G	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180

IMMERSION CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	SD-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	DE	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
Total # of Samples			64								
# of Hits		0	0	0	0	0	0	0	0	0	0
	MAX	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MIN	0	0	0	0	0	0	0	0	0	0

IMMERSION CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E/AC	<100	<100	<100	<100	684	<100	<100	<500	202	<100	<140
SK-95	KS-D	<100	<100	<100	<100	558	<100	<100	<500	465	<100	<140
SK-95	KS-E	<100	<100	<100	<100	496	<100	<100	<500	145	<100	<140
SK-95	KS-W	<100	<100	<100	<100	954	<100	<100	<500	304	<100	<140
SK-95	SD-S	<100	<100	<100	<100	790	<100	<100	<500	276	<100	<140
SK-95	GA-C	<100	<100	<100	<100	466	<100	<100	<500	103	<100	<140
SK-95	GA-G	<100	<100	<100	<100	439	<100	<100	<500	<100	<100	<140
SK-95	NJ-N	<100	<100	<100	<100	573	<100	<100	<500	<100	<100	<140
SK-95	ID-B	<10	<10	<10	<10	<10	<10	<10	<50	70.5	<10	<14
SK-95	LA-P	<25	<25	<25	<25	<25	<25	<25	<125	102	<25	<35
SK-95	NY-S	<10	<10	34.1	<10	308	<10	<10	105	86.9	<10	<14
SK-95	NY-W	<25	<25	<25	<25	193	<25	<25	<125	118	<25	<35
SK-95	LA-K	<100	<100	<100	<100	662	<100	<100	<500	192	<100	<140
SK-95	NY-A	<10	<10	<10	<10	173	<10	<10	<50	91	<10	<14
SK-95	NJ-S	<100	<100	<100	1430	552	<100	<100	<500	111	<100	<140
SK-95	NM-A	<100	<100	<100	<100	622	<100	<100	<500	<100	<100	<140
SK-95	NM-F	<100	<100	<100	<100	666	<100	<100	<500	218	<100	<140
SK-95	NY-T	<100	<100	<100	<100	788	<100	<100	<500	<100	<100	<140
SK-95	GA-M	<25	<25	<25	<25	412	<25	<25	<125	82.2	<25	<35
SK-95	NY-C	<5.0	<5.0	20.8	<5.0	407	<5.0	<5.0	<25	176	24.1	<7.0
SK-95	GA-N	<5.0	<5.0	<5.0	<5.0	172	<5.0	<5.0	<25	174	7.9	<7.0
SK-95	NY-L	<100	<100	<100	<100	485	<100	<100	1650	205	<100	<140
SK-95	GA-m	<100	<100	<100	<100	466	<100	<100	<500	103	<100	<140
SK-95	NE-O	<5.0	<5.0	35.7	<5.0	370	<5.0	<5.0	<25	122	35	<7.0
SK-95	NE-GI	<10.0	<10.0	36.2	<10.0	443	<10.0	<10.0	<50	291	317	<14.0
SK-95	DE	<5.0	<5.0	42.2	43.9	166	<5.0	<5.0	<25	189	14.1	<0.14
SK-95	MS-J	<100	<100	<100	<100	223	<100	<100	914	<100	<100	<140
SK-95	NY-N	<100	<100	<100	<100	636	<100	<100	<500	129	<100	<140
SK-96	CO-E/AC	2.1	<2.00	33	<2.00	856	<2.00	<4.00	16.6	116	7.4	<2.00
SK-96	KS-W	3.9	<2.0	24.3	<2.0	831	<2.0	<4.0	21.1	86.8	6.8	<2.0
SK-96	KS-E	<2.0	<2.0	33.9	<2.0	648	<2.0	<4.0	20.3	91.1	208	<2.0

IMMERSION CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	KS-D	<2.0	<2.0	32	<2.0	954	<2.0	<4.0	<10	140	31.6	<2.0
SK-96	MO-C	2.9	<2.00	39.2	<2.00	682	<2.00	<4.00	22.3	46	301	<2.00
SK-95	GA-N	<2.00	<2.00	17.1	<2.00	870	<2.00	<4.00	19.2	86.9	2.9	<2.00
SK-96	GA-G	<2.50	<2.50	16.2	<2.50	243	<2.50	<2.50	62.5	59.6	<2.50	<2.50
SK-96	GA-m	<2.00	<2.00	10.3	<2.00	645	<2.00	<4.00	<10.0	64.6	<2.00	<2.00
SK-96	GA-C	<10.0	<10.0	<10.0	<10.0	387	<10.0	<10.0	<50.0	60	<10.0	<14.0
SK-96	NY-C	<20.0	<20.0	42.2	<20.0	1020	<20.0	<40.0	<100.0	73.2	24.6	<20.0
SK-96	NY-C	<20.0	<20.0	20.8	<20.0	354	<20.0	<40.0	<100.0	95.2	<20.0	<20.0
SK-96	NY-C	<20.0	<20.0	<20.0	<20.0	299	<20.0	<40.0	<100.0	110	<20.0	<20.0
SK-96	GA-M	<2.00	<2.00	15.8	<2.00	262	<2.00	<2.00	<10.0	45.6	4.90	<2.00
SK-96	NM-F	<2.00	<2.00	12.6	<2.00	225	<2.00	<2.00	<10.0	12.1	8.1	<2.80
SK-96	NM-A	<2.00	<2.00	16.7	<2.00	222	<2.00	<2.00	<10.0	48.2	3.3	<2.80
SK-96	NY-S	<2.00	<2.00	8.40	<2.00	460	<2.00	<4.00	11.7	29.4	5.00	<2.00
SK-96	NY-S	<20.0	<20.0	28.0	<20.0	640	<20.0	<40.0	<100.0	120	20.60	<20.0
SK-96	NY-S	2.00	<2.00	8.00	<2.00	404	<2.00	<4.00	14	34.8	18.8	<2.00
SK-96	NY-N	<20.0	<20.0	35.4	<20.0	575	<20.0	<40.0	<100.0	168	<20.0	<20.0
SK-96	NY-N	<20.0	<20.0	22.2	<20.0	494	<20.0	<40.0	<100.0	163	<20.0	<20.0
SK-96	NY-N	<20.0	<20.0	<20.0	<20.0	563	<20.0	<40.0	<100.0	462	<20.0	<20.0
SK-96	NY-A	<2.00	<2.00	12.6	<2.00	19	<2.00	<4.00	11.1	59.5	3.8	<2.00
SK-96	LA-P	<10.0	<10.0	18.8	<10.0	170	<10.0	<10.0	<50.0	42.6	<10.0	<14.0
SK-96	LA-K	<20.0	<20.0	35.6	<20.0	508	<20.0	<40.0	273	38	<20.0	<20.0
*	UT-S	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<4000	<1000	<1000	<2000
SK-96	NY-L	<20.0	<20.0	38.8	<20.0	996	<20.0	<40.0	<100	189	24.2	<20.0
SK-96	NY-L	<0.200	<2.00	5.8	<2.00	327	<2.00	<4.00	<1.00	66.2	3.9	<2.00
SK-96	NY-L	<20.0	<20.0	<20.0	<20.0	349	<20.0	<40.0	<100.0	179	<20.0	<20.0
SK-96	NY-A	<2.00	<2.00	12.6	<2.00	19	<2.00	<4.00	11.1	59.5	3.8	<2.00
SK-96	NY-A	<20.0	<20.0	20.8	<20.0	584	<20.0	<40.0	<100.0	116	<20.0	<20.0
SK-96	SC-G	<2.00	<2.00	<2.00	<2.00	312	<2.00	<4.00	<10.0	61.2	<2.00	<2.00
SK-96	NE-GI	<10.00	<10.00	<10.00	<10.00	489	<10.00	<10.00	<50.0	163	81.2	<14.0
SK-96	NE-O	<2.00	<2.00	19.3	<2.00	371	2.1	<4.00	35.2	96.4	161	<2.00
SK-96	NE-G	2.8	<2.00	14.7	<2.00	461	<2.00	<4.00	<10.0	39	11.5	<2.00

IMMERSION CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	SD-S	**3.7**	<2.0	88.2	<2.0	**2200**	<2.0	<4.0	38.1	**260**	**1540**	<2.0
SK-96	DE	<10.0	<10.0	15.9	<10.0	**191**	<10.0	<10.0	<50.0	**32.9**	<10.0	<14.0
Total # of Samples			64									
	# of Hits	**6**	**0**	**0**	**2**	**61**	**1**	**0**	**3**	**58**	**26**	**0**
	MAX	3.90	0.00	88.20	1430.00	2200.00	2.10	0.00	1650.00	465.00	1540.00	0.00
	MIN	2	0	5.8	43.9	19	2.1	0	11.1	12.1	2.9	0

safety-kleen.

MEMORANDUM

SUBJECT:	**Annual Recharacterization 1997 Supplemental Data Package**	**DATE:**	**February 10, 1997**
TO:	**EHS Managers (Br., Process, Fuel) Regional Environmental Managers Jeff Bard *Gary Long* Rick Parker**	**FROM:**	**Liane Hetherington-Ward on behalf of the Annual Recharacterization Team**

The Annual Waste Recharacterization Final Data Package was distributed to all EHS Managers and Regional Environmental Managers on December 20. The enclosed Supplemental Data Package includes the remaining data points that were not available when the data package was distributed in December. **This additional data does not change any of the final waste codes.**

The analytical results from the following samples have been added:

- the third sample of Aqueous Brake Cleaner from Lackawanna, NY,
- the Parts Washer Solvent 105 sample from Columbus, GA,
- the Immersion Cleaner sample from Jackson, MS, and
- the Dry Cleaning Filter Powder samples from Omaha and Grand Island, NE.

The additional data is included in the attachment. Enough copies of the supplemental data package have been provided for you to file in each of your facility's 999 File System at # 1160.

Please contact me at X2550 or e-mail at ELGIN/LHWARD if there are any questions.

/dr

Annual Recharacterization Team:

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John Kusz
Steve Lewis
Catherine McCord
Tony Monda
Cathy Padrta
Rick Peoples
Matt Sauvageau
Bonnie Sims
Dave Stringham

AQUEOUS BRAKE CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1
LAB	SITE										
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	4.37	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	4.66	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.19	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	**2.62**	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.31	**3.73**	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<0.40	0.21	**3.28**	<0.20	<0.35	0.02	<0.75
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.24	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.14	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	**5.92**	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.36	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	2.42	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	0.96	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.09	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.25	<1.0	<2.0	**5.85**	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.15	**1.62**	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.7	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	<1.0	**1**	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.55	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	1.52	**3.28**	<2.0	<3.5	<0.04	<0.45
SK-95	TECH CTR	N/A	N/A	N/A	<4.0	3.03	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	KS-E	8.98	0.998	85*	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	KS-D	8.40	1.016	134*	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	KS-W	7.52	1.002	102*	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	WA-L	9.01	1	**104**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45

AQUEOUS BRAKE CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1
LAB	SITE										
SK-95	GA-C	9.08	0.993	**126**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	GA-G	8.94	0.993	>200	<4.0	1.79	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NJ-N	9.00	0.991	>200	<4.0	1.19	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NJ-B	9.21	1.00	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	ID-B	9.24	1.007	>200	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45
SK-95	NY-S	8.74	1.01	>200	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45
SK-95	NY-W	8.90	0.99	>200	<4.0	1.36	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-A	8.93	1.002	>200	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45
SK-95	NJ-S	9.12	0.996	>200	<4.0	2.07	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-T	7.56	0.995	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-C	9.01	0.996	>200	<4.0	1.36	**1.73**	<2.0	<4.0	<0.04	<0.45
SK-95	NY-L	9.01	1.01	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	GA-m	9.08	0.099	**126**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-95	NY-N	9.28	0.986	>200	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45
SK-95	GA-M	8.91	0.991	>200	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45
SK-96	GA-m	9.07	0.996	>200	<5.00	2.48	<0.500	<0.500	<4.00	<0.04	<0.45
SK-96	GA-M	9.16	0.99	>200	<5.00	0.83	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	GA-G	9.10	1	>142	<5.00	1.39	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	GA-N	8.83	0.98	**79**	<5.00	1.79	0.848	<0.500	<4.00	<0.040	<0.452
SK-96	GA-C	7.85	1	>200	<5.00	0.88	<0.50	<0.50	<4.00	<0.04	<0.45
SK-96	KS-W	9.12	0.99	>200	<5.00	0.838	<0.500	<0.500	<4.0	<0.040	<0.45
SK-96	KS-E	9.03	1	>200	<5.0	0.816	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	KS-D	8.41	1.02	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	WA-L	9.15	0.99	142	<5.00	1.21	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	MO-C	9.34	1.01	>200	<5.00	1.03	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-L	7.65	1.04	>200	<5.00	0.722	<0.500	<0.500	<4.00	<0.040	<0.450
SK-96	NY-L	9.02	1.015	>200	<5.00	1.02	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-C	8.28	1.01	>200	<5.00	48.1	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-C	8.62	1.041	>200	<5.00	0.628	0.736	<0.500	<4.00	<0.040	<0.45

AQUEOUS BRAKE CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se
	Reg. Limit	<2; >12.5	na	< 140	5	100	1	5	5	0.2	1
LAB	SITE										
SK-96	NY-C	9.06	1.019	>200	<5.00	0.699	**2.24**	<0.500	<4.00	<0.040	<0.45
SK-96	NY-N	8.19	0.97	>200	<5.00	1.2	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-N	8.33	0.995	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-N	8.42	1.009	>200	<5.00	0.787	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-S	8.97	0.999	>200	<5.00	0.819	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-S	9.30	1.00	>200	<5.00	1.34	<0.500	<0.500	<4.00	<0.040	<0.452
SK-96	NY-S	8.97	1.00	>200	<5.00	4.02	<0.500	<0.500	<4.00	<0.040	<0.452
SK-96	NM-F	9.15	1.01	>200	<5.00	1.88	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NM-A	8.68	1.01	>200	<5.00	1.41	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	DE	8.26	0.99	151	<5.00	1.82	<0.500	<0.500	<4.00	<0.040	<0.452
SK-96	NE-G	8.9	1.01	>200	<5.00	0.8	<0.500	<0.500	<4.00	<0.040	<0.452
SK-96	NY-A	8.72	0.998	>200	<5.00	0.723	<0.500	<0.500	<4.00	<0.04	<0.45
SK-96	NY-A	8.54	1.0	>200	>5.00	0.628	<0.500	<0.500	<4.00	<0.040	<0.45
SK-96	NY-A	8.74	0.99	>200	<5.00	0.681	<0.500	<0.500	<4.00	<0.04	<0.45
SK-96	NY-L	9.01	1.01	>200	<5.00	1.11	<0.500	<0.500	<4.00	<0.040	<0.45
Total # 0f Samples		72									
# of Hits		0	0	**4**	0	0	**9**	0	**1**	0	0
	MAX	9.34	1.041	151	0	48.1	5.92	0	5.85	0.02	0
	MIN	7.52	0.099	79	0	0.21	0.736	0	5.85	0.02	0

*RESAMPLE CONFIRMS FLASH POINT RESULT >200.

AQUEOUS BRAKE CLEANER

Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
SITE										
TECH CTR	<0.48	<0.36	<0.68	<0.96	<0.78	<0.31	<4.49	<0.45	<0.23	<0.30
TECH CTR	<0.238	<0.180	<0.340	<0.480	<0.390	<0.155	<2.24	<0.225	<0.113	<0.148
TECH CTR	<0.190	<0.144	<0.272	<0.384	<0.312	<0.124	<1.79	0.23	<0.090	<0.118
TECH CTR	<0.240	<0.180	<0.350	<0.480	<0.400	<0.160	<2.20	<0.220	<0.110	<0.150
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<0.71	<0.54	<1.0	<1.4	<1.2	<0.46	<6.8	<0.68	<0.23	<0.44
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<0.95	<0.72	<1.4	<1.9	<1.6	<0.62	<9.0	<0.90	<0.45	<0.59
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<0.95	<0.72	<1.4	<1.9	<1.6	<0.62	<9.0	<0.90	<0.45	<0.59
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
TECH CTR	<3.8	<2.9	<5.6	<7.6	<6.4	<2.5	<36	<3.6	<1.8	<2.4
TECH CTR	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TECH CTR	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
KS-E	<0.48	<0.36	<0.68	<0.96	<0.78	<0.31	<4.49	<0.45	<0.23	<0.30
KS-D	<0.190	<0.144	<0.272	<0.384	<0.312	<0.124	<1.794	<0.180	<0.090	<0.118
KS-W	<4.8	<3.6	<7.0	<9.5	<8.0	<3.1	<45.0	<4.5	<2.2	<3.0
WA-L	<0.19	<0.14	<0.28	<0.38	<0.32	<0.12	<1.8	<0.18	<0.09	<0.12

AQUEOUS BRAKE CLEANER

Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
SITE										
GA-C	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
GA-G	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
NJ-N	<0.95	<0.72	<1.4	<1.9	<1.6	<0.62	<9.00	<0.90	<0.45	<0.59
NJ-B	<1.90	<1.40	<2.80	<3.80	<3.20	<1.20	<18.00	<1.80	<0.90	<1.20
ID-B	<1.0	<1.0	<2.0	<3.0	<3.0	<2.0	<0.60	<2.0	<2.0	<2.0
NY-S	<1.4	<1.2	<1.7	<3.0	<3.0	<1.6	<0.60	<1.8	<1.8	<1.9
NY-W	<0.700	<0.580	<0.850	<1.50	<1.50	<0.800	<0.300	<0.900	<0.900	<0.950
NY-A	<1.4	<1.2	<1.7	<3.0	<3.0	<1.6	<0.6	<1.8	<1.8	<1.9
NJ-S	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
NY-T	<0.280	<0.230	<0.340	<0.590	<0.600	<0.320	<0.120	<0.360	<0.360	<0.380
NY-C	<0.70	<0.58	<0.85	<1.5	<1.5	<5.6	<0.30	<0.90	<0.90	<0.95
NY-L	<1.4	<1.2	<1.7	<3.0	<3.0	<1.6	<0.60	<1.8	<1.8	<1.9
GA-m	<1.9	<1.4	<2.8	<3.8	<3.2	<1.2	<18	<1.8	<0.90	<1.2
NY-N	<2.8	<2.3	<3.4	<5.9	<6.0	<3.2	<1.2	<3.6	<3.6	<3.8
GA-M	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
GA-m	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
GA-M	<0.450	<0.450	<0.500	<0.720	<0.720	<0.580	<0.780	<0.900	<0.480	<0.450
GA-G	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
GA-N	<0.900	<0.900	<1.00	<1.740	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
GA-C	<0.85	<0.90	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.95	<0.90
KS-W	<7.0	<7.0	<7.0	<7.0	<7.0	<7.0	<35	<35	<7.0	<7.0
KS-E	<70*	<70*	<70*	<70*	<70*	<70*	<350*	<350*	<70*	<70*
KS-D	<14.0	<11.5	<17.0	<29.5	<30.0	<16.0	<6.00	<18.0	<18.0	<19.0
WA-L	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
MO-C	<1.40	<1.20	<1.70	<3.00	<3.00	<1.60	<0.600	<1.80	<1.80	<1.90
NY-L	<9.00	<9.00	<10.0	<14.5	<14.5	<11.5	<15.5	<18.0	<9.50	<9.00
NY-L	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
NY-C	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NY-C	<1.70	**0.27**	**0.92**	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210

AQUEOUS BRAKE CLEANER

Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-13-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
SITE										
NY-C	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
NY-N	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NY-N	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
NY-N	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
NY-S	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NY-S	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NY-S	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NM-F	<1.70	<0.150	<1.70	<3.00	<3.00	<1.60	<0.600	<0.700	<0.370	<0.470
NM-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
DE	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NE-G	<9.00	<9.00	<10.0	<14.5	<14.5	<11.5	<15.5	<18.0	<9.50	<9.00
NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NY-A	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
NY-L	<2.80	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
	72									
	0	**1**	**1**	0	0	0	0	0	0	0

MAX	0	0.27	0.92	0	0	0	0	0.23	0	0
MIN	0	0.27	0.92	0	0	0	0	0.23	0	0

AQUEOUS BRAKE CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.14	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.14	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.53	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.13	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.53	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.19	<0.10	<0.14
SK-95	TECH CTR	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	29	<0.50	<0.50	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	2.2	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.43	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**4.0**	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.11	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.91	**127**	**0.51**	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	9.6	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.37	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.26	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	TECH CTR	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	196	<5.0	<5.0	<7.0
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**61.4**	**20.5**	<0.14
SK-95	TECH CTR	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**1.6**	0.25	<0.14
SK-95	TECH CTR	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**5020**	<5.0	<7.0
SK-95	TECH CTR	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**543**	<5.0	<7.0
SK-95	TECH CTR	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1.2	<0.25	<0.25	<0.14
SK-95	KS-E	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**56**	<5.0	<7.0
SK-95	KS-D	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	59	**2.4**	<1.0	<1.4
SK-95	KS-W	0.29	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	**301**	**348**	<0.10	<0.14
SK-95	WA-L	**12**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.4

AQUEOUS BRAKE CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	GA-C	<25	<25	<25	<25	<25	<25	<25	<125	**178**	<25	<35
SK-95	GA-G	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**59**	**17**	<1.4
SK-95	NJ-N	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.42	<0.10	<0.14
SK-95	NJ-B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.4
SK-95	ID-B	<100	<100	<100	<100	<100	<100	<100	<500	**952**	<100	<140
SK-95	NY-S	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0
SK-95	NY-W	<10	<10	<10	<10	<10	<10	<10	<50	**76.2**	<10	<14
SK-95	NY-A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**1.6**	<1.0	<1.0
SK-95	NJ-S	<100	<100	<100	<100	<100	<100	<100	<500	**989**	<100	<140
SK-95	NY-T	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**12.2**	<1.0	<1.4
SK-95	NY-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**9.6**	<0.10	<0.14
SK-95	NY-L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**30.2**	**2.6**	<0.14
SK-95	GA-m	<25	<25	<25	<25	<25	<25	<25	<125	**178**	<25	<35
SK-95	NY-N	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**7.6**	<0.10	<0.14
SK-95	GA-M	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	0.27	<0.10	<0.14
SK-96	GA-m	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.14
SK-96	GA-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	GA-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.9**	<0.100	<0.140
SK-96	GA-N	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**10.5**	<1.00	<1.40
SK-96	GA-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	3.7	**2220**	0.42	<0.14
SK-96	KS-W	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**32.8**	0.27	<0.140
SK-96	KS-E	<10	<10	<10	<10	<10	<10	<10	158	**1580**	<10	<10
SK-96	KS-D	**0.92**	<0.100	<100.0	<0.100	<100.0	<0.100	<0.100	**253**	**2650**	0.16	<0.140
SK-96	WA-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**93.4**	**3.6**	<0.140
SK-96	MO-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.49	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.46	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**117**	<0.100	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.1**	<0.100	<0.140
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.4**	<0.100	<0.140

AQUEOUS BRAKE CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.5	**15.1**	<0.100	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**19.1**	**2.2**	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	0.12	0.23	<0.500	0.12	<0.100	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.25	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	11.6	**50.4**	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**33.1**	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**230**	**67.1**	<0.140
SK-96	NM-F	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	48.8	**0.93**	<0.100	<0.140
SK-96	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	<0.100	<0.100	<0.140
SK-96	DE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**35.6**	**5.80**	<0.140
SK-96	NE-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.92**	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1250**	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**42.5**	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**3200**	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**125**	<0.100	<0.140
Total # 0f Samples		72										
# of Hits		**2**	0	0	0	0	0	0	**2**	**42**	**8**	0
	MAX	12	0	0	0	0	0.12	0.23	301	5020	67.1	0
	MIN	0.15	0	0	0	0	0.12	0.23	0.91	0.11	0.16	0

PARTS WASHER SOLVENT 105

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E-DE	8.06	0.81	141	<0.40	1.71	**1.02**	<2.0	**7.97**	<0.04	<0.45	<1.5
SK-95	BI	8.03	0.79	**128**	<4.00	3.56	**2.88**	<2.00	**8.81**	<0.04	<0.45	<1.5
SK-95	CO-GJ-RE	7.64	0.8	**131**	<0.40	1.71	<1.0	<2.0	**10.67**	<0.04	<0.45	<1.5
SK-95	CO-P-DE	8.8	0.811	143	<0.40	1.31	<1.0	<2.0	**5.14**	<0.04	<0.45	<1.5
SK-95	FA	7.17	0.811	>142	<4.00	1.8	<1.00	<2.00	**3.88**	<0.04	<0.452	<1.5
SK-95	KS-D	6.84	0.792	>142	<4.0	1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-E	6.75	0.789	**138**	<4.0	3.94	**1.24**	<2.0	**5.16**	<0.04	<0.45	<1.5
SK-95	KS-W	7.13	0.803	144	<4.0	1.26	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	SD-S	7.44	0.795	**134**	<4.00	1.48	**1.32**	<2.00	**11.64**	<0.04	<0.45	<1.5
SK-95	WA-S	7.29	0.812	>142	<4.0	1.88	<1.0	<2.0	**7.43**	<0.04	<0.45	<1.5
SK-95	GA-C	5.35	0.805	148	<4.0	1.3	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-G	4.78	0.783	**137**	<4.0	<1.0	<1.0	<2.0	**13.82**	<0.04	<0.45	<1.5
SK-95	NJ-N	8.36	0.792	**132**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NJ-B	8.84	0.788	**139**	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	DE	8.43	0.80	145	<5.0	<20	<1.0	<2.0	**13.49**	<0.04	<0.45	<1.0
SK-95	LA-K	7.29	0.799	146	<4.00	1.98	<1.00	<2.00	<4.00	<0.04	<0.45	<2.0
SK-95	LA-P	6.90	0.789	144	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-S	5.44	0.807	**138**	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-W	7.28	0.78	**130**	<4.0	1.51	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	ID-B	8.02	0.81	**139**	<4.0	5.97	<1.0	<2.0	**5.48**	<0.04	<0.45	<1.5
SK-95	DO	7.76	0.83	**138**	<4.0	1.59	<1.0	<2.0	**8.65**	<0.04	<0.45	<2.0
SK-95	NY-A	7.31	0.192	140	<4.0	1.23	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NJ-S	7.36	0.798	**137**	<4.0	<1.0	<1.0	<2.0	<3.5	0.04	<0.45	<1.5
SK-95	NY-T	7.89	0.804	**120**	<4.0	1.25	<1.0	<2.0	**13.9**	<0.04	<0.45	<1.5
SK-95	GA-N	3.98	0.780	148	<4.0	2.0	<1.0	<2.0	3.83	<0.04	<0.45	<1.5
SK-95	NM-F	8.95	0.787	**120**	<4.0	<1.0	<1.0	<2.0	**5.29**	<0.04	<0.45	<2.0
SK-95	MS-J	6.49	0.789	149	<4.0	<1.0	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	GA-M	7.88	0.786	143	<4.0	2.09	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-L	6.57	0.799	140	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5

PARTS WASHER SOLVENT 105

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	GA-m	5.35	0.805	148	<4.0	1.3	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-C	7.70	0.785	142	<4.0	2.52	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	NY-N	8.88	0.796	**124**	<4.0	1.01	<1.0	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NE-O	7.46	0.795	**129**	<4.0	1.94	<1.0	<2.0	**8.71**	<0.04	<0.45	<1.5
SK-95	NE-GI	6.99	0.804	**136**	<4.0	1.08	<1.0	<2.0	**6.99**	<0.04	<0.45	<1.5
SK-95	DE	8.72	0.793	147	<4.0	1.13	<1.0	<2.0	**8.14**	<0.04	<0.45	<1.5
SK-95	MN-B	6.01	0.797	142	<4.0	1.97	<1.0	<2.0	**7.67**	<0.04	<0.45	<1.5
SK-96	ND-F	7.65	0.80	**138**	<5.00	1.95	0.93	<5.00	**7.42**	<0.04	<0.45	<0.50
SK-96	KS-E	7.24	0.80	**132**	<5.00	<0.500	<0.50	0.67	<4.00	<0.040	<0.45	<0.50
SK-96	KS-W	6.51	0.80	141	<5.00	1.15	0.99	1.30	**7.19**	<0.040	<0.45	<0.50
SK-96	SD-S	7.97	0.87	**136**	<0.500	2.00	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	KS-D	7.77	0.80	145	<5.00	3.01	0.80	<0.500	4.89	<0.040	<0.45	<0.50
SK-96	GA-G	6.79	0.81	141	<5.00	1.39	0.58	<0.50	**5.88**	<0.040	<0.45	<0.50
SK-96	GA-m	5.61	0.79	148	<5.00	1.00	<0.50	<0.50	<4.00	<0.040	<0.45	<0.50
SK-96	GA-N	7.16	0.82	151	<5.00	3.02	0.63	<0.50	**5.07**	<0.04	<0.45	<0.50
SK-96	WA-S	6.59	0.80	**138**	<5.00	2.96	0.82	<0.50	**7.89**	<0.04	<0.45	<0.50
SK-96	MO-C	6.27	0.802	**127**	<5.00	0.755	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	BI	7.21	0.8	>142	<5.00	0.712	<0.500	<0.500	**7.36**	<0.040	<0.45	<0.500
SK-96	NY-L	7.15	0.8	140	<5.00	<0.500	**5.71**	<0.500	<4.00	<0.040	<0.450	<0.500
SK-96	NY-L	8.59	0.799	**120**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	MS-J	7.37	0.8	150	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	GA-M	7.81	0.8	146	<5.00	1.15	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-A	6.54	0.79	141	<5.00	0.537	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NM-F	8.35	0.81	**115**	<5.00	9.76	**2.35**	0.515	**36.5**	<0.040	<0.45	<0.500
SK-96	NY-N	7.67	0.797	**138**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.73	0.787	**135**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	6.04	0.787	**132**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-S	7.64	0.781	**131**	<5.0	1.41	0.8	<0.500	**5.17**	<0.04	<0.45	<0.500
SK-96	NY-S	5.50	0.77	**136**	<5.00	<0.500	<0.500	<0.500	<0.400	<0.040	<0.452	<0.500

PARTS WASHER SOLVENT 105

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	NY-S	6.38	0.77	**124**	<5.00	3.38	<0.500	<0.500	**5.15**	<0.040	<0.452	<0.050
SK-96	NY-C	6.98	0.802	**119**	<5.00	0.912	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-A	6.14	0.801	**136**	<5.00	1.95	<0.500	<0.500	**250**	<0.04	<0.45	<0.500
SK-96	LA-P	7.12	0.784	147	<5.00	<0.500	0.503	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	DE	6.37	0.83	155	<5.00	3.73	**1.39**	0.933	**45.2**	<0.040	<0.452	<0.500
SK-96	NE-O	8.33	0.794	140	<5.00	2.17	**1.22**	0.893	**6.73**	<0.040	<0.452	<0.500
SK-96	DO	5.09	0.81	**130**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	DO	7.67	1.05	>200	<5.00	4.84	**1.40**	0.971	**15.2**	<0.040	<0.45	<0.500
SK-96	MN-E	7.46	0.78	156	<5.00	<0.500	**1.64**	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	MN-E	8.06	0.81	**136**	<5.00	1.43	**1.01**	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	MN-E	7.61	0.8	**136**	<5.00	1.31	0.752	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	LA-K	7.17	0.792	160	<5.00	5.21	<0.500	0.561	<4.00	<0.040	<0.45	<0.500
SK-96	SC-G	8.33	0.8	154	<5.00	0.578	**1.75**	0.618	<4.00	<0.040	<0.452	<0.500
•	UT-S											
SK-96	NY-A	5.60	0.812	**120**	<5.00	<0.500	<0.500	3.32	**5.55**	<0.04	<0.45	<0.500
SK-96	NY-A	7.35	0.801	**126**	<5.00	0.542	<0.500	<0.500	**6.18**	<0.04	<0.45	<0.500
SK-96	MN-B	7.72	0.8	**138**	<5.00	1.53	0.91	<0.500	**8.3**	<0.040	<0.452	<0.500
SK-96	MN-B	8.23	0.82	**112**	<5.00	1.56	0.551	<0.500	4.91	<0.040	<0.452	<0.500
SK-96	NE-GI	8.57	0.803	**135**	<5.00	2.91	0.734	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	CO-E-DE	7.58	0.810	147	<5.00	2.88	0.83	<0.500	**7.83**	<0.040	<0.45	<0.500
SK-96	CO-P-DE	8.44	0.81	152	<5.00	1.74	<0.500	<0.500	**6.64**	<0.040	<0.452	<0.500
SK-96	CO-GJ-RE	6.71	0.800	144	<5.00	0.89	0.67	<0.500	**11.4**	<0.040	<0.45	<0.500
SK-96	GA-C	6.45	0.9	150	<5.00	<0.50	<0.50	<0.50	**8.69**	<0.04	<0.45	<0.50
SK-96	NE-G	8.69	0.831	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
Total # of Samples		82										
# of Hits		0	0	**40**	0	0	**12**	0	**38**	0	0	0
	MAX	8.95	1.053	160	0	9.76	5.71	3.32	250	0.04	0	0
	MIN	3.98	0.192	112	0	0.537	0.503	0.515	3.83	0.04	0	0

PARTS WASHER SOLVENT 105

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E-DE	<190	<144	<272	<384	<312	<124	<1800	<180	<90	<120
SK-95	BI	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<1000	<2000	<2000
SK-95	CO-GJ-RE	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	CO-P-DE	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	FA	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-D	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-E	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-W	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	SD-S	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	WA-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	GA-C	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	GA-G	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	NJ-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NJ-B	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-K	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-P	<280	<230	<340	<590	<600	<2220	<120	<360	<360	<380
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-W	<196	<161	<239	<414	<421	<224	<84	<253	<253	<267
SK-95	ID-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DO	<280	<230	<340	<590	<600	<2220	<120	<360	<360	<380
SK-95	NY-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-T	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NM-F	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	MS-J	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-M	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380

PARTS WASHER SOLVENT 105

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	GA-m	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-N	<280	<230	<340	<590	<600	<2220	<120	<360	<360	<380
SK-95	NE-O	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NE-GI	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	MN-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	ND-F	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	SD-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-D	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-G	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-m	<280	<230	<340	<<590	<600	<320	<120	<360	<360	<380
SK-96	GA-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	WA-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MO-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	BI	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	NY-L	40.2	<0.073	<0.015	<0.015	<0.015	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-L	28.0	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	MS-J	3.2	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	GA-M	<3600	<3600	<4000	<5800	<5800	<4600	<6200	<7200	<3800	<3600
SK-96	NM-A	15.7	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NM-F	5.5	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	9.8	<0.073	<0.016	<0.034	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	11.8	<0.073	<0.003	0.013	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-N	10.9	<0.073	<0.003	0.011	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	21.2	<0.073	<0.016	0.108	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-S	12.4	<0.073	0.85	<1.50	<1.50	<0.800	<0.300	<0.350	<0.180	<0.240

PARTS WASHER SOLVENT 105

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	NY-S	68.9	<0.073	<0.850	<1.50	<1.50	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NY-C	56.5	<0.360	<0.003	<0.003	<0.003	<4.00	<1.50	<1.80	<0.920	<1.20
SK-96	NY-A	19.9	<0.073	<0.016	<0.034	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	LA-P	<0.850	<0.073	0.035	0.093	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	DE	3.5	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	NE-O	38.6	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	DO	63.6	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	DO	60.9	<3.60	<4.00	<5.80	<5.80	<4.60	<6.20	<7.20	<3.80	<3.60
SK-96	MN-E	<1.70	<0.050	<0.048	<0.082	<0.880	<0.610	<0.250	<1.30	<1.40	<0.210
SK-96	MN-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MN-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	LA-K	5.4	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	SC-G	<0.850	<0.073	<0.016	0.053	<0.367	<0.800	<0.300	<0.350	<0.180	<0.240
	UT-S	<365	<365	<365	<365	<365	<365	<365	<365	<3500	<365
SK-96	NY-A	26	<0.73	<0.003	<0.003	<0.003	<8.00	<3.00	<3.50	<1.80	<2.40
SK-96	NY-A	59.1	<0.73	<0.003	<0.003	<0.003	<8.00	<3.00	<3.50	<1.80	<2.40
SK-96	MN-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MN-B	10.8	<0.073	<0.003	<0.003	<0.003	<0.800	<0.300	<0.350	<0.180	<0.240
SK-96	NE-GI	28.8	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-95	CO-E-DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	CO-P-DE	16.3	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
SK-95	CO-GJ-RE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-C	<170	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-G	10.6	<0.073	<0.016	<0.034	<0.370	<0.800	<0.300	<0.350	<0.180	<0.240
Total # of Samples		82									
# of Hits		0	0	0	0	0	0	0	0	0	0
	MAX	68.9	0	0.85	0.108	0	0	0	0	0	0
	MIN	3.2	0	0.035	0.011	0	0	0	0	0	0

PARTS WASHER SOLVENT 105

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E-DE	<100	<100	<100	<100	<100	<100	<100	<500	**662**	<100	<140
SK-95	BI	<100	<100	<100	<100	<100	<100	<100	<500	**1140**	**139**	<140
SK-95	CO-GJ-RE	<100	<100	<100	<100	<100	<100	<100	<500	**1610**	<100	<140
SK-95	CO-P-DE	<100	<100	<100	<100	<100	<100	<100	<500	**784**	<100	<140
SK-95	FA	<100	<100	<100	<100	<100	<100	<100	<500	**311**	<100	<140
SK-95	KS-D	<100	<100	<100	<100	<100	<100	<100	<500	**201**	<100	<140
SK-95	KS-E	<100	<100	<100	<100	<100	<100	<100	<500	**833**	<100	<140
SK-95	KS-W	<100	<100	<100	<100	<100	<100	<100	<500	**1560**	<100	<140
SK-95	SD-S	<100	<100	<100	<100	<100	<100	<100	<500	**761**	<100	<140
SK-95	WA-S	**1.1**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**2.5**	<1.0	<1.4
SK-95	GA-C	<100	<100	<100	<100	<100	<100	<100	<500	**2260**	<100	<140
SK-95	GA-G	<100	<100	<100	<100	<100	<100	<100	<500	**321**	<100	<140
SK-95	NJ-N	<100	<100	<100	<100	<100	<100	<100	<500	**4120**	<100	<140
SK-95	NJ-B	<10	<10	<10	<10	<10	<10	<10	<50	**246**	<10	<14
SK-95	DE	<100	<100	<100	<100	<100	<100	<100	<500	**558**	<100	<140
SK-95	LA-K	<100	<100	<100	<100	<100	<100	<100	<500	**225**	<100	<140
SK-95	LA-P	**5.7**	<5.0	<5.0	<5.0	**8.6**	<5.0	<5.0	<25	**508**	**31.1**	<7.0
SK-95	NY-S	<100	<100	<100	<100	<100	<100	<100	<500	**1250**	**162**	<140
SK-95	NY-W	<5.0	<5.0	<5.0	<5.0	**12.28**	<5.0	<5.0	<25	**261.2**	**25.51**	<7.0
SK-95	ID-B	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25	**68.5**	<5.0	<7.0
SK-95	DO	<10	<100	<100	<100	<10	<10	<10	<500	**424**	<100	<140
SK-95	NY-A	<100	<100	<100	<100	<100	<100	<100	<500	**563**	<100	<140
SK-95	NJ-S	<100	<100	<100	<100	<100	<100	<100	<500	**620**	<100	<140
SK-95	NY-T	<100	<100	<100	<100	<100	<100	<100	<500	**185**	<100	<140
SK-95	GA-N	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<12.5	**8**	<2.5	<3.5
SK-95	NM-F	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**1.5**	<1.0	<1.4
SK-95	MS-J	<100	<100	<100	<100	<100	<100	<100	<500	**259**	<100	<140
SK-95	GA-M	<100	<100	<100	<100	<100	<100	<100	<500	**1180**	<100	<140
SK-95	NY-L	<5.0	<5.0	<5.0	<5.0	5.9	<5.0	<5.0	<25	**71.5**	<5.0	<7.0

PARTS WASHER SOLVENT 105

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	GA-m	<100	<100	<100	<100	<100	<100	<100	<500	**2260**	<100	<140
SK-95	NY-C	<100	<100	<100	<100	<100	<100	<100	<500	**288**	<100	<140
SK-95	NY-N	<5.0	<5.0	<5.0	<5.0	**24.6**	<5.0	<5.0	<25	**286**	<5.0	<7.0
SK-95	NE-O	**3.6**	<0.10	<2.5	**13.8**	<2.5	<0.10	<0.10	5.5	**101**	**24.3**	<0.140
SK-95	NE-GI	**2**	<2.5	<2.5	**7.3**	<2.5	<2.5	<2.5	<12.5	**161**	**15.1**	<0.140
SK-95	DE	**2.7**	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<1.2	**82.7**	**29.5**	<0.14
SK-95	MN-B	<100	<100	<100	<100	<100	<100	<100	<500	**701**	<100	<140
SK-96	ND-F	**3.60**	<2.00	<2.00	<2.00	**8.00**	<2.00	<4.00	<10.0	**821**	**137**	<2.00
SK-96	KS-E	**3.30**	<2.00	<2.0	<2.0	**13.70**	<2.00	<4.00	<10	**1760**	**71.2**	<2.00
SK-96	KS-W	**9.60**	<2.00	<2.0	<2.0	7.20	<2.00	<4.00	<10	**892**	**12.9**	<2.00
SK-96	SD-S	<2.00	<2.00	<2.00	<2.00	6.50	<2.00	<4.0	18.9	**727**	**9.60**	<2.00
SK-96	KS-D	<2.00	<2.00	3.90	<2.0	7.10	<2.00	<4.00	<10.0	**1010**	**4.80**	<2.00
SK-96	GA-G	**3.10**	<2.00	<2.00	<2.00	**19.30**	<2.00	<4.00	14.90	**3310**	**74.7**	<2.00
SK-96	GA-m	<2.00	<2.00	<2.00	<2.00	**8.50**	<2.00	<4.00	<10.0	**1090**	**2.30**	<2.00
SK-95	GA-N	<2.00	<2.00	<2.00	<2.00	4.60	<2.00	<4.00	16.40	**1030**	**9.10**	<2.00
SK-96	WA-S	**3.90**	<2.00	<2.00	<2.00	**9.60**	<2.00	<4.00	<10.0	**944**	**151**	<2.00
SK-96	MO-C	**2.2**	<2.00	2.2	<2.00	**11.9**	<2.00	<4.00	<10.0	**671**	**36.8**	<2.00
SK-96	BI	**14.4**	<2.00	<2.00	<2.00	**10.3**	<2.00	<4.00	<10.0	**1320**	**39.9**	<2.00
SK-96	NY-L	0.14	<0.100	<10.0	<0.100	<10.0	<0.100	<0.100	<0.500	**184**	**2.8**	<0.140
SK-96	NY-L	<20.0	<20.0	<20.0	<20.0	**26.6**	<20.0	<40.0	<100.0	**2770**	<20.0	<20.0
SK-96	MS-J	<2.00	<2.00	<2.00	<2.00	3.7	<2.00	<4.00	<10.0	**242**	**11.5**	<2.00
SK-96	GA-M	<2.00	<2.00	<2.00	<2.00	**7.7**	<2.00	<4.00	<10.0	**756**	**7.5**	<2.00
SK-96	NM-A	<2.00	<2.00	<2.00	<2.00	4.20	<2.00	<4.00	<10.0	**353**	**6.60**	<2.00
SK-96	NM-F	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**77.1**	<2.00	<2.00
SK-96	NY-N	**3.00**	<0.200	<0.200	<0.200	4.4	<0.200	0.44	17.1	**437**	**29.2**	<0.200
SK-96	NY-N	<0.200	<2.00	<2.00	<2.00	**11.20**	<2.00	<4.00	<1.00	**209**	**3.1**	<2.00
SK-96	NY-N	<0.200	<2.00	<2.00	<2.00	**10.20**	<2.00	<4.00	<1.00	**203**	**3.0**	<2.00
SK-96	NY-S	**1.4**	<0.200	0.98	<0.200	**9.4**	<0.200	<0.400	1.9	**496**	**16.9**	<0.200
SK-96	NY-S	<2.00	<2.00	<2.00	<2.00	**11.4**	<2.00	<4.00	<10.0	**527**	**2.4**	<2.00

PARTS WASHER SOLVENT 105

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	NY-S	<2.00	<2.00	<2.00	<2.00	**20.8**	<2.00	<4.00	<10.0	**856**	**10.9**	<2.00
SK-96	NY-C	<2.00	<2.00	<2.00	<2.00	**35.2**	<2.00	<4.00	<10.0	**878**	**13.10**	<2.00
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	**10.9**	<2.00	<4.00	<10.00	**381**	**5.9**	<2.00
SK-96	LA-P	<2.00	<2.00	3.4	<2.00	5.5	<2.00	<4.00	<10.00	**304**	**14.1**	<2.00
SK-96	DE	**4.3**	<2.00	<2.00	<2.00	3.5	<2.00	<4.00	<10.0	**257**	**69.4**	<2.00
SK-96	NE-O	<2.00	<2.00	<2.00	<2.00	**8.5**	<2.00	<4.00	<10.0	**67.5**	<2.00	<2.00
SK-96	DO	**9.7**	<2.00	3.4	<2.00	**12.40**	<2.00	<4.00	13.4	**1500**	**86.5**	<2.00
SK-96	DO	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	16.9	**1.6**	0.26	<0.140
SK-96	MN-E	<0.200	<0.200	<0.200	<0.200	0.94	<0.200	<0.400	<1.00	0.51	<0.200	<0.200
SK-96	MN-E	**2.9**	<0.200	<0.200	<0.200	**9.5**	<0.200	<0.400	7.2	**243**	**135**	<0.200
SK-96	MN-E	**3.2**	<0.200	<0.200	<0.200	**9.3**	<0.200	<0.400	7.1	**240**	**145**	<0.200
SK-96	LA-K	<2.00	<2.00	<2.00	<2.00	3.4	<2.00	<4.00	<10.00	**205**	**3.1**	<2.00
SK-96	SC-G	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.0	<2.00	<2.00	<2.00
•	UT-S	<14	<35	<14	<35	<70	<35	<35	<350	**959**	**39.2**	<35
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	**16.2**	<2.00	<4.00	<10.00	**1540**	**2580**	<2.00
SK-96	NY-A	<2.00	<2.00	<2.00	<2.00	**15.7**	<2.00	<4.00	<10.00	**1510**	**2840**	<2.00
SK-96	MN-B	**3.3**	<0.200	<0.200	<0.200	7.3	<0.200	<0.400	7.3	**218**	**65.4**	<0.200
SK-96	MN-B	<2.00	<2.00	<2.00	<2.00	5.4	<2.00	<4.00	13.3	**999**	**34.1**	<2.00
SK-96	NE-GI	<2.00	<2.00	<2.00	<2.00	**9.3**	<2.00	<4.00	<10.00	**563**	<2.00	<2.00
SK-95	CO-E-DE	**6.00**	<2.00	<2.00	<2.00	3.7	<2.00	<4.00	17.5	**1470**	**70.1**	<2.00
SK-95	CO-P-DE	**3.90**	<2.00	<2.00	<2.00	3.2	<2.00	<4.00	<10.0	**450**	**19.8**	<2.00
SK-95	CO-GJ-RE	**8.1**	<0.20	<0.20	<0.20	6.2	0.43	**13.7**	12.5	**2110**	**415**	<0.20
SK-96	GA-C	<2.00	<2.00	<2.00	<2.00	**8.00**	<2.00	<4.00	<10.0	**1050**	**9.4**	<2.00
SK-96	NE-G	**4.8**	<2.00	<2.00	<2.00	5.7	<2.00	<4.00	16.4	**1060**	**59.4**	<2.00
Total # of Samples		82										
# of Hits		**23**	0	0	**2**	**27**	0	0	0	**80**	**46**	0
	MAX	14.4	0	3.9	13.8	35.2	0.43	13.7	18.9	4120	2840	0
	MIN	0.14	0	0.98	7.3	0.94	0.43	0.44	1.9	0.51	0.26	0

IMMERSION CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	CO-E/AC	10.42	0.933	153	<0.40	<1.0	**3.53**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	KS-D	10.10	0.928	>142	<4.0	2.09	**11.44**	<2.0	**41.14**	<0.04	<0.45	<1.5
SK-95	KS-E	10.97	0.93	144	<4.0	<1.0	**6.87**	<2.0	**55.4**	<0.04	<0.45	<1.5
SK-95	KS-W	10.51	0.947	145	<4.0	<1.0	**24.41**	**13.88**	<3.5	<0.04	0.54	<1.5
SK-95	SD-S	10.08	0.931	**137**	<4.00	<1.00	<1.00	<2.00	**8.43**	<0.04	<0.45	<1.5
SK-95	GA-C	10.68	0.944	**139**	<4.0	<1.0	**2.35**	<2.0	**11.78**	<0.04	<0.45	<1.5
SK-95	GA-G	9.27	0.935	>200	<4.0	3.26	**122.4**	**7.23**	**58.2**	<0.04	0.65	<1.5
SK-95	NJ-N	10.11	0.935	145	<4.0	<1.0	**4.07**	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	ID-B	10.70	0.949	>200	<5.0	59.3	**2.0**	**244.63**	**74.95**	<0.04	<0.45	<1.0
SK-95	LA-P	9.41	0.939	**138**	<5.0	<20	**33.81**	<2.0	**11.78**	<0.04	<0.45	<1.0
SK-95	NY-S	10.33	0.948	144	<5.0	<20	<1.0	<2.0	<5.0	<0.04	<0.45	<1.0
SK-95	NY-W	10.16	0.945	**137**	<5.0	<20	<1.0	<2.0	**6.64**	<0.04	<0.45	<1.0
SK-95	LA-K	10.23	0.942	140	<4.00	<1.00	**160**	<2.00	<4.00	<0.04	<0.45	<2.0
SK-95	NY-A	10.20	0.955	140	<5.0	<20	**6.91**	<2.0	**5.08**	<0.04	<0.45	<1.0
SK-95	NJ-S	10.09	0.935	149	<4.0	<1.0	<1.0	<2.0	**16.5**	<0.04	<0.45	<1.5
SK-95	NM-A	10.85	0.956	**134**	<4.0	<1.0	**1.72**	<2.0	**13.1**	<0.04	<0.45	<2.0
SK-95	NM-F	10.14	0.937	147	<4.0	<1.0	**6.56**	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	NY-T	10.39	0.940	142	<4.0	<1.0	<1.0	<2.0	<3.5	<0.04	<0.45	<1.5
SK-95	GA-M	10.27	0.928	148	<4.0	<1.0	<1.0	<2.0	**8.6**	<0.04	<0.45	<2.0
SK-95	NY-C	10.25	0.923	146	<4.0	<1.0	**1.22**	<2.0	<4.0	<0.04	<0.45	<2.0
SK-95	GA-N	10.26	0.940	**139**	<4.0	1.2	<1.0	<2.0	**59.83**	<0.04	<0.45	<1.5
SK-95	NY-L	10.56	0.939	147	<4.0	<1.0	**28**	<2.0	**34.3**	<0.04	<0.45	<1.5
SK-95	GA-m	10.68	0.944	**139**	<4.0	<1.0	**2.35**	<2.0	**11.78**	<0.04	<0.45	<1.5
SK-95	NE-O	10.18	0.944	147	<4.0	<1.0	**22.3**	<2.0	**49.1**	<0.04	<0.45	<1.5
SK-95	NE-GI	10.4	0.937	>200	<4.0	<1.0	<1.0	<2.0	3.94	<0.04	<0.45	<1.5
SK-95	DE	10.07	0.926	144	<4.0	1.26	**30.6**	**5.14**	**47.02**	<0.04	<0.45	<1.5
SK-95	MS-J	6.66	0.943	148	<4.0	<1.0	**2.47**	<2.0	**7.75**	<0.04	<0.45	<2.0
SK-95	NY-N	10.42	0.930	144	<4.0	1.77	**6.39**	<2.0	**22.1**	<0.04	<0.45	<1.5
SK-96	CO-E/AC	10.66	0.92	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500

IMMERSION CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	KS-W	9.47	0.95	143	<5.00	2.28	**32.4**	0.85	**242**	0.17	<0.45	<0.500
SK-96	KS-E	9.60	0.94	147	<5.00	2.35	**14.2**	0.909	**72.8**	<0.040	<0.45	<0.500
SK-96	KS-D	9.56	0.94	144	<5.00	0.759	**26.8**	0.974	**83.9**	0.11	<0.45	<0.500
SK-96	MO-C	10.87	0.944	148	<5.00	<0.500	**2.62**	<0.500	**31.8**	<0.040	<0.45	<0.050
SK-96	GA-N	10.70	0.941	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	GA-G	9.50	0.94	147	<5.00	<0.500	**9.52**	<0.50	**29.4**	<0.040	<0.45	<0.500
SK-96	GA-m	9.43	0.93	>200	<5.00	2.52	**3.17**	1.78	**63.4**	<0.040	<0.45	<0.500
SK-96	GA-C	10.13	0.95	146	<5.00	<0.50	<0.50	<0.50	<4.00	<0.04	<0.45	<0.50
SK-96	NY-C	9.97	0.95	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.450	<0.500
SK-96	NY-C	9.64	0.990	>200	**9.59**	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-C	10.01	0.94896	148	<5.00	<0.500	<0.500	<0.500	**14.4**	<0.040	<0.45	<0.500
SK-96	GA-M	9.85	0.94	148	<5.00	<0.500	**1.94**	0.554	**17.8**	<0.040	<0.45	<0.500
SK-96	NM-F	9.97	1.01	148	<5.00	<0.500	**1.89**	<0.500	<4.00	<0.04	<0.45	<0.500
SK-96	NM-A	9.95	0.96	148	<5.00	<0.500	<0.500	0.536	**35**	<0.040	<0.45	<0.500
SK-96	NY-S	9.60	0.94	>200	<5.00	0.508	0.765	<0.500	**12.9**	<0.040	<0.452	<0.500
SK-96	NY-S	9.67	0.97	147	<5.00	<0.500	**2.36**	<0.500	**7.61**	<0.040	<0.45	<0.500
SK-96	NY-S	10.46	0.936	147	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-96	NY-N	9.70	0.912	>200	<5.00	17	**6.99**	2.62	**3040**	<0.040	<0.45	<0.500
SK-96	NY-N	9.97	0.939	148	<5.00	0.713	**7.06**	<0.500	**14.8**	<0.040	<0.45	<0.500
SK-96	NY-N	9.97	0.931	143	<5.00	1.25	**10.3**	<0.500	**23.1**	<0.040	<0.45	<0.500
SK-96	NY-A	9.72	0.93	148	<5.0	0.629	**34**	1.12	**84**	<0.04	<0.45	<0.500
SK-96	LA-P	9.78	0.954	153	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	LA-K	9.71	0.93394	149	<5.00	<0.500	**1.12**	0.726	**15.3**	<0.040	<0.45	<0.500
*	UT-S	10.8		151	<1.0	<10.0	**10.4**	<0.3	<2.0	0.0077	<3.0	<0.2
SK-96	NY-L	9.85	0.94	151	<5.00	<0.500	**2.19**	0.6	**12.9**	<0.040	<0.450	<0.500
SK-96	NY-L	10.57	0.951	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-L	10.57	0.951	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NY-A	9.96	0.936	148	<5.0	16.7	<0.500	<0.500	**5.15**	<0.04	<0.45	<0.500
SK-96	NY-A	9.93	0.946	147	<5.0	5.17	<0.500	<0.500	**5.91**	<0.04	<0.45	<0.500

IMMERSION CLEANER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	SC-G	9.78	0.965	180	<5.00	<0.500	**6.32**	<0.500	**25.3**	<0.040	<0.452	<0.500
SK-96	NE-GI	9.95	0.955	143	<5.00	<0.500	**2.95**	<0.500	**8.22**	0.17	<0.45	<0.500
SK-96	NE-O	10.06	0.923	150	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-96	NE-G	10.1	0.926	144	<5.00	<0.500	**2.06**	<0.500	**6.45**	<0.040	<0.452	<0.500
SK-96	SD-S	9.92	0.94	148	<5.0	0.573	<0.500	<0.500	**16.1**	<0.040	<0.45	<0.500
SK-96	DE	9.82	0.947	145	<5.00	0.713	0.706	**12.4**	**15.0**	<0.040	<0.452	<0.500
SK-96	MS-J	9.94	0.94	148	<5.00	<0.500	**7.08**	2.02	**4.36**	<0.040	<0.45	0.856
Total # of Samples		65										
	# of Hits	0	0	**7**	**1**	0	**40**	**5**	**44**	0	0	0
	MAX	10.97	1.01	180.00	9.59	59.30	160.00	244.63	3040.00	0.17	0.65	0.00
	MIN	6.66	0.912	134	9.59	0.508	0.706	0.536	3.94	0.0077	0.54	0

IMMERSION CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	CO-E/AC	<190	<140	<280	<380	<320	<120	<1800	<180	<90	<120
SK-95	KS-D	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-E	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	KS-W	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	SD-S	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	GA-C	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	GA-G	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	NJ-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	ID-B	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-P	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	LA-K	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NJ-S	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NM-A	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NM-F	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-T	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-M	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<190	<144	<280	<380	<320	<124	<1800	<180	<90	<118
SK-95	NY-L	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-m	<190	<144	<272	<384	<312	<124	<1794	<180	<90	<118
SK-95	NE-O	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NE-GI	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	DE	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	MS-J	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	NY-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	CO-E/AC	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380

IMMERSION CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	KS-W	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-E	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	KS-D	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	MO-C	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-95	GA-N	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-G	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	GA-m	<280	<230	<340	<<590	<600	<320	<120	<360	<360	<380
SK-96	GA-C	<170	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-C	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	GA-M	<3600	<3600	<3600	<3600	<3600	<3600	<3600	<3600	<3600	<3600
SK-96	NM-F	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NM-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-S	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	LA-P	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	LA-K	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
*	UT-S	<500000	<500000	<500000	<500000	<500000	<500000	<2550000	<500000	<2550000	<500000
SK-96	NY-L	<1800	<1800	<2000	<2900	<2900	<2300	<3100	<3600	<1900	<1800
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-L	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-A	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180

IMMERSION CLEANER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	SC-G	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-GI	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-O	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NE-G	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	SD-S	<280	<230	<340	<590	<600	<320	<120	<360	<360	<380
SK-96	DE	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	MS-J	<3600	<3600	<4000	<5800	<5800	<4600	<6200	<7200	<3800	<3600
Total # of Samples			65								
# of Hits		0	0	0	0	0	0	0	0	0	0
MAX		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MIN		0	0	0	0	0	0	0	0	0	0

IMMERSION CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DCIB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	CO-E/AC	<100	<100	<100	<100	**684**	<100	<100	<500	**202**	<100	<140
SK-95	KS-D	<100	<100	<100	<100	**558**	<100	<100	<500	**465**	<100	<140
SK-95	KS-E	<100	<100	<100	<100	**496**	<100	<100	<500	**145**	<100	<140
SK-95	KS-W	<100	<100	<100	<100	**954**	<100	<100	<500	**304**	<100	<140
SK-95	SD-S	<100	<100	<100	<100	**790**	<100	<100	<500	**276**	<100	<140
SK-95	GA-C	<100	<100	<100	<100	**466**	<100	<100	<500	**103**	<100	<140
SK-95	GA-G	<100	<100	<100	<100	**439**	<100	<100	<500	<100	<100	<140
SK-95	NJ-N	<100	<100	<100	<100	**573**	<100	<100	<500	<100	<100	<140
SK-95	ID-B	<10	<10	<10	<10	<10	<10	<10	<50	**70.5**	<10	<14
SK-95	LA-P	<25	<25	<25	<25	<25	<25	<25	<125	**102**	<25	<35
SK-95	NY-S	<10	<10	34.1	<10	**308**	<10	<10	105	**86.9**	<10	<14
SK-95	NY-W	<25	<25	<25	<25	**193**	<25	<25	<125	**118**	<25	<35
SK-95	LA-K	<100	<100	<100	<100	**662**	<100	<100	<500	**192**	<100	<140
SK-95	NY-A	<10	<10	<10	<10	**173**	<10	<10	<50	**91**	<10	<14
SK-95	NJ-S	<100	<100	<100	**1430**	**552**	<100	<100	<500	**111**	<100	<140
SK-95	NM-A	<100	<100	<100	<100	**622**	<100	<100	<500	<100	<100	<140
SK-95	NM-F	<100	<100	<100	<100	**666**	<100	<100	<500	**218**	<100	<140
SK-95	NY-T	<100	<100	<100	<100	**788**	<100	<100	<500	<100	<100	<140
SK-95	GA-M	<25	<25	<25	<25	**412**	<25	<25	<125	**82.2**	<25	<35
SK-95	NY-C	<5.0	<5.0	20.8	<5.0	**407**	<5.0	<5.0	<25	**176**	**24.1**	<7.0
SK-95	GA-N	<5.0	<5.0	<5.0	<5.0	**172**	<5.0	<5.0	<25	**174**	**7.9**	<7.0
SK-95	NY-L	<100	<100	<100	<100	**485**	<100	<100	**1650**	**205**	<100	<140
SK-95	GA-m	<100	<100	<100	<100	**466**	<100	<100	<500	**103**	<100	<140
SK-95	NE-O	<5.0	<5.0	35.7	<5.0	**370**	<5.0	<5.0	<25	**122**	**35**	<7.0
SK-95	NE-GI	<10.0	<10.0	36.2	<10.0	**443**	<10.0	<10.0	<50	**291**	**317**	<14.0
SK-95	DE	<5.0	<5.0	42.2	**43.9**	**166**	<5.0	<5.0	<25	**189**	**14.1**	<0.14
SK-95	MS-J	<100	<100	<100	<100	**223**	<100	<100	**914**	<100	<100	<140
SK-95	NY-N	<100	<100	<100	<100	**636**	<100	<100	<500	**129**	<100	<140
SK-96	CO-E/AC	**2.1**	<2.00	33	<2.00	**856**	<2.00	<4.00	16.6	**116**	**7.4**	<2.00

IMMERSION CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	KS-W	**3.9**	<2.0	24.3	<2.0	**831**	<2.0	<4.0	21.1	**86.8**	**6.8**	<2.0
SK-96	KS-E	<2.0	<2.0	33.9	<2.0	**648**	<2.0	<4.0	20.3	**91.1**	**208**	<2.0
SK-96	KS-D	<2.0	<2.0	32	<2.0	**954**	<2.0	<4.0	<10	**140**	**31.6**	<2.0
SK-96	MO-C	**2.9**	<2.00	39.2	<2.00	**682**	<2.00	<4.00	22.3	**46**	**301**	<2.00
SK-95	GA-N	<2.00	<2.00	17.1	<2.00	**870**	<2.00	<4.00	19.2	**86.9**	**2.9**	<2.00
SK-96	GA-G	<2.50	<2.50	16.2	<2.50	**243**	<2.50	<2.50	62.5	**59.6**	<2.50	<2.50
SK-96	GA-m	<2.00	<2.00	10.3	<2.00	**645**	<2.00	<4.00	<10.0	**64.6**	<2.00	<2.00
SK-96	GA-C	<10.0	<10.0	<10.0	<10.0	**387**	<10.0	<10.0	<50.0	**60**	<10.0	<14.0
SK-96	NY-C	<20.0	<20.0	42.2	<20.0	**1020**	<20.0	<40.0	<100.0	**73.2**	**24.6**	<20.0
SK-96	NY-C	<20.0	<20.0	20.8	<20.0	**354**	<20.0	<40.0	<100.0	**95.2**	<20.0	<20.0
SK-96	NY-C	<20.0	<20.0	<20.0	<20.0	**299**	<20.0	<40.0	<100.0	**110**	<20.0	<20.0
SK-96	GA-M	<2.00	<2.00	15.8	<2.00	**262**	<2.00	<2.00	<10.0	**45.6**	**4.90**	<2.00
SK-96	NM-F	<2.00	<2.00	12.6	<2.00	**225**	<2.00	<2.00	<10.0	**12.1**	**8.1**	<2.80
SK-96	NM-A	<2.00	<2.00	16.7	<2.00	**222**	<2.00	<2.00	<10.0	**48.2**	**3.3**	<2.80
SK-96	NY-S	<2.00	<2.00	8.40	<2.00	**460**	<2.00	<4.00	11.7	**29.4**	**5.00**	<2.00
SK-96	NY-S	<20.0	<20.0	28.0	<20.0	**640**	<20.0	<40.0	<100.0	**120**	**20.60**	<20.0
SK-96	NY-S	**2.00**	<2.00	8.00	<2.00	**404**	<2.00	<4.00	14	**34.8**	**18.8**	<2.00
SK-96	NY-N	<20.0	<20.0	35.4	<20.0	**575**	<20.0	<40.0	<100.0	**168**	<20.0	<20.0
SK-96	NY-N	<20.0	<20.0	22.2	<20.0	**494**	<20.0	<40.0	<100.0	**163**	<20.0	<20.0
SK-96	NY-N	<20.0	<20.0	<20.0	<20.0	**563**	<20.0	<40.0	<100.0	**462**	<20.0	<20.0
SK-96	NY-A	<2.00	<2.00	12.6	<2.00	**19**	<2.00	<4.00	11.1	**59.5**	**3.8**	<2.00
SK-96	LA-P	<10.0	<10.0	18.8	<10.0	**170**	<10.0	<10.0	<50.0	**42.6**	<10.0	<14.0
SK-96	LA-K	<20.0	<20.0	35.6	<20.0	**508**	<20.0	<40.0	**273**	**38**	<20.0	<20.0
*	UT-S	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<4000	<1000	<1000	<2000
SK-96	NY-L	<20.0	<20.0	38.8	<20.0	**996**	<20.0	<40.0	<100	**189**	**24.2**	<20.0
SK-96	NY-L	<0.200	<2.00	5.8	<2.00	**327**	<2.00	<4.00	<1.00	**66.2**	**3.9**	<2.00
SK-96	NY-L	<20.0	<20.0	<20.0	<20.0	**349**	<20.0	<40.0	<100.0	**179**	<20.0	<20.0
SK-96	NY-A	<2.00	<2.00	12.6	<2.00	**19**	<2.00	<4.00	11.1	**59.5**	**3.8**	<2.00
SK-96	NY-A	<20.0	<20.0	20.8	<20.0	**584**	<20.0	<40.0	<100.0	**116**	<20.0	<20.0

IMMERSION CLEANER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	SC-G	<2.00	<2.00	<2.00	<2.00	**312**	<2.00	<4.00	<10.0	**61.2**	<2.00	<2.00
SK-96	NE-GI	<10.00	<10.00	<10.00	<10.00	**489**	<10.00	<10.00	<50.0	**163**	**81.2**	<14.0
SK-96	NE-O	<2.00	<2.00	19.3	<2.00	**371**	**2.1**	<4.00	35.2	**96.4**	**161**	<2.00
SK-96	NE-G	**2.8**	<2.00	14.7	<2.00	**461**	<2.00	<4.00	<10.0	**39**	**11.5**	<2.00
SK-96	SD-S	**3.7**	<2.0	88.2	<2.0	**2200**	<2.0	<4.0	38.1	**260**	**1540**	<2.0
SK-96	DE	<10.0	<10.0	15.9	<10.0	**191**	<10.0	<10.0	<50.0	**32.9**	<10.0	<14.0
SK-96	MS-J	<2.00	<2.00	13.2	<2.00	**438**	<2.00	<4.00	<10.0	**21.6**	**3.00**	<2.00
Total # of Samples			65									
	# of Hits	**6**	0	0	**2**	**62**	**1**	0	**3**	**59**	**27**	0
	MAX	3.90	0.00	88.20	1430.00	2200.00	2.10	0.00	1650.00	465.00	1540.00	0.00
	MIN	2	0	5.8	43.9	19	2.1	0	11.1	12.1	2.9	0

DRY CLEANER FILTER POWDER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-95	KS-E	6.9	0.647	>200	<0.40	0.21	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	KS-W	6.54	1.08	>200	<0.40	0.33	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-A	6.62	1.439	>200	<0.40	0.23	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-T	6.33	N/A	>200	<0.40	0.2	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	DE	6.74	0.791	>200	<0.40	0.497	<0.10	0.28	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-C	7.17	NA	>200	<4.0	0.252	0.110	0.273	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-GI	5.75	1.38	>200	<0.40	0.298	0.129	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NE-O	6.11	1.32	>200	<0.40	0.418	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-L	6.28	1.03	>200	<0.40	0.24	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NM-A	6.26	0.905	>200	<0.40	0.237	<0.10	<0.20	<0.35	<0.0008	<0.75	<0.15
SK-95	NY-N	6.57	1.17	>200	<0.40	0.518	<0.10	0.445	<0.35	<0.0008	<0.75	<0.15
SK-96	KS-E	5.66	1.31	>200	<0.500	0.0296	0.071	0.058	<0.400	<0.0008	<0.600	<0.050
SK-96	KS-W	5.63	1.33	>200	<0.500	0.581	0.111	0.084	<0.400	<0.0008	<0.600	<0.050
SK-96	MO-C	5.85	1.37	>200	<0.500	0.283	0.06	0.079	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	6.32	0.98	>200	<0.500	0.176	0.113	0.099	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	6.00	1.591	>200	<0.500	0.175	<0.050	0.061	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-L	5.85	1.598	>200	<0.500	0.161	<0.050	0.061	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-m	6.29	1.42	>200	<0.500	0.254	0.052	0.072	<0.400	<0.0008	<0.600	<0.050
SK-96	MS-J	6.96	1.28	>200	<0.500	0.181	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NM-A	7.27	1.03	>200	<0.500	0.381	<0.050	0.232	0.488	<0.0008	<0.600	<0.050
SK-96	GA-N	6.67	1.05	>200	<0.500	0.252	<0.050	0.065	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-N	6.15	1.66	>200	<0.500	0.299	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-N	2.65	1.427	>200	<5.00	0.661	<0.500	**9.49**	<4.00	<0.040	<0.452	<0.500
SK-96	NY-N	5.86	1.142	>200	<0.500	0.163	0.069	0.428	<0.400	<0.0008	<0.600	<0.050
SK-96	DE	6.05	0.78	>200	<0.500	0.076	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	LA-P	NA*	NA*	NA*	<0.500	0.318	0.065	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	5.85	1.01	N/A	<0.500	0.176	<0.050	0.065	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	6.24	1.1	>200	<0.500	0.266	0.108	0.1	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-S	6.10	1.39	>200	<0.500	0.228	0.099	0.095	<0.400	<0.0008	<0.600	<0.050

DRY CLEANER FILTER POWDER

Physical Properties and TCLP Metals Analysis, ppm

	Parameter	pH	SG	FP	As	Ba	Cd	Cr	Pb	Hg	Se	Ag
	Reg. Limit	≤2; ≥12.5	na	< 140	5	100	1	5	5	0.2	1	5
LAB	SITE											
SK-96	GA-C	6.12	1.14	>200	<0.500	0.184	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	GA-G	5.98	1.59	>200	<0.500	0.35	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-96	LA-K	N/A	N/A	N/A	<0.500	0.262	0.06	0.094	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-A	6.21	0.92	>200	<0.500	0.237	<0.050	0.069	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-A	6.20	1.02	>200	<0.500	0.168	<0.050	0.063	<0.400	<0.0008	<0.600	<0.050
SK-96	NY-A	6.10	1.04	>200	<0.500	0.24	<0.050	0.075	<0.400	<0.0008	<0.600	<0.050
SK-96	NE-O	7.15	1.01	>200	<0.500	0.158	0.083	0.522	<0.400	<0.0008	<0.600	<0.050
SK-96	NE-GI	6.65	0.81	>200	<0.500	0.237	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
TOTAL # OF SAMPLES		37										
# of Hits		0	0	0	0	0	0	1	0	0	0	0
	MAX	7.27	1.66	0	0	0.661	0.129	9.49	0.488	0	0	0
	MIN	2.65	0.647	0	0	0.0296	0.052	0.058	0.488	0	0	0

DRY CLEANER FILTER POWDER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-95	KS-E	0.035	<0.042	<0.044	<0.098	<0.120	<0.069	<0.350	<0.142	<0.041	<0.142
SK-95	KS-W	0.14	<0.044	<0.044	<0.10	<0.12	<0.068	<0.35	<0.14	<0.040	<0.14
SK-95	NY-A	<0.040	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.042
SK-95	NY-T	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	DE	<0.040	<0.044	<0.044	<0.100	<0.120	<0.068	<0.350	<0.140	<0.040	<0.140
SK-95	NY-C	0.052	<0.046	<0.068	<0.120	<0.120	<0.064	<0.024	<0.072	<0.072	<0.076
SK-95	NE-GI	<0.040	<0.044	<0.044	<0.100	<0.120	<0.068	<0.350	<0.140	<0.040	<0.140
SK-95	NE-O	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	NY-L	<0.070	<0.058	<0.085	<0.150	<0.150	<0.080	<0.030	<0.090	<0.090	<0.095
SK-95	NM-A	<0.040	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.042
SK-95	NY-N	<0.040	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.042
SK-96	KS-E	<0.040	<0.040	<0.040	<0.040	<0.090	<0.040	<0.040	<0.040	<0.040	<0.040
SK-96	KS-W	<0.042	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.040
SK-96	MO-C	0.091	<0.040	<0.040	<0.042	<0.085	<0.044	<0.040	<0.040	<0.040	<0.040
SK-96	NY-L	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-L	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-L	<0.040	<0.040	<0.040	<0.050	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	GA-m	<0.040	<0.040	<0.040	<0.050	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	MS-J	<0.040	<0.040	<0.040	<0.05	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	NM-A	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	GA-N	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-N	<180	<180	<200	<290	<290	<230	<310	<360	<190	<180
SK-96	NY-N	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	DE	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	LA-P	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	0.059	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-S	0.057	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045

DRY CLEANER FILTER POWDER

TCLP Semi Volatiles Analysis, ppm

	Parameter	cresol	2.4-DNT	Cl6-benz	Cl6-1,3-but	Cl6-eth	nitrobenz	Cl5-phenol	pyridine	2.4.5-TCP	2.4.6-TCP
	Reg. Limit	200	0.13	0.13	0.5	3	2	100	5	400	2
LAB	SITE										
SK-96	GA-C	<0.042	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	GA-G	<0.040	<0.040	<0.040	<0.050	<0.050	<0.040	<0.200	<0.050	<0.040	<0.040
SK-96	LA-K	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NY-A	<0.900	<0.900	<1.00	<1.40	<1.40	<1.20	<1.60	<1.80	<0.950	<0.900
SK-96	NE-O	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
SK-96	NE-GI	<0.045	<0.045	<0.050	<0.072	<0.072	<0.058	<0.078	<0.090	<0.048	<0.045
TOTAL # OF SAMPLES		37									
# of Hits		0	0	0	0	0	0	0	0	0	0
	MAX	0.14	0	0	0	0	0	0	0	0	0
	MIN	0.035	0	0	0	0	0	0	0	0	0

DRY CLEANER FILTER POWDER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DCIB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-95	KS-E	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**134**	0.45	<0.14
SK-95	KS-W	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**116**	<0.10	<0.14
SK-95	NY-A	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.010	**129**	<0.005	<0.005
SK-95	NY-T	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**186**	<0.10	<0.14
SK-95	DE	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	<0.10	<0.10	<0.14
SK-95	NY-C	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**105**	**1.9**	<0.14
SK-95	NE-GI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**43.6**	**2.9**	<0.14
SK-95	NE-O	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**1870**	**0.51**	<0.14
SK-95	NY-L	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**131**	<0.10	<0.14
SK-95	NM-A	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**105**	0.1	<0.14
SK-95	NY-N	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.84	**106**	<0.10	<0.14
SK-96	KS-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**119**	0.150	<0.140
SK-96	KS-W	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**277**	<0.100	<0.140
SK-96	MO-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**156**	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	0.11	<0.100	<0.100	<0.100	<0.500	**134**	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**102**	<0.100	<0.140
SK-96	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**193**	<0.100	<0.140
SK-96	GA-m	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**111**	**0.8**	<0.140
SK-96	MS-J	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**145**	0.34	<0.140
SK-96	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1110**	0.22	<0.140
SK-96	GA-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**261**	0.2	<0.140
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**230**	<0.100	<0.140
SK-96	NY-N	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**11200**	**2.9**	<2.00
SK-96	NY-N	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**176**	0.26	<0.140
SK-96	DE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**210**	<0.100	<0.140
SK-96	LA-P	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**389**	<0.100	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**218**	0.36	<0.140
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**159**	0.15	0.14
SK-96	NY-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**162**	0.16	<0.140

DRY CLEANER FILTER POWDER

TCLP Volatiles Analysis, ppm

	Parameter	benzene	CCl4	Clbenz	CHCl3	1.4-DClB	1.2-DCA	1.1-DCE	MEK	PCE	TCE	VChloride
	Reg. Limit	0.5	0.5	100	6	7.5	0.5	0.7	200	0.7	0.5	0.2
LAB	SITE											
SK-96	GA-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**174**	<0.100	<0.140
SK-96	GA-G	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<125	**214**	<0.100	<0.140
SK-96	LA-K	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**436**	<0.100	<0.140
SK-96	NY-A	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	<10.00	**1090**	**243**	<10.00	<14.0
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1030**	<0.100	<0.140
SK-96	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**283**	<0.100	<0.140
SK-96	NE-O	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**165**	<0.100	<0.140
SK-96	NE-GI	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**194**	<0.100	<0.140
TOTAL # OF SAMPLES		37										
# of Hits		0	0	0	0	0	0	0	**1**	**36**	**5**	0
	MAX	0	0	0	0.11	0	0	0	1090	11200	2.9	0.14
	MIN	0	0	0	0.11	0	0	0	0.84	43.6	0.1	0.14

Appendix C

Containment Calculations

PROFESSIONAL ENGINEER'S STATEMENT

This is to certify that the engineering features of this Appendix (Appendix C) have been reviewed by me. In my opinion, the design features represented in these drawings are representative of current site conditions. These are the same design features as those represented in the February 1992 operating permit application that was submitted to Florida Department of Environmental Protection (FDEP) for this site.

Elaina J. Modlin, P.E.
#49946 **Signature**

ELAINA J. MODLIN
Printed Name

22Dec97
Date

PAINT WASTE SHELTER

OVERALL MEASUREMENTS — 15' x 20'

CONTAINMENT — 6 METAL PANS, EACH 5' x 10' x 0.5'

$VOLUME_{PW} = 6 \times 5' \times 10' \times 0.5' \times \frac{7.48\ G}{FT^3} = 1,122\ GAL$

∴ IF CONTAINMENT VOLUME = 10% TOTAL ALLOWABLE STORAGE CAPACITY, THE THEORETICAL STORAGE (ALLOWABLE) CAPACITY = 11,220 GAL

CONTAINER STORAGE AREA

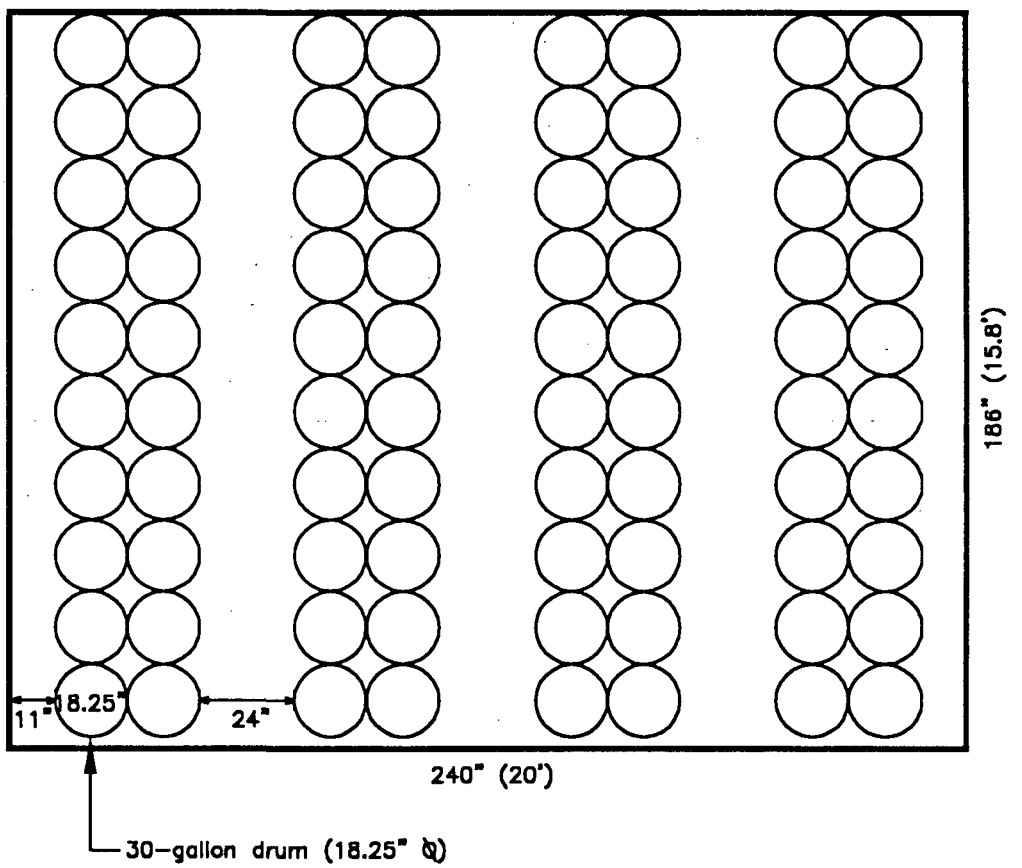
CONTAINMENT - TWO TRENCHES

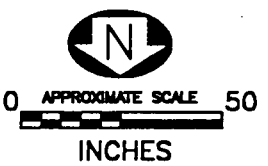
T1: 7'7" x 18" x 18"
T2: SAME AS T1

$V_{CSA} = 2 \times 7.6' \times 1.5' \times 1.5' \times \frac{7.48\ G}{FT^3} = 255.3\ GAL$

∴ IF CONTAINMENT VOLUME = 10% ALLOWABLE STORAGE, THE ALLOWABLE CAPACITY = 2553 GAL

Figure C–1
Container Layout
in Paint Waste Shelter
Safety–Kleen Corp. Facility
Orange Park, Florida





Note: Typical arrangement of 30–gallon drums in paint waste shelter. This arrangement allows for up to eighty 30–gallon drums stacked one high (2400 gallons total) or 160 30–gallon drums stacked two high (4800 gallons total).

ERM

ERM®

RETURN/FILL STATION (SEE ATT. FIG)

- COMPRISED OF 2 SEPARATE CONTAINMENT STRUCTURES (NORTH & SOUTH)
- NORTH HAS 1 RECTANGULAR SUMP; ASSUME THAT ONE INACTIVE DUMPSTER IS PRESENT
- SOUTH HAS 1 CIRCULAR SUMP AND 2 DUMPSTERS
- EACH DUMPSTER SITS ON THE CONCRETE FLOOR, WITH AN AREAL FOOTPRINT OF 5.42' x 3.17' (HOUSING MEASUREMTS)
- EACH DUMPSTER RESERVIOR MAY CONTAIN 108 GAL OF SOLVENT. FOR THE PURPOSES OF CALCULATING CONTAINMENT VOLUMES, THIS VOLUME WAS EXCLUDED; I.E. WE ASSUMED THAT A SPILL OCCURRED ADJACENT TO THE DUMPSTER.

NORTH SIDE

$$V_{CONC} = 18.42' \times 25' \times 0.33' \times \frac{7.48\ GAL}{FT^3} = 1136.7\ GAL$$

$$V_{S1} = 2' \times 2' \times 1' \times 7.48\ GAL/FT^3 = 29.9\ GAL$$

$$V_{DUMP} = 5.42' \times 3.17' \times 0.33' \times \frac{7.48\ GAL}{FT^3} = 42.4\ GAL$$

$$V_{NORTH} = V_{CONC} + V_{S1} - V_{DUMP} = 1136.7 + 29.9 - 42.4$$

V_{NORTH} = 1124 GAL >> $V_{CONTAINED}$ SINGLE DUMPSTER (108 GAL)

SOUTH SIDE

$$V_{CONC} = 20.17' \times 25' \times 0.42' \times \frac{7.48\ GAL}{FT^3} = 1584.2\ GAL$$

$$V_{S2} = \pi \frac{(1')^2}{4} \times 1' \times \frac{7.48\ GAL}{FT^3} = 5.9\ GAL$$

$$V_{DUMP\ (2)} = 2 \times 5.42' \times 3.17' \times 0.42' \times \frac{7.48\ GAL}{FT^3} = 108\ GAL$$

$$V_{SOUTH} = V_{CONC} + V_{S2} - V_{DUMP} = 1584.2 + 5.9 - 108$$

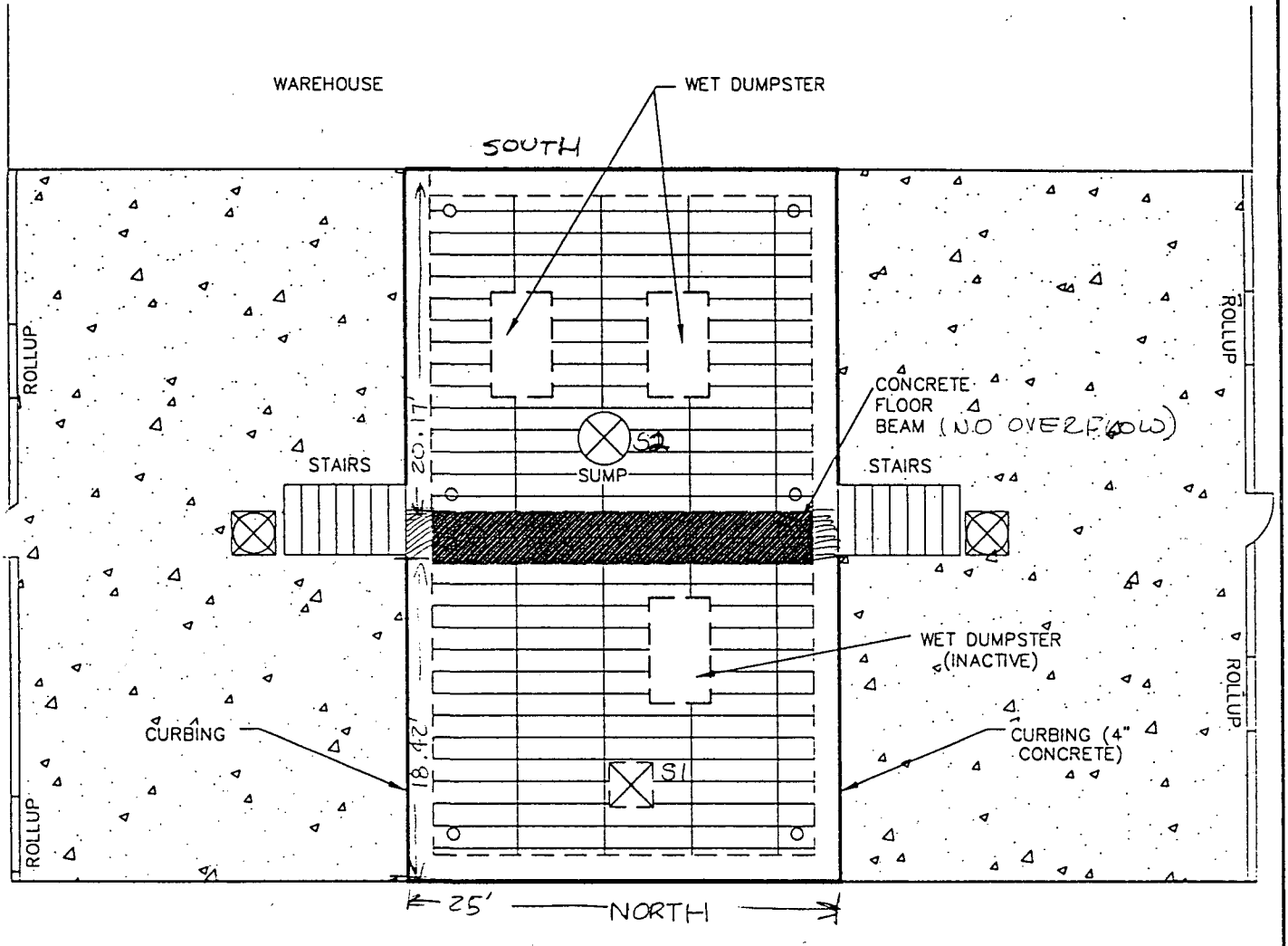
V_{SOUTH} = 1482 GAL >> $V_{CONTAINED\ IN\ 2\ DSTRS}$ (2x108GAL)

TOTAL

$$V_{NORTH} + V_{SOUTH} = V_{TOTAL} = 2{,}606\ GAL$$

REVISION 0
JANUARY 5, 1998

Figure C-2
Return/Fill Station
Safety-Kleen Corp. Facility
Orange Park, Florida



LEGEND

- O — FILL NOZZLES
- SUMP
- GRATING
- CURBING (4" CONCRETE)

N

APPROXIMATE SCALE 1" = FEET

13112.26/31126RF/021192-2

ERM.

Environmental Resources Management, Inc.

WO Number 1311215.26 Sheet 3 of 3
Project SAFETY-KLEEN ORANGE PARK
Subject CONTAINMENT CALCS
By EGM Date 7/31/97
Chkd by _____ Date _____

ERM

Tank Containment Area Calculations

$V = (49'\ 6\tfrac{1}{2}")(18'8")(4') - (\tfrac{1}{2})(18.67-13.83)(18.67-13.83)(4')$

$(49.54)(18.67)(4) - 46.85 = 3652.8\ ft^3 \left(7.48 \frac{gal}{ft^3}\right) = 27,323$ gallons

Volume concrete pad:

$(1")(49'6\tfrac{1}{2} - 3'\tfrac{1}{2}" - 3'\tfrac{1}{2}")(18'8" - 2'\tfrac{1}{2}" - 2'\tfrac{1}{2}") - (4)(\tfrac{1}{2})(5'8" - 2'\tfrac{1}{2}")(6'8" - 3'\tfrac{1}{2}")(1')$

$(.08)(49.54 - 3.04 - 3.04)(18.67 - 2.04 - 2.04) - (2)(5.67 - 2.04)(6.67 - 3.04)(.08)$

$(.08)(43.46)(14.59) - (2)(3.63)(3.63)(.08)$

$(50.73) - (2.1) = 48.63\ ft^3 \left(7.48 \frac{gal}{ft^3}\right) = 363.5$ gallons

Tank (15K) volume inside containment (Mineral Spirits)

$V = \frac{\pi d^2}{4}(h) = \frac{(3.14)(10.5')^2(4'-7")}{4} = \frac{(3.14)(10.5)^2(3.42')}{4} = 296\ ft^3$

2 tanks @ $296\ ft^3 = 592\ ft^3 \left(7.48 \frac{gallons}{ft^3}\right) = 4428$ gallons

Tank volume (15K Ethylene Glycol):

$V = \frac{\pi d^2}{4} h = \frac{(3.14)(10.5)^2(4'-1")}{4} = \frac{(3.14)(10.5)^2(3.92')}{4} = 339.3\ ft^3 \left(7.48 \frac{gallons}{ft^3}\right) = 2537.7$ gallons

Sump Volume:

$V = \frac{\pi d^2 (h)}{4} = \frac{(3.14)(12")^2(16")}{4} = 2.1\ ft^3 \left(7.48 \frac{gallons}{ft^3}\right) = 15.7$ gallons

Volume 25 year 24 hour rainfall event:

$V = (49.54)(18.67)(9/12') - \left(\frac{46.85}{4}\right)\left(\frac{9}{12}\right) = 693.7 - 8.78 = 684.9\ ft^3 \left(7.48 \frac{gal}{ft^3}\right)$

$= 5123.2$ gallons

TOTAL CONTAINMENT VOLUME = 27,323

\+ 15.7 (sump)
\- 363.5 (concrete pad)
\- 4428.0 (2 MS tanks)
\- 2537.7 (EG tank - ANTIFRZ)
\- 5123.2 (rainfall)

14,886.3 gallons (20000 GAL EXCLUDING RAINFALL)

Rupture of 1 tank would release 15,000 - 2214 gal (already within the containment) = 12786 gal < 14,886.3 gal (20,000 GAL)

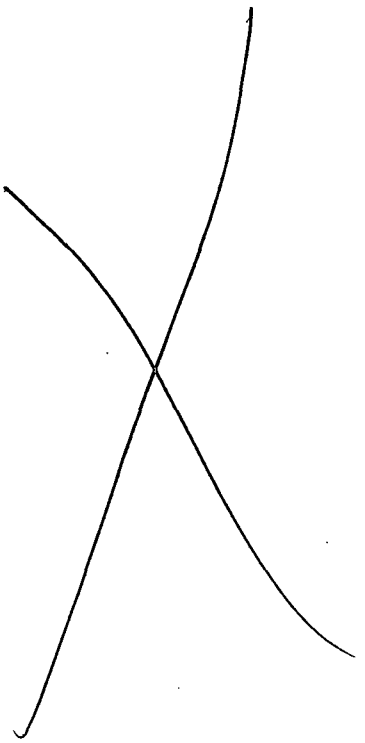
∴ Containment volume is satisfactory

Appendix C

Containment Calculations

PROFESSIONAL ENGINEER'S STATEMENT

This is to certify that the engineering features of this Appendix (Appendix C) have been reviewed by me. In my opinion, the design features represented in these drawings are representative of current site conditions. These are the same design features as those represented in the February 1992 operating permit application that was submitted to Florida Department of Environmental Protection (FDEP) for this site.



Elaina J. Modlin
#49946 Signature

ELAINA J. MODLIN
Printed Name

8-14-97
Date

PAINT WASTE SHELTER

OVERALL MEASUREMENTS — 15' x 20'

CONTAINMENT — 6 METAL PANS, EACH 5' x 10' x 0.5'

$VOLUME_{PW} = 6 \times 5' \times 10' \times 0.5' \times \frac{7.48\ G}{FT^3} = 1,122\ GAL$

∴ IF CONTAINMENT VOLUME = 10% TOTAL ALLOWABLE STORAGE CAPACITY, THE THEORETICAL STORAGE (ALLOWABLE) CAPACITY = 11,220 GAL

CONTAINER STORAGE AREA

CONTAINMENT - TWO TRENCHES

T1: 7'7" x 18" x 18"
T2: SAME AS T1

$V_{CSA} = 2 \times 7.6' \times 1.5' \times 1.5' \times \frac{7.48\ G}{FT^3} = 261.8\ GAL$

∴ IF CONTAINMENT VOLUME = 10% ALLOWABLE STORAGE, THE ALLOWABLE CAPACITY = 2168 GAL

RETURN/FILL STATION

CONTAINMENT – TWO BARREL WASHERS, TWO SUMPS, & NORTH & SOUTH HALF OF CURBED CONTAINMENT PAD (V_{BW} TAKES AWAY FROM AVAILABLE FLOOR SPACE)

- BARREL WASHERS, MEASURING 5'5" x 3'2" x 5" (2)

$$V_{BW} = 2 \times 5.42' \times 3.17' \times 0.42' \times \frac{7.48\ G}{FT^3} = 108\ GAL$$

- SUMPS

S1 MEASURES 2' x 2' x 1'
S2 MEASURES 1' Ø x 1' (d)

$$V_{S1} = 2' \times 2' \times 1' \times \frac{7.48\ GAL}{FT^3} = 30\ GAL$$

$$V_{S2} = \pi \cdot \frac{1^2}{4} \cdot 1' \times \frac{7.48\ GAL}{FT^3} = 6\ GAL$$

$V_{STOTAL} = 36\ GAL$

- CONTAINMENT PAD

$$V_{P1} = [(20.17' \times 18.5' \times 0.42')] \times \frac{7.48\ GAL}{FT^3} = 1,172\ GAL$$

$$V_{P2} = [(18.42' \times 18.5' \times 0.83') + 2(17')(1')(1')] \times \frac{7.48\ G}{FT^3} = 1,084\ GAL$$

$V_{PTOTAL} = 2256\ GAL$

- TOTAL VOLUME

$V_T = V_{PT} + V_{ST} - V_{BW}$

$\therefore$ $V_T = 2256 + 36 - 108 = 2184\ GAL$ (TOTAL ALLOWABLE = 21,840 GAL)

Environmental Resources Management, Inc.

ERM

WO Number 1311215.26 Sheet 3 of 3
Project SAFETY-KLEEN ORANGE PARK
Subject CONTAINMENT CALCS
By EJM Date 7/31/97
Chkd by _____ Date _____

Tank Containment Area Calculations

$V = (49'\,6\tfrac{1}{2}")(18'8")(4') - (\tfrac{1}{2})(18.67-13.83)(18.67-13.83)(4')$

$(49.54)(18.67)(4) - 46.85 = 3652.8\ ft^3 \left(7.48 \frac{gal}{ft^3}\right) = 27{,}323$ gallons

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$(1")(49'6\tfrac{1}{2} - 3'\tfrac{1}{2}" - 3'\tfrac{1}{2}")(18'8" - 2'\tfrac{1}{2}" - 2'\tfrac{1}{2}") - (4)(\tfrac{1}{2})(5'8" - 2'\tfrac{1}{2}")(6'8" - 3'\tfrac{1}{2}")(1")$

$(.08)(49.54 - 3.04 - 3.04)(18.67 - 2.04 - 2.04) - (2)(5.67 - 2.04)(6.67 - 3.04)(.08)$

$(.08)(43.46)(14.59) - (2)(3.63)(3.63)(.08)$

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$V = \frac{\pi d^2}{4}(h) = \frac{(3.14)(10.5')^2(4'-7")}{4} = \frac{(3.14)(10.5)^2(3.42')}{4} = 296\ ft^3$

2 tanks @ $296\ ft^3 = 592\ ft^3 \left(7.48 \frac{gallons}{ft^3}\right) = 4428$ gallons

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Sump Volume:

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Volume 25 year 24 hour rainfall event:

$V = (49.54)(18.67)(9/12') - \left(\frac{46.85}{4}\right)\left(\frac{9}{12}\right) = 693.7 - 8.78 = 684.9\ ft^3 \left(7.48 \frac{gal}{ft^3}\right)$

$= 5123.2$ gallons

TOTAL CONTAINMENT VOLUME = 27,323

\+ 15.7 (sump)
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\- 4428.0 (2 MS tanks)
\- 2537.7 (EG tank - ANTIFRZ)
\- 5123.2 (rainfall)

14,886.3 gallons (20000 GAL EXCLUDING RAINFALL)

Rupture of 1 tank would release 15,000 - 2214 gal (already within the containment) = 12786 gal < 14,886.3 gal (20,000 GAL)

∴ Containment volume is satisfactory

Appendix D

Concrete Permeability Information

safety-kleen ®

RECEIVED
MAR 17, 1995

MEMORANDUM

SUBJECT: Epoxy Coatings on Concrete Containment Systems

DEPOT/OFFICE: Breslau

TO: Dan Dowling

DATE: March 2, 1995
H:\ENG\WORD95\CR\CRMEMS.DOC

FROM: Chris Riehl

cc: Peter Dwan
David Flahaut
Frank Wagner

Following continuous problems with the maintenance and high capital cost of epoxy coatings on the concrete containment areas in the branches, I began questioning the need to install these products.

I discussed this issue with the three regional environmental engineers and found the following. In Eastern Canada, only Québec has regulations regarding the requirements for containment areas. Québec Hazardous Waste regulations specify that containment systems have a permeability less than 1×10^{-7} cm/s. In Ontario (Central Region), there are no specific regulations regarding the specifications of containment systems. In Western Region, only B.C. has specific requirements for containment systems, which are the same as Québec. The regulation in B.C. (as attached), also states that the permeability of the containment system must be less than 1×10^{-7} cm/s. Therefore, there are no provincial regulations specifically requiring an epoxy coating system on the concrete containment. However, there are certain branches with permit conditions requiring the coatings.

Preliminary investigations with the Canadian Portland Cement Association (CPCA) revealed the average permeability of concrete is from 1×10^{-10} cm/s (see attached), or one thousand times less permeable than the quantified requirements of Québec and B.C. Following discussions with Peter Dwan, I decided to have laboratory tests done to document this for the files and provide proof for other facilities. The lab tests were done on three core samples taken from the Langley, B.C. branch, and the results are attached. The permeability of the samples ranged from 4.830×10^{-9} cm/s to 1.063×10^{-8} cm/s, falling within the range estimated by CPCA.

In an effort to reduce immediate capital costs and future maintenance cost, I am planning on using this documentation to aggressively fight any agency's requests for the epoxy coatings. I hope this information will also prove useful for the branches in the U.S.

CR/cd

The moisture content of thin concrete elements after drying in air with a relative humidity of 50% to 90% for several months is about 1% to 2% by weight of the concrete depending on the concrete's constituents, original water content, drying conditions, and the size of the concrete element (refer to Chapter 13 for more information).

Size and shape of a concrete member have an important bearing on the rate of drying. Concrete elements with large surface area in relation to volume (such as floor slabs) dry faster than large concrete volumes with relatively small surface areas (such as bridge piers).

Many other properties of hardened concrete also are affected by its moisture content; these include elasticity, creep, insulating value, fire resistance, abrasion resistance, electrical conductivity, and durability.

Strength

Compressive strength may be defined as the measured maximum resistance of a concrete or mortar specimen to axial loading. It is generally expressed in pounds per square inch (psi) at an age of 28 days and is designated by the symbol f'_c. To determine compressive strength, tests are made on specimens of mortar or concrete; in the United States, unless otherwise specified, compression tests of mortar are made on 2-in. cubes, while compression tests of concrete are made on cylinders 6 in. in diameter and 12 in. high (see Fig. 1-6).

Compressive strength of concrete is a primary physical property and one frequently used in design calculations for bridges, buildings, and other structures. Most general-use concrete has a compressive strength between 3000 psi and 5000 psi. High-strength concrete has a compressive strength of at least 6000 psi. Compressive strengths of 20,000 psi have been used in building applications.

In designing pavements and other slabs on ground, the flexural strength of concrete is generally used.

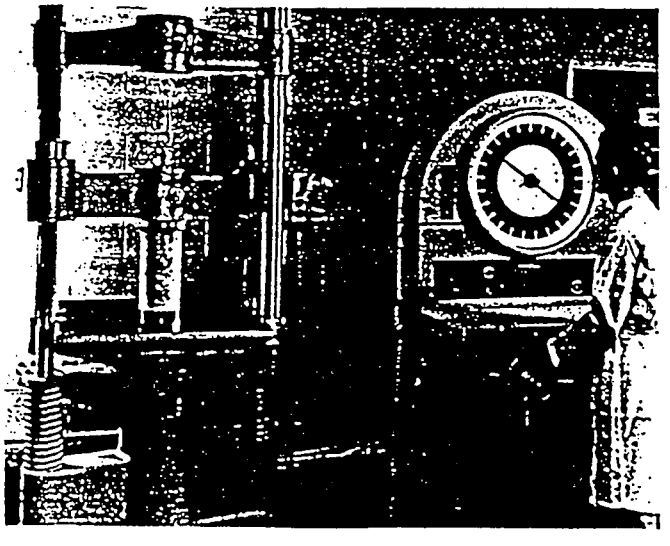


Fig. 1-6. Testing a 6x12-in. concrete cylinder in compression. The load on the test cylinder is registered on the scale.

Compressive strength can be used as an index of flexural strength, once the empirical relationship between them has been established for the materials and the size of the member involved. The flexural strength or modulus of rupture of normal-weight concrete is often approximated as 7.5 to 10 times the square root of the compressive strength.

The tensile strength of concrete is about 8% to 12% of the compressive strength and is often estimated as 5* to 7.5 times the square root of the compressive strength.**

The torsional strength for concrete is related to the modulus of rupture and the dimensions of the concrete element.†

The shear strength of concrete can vary from 35% to 80% of the compressive strength. The correlation between compressive strength and flexural, tensile, torsional, and shear strength varies with concrete ingredients and environment.

Modulus of elasticity, denoted by the symbol E, may be defined as the ratio of normal stress to corresponding strain for tensile or compressive stresses below the proportional limit of a material. For normal-weight concrete, E ranges from 2 to 6 million psi and can be approximated as 57,000 times the square root of the compressive strength.††

The principal factors affecting strength are water-cement ratio and age, or the extent to which hydration has progressed. Fig. 1-7 shows compressive strengths for a range of water-cement ratios at different ages. Tests were made on 6-in.-diameter cylinders that were 12 in. in height. Note that strengths increase with age and increase as the water-cement ratios decrease. These factors also affect flexural and tensile strengths and bond of concrete to steel.

The age-compressive strength relationships in Fig. 1-7 are for typical air-entrained and non-air-entrained concretes. When more precise values for concrete are required, curves should be developed for the specific materials and mix proportions to be used on the job.

For a given workability and a given amount of cement, air-entrained concrete requires less mixing water than non-air-entrained concrete. The lower water-cement ratio possible for air-entrained concrete tends to offset the somewhat lower strengths of air-entrained concrete, particularly in lean-to-medium cement content mixes.

Unit Weight

Conventional concrete, normally used in pavements, buildings, and other structures, has a unit weight in the range of 140 to 150 lb per cubic foot (pcf). The unit weight (density) of concrete varies, depending on the amount and relative density of the aggregate, the amount of air that is entrapped or purposely entrained, and the water and cement contents, which in turn are

*Reference 1-11.

**ACI 207.2R estimates tensile strength as $6.7\sqrt{f'_c}$.

†Torsional strength correlations are presented in Reference 1-11.

††See Section 8.5 of ACI 318.

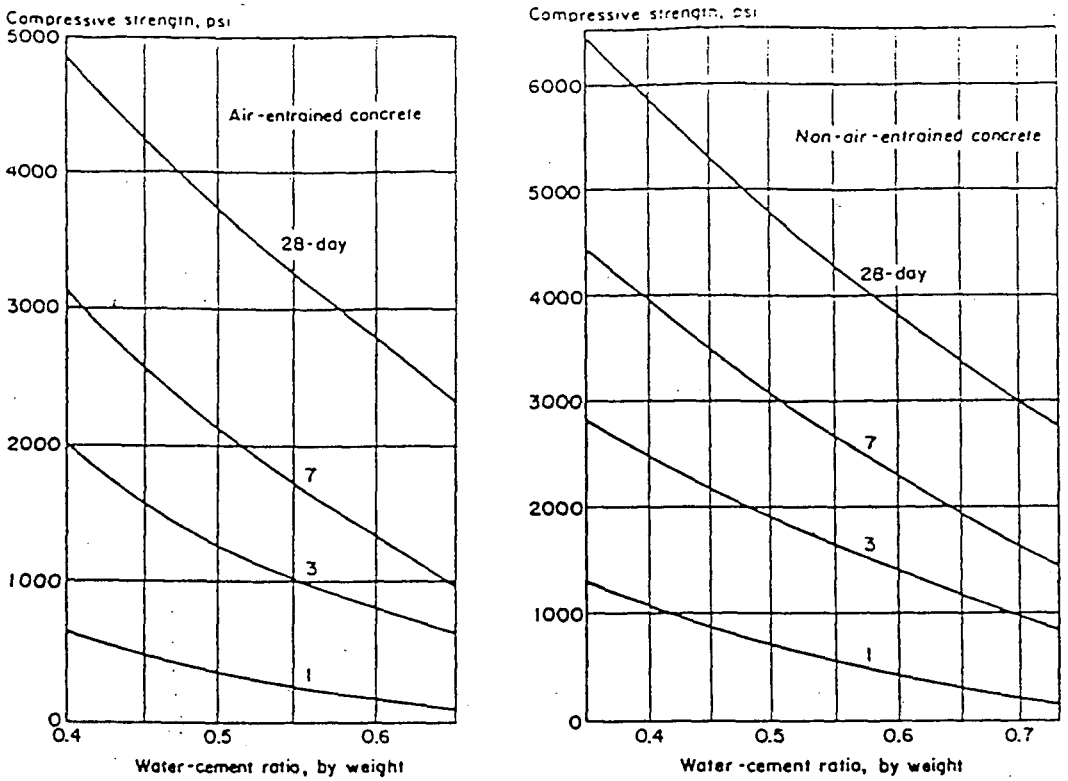


Fig. 1-7. Typical age-strength relationships of concrete based on compression tests of 6x12-in. cylinders, using Type I portland cement and moist-curing at 70°F.

influenced by the maximum-size aggregate. Values of the unit weight of fresh concrete are given in Table 1-1. In the design of reinforced concrete structures, the combination of conventional concrete and reinforcing bars is commonly assumed to weigh 150 pcf.

The weight of dry concrete equals the weight of freshly mixed concrete less the weight of evaporable water. Some of the mix water combines chemically with the cement during the hydration process, converting the cement into cement gel. Also, some of the water remains tightly held in pores and capillaries and does not evaporate under normal conditions. The amount of water that will evaporate in air at 50% relative humidity is about 2% to 3% of the concrete weight, depending on initial water content of the concrete, absorption characteristics of the aggregates, and size of the structure.

Aside from conventional concrete, there is a wide spectrum of other concretes to meet various needs, ranging from lightweight insulating concretes with a unit weight of 15 pcf to heavyweight concrete with a unit weight of up to about 400 pcf used for counterweights or radiation shielding (see Chapter 15, "Special Types of Concrete").

Resistance to Freezing and Thawing

Concrete used in structures and pavements is expected to have long life and low maintenance. It must have good durability to resist anticipated exposure conditions. The most destructive weathering factor is freezing and thawing while the concrete is wet, particularly in the presence of deicing chemicals. Deterioration is caused by the freezing of the water in the paste, the aggregate particles, or both.

With air entrainment, concrete is highly resistant to this deterioration as shown in Fig. 1-8. During freezing,

Table 1-1. Observed Average Weight of Fresh Concrete*

Maximum size of aggregate, inches	Air content, percent	Water, pounds per cubic yard	Cement, pounds per cubic yard	Unit weight, pounds per cubic foot**				
				Specific gravity of aggregate†				
				2.55	2.60	2.65	2.70	2.75
¾	6.0	283	566	137	139	141	143	145
1½	4.5	245	490	141	143	146	148	150
3	3.5	204	408	144	147	149	152	154
6	3.0	164	282	147	149	152	154	157

*Source: Reference 1-15, Table 4.
**Air-entrained concrete with indicated air content.
†On saturated surface-dry basis.

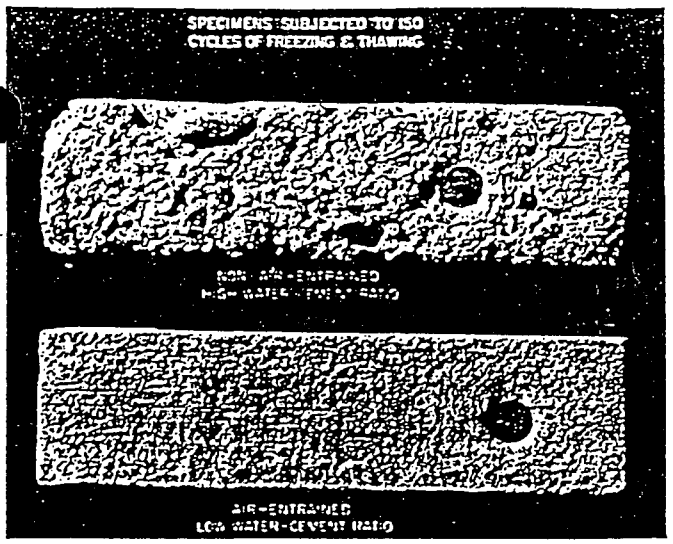


Fig. 1-8. Air-entrained concrete is highly resistant to repeated freeze-thaw cycles.

the water displaced by ice formation in the paste is accommodated so that it is not disruptive; the air bubbles in the paste provide chambers for the water to enter and thus relieve the hydraulic pressure generated.

When freezing occurs in concrete containing saturated aggregate, disruptive hydraulic pressures can also be generated within the aggregate. Water displaced from the aggregate particles during the formation of ice cannot escape fast enough to the surrounding paste to relieve pressure. However, under nearly all exposure conditions, a paste of good quality (low water-cement ratio) will prevent most aggregate particles from becoming saturated. Also, if the paste is air-entrained, it will accommodate the small amounts of excess water that may be expelled from aggregates, thus protecting the concrete from freeze-thaw damage.

Fig. 1-9 illustrates, for a range of water-cement ratios, that (1) air-entrained concrete is much more resistant to freeze-thaw cycles than non-air-entrained concrete, (2) concrete with a low water-cement ratio is more durable than concrete with a high water-cement ratio, and (3) a drying period prior to freeze-thaw exposure substantially benefits the freeze-thaw resistance of air-entrained concrete but does not significantly benefit non-air-entrained concrete.* Air-entrained concrete with a low water-cement ratio and an air content of 4% to 8% will withstand a great number of cycles of freezing and thawing without distress.

Freeze-thaw durability can be determined by laboratory test procedure ASTM C666, Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing. From the test, a durability factor is calculated that reflects the number of cycles of freezing and thawing required to produce a certain amount of deterioration. Deicer-scaling resistance can be determined by ASTM C672, Standard Test Method for Scaling Resistance of Concrete Surfaces Exposed to Deicing Chemicals.

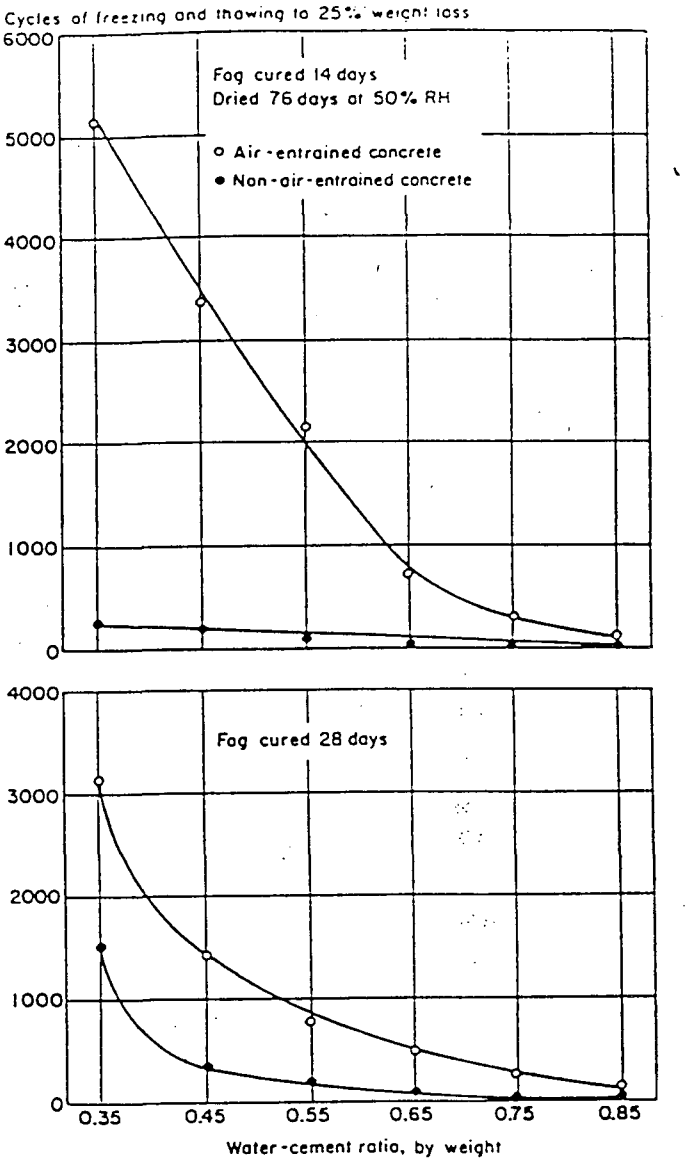


Fig. 1-9. Relationship between freeze-thaw resistance, water-cement ratio, and drying for air-entrained and non-air-entrained concretes made with Type I cement. High resistance to freezing and thawing is associated with entrained air, low water-cement ratio, and a drying period prior to freeze-thaw exposure. Reference 1-5.

Permeability and Watertightness

Concrete used in water-retaining structures or exposed to weather or other severe exposure conditions must be virtually impermeable or watertight. Watertightness is often referred to as the ability of concrete to hold back or retain water without visible leakage. Permeability refers to the amount of water migration through concrete when the water is under pressure or to the ability of concrete to resist penetration of water or other substances (liquid, gas, ions, etc.). Generally,

*See References 1-5 and 1-6.

the same properties of concrete that make concrete less permeable also make it more watertight.

The overall permeability of concrete to water is a function of the permeability of the paste, the permeability and gradation of the aggregate, and the relative proportion of paste to aggregate. Decreased permeability improves concrete's resistance to resaturation, sulfate and other chemical attack, and chloride-ion penetration.

Permeability also affects the destructiveness of saturated freezing. Here the permeability of the paste is of particular importance because the paste envelops all constituents in the concrete. Paste permeability is related to water-cement ratio and the degree of cement hydration or length of moist curing. A low-permeability concrete requires a low water-cement ratio and an adequate moist-curing period. Air entrainment aids watertightness but has little effect on permeability. Permeability increases with drying.*

The permeability of mature hardened paste kept continuously moist ranges from 0.1×10^{-12} to 120×10^{-12} cm per sec. for water-cement ratios ranging from 0.3 to 0.7.* The permeability of rock commonly used as concrete aggregate varies from approximately 1.7×10^{-9} to 3.5×10^{-13} cm per sec. The permeability of mature, good-quality concrete is aproximately 1×10^{-10} cm per sec.

The relationship between permeability, water-cement ratio, and initial curing for 4x8-in. cylindrical concrete specimens tested after 90 days of air drying and subjected to 3000 psi of water pressure is illustrated in Fig. 1-10. The test apparatus is shown in Fig. 1-11. Although permeability values would be different for other liquids and gases, the relationship between water-cement ratio, curing period, and permeability would be similar.

Test results obtained by subjecting 1-in.-thick non-air-entrained mortar disks to 20-psi water pressure are given in Fig. 1-12. In these tests, there was no water leakage through mortar disks that had a water-cement ratio of 0.50 by weight or less and were moist-cured for seven days. Where leakage occurred, it was greater in mortar disks made with high water-cement ratios. Also, for each water-cement ratio, leakage was less as the length of the moist-curing period increased. In disks with a water-cement ratio of 0.80, the mortar still

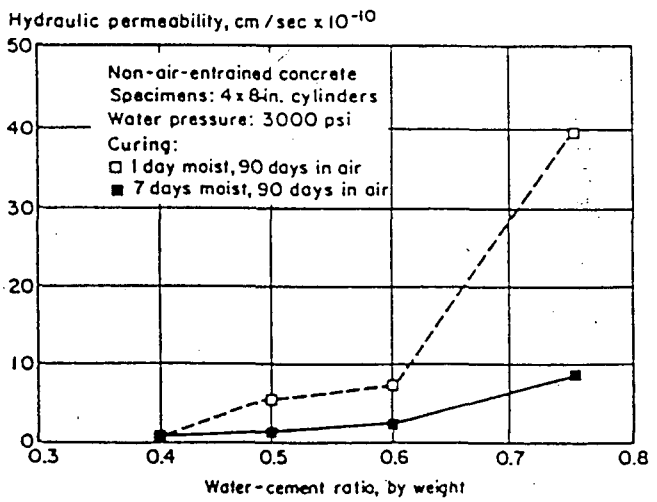


Fig. 1-10. Relationship between hydraulic (water) permeability, water-cement ratio, and initial curing on concrete specimens. Reference PCA HM1170.

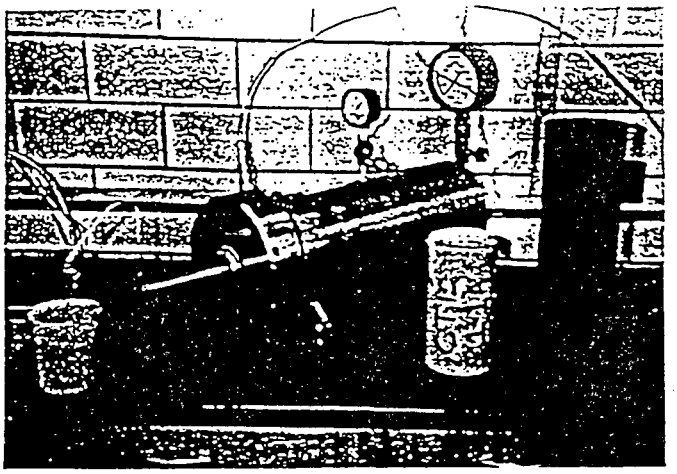


Fig. 1-11. Hydraulic permeability test apparatus used to obtain data illustrated in Fig. 1-10.

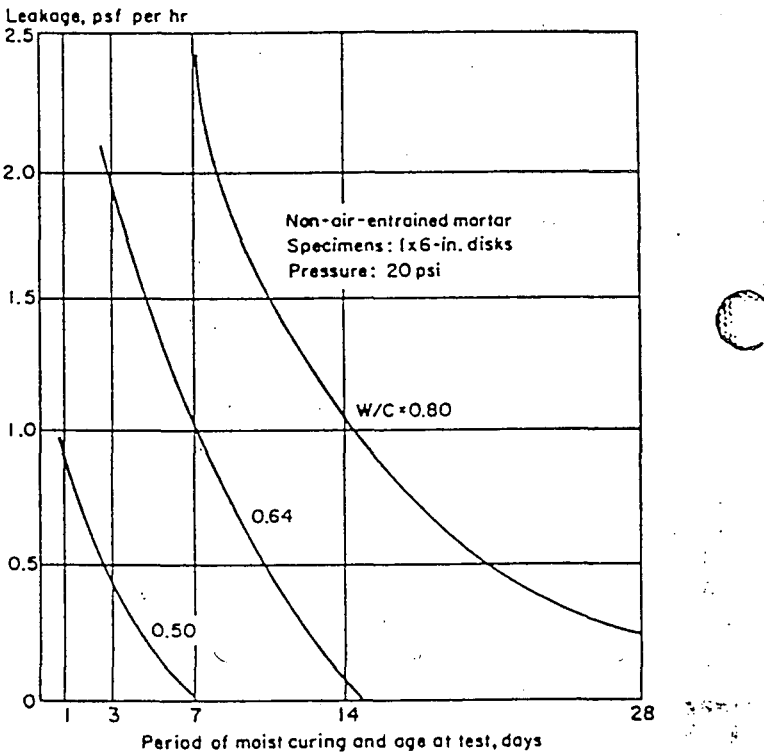


Fig. 1-12. Effect of water-cement ratio (w/c) and curing duration on permeability of mortar. Note that leakage is reduced as the water-cement ratio is decreased and the curing period increased. Reference 1-1 and PCA Major Series 227.

*Reference 1-4.

permitted leakage after being moist-cured for one month. These results clearly show that a low water-cement ratio and a period of moist curing significantly reduce permeability.

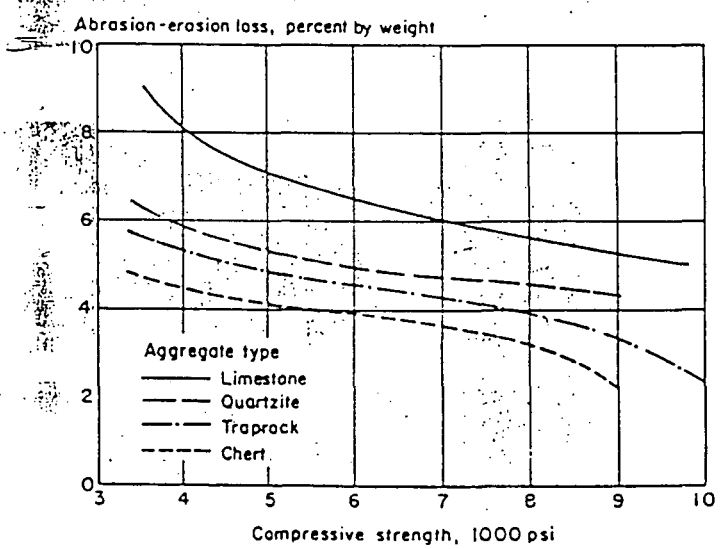
A low water-cement ratio also reduces segregation and bleeding, further contributing to watertightness. To be watertight, concrete must also be free from cracks and honeycomb.

Occasionally, porous concrete—no-fines concrete that readily allows water to flow through—is designed for special applications. In these concretes, the fine aggregate is greatly reduced or completely removed producing a high volume of air voids. Porous concrete has been used in tennis courts, pavements, parking lots, greenhouses, and drainage structures. No-fines concrete has also been used in buildings because of its thermal insulation properties. Additional information on porous concrete is given in Chapter 15, "Special Types of Concrete."

Abrasion Resistance

Floors, pavements, and hydraulic structures are subjected to abrasion; therefore, in these applications concrete must have a high abrasion resistance. Test results indicate that abrasion resistance is closely related to the compressive strength of concrete. Strong concrete has more resistance to abrasion than does weak concrete. Since compressive strength depends on water-cement ratio and curing, a low water-cement ratio and adequate curing are necessary for abrasion resistance. The type of aggregate and surface finish or treatment used also have a strong influence on abrasion resistance. Hard aggregate is more abrasion resistant than soft aggregate and a steel-troweled surface resists abrasion more than a surface that is not troweled.

Fig. 1-13 shows results of abrasion tests on concretes of different compressive strengths and aggregate types.



g. 1-13. Effect of compressive strength and aggregate ype on the abrasion resistance of concrete. High-strength concrete made with a hard aggregate is highly resistant to abrasion. Reference 1-16.

Fig. 1-14 illustrates the effect hard steel troweling and surface treatments have on abrasion resistance. Abrasion tests can be conducted by rotating steel balls, dressing wheels, or disks under pressure over the surface (ASTM C 779). One type of test apparatus is pictured in Fig. 1-15. Other types of abrasion tests are also available (ASTM C 418 and C 944).

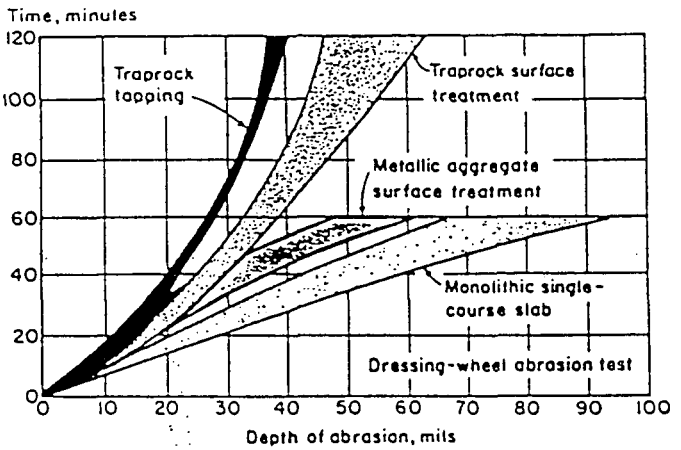


Fig. 1-14. Effect of hard steel troweling and surface treatments on the abrasion resistance of concrete. Base slab compressive strength was 6000 psi at 28 days. All slabs were steel troweled. Reference 1-12.

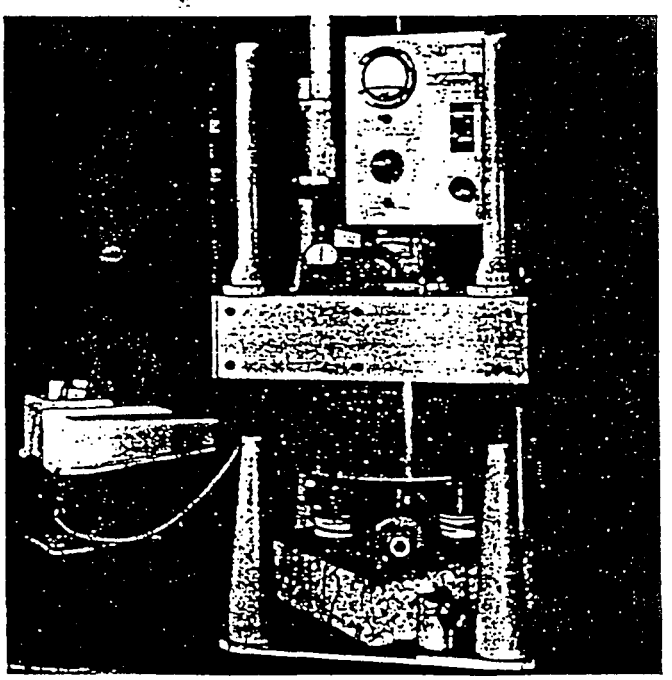


Fig. 1-15. Test apparatus for measuring abrasion resistance of concrete. The machine can be adjusted to use either revolving disks or dressing wheels. With a different machine, steel balls under pressure are rolled over the surface of the specimen. The tests are described in ASTM C 779, Standard Test Method for Abrasion Resistance of Horizontal Concrete Surfaces.

Volume Stability

Hardened concrete changes volume slightly due to changes in temperature, moisture, and stress. These volume or length changes may range from about 0.01% to 0.08%. Thermal volume changes of hardened concrete are about the same as those for steel.

Concrete kept continually moist will expand slightly. When permitted to dry, concrete will shrink. The primary factor influencing the amount of drying shrinkage is the water content of the freshly mixed concrete. Drying shrinkage increases directly with increases in this water content. The amount of shrinkage also depends upon several other factors, such as amounts of aggregate used, properties of the aggregate, size and shape of the concrete mass, relative humidity and temperature of the environment, method of curing, degree of hydration, and time. Cement content has little to no effect on shrinkage of concrete with cement contents between 5 and 8 bags per cu yd.

Concrete under stress will deform elastically. Sustained stress will result in additional deformation called creep. The rate of creep (deformation per unit of time) decreases with time.

The magnitude of volume changes and factors influencing them are discussed in Chapter 13, "Volume Changes of Concrete."

Control of Cracking

Two basic causes of cracks in concrete are (1) stress due to applied loads and (2) stress due to drying shrinkage or temperature changes in restrained conditions.

Drying shrinkage is an inherent, unavoidable property of concrete; therefore, properly positioned reinforcing steel is used to reduce crack widths, or joints (Fig. 1-16) are used to predetermine and control the location of cracks. Thermal stress due to fluctuations in temperature can cause cracking, particularly at an early age.

Concrete shrinkage cracks occur because of restraint. When shrinkage occurs and there is no restraint, the concrete does not crack. Restraint comes from several sources. Drying shrinkage is always greater near the surface of concrete; the moist inner portions restrain the concrete near the surface, which can cause cracking. Other sources of restraint are reinforcing steel embedded in concrete, the interconnected parts of a concrete structure, and the friction of the subgrade on which concrete is placed.

Joints are the most effective method of controlling unsightly cracking. If a sizable expanse of concrete (a wall, slab, or pavement) is not provided with properly spaced joints to accommodate drying shrinkage and temperature contraction, the concrete will crack in a random manner.*

Control joints are grooved, formed, or sawed into sidewalks, driveways, pavements, floors, and walls so that cracking will occur in these joints rather than in a random manner. Control joints permit movement in the plane of a slab or wall. They extend to a depth of approximately one-quarter the concrete thickness.

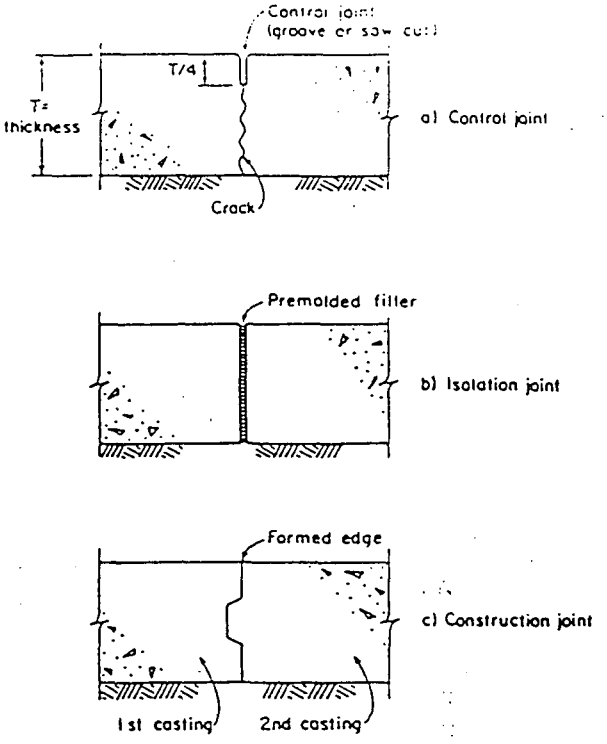


Fig. 1-16. The three basic types of joints used in concrete slab-on-ground construction.

Isolation joints separate a slab from other parts of a structure and permit horizontal and vertical movements of the slab. They are placed at the junction of floors with walls, columns, footings, and other points where restraint can occur. They extend the full depth of the slab and include a premolded joint filler.

Construction joints occur where concrete work is concluded for the day; they separate areas of concrete placed at different times. In slabs-on-ground, construction joints usually align with and function as control or isolation joints.

*Refer to Chapter 9 for more information.

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Chapter 4 **Aggregates for Concrete**
Chapter 5 **Air-Entrained Concrete**
Chapter 6 **Admixtures for Concrete**
Chapter 7 **Proportioning Normal Concrete Mixtures**
Chapter 8 **Batching, Mixing, Transporting, and Handling Concrete**
Chapter 9 **Placing and Finishing Concrete**
Chapter 10 **Curing Concrete**
Chapter 11 **Hot-Weather Concreting**
Chapter 12 **Cold-Weather Concreting**
Chapter 13 **Volume Changes of Concrete**
Chapter 14 **Control Tests for Quality Concrete**
Chapter 15 **Special Types of Concrete**

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This publication is based on the facts, tests, and authorities stated herein. It is intended for the use of professional personnel competent to evaluate the significance and limitations of the reported findings and who will accept responsibility for the application of the material it contains. Obviously, the Portland Cement Association disclaims any and all responsibility for the application of the stated principles or for the accuracy of any of the sources other than work performed or information developed by the Association.

Caution: Avoid prolonged contact between unhardened (wet) cement or concrete mixtures and skin surfaces. To prevent such contact, it is advisable to wear protective clothing. Skin areas that have been exposed to wet cement or concrete, either directly or through saturated clothing, should be thoroughly washed with water.

PORTLAND CEMENT ASSOCIATION

An organization of cement manufacturers to improve and extend the uses of portland cement and concrete through market development, engineering, research, education, and public affairs work.

5420 Old Orchard Road, Skokie, Illinois 60077-1083

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CONCRETE INFORMATION

PCA

Reprinted from *Design and Control of Concrete Mixtures* (EB001.13T), Chapter 1.

Fundamentals of Concrete

Concrete is basically a mixture of two components: aggregates and paste. The paste, comprised of portland cement and water, binds the aggregates (sand and gravel or crushed stone) into a rocklike mass as the paste hardens because of the chemical reaction of the cement and water.*

Aggregates are generally divided into two groups: fine and coarse. Fine aggregates consist of natural or manufactured sand with particle sizes ranging up to ⅜ in.; coarse aggregates are those with particles retained on the No. 16 sieve and ranging up to 6 in. The most commonly used maximum aggregate size is ¾ in. or 1 in.

The paste is composed of portland cement, water, and entrapped air or purposely entrained air. Cement paste ordinarily constitutes about 25% to 40% of the total volume of concrete. Fig. 1-1 shows that the absolute volume of cement is usually between 7% and 15% and the water between 14% and 21%. Air content in air-entrained concrete ranges up to about 8% of the volume of the concrete, depending on the top size of the coarse aggregate.

Since aggregates make up about 60% to 75% of the total volume of concrete, their selection is important. Aggregates should consist of particles with adequate strength and resistance to exposure conditions and should not contain materials that will cause deterioration of the concrete. A continuous gradation of particle sizes is desirable for efficient use of the cement and water paste. Throughout this text, it will be assumed that suitable aggregates are being used, except where otherwise noted.

The quality of the concrete depends to a great extent upon the quality of the paste. In properly made concrete, each particle of aggregate is completely coated with paste and all of the spaces between aggregate particles are completely filled with paste, as illustrated in Fig. 1-2.

For any particular set of materials and conditions of curing, the quality of hardened concrete is determined

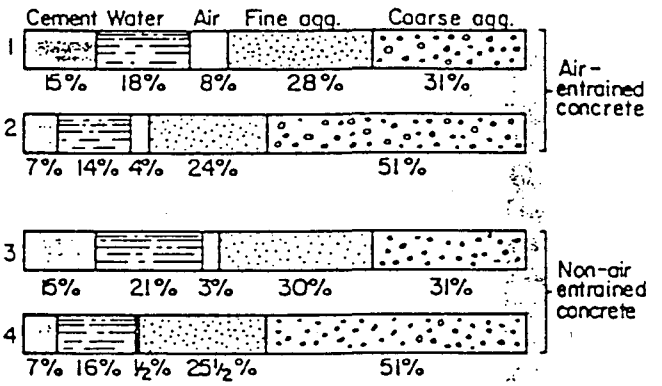

Fig. 1-1. Range in proportions of materials used in concrete, by absolute volume. Bars 1 and 3 represent rich mixes with small aggregates. Bars 2 and 4 represent lean mixes with large aggregates.

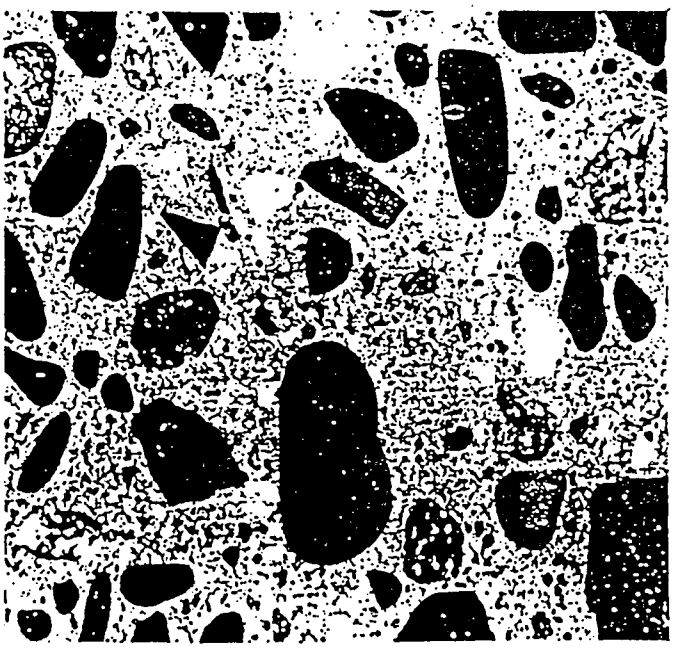

Fig. 1-2. Cross section of hardened concrete. Cement-and-water paste completely coats each aggregate particle and fills all spaces between particles.

*This text addresses the utilization of portland cement in the production of concrete. The term "portland cement" pertains to a calcareous hydraulic cement produced by heating the oxides of silicon, calcium, aluminum, and iron. The term "cement" used throughout the text pertains to portland cement unless otherwise stated.

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by the amount of water used in relation to the amount of cement. Following are some advantages of reducing water content:

- Increased compressive and flexural strength
- Lower permeability, thus increased watertightness and lower absorption
- Increased resistance to weathering
- Better bond between successive layers and between concrete and reinforcement
- Less volume change from wetting and drying
- Reduced shrinkage cracking tendencies

The less water used, the better the quality of the concrete—provided it can be consolidated properly. Smaller amounts of mixing water result in stiffer mixtures; but with vibration, the stiffer mixtures can be used. For a given quality of concrete, stiffer mixtures are more economical. Thus consolidation by vibration permits improvement in the quality of concrete and in economy.

The freshly mixed (plastic) and hardened properties of concrete may be changed by adding admixtures to the concrete, usually in liquid form, during batching. Admixtures are commonly used to (1) adjust setting time or hardening, (2) reduce water demand, (3) increase workability, (4) intentionally entrain air, and (5) adjust other concrete properties. Admixtures are discussed in Chapter 6.

After completion of proper proportioning, batching, mixing, placing, consolidating, finishing, and curing, hardened concrete becomes a strong, noncombustible, durable, abrasion-resistant, and practically impermeable building material that requires little or no maintenance. Concrete is also an excellent building material because it can be formed into a wide variety of shapes, colors, and textures for use in almost unlimited number of applications.

FRESHLY MIXED CONCRETE

Freshly mixed concrete should be plastic or semifluid and generally capable of being molded by hand. A very wet concrete mixture can be molded in the sense that it can be cast in a mold, but this is not within the definition of "plastic"—that which is pliable and capable of being molded or shaped like a lump of modeling clay.

In a plastic concrete mixture all grains of sand and pieces of gravel or stone are encased and held in suspension. The ingredients are not apt to segregate during transport; and when the concrete hardens, it becomes a homogeneous mixture of all the components. Concrete of plastic consistency does not crumble but flows sluggishly without segregation.

Slump is used as a measure of the consistency of concrete. A low-slump concrete has a stiff consistency.

In construction practice, thin concrete members and heavily reinforced concrete members require workable, but never soupy, mixes for ease of placement. A plastic mixture is required for strength and for maintaining homogeneity during handling and placement. While a plastic mixture is suitable for most concrete work, superplasticizing admixtures may be used to make concrete more flowable in thin or heavily reinforced concrete members.

Mixing

In Fig. 1-1, the five basic components of concrete are shown separately. To ensure that they are combined into a homogeneous mix requires effort and care. The sequence of charging ingredients into the mixer plays an important part in the uniformity of the finished product. The sequence, however, can be varied and still produce a quality concrete. Different sequences require adjustments in the time of water addition, the total number of revolutions of the mixer drum, and the speed of revolution. Other important factors in mixing are the size of the batch in relation to the size of the mixer drum, the elapsed time between batching and mixing, and the design, configuration, and condition of the mixer drum and blades. Approved mixers, correctly operated and maintained, ensure an end-to-end exchange of materials by a rolling, folding, and kneading action of the batch over itself as the concrete is mixed.

Workability

The ease of placing, consolidating, and finishing freshly mixed concrete is called workability. Concrete should be workable but should not segregate or bleed excessively. Bleeding is the migration of water to the top surface of freshly placed concrete caused by the settlement of the solid materials—cement, sand, and stone—within the mass. Settlement is a consequence of the combined effect of vibration and gravity.

Excessive bleeding increases the water-cement ratio near the top surface and a weak top layer with poor durability may result, particularly if finishing operations take place while bleed water is present. Because of the tendency of freshly mixed concrete to segregate and bleed, it is important to transport and place each load as close as possible to its final position. Entrained air improves workability and reduces the tendency of freshly mixed concrete to segregate and bleed.

Consolidation

Vibration sets into motion the particles in freshly mixed concrete, reducing friction between them and giving the mixture the mobile qualities of a thick fluid. The vibratory action permits use of a stiffer mixture containing a larger proportion of coarse and a smaller proportion of fine aggregate. The larger the maximum-size aggregate in concrete with a well-graded aggregate, the less volume there is to fill with paste and the less aggregate surface area there is to coat with paste; thus less water and cement are needed. With adequate consolidation, harsher as well as stiffer mixtures can be used, resulting in improved quality and economy.

If a concrete mixture is workable enough to be readily consolidated by hand rodding, there may not be an

To: CHRIS RIEHL
FROM: PETER SWAN
PAGES: 01
DATE: 10/19/94

(c) flammable solids, substances liable to spontaneous combustion or substances that on contact with water emit flammable gases as defined and regulated in Divisions 1, 2 and 3 of Class 4

of the Federal Regulations;

"impervious" means having a permeability not greater than 1×10^{-7} cm per second when subjected to a head of 0.305 m of water;

"incinerator" means a thermal treatment facility using controlled flame combustion;

"incompatible special waste" means a special waste which, when in contact with another special waste or substance and under normal conditions of storage or transportation, may react to produce

(a) heat,

(b) a gas,

(c) a corrosive substance, or

(d) a toxic substance;

"indoor' means enclosed and protected from precipitation and wind as in a building but does not include a shipping container used for passive storage;

"in situ management facility" means a facility used to

(a) prevent or control the movement or release of special waste contaminants, or

(b) treat or destroy special waste contaminants in soil or groundwater

at an historical special waste contaminated site in such a way that the physical location of the special waste contaminants and the soil is not substantially altered.

"labpack" means an outer packaging as defined by the Federal Regulations which has a maximum capacity of 454 ℓ and which is used to transport multiple small inside containers of special waste;

"land treatment" means the treatment of special waste by applying it to land;

"leachate" means any liquid, including suspended materials which it contains, which has percolated through or drained from a special waste facility;

"leachable toxic waste" means waste which when subjected to the Leachate Extraction Procedure described in Part 1 of Schedule 4 produces an extract with a contaminant concentration greater than those prescribed in Table 1 of Schedule 4;

"liner" means a continuous layer of synthetic or natural clay or earth materials, placed beneath and at the sides of a secure landfill, a

** TOTAL PAGE.001 **

INTERNATIONAL HEADQUARTERS
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CANADA T2E 6T5

AGAT® Laboratories

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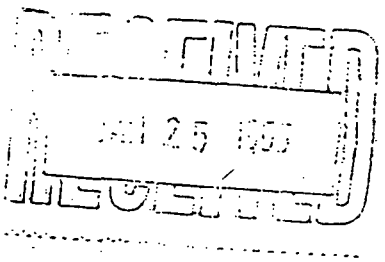
January 23, 1995



Safety-Kleen
300 Woolwich St. S
Breslau, Ontario
N0B 1M0

Attention : Mr. Chris Riehl

Re : Hydraulic Conductivity Study
Our File: 94RE1256

Dear Chris,

Enclosed please find a copy of our report entitled *Hydraulic Conductivity Study* that you requested. Also enclosed is our Invoice #67763 for the amount of $1,363.59.

If you have any questions regarding this study, please do not hesitate to contact us at (403) 299-2000.

Sincerely yours,

AGAT Laboratories

M. Pankalla

Marianna Pankalla, M.Sc.
Reservoir Analyst
Reservoir Engineering Division

299-2105

Graham McLeod,P.Geol.,B.Sc.
Manager, Special Core
Reservoir Engineering Division

AGAT Laboratories

CUSTOMER REVIEW

Company:_____ Job #:_____

Contact:_____ Date:_____ Phone #:_____

1. Type of Work

____ Routine Core Analysis	____ Special Core Analysis	____ Environmental Analysis
____ Geology/Petrology	____ Routine Oil, Gas & Water	____ PVT Analysis
____ Preventive Maintenance	____ International	____ Other

2. Quality of Work

Were the following to your satisfaction? Please check one.

		Exceptional	Good	Needs Improvement
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b)	Turnaround of Results?	_____	_____	_____
c)	Technical ability of AGAT personnel?	_____	_____	_____
d)	Courtesy by AGAT personnel?	_____	_____	_____
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John Desanti
President

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3801 - 21st Street N.E.,
Calgary, AB T2E 6T5,
Fax Number: (403) 299-2005.

AG1003

HYDRAULIC CONDUCTIVITY STUDY

Prepared for:

SAFETY - KLEEN

Prepared by:

AGAT Laboratories
3801 - 21st Street N.E.
Calgary, Alberta
T2E 6T5

Telephone: (403) 299-2000

Work Order 94RE1245
January, 1995

SUMMARY

For the current study, three (2.5 cm in diameter) cement samples from the West Wall location were subjected to hydraulic conductivity testing.

Prior to testing, samples' petrophysical properties (gas permeability, Boyle's Law porosity and grain density) were determined. The samples were then pressure-saturated with Deionized Water. Each saturated sample was placed in a coreholder and a nominal pressure was applied to the samples to prevent fluid bypass during testing. A hydraulic head of approximately 2.989 kPa (equivalent of 0.305 m of water) was applied to the samples to determine their permeability. The water permeability was calculated from the measured flowrate and hydraulic head applied to the sample. The permeability was then converted to a hydraulic conductivity using a multiplication factor of $9.66*10^{-7}$ cm/s/md.

The hydraulic conductivities of the samples were found to range from $4.830*10^{-9}$ cm/s to $1.063*10^{-8}$ cm/s (refer to Table 1).

SAFETY - KLEEN **FILE 94RE1245**

3 Cement Samples - Hydraulic Conductivity Testing

TABLE 1
SAMPLE SUMMARY

Sample #	Length (cm)	Diameter (cm)	Porosity (%)	Grain Dens (kg/m3)	Gas Perm. (md)	Water Perm. (md)	Hydraulic Conductivity (cm/s)
1	4.673	2.515	22.06	2.584	0.838	0.011	1.06E-08
2	4.936	2.513	16.98	2.596	0.684	0.007	6.80E-09
3	4.711	2.518	13.88	2.712	0.610	0.005	4.83E-09

AGAT Laboratories would like to acknowledge the following employees for their contributions to this report:

Marianna Pankalla, M.Sc.
Reservoir Analyst, Reservoir Engineering Division

Graham McLeod, P.Geol., B.Sc.
Manager, Reservoir Engineering Division

and all Laboratory Technologists

PERMIT TO PRACTICE
AGAT LABORATORIES LTD.
Signature Graham McLeod
Date January 10, 1995
PERMIT NUMBER: P 3989
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

Report Prepared by : M. Pankalla

Marianna Pankalla, M.Sc.

Appendix E

Engineering Assessment of Tank System

TANK INSPECTION REPORT

SAFETY-KLEEN CORP.

ORANGE PARK PLANT

DIRTY MINERAL SPIRITS STORAGE TANK

INSPECTION COMPLETED

AUGUST 1997

AST INSPECTION SERVICES, INC.

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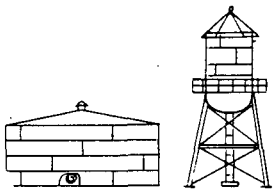

AST Inspection Services, Inc.

August 13, 1997

SAFETY-KLEEN
PO BOX 20008
4426 ENTREPOT BLVD.
TALLAHASSEE, FLORIDA 32316

Attn. Mr. Richard Morris

Re: Inspection report - Dirty Mineral Spirits Storage Tank - Orange Park, Fl.

Gentlemen,

Dan Coleman of *AST Inspection Services,* Inc. performed an Out of Service inspection on the above referenced tank on August 5, 1997. The inspection was performed per API-653 guidelines. This report contains our inspection findings, recommendations, photographs and a tank drawing.

General

Dirty Mineral Spirits Storage Tank
10'-6" diameter and 23'-3" high
Ul-142 Design
Built in Approximately 1980 by Buffalo Tank Company
15,000 gal. capacity

The tank is in good condition. No leaks or significant corrosion were found during this inspection. The tank was inspected both internally and externally. Ultrasonic thickness measurements were taken on the shell, bottom, and roof using a Krautkramer Branson DME thickness tester.

The tank was previously inspected by Tera, Inc.

Bottom

The tank has a 1/4" plate flat flanged bottom. The tank rests on a 3" x 6" tubing grillage which allowed a limited visual underside inspection.
Visual inspection of both the interior and exterior did not reveal any metal loss corrosion.
Visual inspection of the underside of the tank bottom revealed coating failure but

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no metal loss corrosion. There was no evidence of any leaks from the underside of the tank bottom. Ultrasonic testing of the bottom indicated the plate thickness to be a consistent 0.260".

Shell

The tank shell is in excellent condition. Visual inspection indicated the tank was fabricated with butt welded vertical seams and lap welded horizontal seams including lap welds at the flanged roof and bottom connections. The horizontal seams are welded on the tank exterior only while the vertical seams are welded on both sides. This type of fabrication meets UL 142 design criteria.
U-T tests of the shell revealed the shell to be a minimum of 3/16" in thickness. U-T readings were consistent and did not indicate any metal loss. The UL 142 nameplate frame is severely corroded and the shell is corroding behind the nameplate. We recommend the nameplate frame be removed and the rusting area behind the plate be cleaned and coated.
The coating on the shell is in good condition but is beginning to fail on the upper shell course.
See the tank drawing for U-T readings.

Roof

The roof is in good condition. Thickness readings did not indicate any metal loss and were consistent at 1/4" +. The roof coating is in good condition. Visual inspection of the underside of the roof did not reveal any corrosion.

Nozzles and accessories

All nozzles are in good condition.
Details and locations of the nozzles are on the drawing included with this report.
The tank has 4) 3/4" anchor bolts. The anchor bolts are rusting and should be cleaned and coated.

Secondary Containment

The secondary containment appeared in good condition. The lining was in good condition although it could not be entirely inspected due to standing water in some areas.

Piping

The inlet and outlet piping was visually inspected for leaks. There was no indications of leaks.

Recommendations

We recommend the following:

1. Clean and coat the anchor bolts.

2. Remove UL 142 name tag bracket and clean and paint shell where removed. Clean the name tag of all paint and reattach to the shell with an epoxy adhesive.

3. Touch-up the shell coating where beginning to fail on the upper shell course.

Conclusion

The tank is in excellent condition based on this Out of Service inspection. As long as the exterior coating is maintained and its stored contents remain non-corrosive the tank should have an indefinite service life.

Thank you for allowing us to perform this inspection.

Sincerely,
AST Inspection Services, Inc.

Daniel E. Coleman

Daniel E. Coleman EI, API Inspector Certification #0867

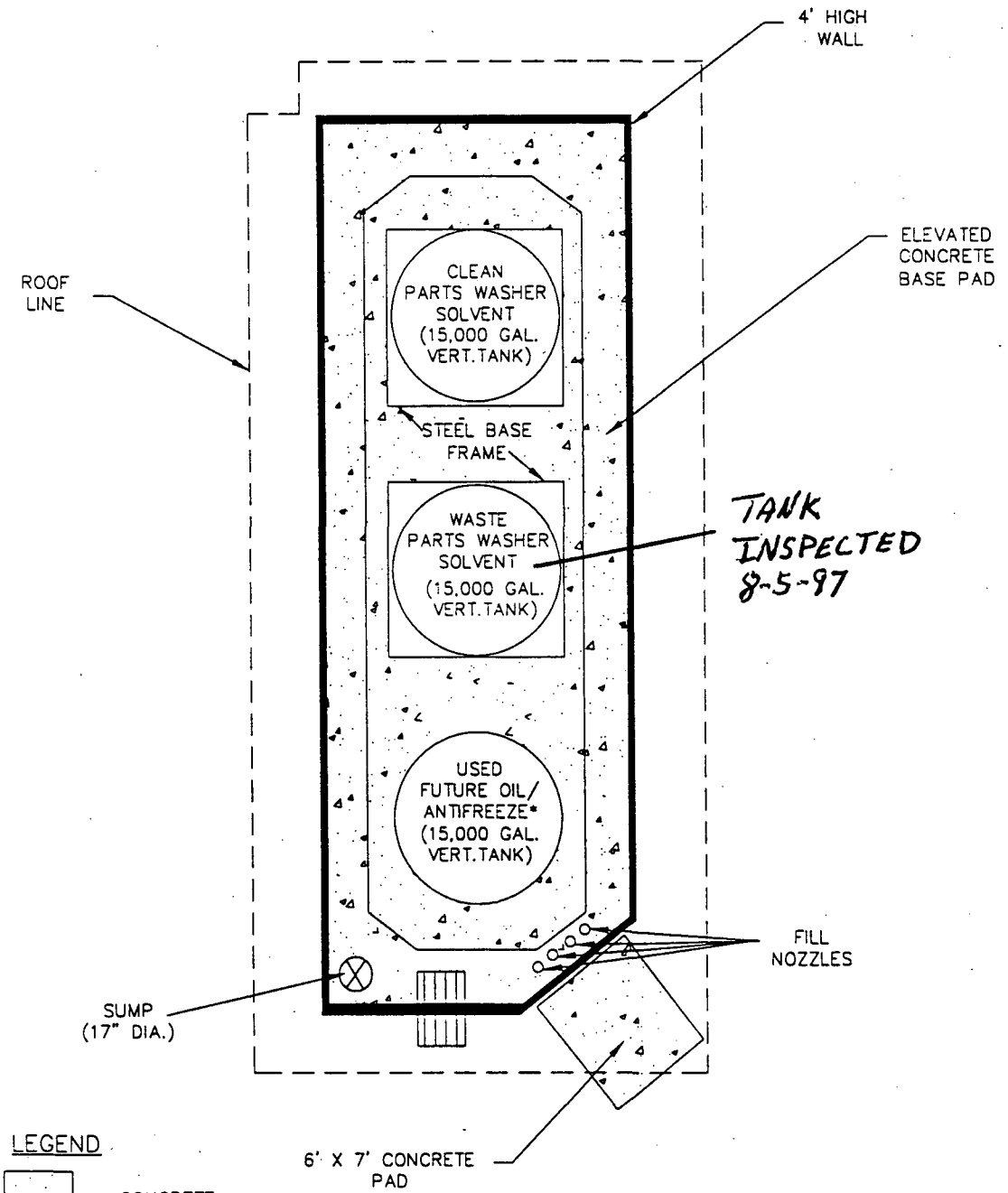
David E. Newlin, PE
Florida Registered Professional Engineer #31431

DAVID E. NEWLIN
CERTIFICATE
No. 31431
STATE OF FLORIDA
REGISTERED ENGINEER

David E. Newlin
8/15/97

REVISION 0
AUGUST 20, 1997

Figure 9.2-1
Tank Storage Area
Safety-Kleen Corp. Facility
Orange Park, Florida



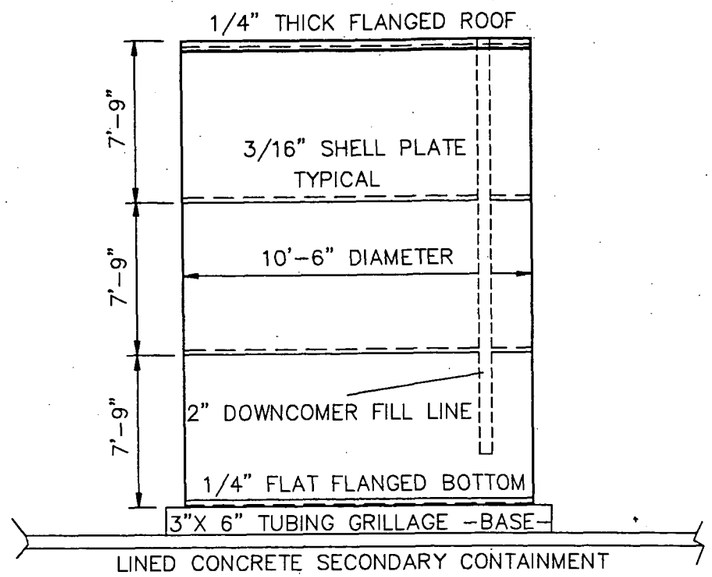
*TANK TO BE CLOSED BY 12/31/97 AND PUT INTO NEW SERVICE FOR USED OIL & ANTIFREEZE

13112.26/31126TSA/072197

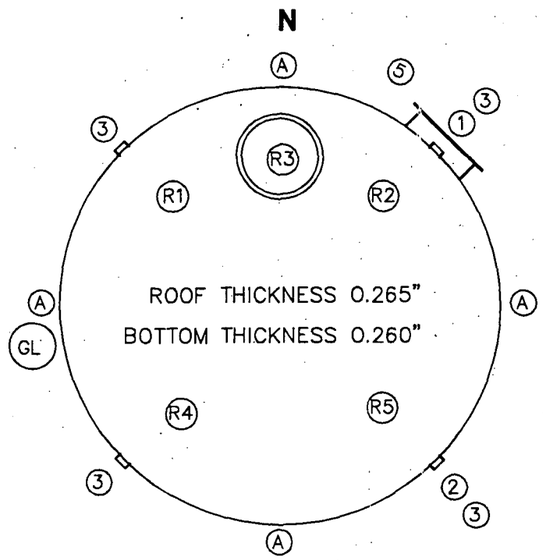
ERM

DIRTY MINERAL SPIRITS STORAGE TANK - ORANGE PARK, FLORIDA

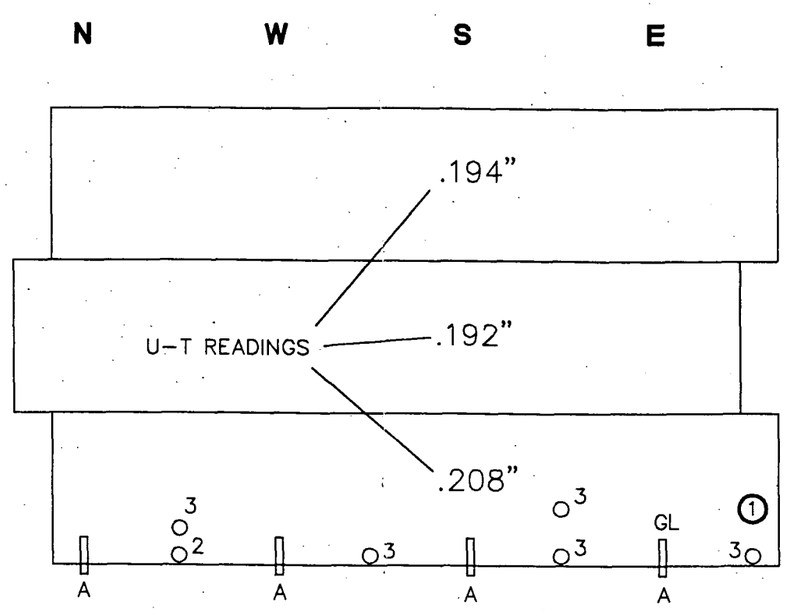
DESIGN: UL 142 STD. TEMP. AND PRESSURE
BUILT: APPROXIMATELY 1980 BY BUFFALO TANK CO.
INSPECTED: AUGUST 5, 1997
10'-6" DIAMETER X 23'-3" HIGH
15,000 GALLON CAPACITY
BUTT WELDED VERTICAL SEAMS
LAP WELDED HORIZONTAL SEAMS



ELEVATION



PLAN



SHELL ROLLOUT

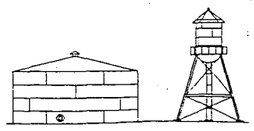
NOTES:
1. SHELL RUSTING BEHIND UL 142 NAMEPLATE LOCATED ABOVE MANWAY.
2. SHELL COATING IN GOOD CONDITION – COATING BEGINNING TO FAIL ON UPPER SHELL COURSE.
3. U-T READINGS DO NOT INDICATE ANY INTERIOR CORROSION.
4. NO INTERNAL CORROSION FOUND DURING INTERIOR INSPECTION.
5. NO VISIBLE SIGNS OF TANK LEAKAGE.
6. TANK IS IN GOOD CONDITION BASED ON THIS INSPECTION

INSPECTOR: DANIEL E. COLEMAN EI – API CERTIFICATION #0867

NOZZLES, FITTINGS AND ACCESSORIES

SYMBOL	DESCRIPTION	INSPECTION NOTES
1	24" SHELL MANWAY	GOOD CONDITION
2	4" COUPLING – INLET/OUTLET	GOOD CONDITION
3	4" COUPLING – SPARE NOZZLES	GOOD CONDITION
GL	GROUNDING LUG	GOOD CONDITION
A	TANK ANCHORS	HAVE COATING FAILURE AT BOLTS
R1	4" COUPLING/2" FILL PIPING – ROOF	GOOD CONDITION
R2	4" COUPLING/2" LEVEL GAUGE PIPING	GOOD CONDITION
R3	24" ROOF MANWAY	LONG BOLT CONFIGURATION – NFPA 30 – GOOD
R4	4" COUPLING W/2" P/V VENT	MORRISON FIG. 548 2oz. 20,200 CFH @ 0.5psi
R5	4" COUPLING W/2" ALARM	GOOD CONDITION

AST INSPECTION SERVICES, INC.
PO BOX 902
MADISON, FLORIDA 32341
PHONE: (912) 244-9826



FOR:
SAFETY-KLEEN CORP.
ORANGE PARK BRANCH
ORANGE PARK, FLORIDA

PROJECT:
OUT OF SERVICE INSPECTION
DIRTY MINERAL SPIRITS STORAGE TANK

DRAWN BY: D.W.W.
CHECKED BY: D.E.C.
UNIT NUMBER:

Photograph Descriptions Dirty Mineral Spirits Storage Tank
Orange Park, Fl. Plant

1. Overall view of storage tank facility.

2. View of inside of containment showing outlet piping from tank.

3. View of beginning coating failure on upper shell course.

4. View of shell manway and rusting nameplate.

5. View of outlet piping and foundation grillage.

6. View of tank identification, level indicator and high level alarms.

7. View of typical rusting anchor and grounding cable.

8. View of roof mounted 2" P\V vent.

9. View of roof manway with long bolts for emergency venting.

10. View of underside of roof showing 2" inlet downcomer piping and level indicator tape.

11. View of tank bottom and lower shell at typical 4" shell nozzle. Notice there is no corrosion and the original painted plate markings remain.

12. View of outlet valve installed in lower 4" nozzle.
8. View of shell manway with name tag.

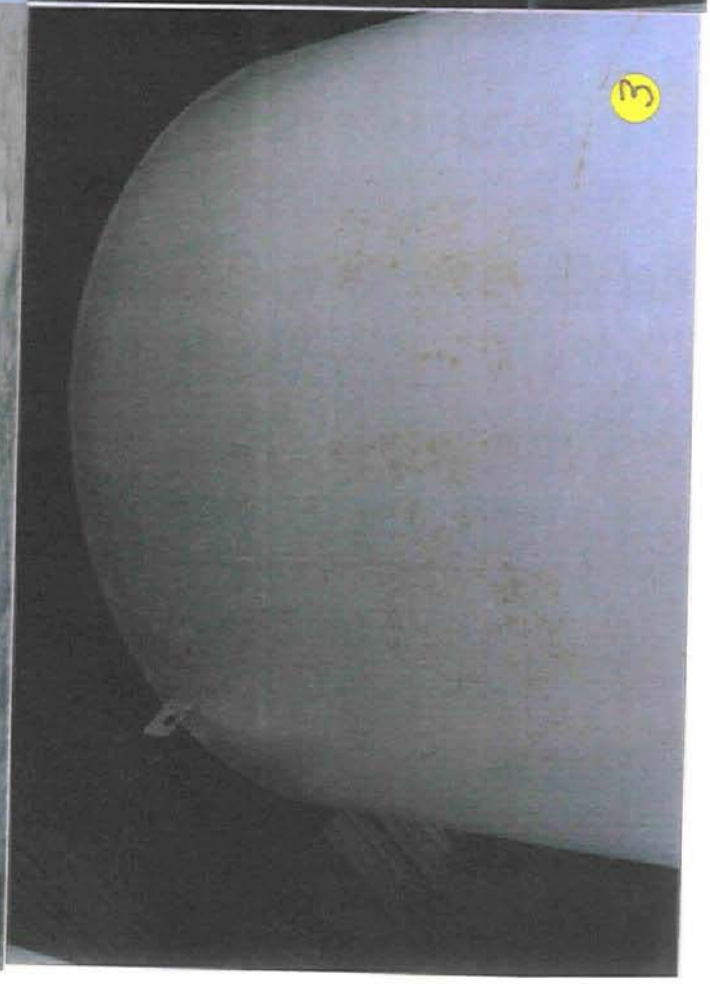
9. View of shell vent showing severe corrosion typical of all vent hoods.

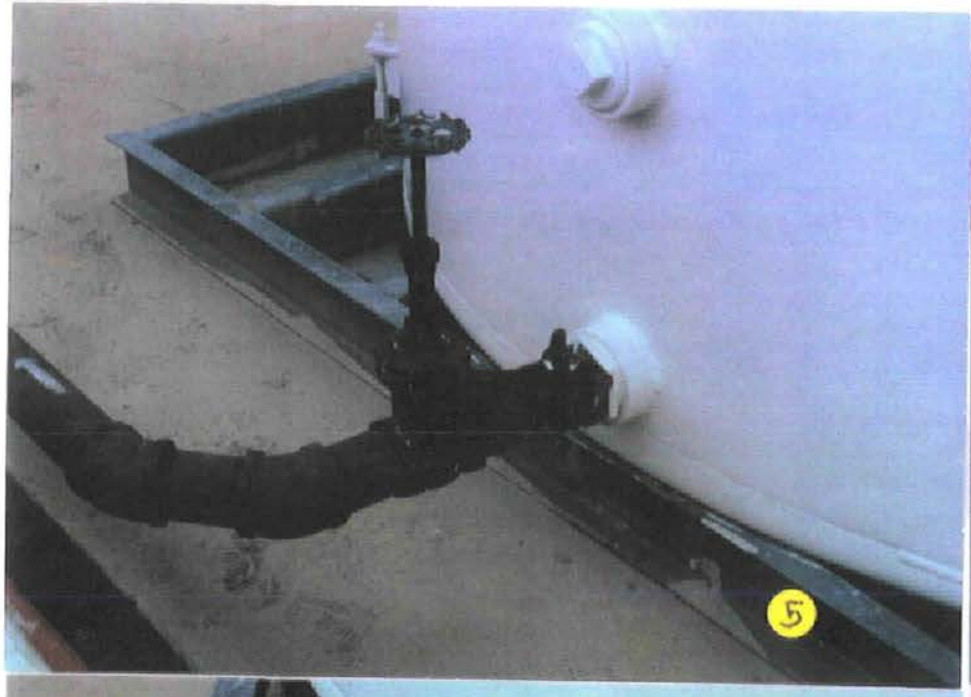
10. View of roof vent showing corrosion under hoods.

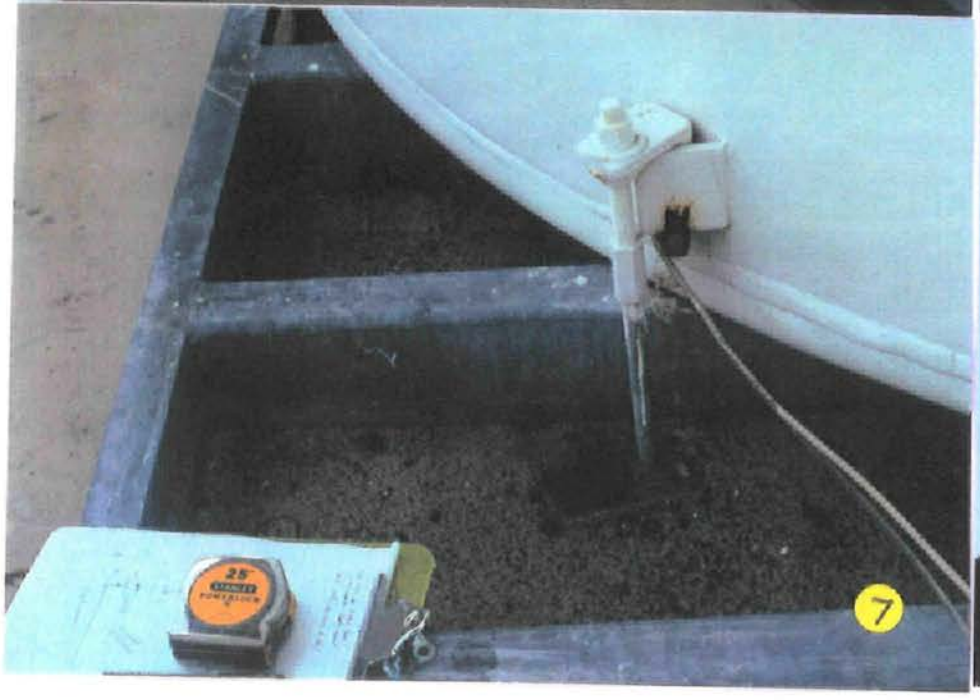
11. View of roof manway and level indicator nozzles.

12. View of vent showing corrosion under hoods.

DIRTY MINERAL SPIRITS STORAGE TANK ORANGE PARK, FLORIDA

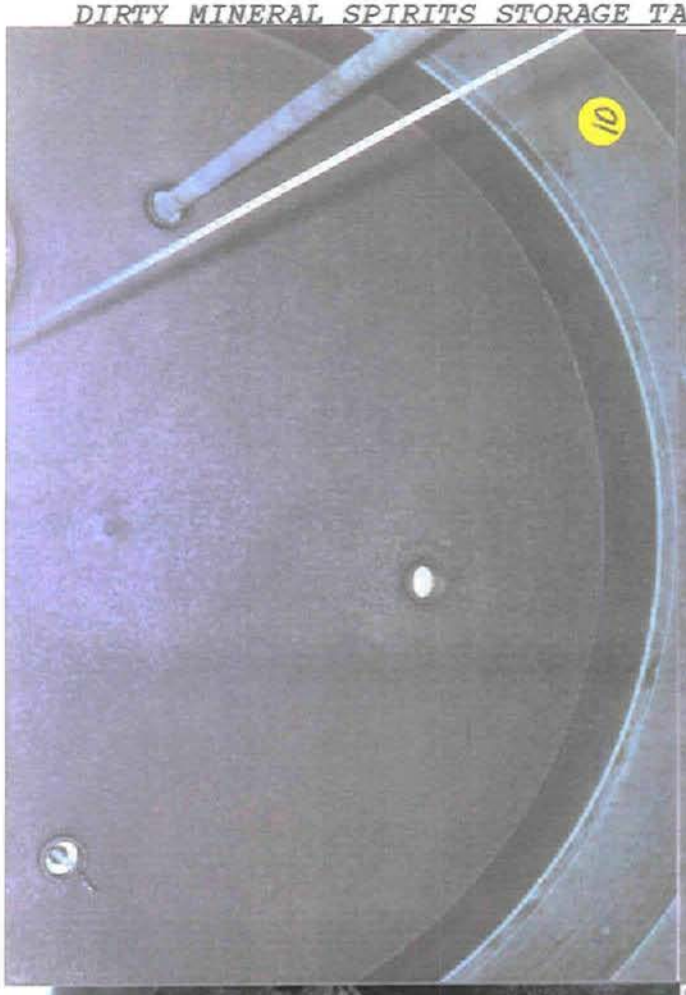






DIRTY MINERAL SPIRITS STORAGE TANK ORANGE PARK, FLORIDA

DIRTY MINERAL SPIRITS STORAGE TANK ORANGE PARK, FLORIDA



Appendix F

Ethylene Glycol Tank Closure Plan

APPENDIX F ETHYLENE GLYCOL TANK CLOSURE PLAN

INTRODUCTION

Safety-Kleen's Orange Park facility is permitted to store hazardous ethylene glycol (i.e., used antifreeze mixed with used oil) in a 15,000-gallon aboveground storage tank. The location of the subject tank is presented on Figure 2.1-1 in Section 2.1. This waste stream previously was considered hazardous by the State of Florida. However, the Florida Department of Environmental Protection (FDEP) has subsequently determined this waste stream can be handled as nonhazardous as long as it is destined for recycling. Based on this, Safety-Kleen intends to "close" the ethylene glycol tank (in accordance with FDEP approval).

The used antifreeze tank system is described in Section 9 of the text. It is Safety-Kleen's intent to undergo formal closure of this tank so that it may be reused for storage of used antifreeze and used oil, a nonhazardous mixture. The purpose of this document is to present the anticipated closure activities and to obtain FDEP's concurrence with the proposed plan of action.

CLOSURE ACTIVITIES

Closure activities will be as follows:

- The tank will be locked out of service and the atmospheric measurements will be taken (i.e., % LEL and % oxygen).

- The tank will be emptied of any free liquids and sludge. This will be achieved by opening the tank manway and pumping and/or manually removing the material. Similarly, the associated piping will be pumped free of liquid. Any free liquids either will be pumped into the existing used solvent tank located adjacent to the ethylene glycol tank, or will be contained in appropriately labeled 55-gallon drums. The sludge from the tank will be contained in appropriately labeled 55-gallon steel drums. These drums will be characterized and shipped to a Safety-Kleen recycle center for appropriate disposal.

- Once the tank and piping have been emptied, they will be rinsed using pressurized water and scrubbed manually (the piping will not be scrubbed). It is anticipated that the tank and piping will be rinsed and scrubbed (if necessary) three times. All of the rinse water will be contained and pumped into the used solvent tank.

- Following completion of the scrubbing and rinsing, the tank will be visually inspected to ensure that the interior of the tank is clean and to ensure that the tank appears fit for service. No decontamination verification samples will be collected.

- Equipment used for decontaminating the tank and piping will be decontaminated following completion of this project. The decontamination process will be performed on a paved area that is covered with visqueen and bermed to contain the decontamination fluid. Decontamination will include rinsing the equipment with pressurized water and scrubbing with a detergent. When complete, decontamination fluid will be contained in appropriately labeled 55-gallon steel drums. These drums will be characterized and shipped to a Safety-Kleen recycle center for appropriate disposal.

Closure activities will be performed under the supervision of a Florida-licensed Professional Engineer (P.E.). Once the closure has been completed, a P.E.-sealed closure report will be submitted to FDEP.

CLOSURE SCHEDULE

Closure activities are expected to commence after issuance of the permit. The actual duration of the field portion of closure activities is expected to be approximately two days. FDEP will be notified in writing ten working days before closure activities start. A written closure report will be provided to FDEP within thirty calendar days following completion of the field activities.

CLOSURE COST ESTIMATE

The total cost for completion of the closure activities described herein is $10,763. This cost estimate is based on the following:

1. Labor

- 2 laborers @ $35/hr for 20 hours	$1,400
- 1 foreman @ $50/hr for 20 hours	$1,000
- 1 engineer @ $80/hr for 10 hours	$800

2. Equipment

- steam cleaner (2 days) @ $100/day	$200
- vacuum tanker (2 days) @ $900/day	$1,800
- other equipment (2 days) @ $100 (total)	$100

3. Disposal of liquid and sludge

- decontamination fluid (from tank) disposal (assumed 6 drums @$210/drum (hazardous))	$1260
- decontamination fluid (from equipment) disposal (assumed 4 drums @ $/210 drum (hazardous))	$840
- sludge disposal (from tank)	

(assumed 6 drums @ $280/drum (hazardous))		$1680
- transportation ($1,063/truckload; 1 load)		$1063

4. Closure Certification Report

- 24 hours @ $100/hr		$2400
	TOTAL	$12,543

Appendix G

Engineering Drawings of Barrel Washers

PROFESSIONAL ENGINEER'S STATEMENT

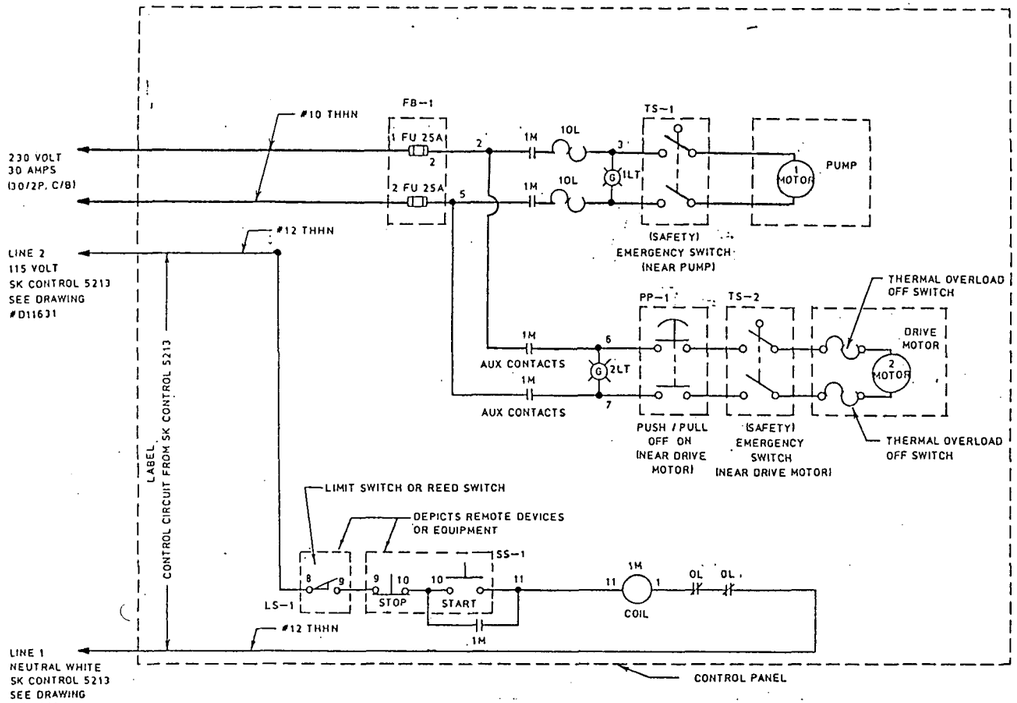
The design features presented in the following appendix were prepared by others not under my supervision. Therefore, I do not certify the accuracy of said drawings.

This is to certify that I have reviewed the design features presented in this Appendix (Appendix G). The following design documents are the same as those presented in the operating permit application for this facility that was submitted to FDEP in February 1992. During my site walk-through (conducted on June 17, 1997), I did not observe significant deviations from the features represented in these drawings. Safety-Kleen has personally indicated to me that no design changes have occurred since these drawings were first submitted.

Elaine J. Modla
#49946 Signature

ELAINA J. HODLA
Printed Name

8-14-97
Date



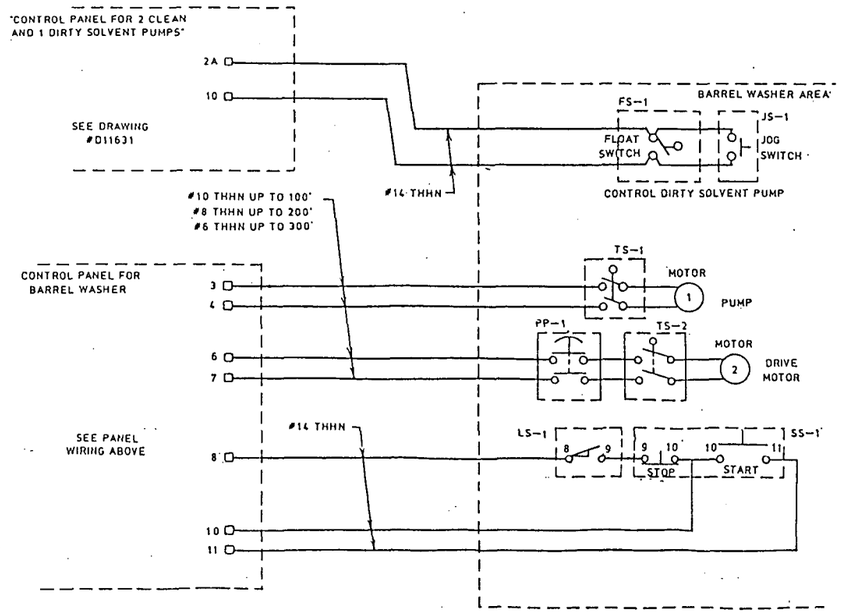
"PANEL WIRING" & ELEMENTARY DIAGRAM

N.T.S.

(ONE BARREL WASHER)

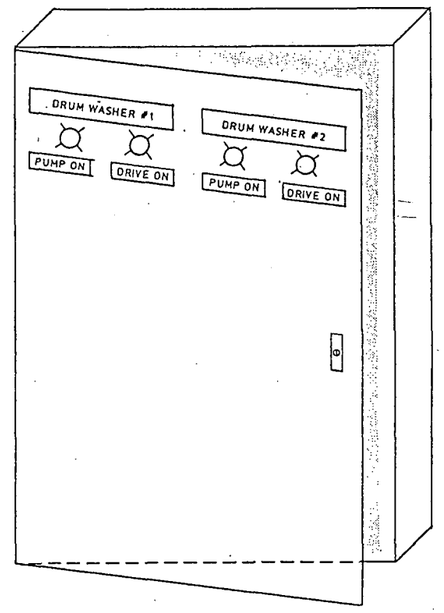
POWER WIRING

CONTROL WIRING

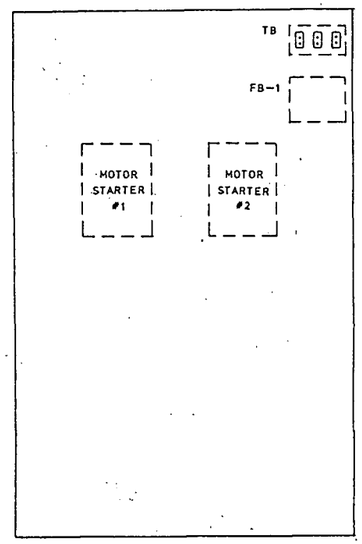


WIRING DIAGRAM

N.T.S.



PANEL FRONT



PANEL INTERIOR

CONTROL PANEL MAKE-UP

N.T.S.

BILL OF MATERIAL

TAG	QUANTITY	DESCRIPTION
FB-1	1	FUSE BLOCK WITH FRN FUSES LITTLE FUSE LH 250 30 2P FUSES FLNR 25
STARTER	2	NEMA SIZE #1 MAGNETIC STARTER SQ D 8536-SBO 1S
1LT	2	PUMP PILOT LIGHT - GREEN - 240 VOLT SQ D 9001 KP7R9 W/TRANSFORMER.
2LT	2	DRIVE MOTOR PILOT LIGHT-GREEN - 240 VOLT SQ D 9001 KP7R9 WITH TRANSFORMER
PANEL	1	UNIVERSAL BOX WITH PIANO HINGE, SINGLE POINT L HANDLE. LOCK, 8" DEEP, 36" HIGH, 24" WIDE

REMOTE ITEMS

SS-1	1	START-STOP STATION 9001 BR2OS
TS-1,2	2	2-POLE TOGGLE SWITCH, 20A RATED SQ D 2510 KR1
JS-1	1	JOG SWITCH, 1-POLE, 20A RATED
FS-1	1	FLOAT SWITCH, 1-POLE, 10A RATED
LS-1	1	LIMIT SWITCH OR REED SWITCH MAKES WHEN BARREL IS IN PLACE 9007 CL61J
PP-1	1	2 POLE TOGGLE SWITCH, START STOP STATION 2HP CONTACT RATING

NO.	DESCRIPTION	BY	CHKD	APPR	DATE

REVISIONS

TITLE

ELECTRICAL CONTROL PANEL
FOR DRUM WASHER "90"

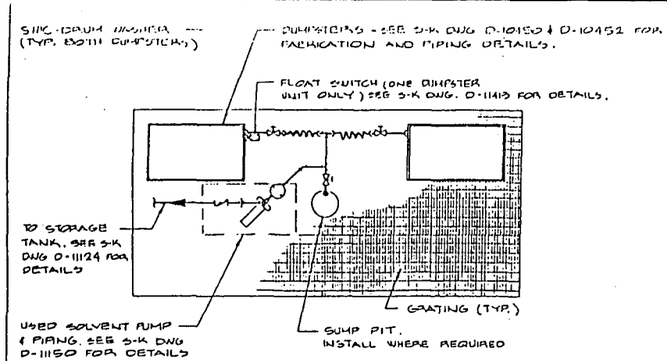
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		NONE	DK	

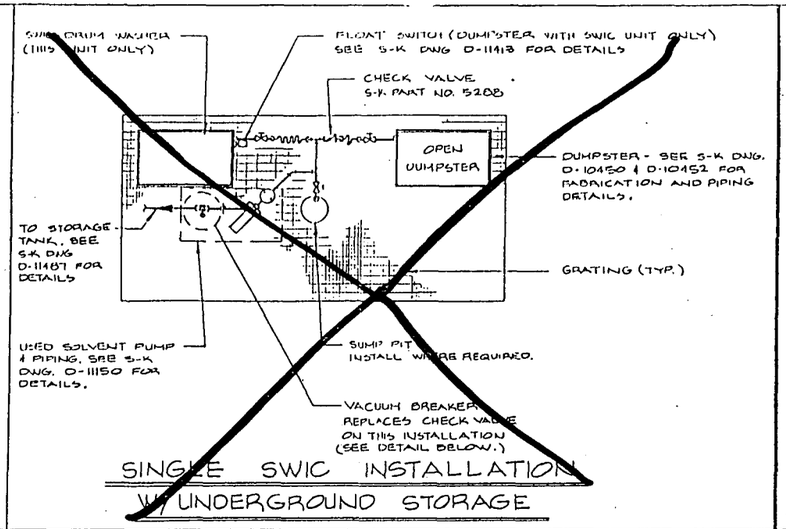
BRANCH

DRAWING NO. D-14289

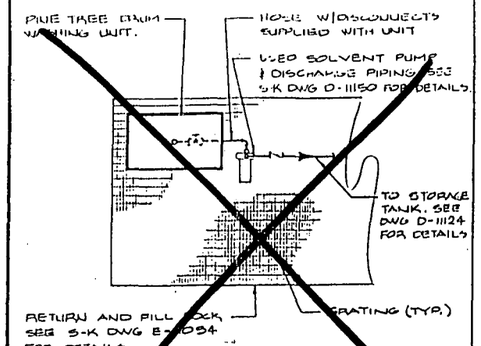
REV.



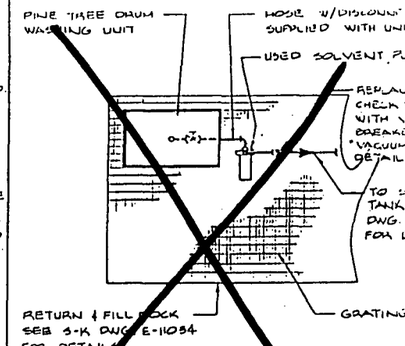
DOUBLE SWIC INSTALLATION
W/ ABOVE GROUND STORAGE



SINGLE SWIC INSTALLATION
W/ UNDERGROUND STORAGE



PINE TREE INSTALLATION
W/ ABOVE GROUND STORAGE



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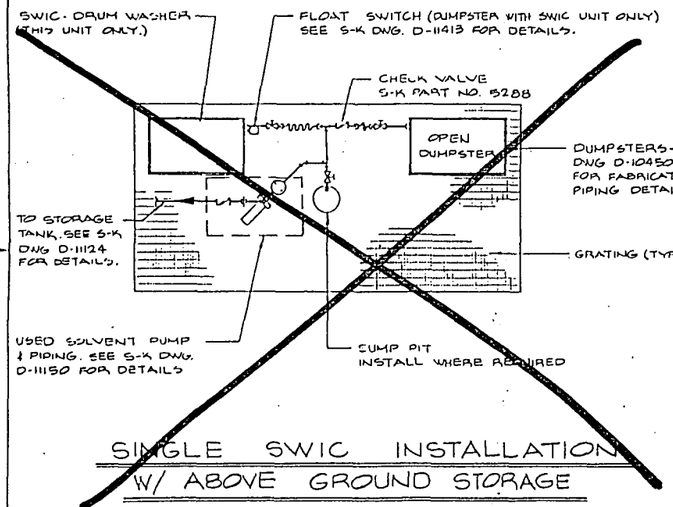
W/ UNDERGROUND STORAGE



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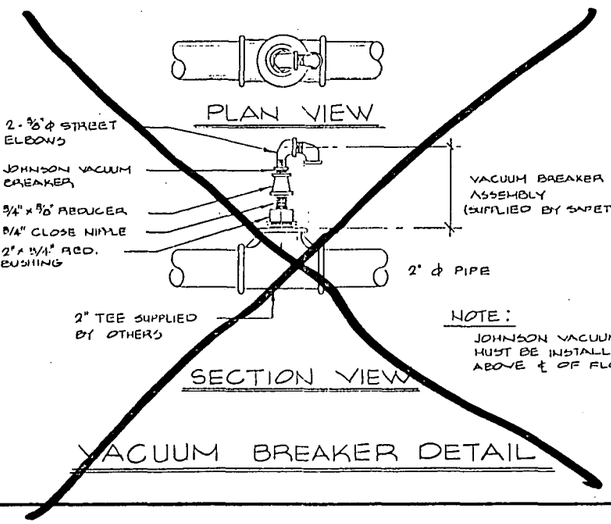
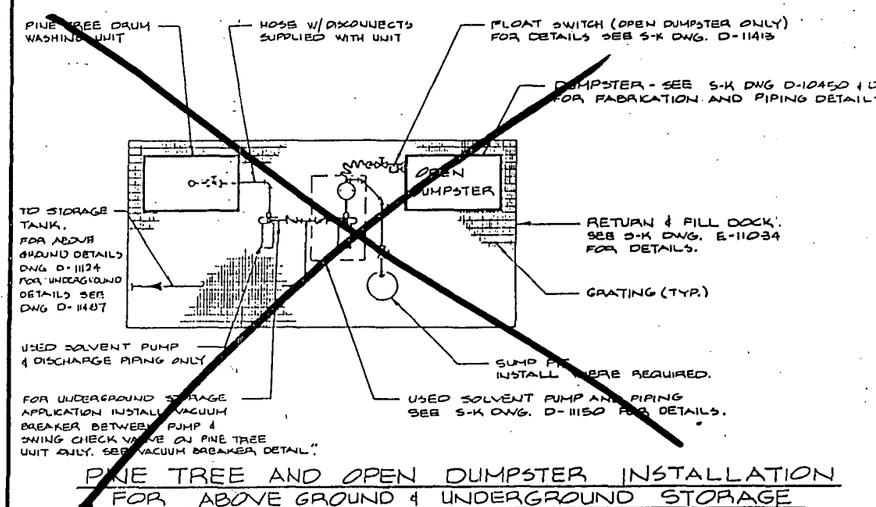
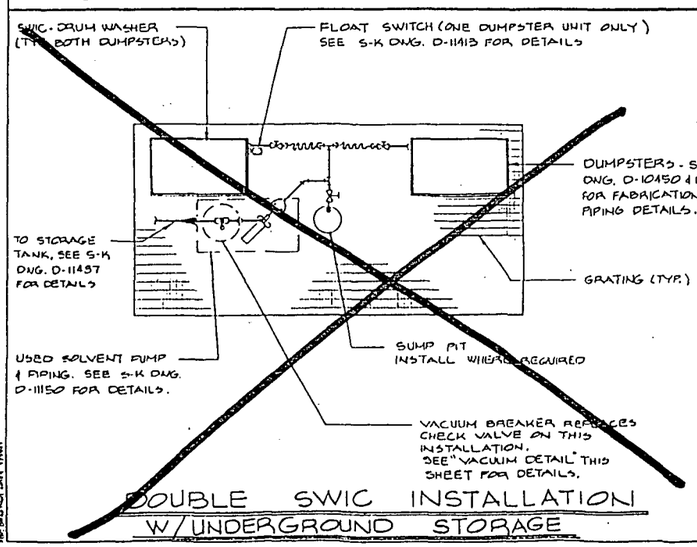
W/ ABOVE GROUND STORAGE



VACUUM BREAKER DETAIL



PINE TREE AND OPEN DUMPSTER INSTALLATION
FOR ABOVE GROUND & UNDERGROUND STORAGE



DOUBLE SWIC INSTALLATION
W/ UNDERGROUND STORAGE

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NO	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

TYPICAL DRUM WASHER SCHEMATIC

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

SCALE	DRAWN	CHECKED	ENGINEERING APPR	OPERATION APPR
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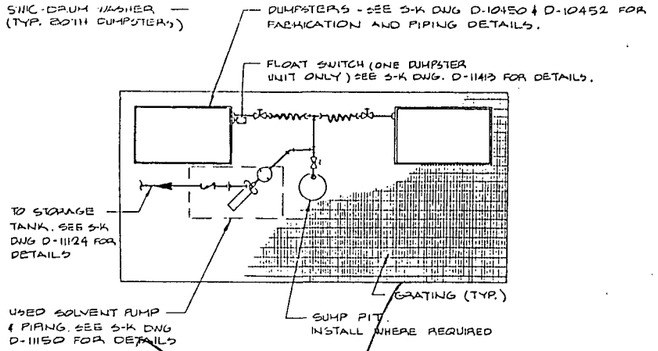
FOR SERVICE CENTER, BRANCH :

DRAWING NO D-14288



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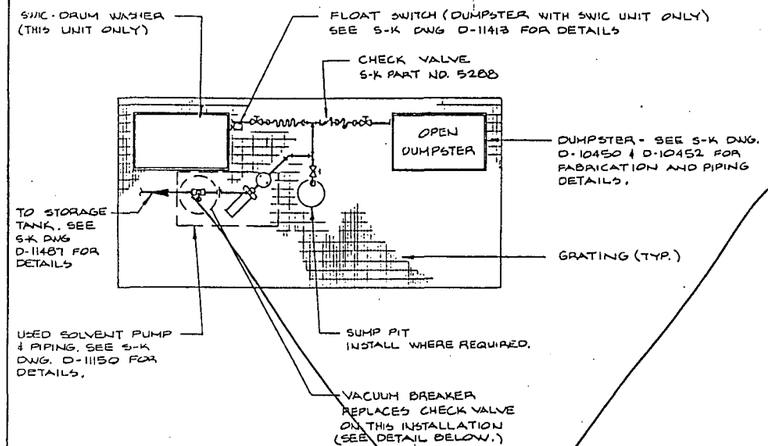
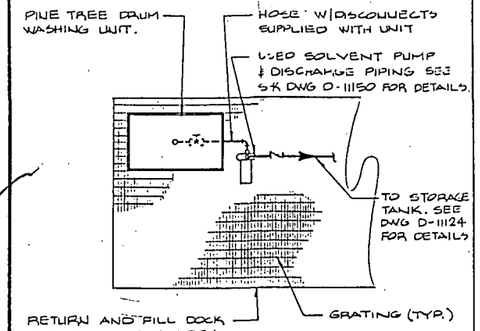
W/ ABOVE GROUND STORAGE



SINGLE SWIC INSTALLATION
W/ UNDERGROUND STORAGE



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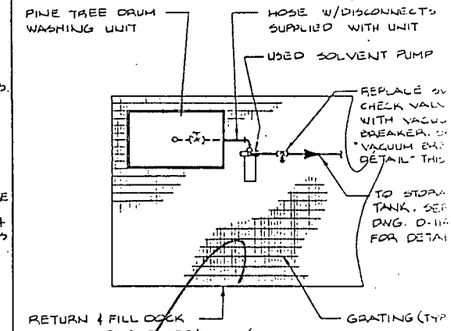
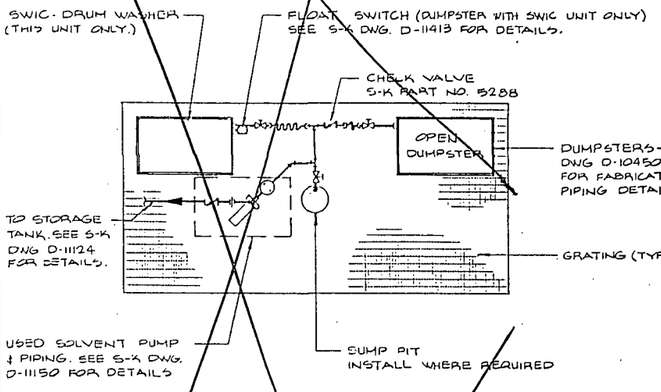


PINE TREE INSTALLATION
W/ UNDERGROUND STORAGE



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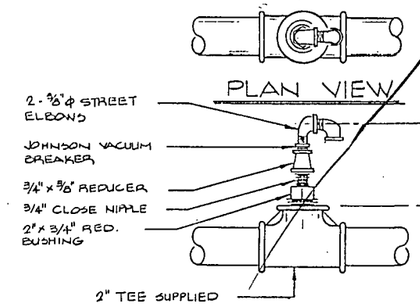
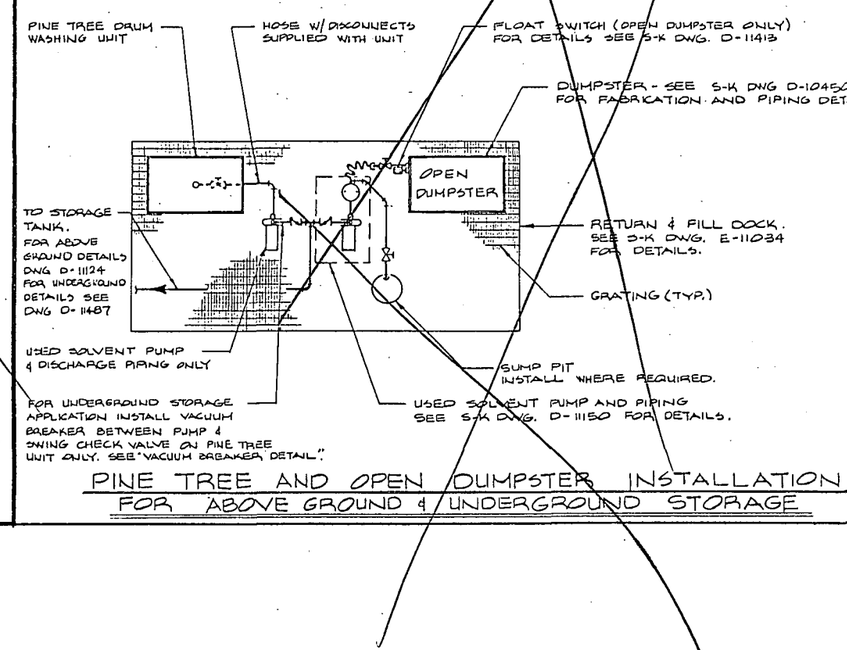


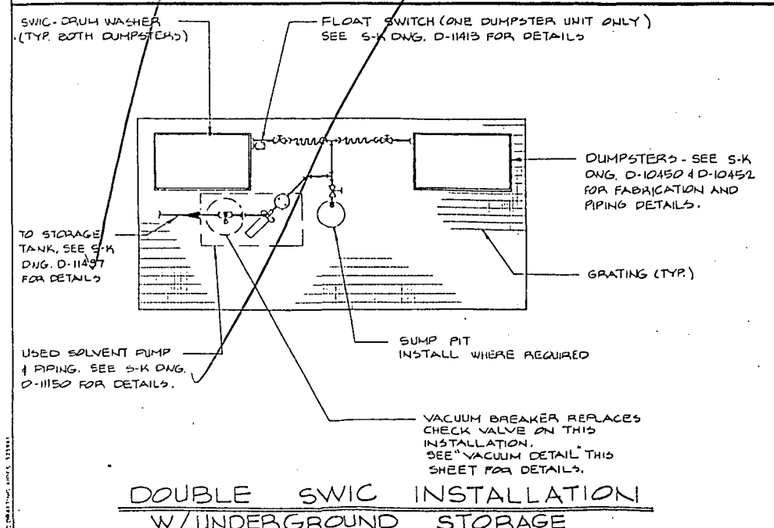
NOTE:
JOHNSON VACUUM BREAKER MUST BE INSTALLED 2" ABOVE & OF FLOAT SWITCH

SECTION VIEW

VACUUM BREAKER DETAIL



PINE TREE AND OPEN DUMPSTER INSTALLATION
FOR ABOVE GROUND & UNDERGROUND STORAGE



DOUBLE SWIC INSTALLATION
W/ UNDERGROUND STORAGE

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NO	DESCRIPTION	BY	CHK	APPR	DATE
REVISIONS					

TITLE: TYPICAL DRUM WASHER SCHEMATICS

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

SCALE	DRAWN	CHECKED	ENGINEERING APPR	OPERATION APPR	DATE
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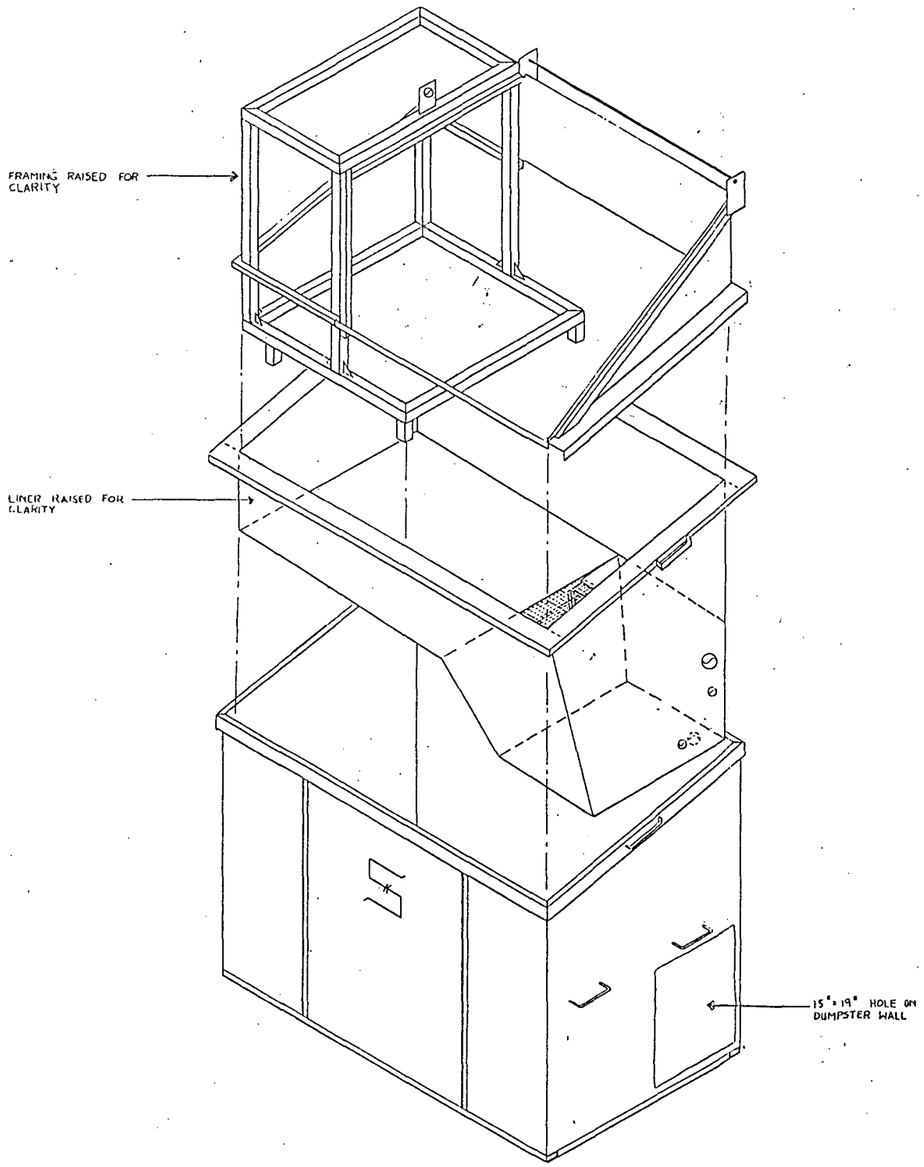
FOR SERVICE CENTER BRANCH:

DRAWING NO D-14288



SOUTHWEST INDUSTRIAL CONSTRUCTORS INC

DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY - KLEEN DRUM WASHER

SHEET NO.
—

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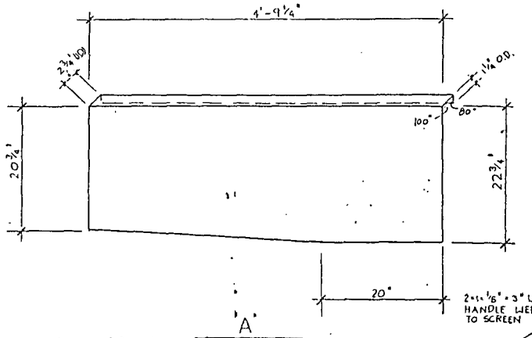
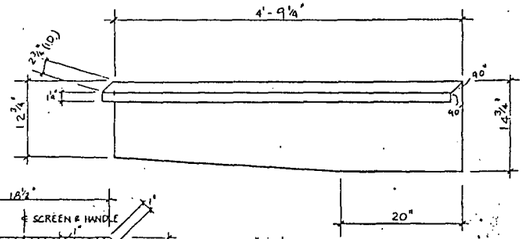
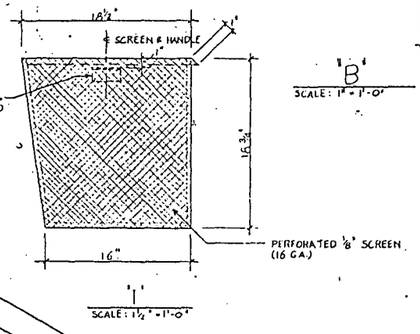


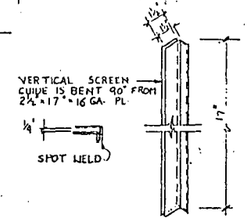
"A"
SCALE: 1" = 1'-0"



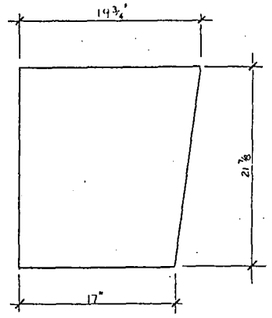
"B"
SCALE: 1" = 1'-0"



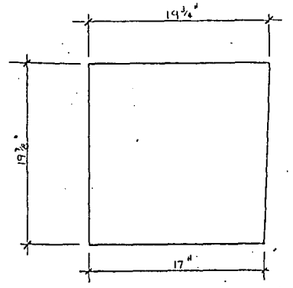
"I"
SCALE: 1 1/2" = 1'-0"



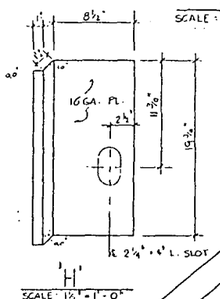
"G" (2 REQ'D)
SCALE: 1" = 1'-0"



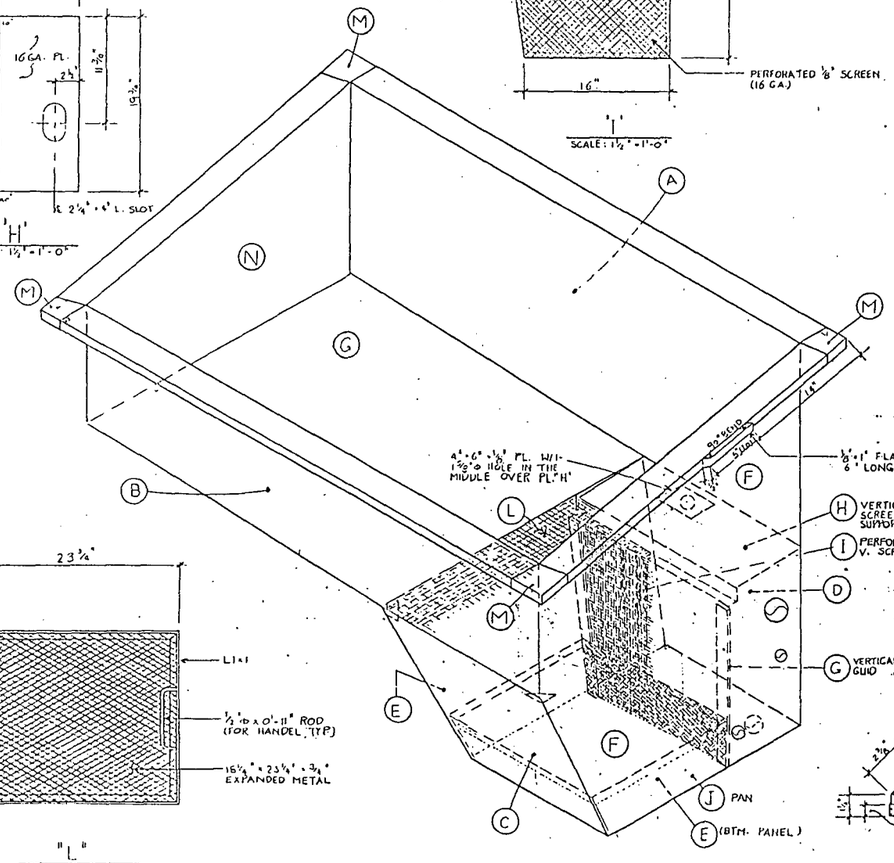
"C"
SCALE: 1 1/2" = 1'-0"



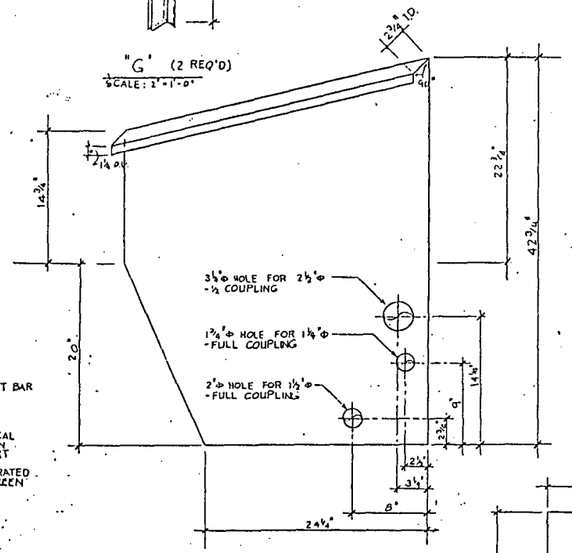
"D"
SCALE: 1 1/2" = 1'-0"



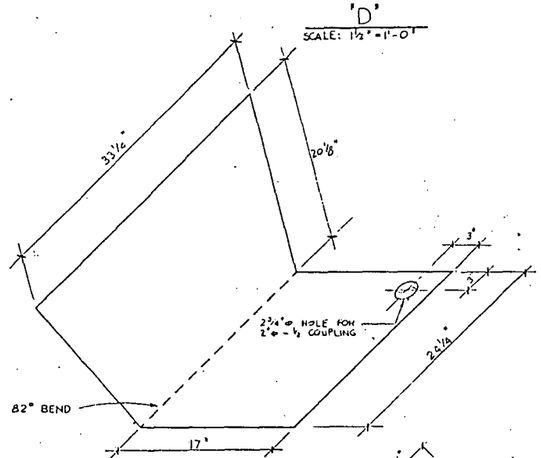
"H"
SCALE: 1 1/2" = 1'-0"



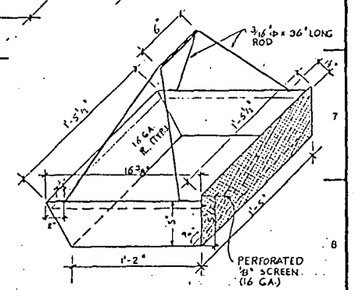
PICTORIAL - DUMPSTER LINER
SCALE: 1 1/2" = 1'-0"



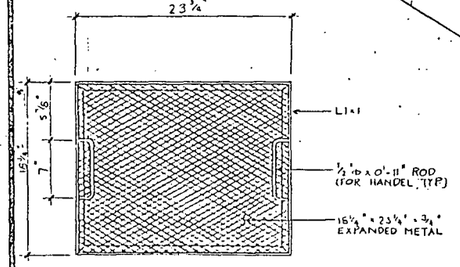
"F"
SCALE: 1 1/2" = 1'-0"



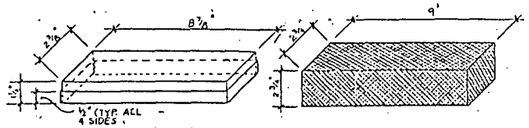
"E"
SCALE: 1 1/2" = 1'-0"

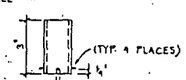


"J"
SCALE: 1 1/2" = 1'-0"

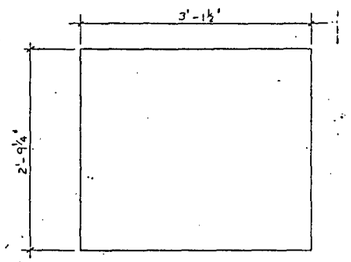


"L"
SCALE: 1 1/2" = 1'-0"

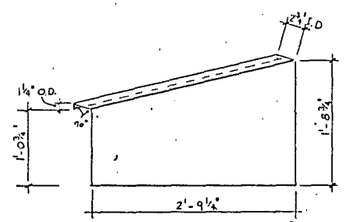




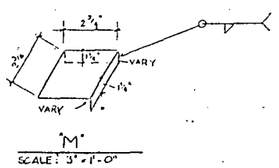
PUMP SCREEN
SCALE: 3" = 1'-0"



"G"
SCALE: 1" = 1'-0"



"N"
SCALE: 1" = 1'-0"



"M"
SCALE: 3" = 1'-0"

NOTE: ALL MATERIALS ARE 1/8" THK. H.R. STEEL PL.

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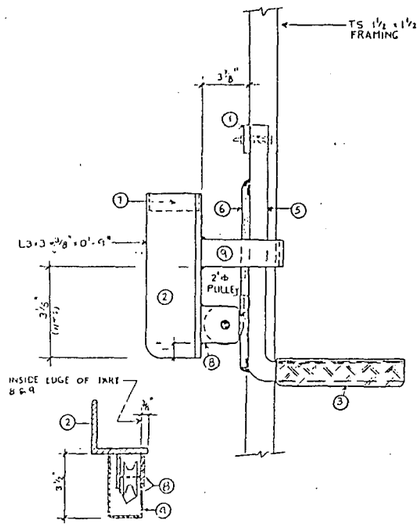
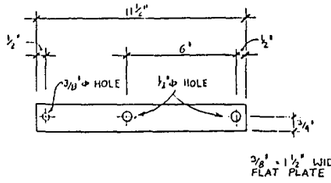
SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

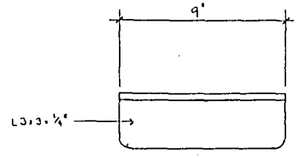
SAFETY - KLEEN
DRUM WASHER

SHEET NO.
2
OF

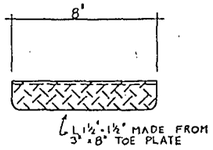




'1'
SCALE: 3"=1'-0"



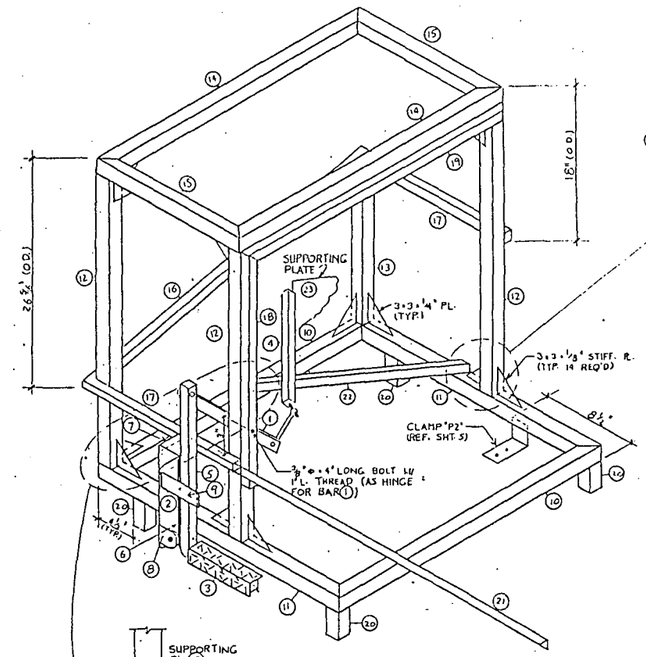
'2'
SCALE: 3"=1'-0"

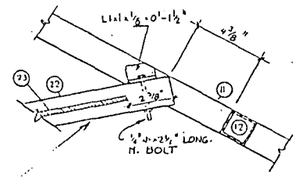


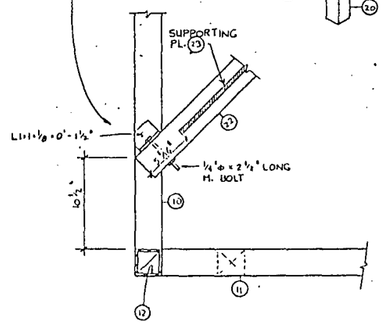
'3'
SCALE: 3"=1'-0"

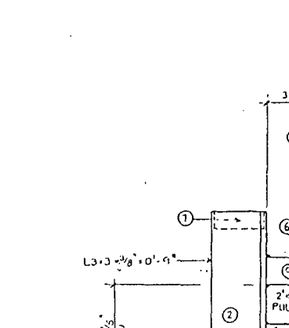
FRONT VIEW
SCALE 3"=1'-0"

MEMBER	NO. REQ'D	TYPE	LENGTH	CUT 1	CUT 2
10	2	T.S. 1½ x 1½	32⅜"	45°	45°
11	2		29⅜"	45°	45°
12	3		32½"	90°	90°
13	1		16¾"	90°	90°
14	2		33"	45°	45°
15	2		18"	45°	45°
16	1	T.S. 1x1	35⅜"	45°	45°
17	2		19"	45°	90°
18	1		26¼"	45°	90°
19	1		31¼"	45°	90°
20	4	T.S. 1¼ x 1¼	3"	90°	90°
21	1	L 1x1	39¼"	90°	90°
22	1	T.S. 1x1	24"	90°	90°

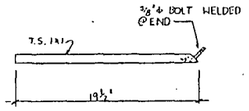




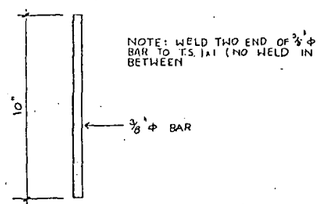




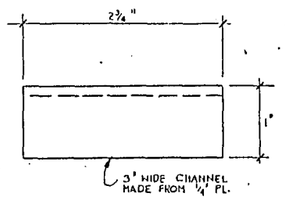
"5"
SCALE: 3"=1'-0"



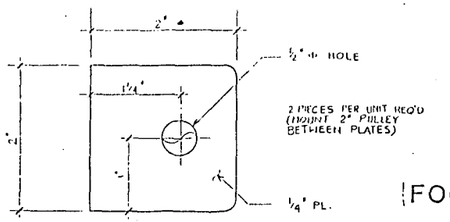
"4"
SCALE: 1½"=1'-0"



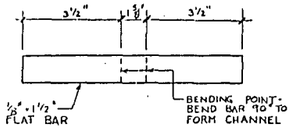
"6"
SCALE: 3"=1'-0"



"7"
SCALE: 12"=1'-0"



"8"
SCALE: 12"=1'-0"



NOTE: TO FABRICATE THIS PART FIRST BEND ⅛"x1½"x12" LONG FLAT BAR. THEN THEN TRIM LEGS TO 3½"

"9"
SCALE: 3"=1'-0"

FOOT PEDAL ASSEMBLY & DETAILS

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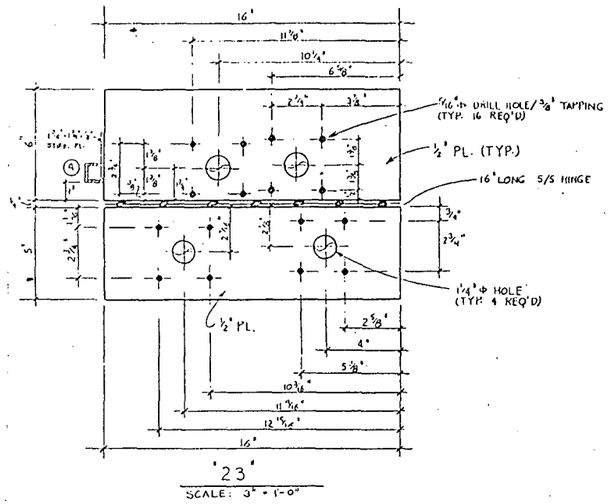
SOUTHWEST INDUSTRIAL CONSTRUCTORS INC.

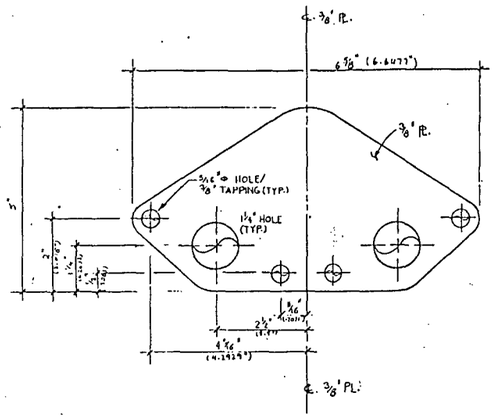
DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY - KLEEN DRUM WASHER

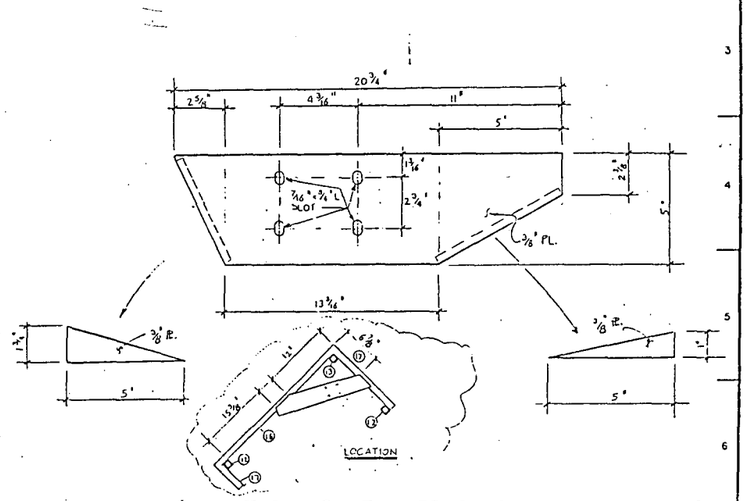
SHEET NO. 3 OF



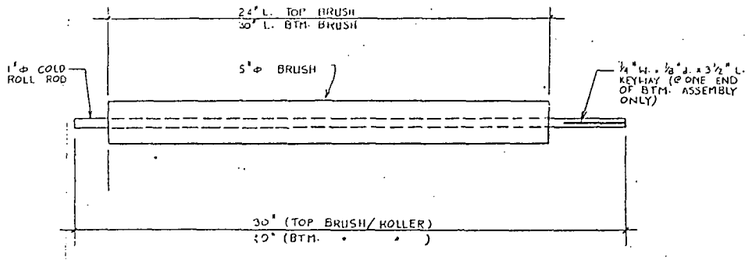
'23'
SCALE: 3" = 1'-0"

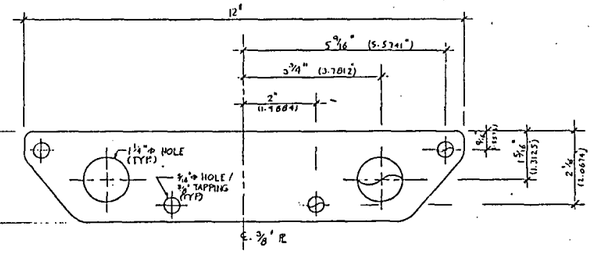


'26'
SCALE: 6" = 1'-0"

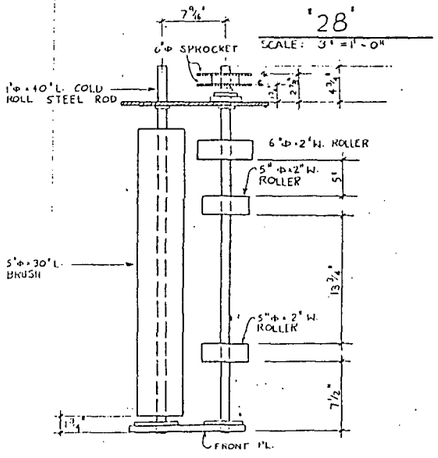


MOTOR MOUNTING BRACKET
N.T.S.

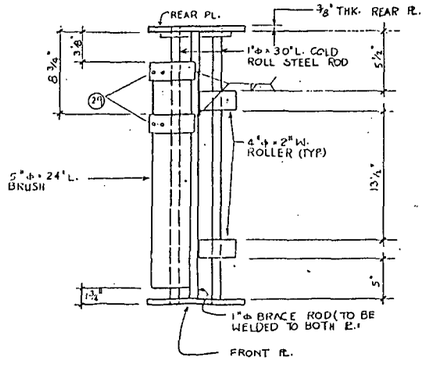




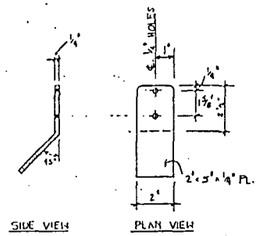
"27"
SCALE: 6" = 1'-0"



BTM. ASSEMBLY

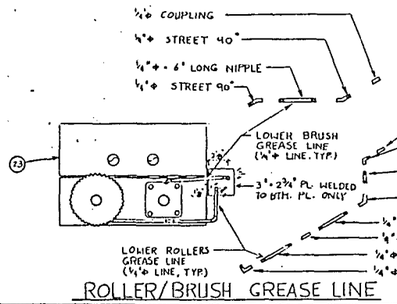


TOP ASSEMBLY

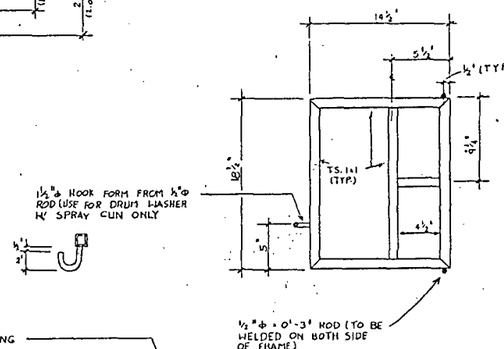


'29' BRACKET
SCALE: 3" = 1'-0"

ROLLER/ BRUSH ASSEMBLY
SCALE: 1 1/2" = 1'-0"



ROLLER/BRUSH GREASE LINE



BARREL WASHER RACK
SCALE: 1 1/2" = 1'-0"

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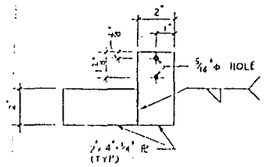
SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

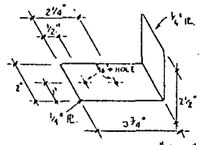
DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY KLEEN
DRUM WASHER

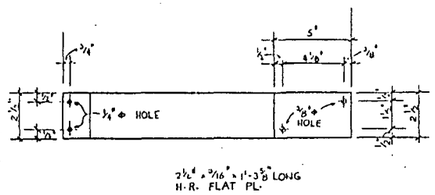
SHEET NO. 4



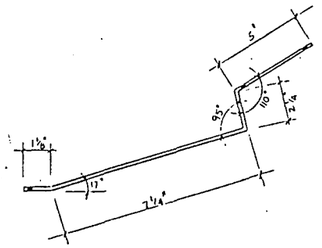
CLAMP 'P1'
SCALE: 3" = 1'-0"



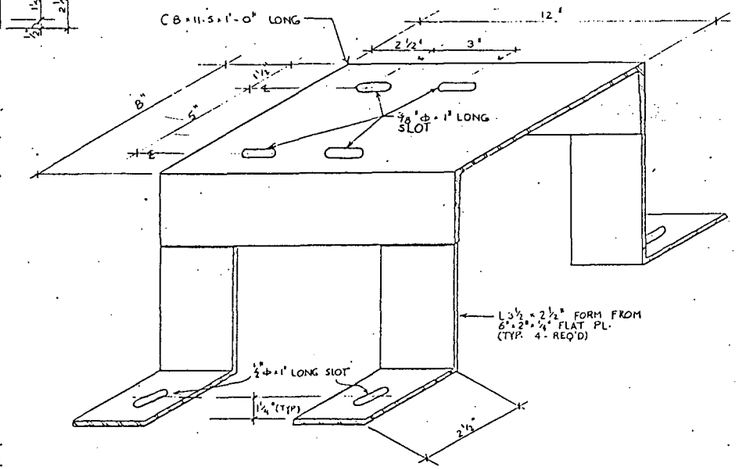
CLAMP "P2"



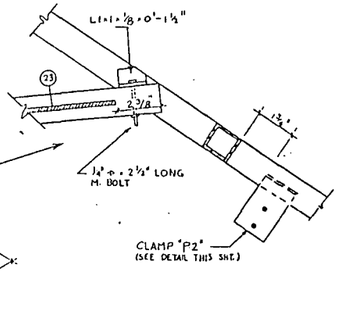
2 1/2" x 3/16" x 1'-3 3/8" LONG
H.R. FLAT PL.

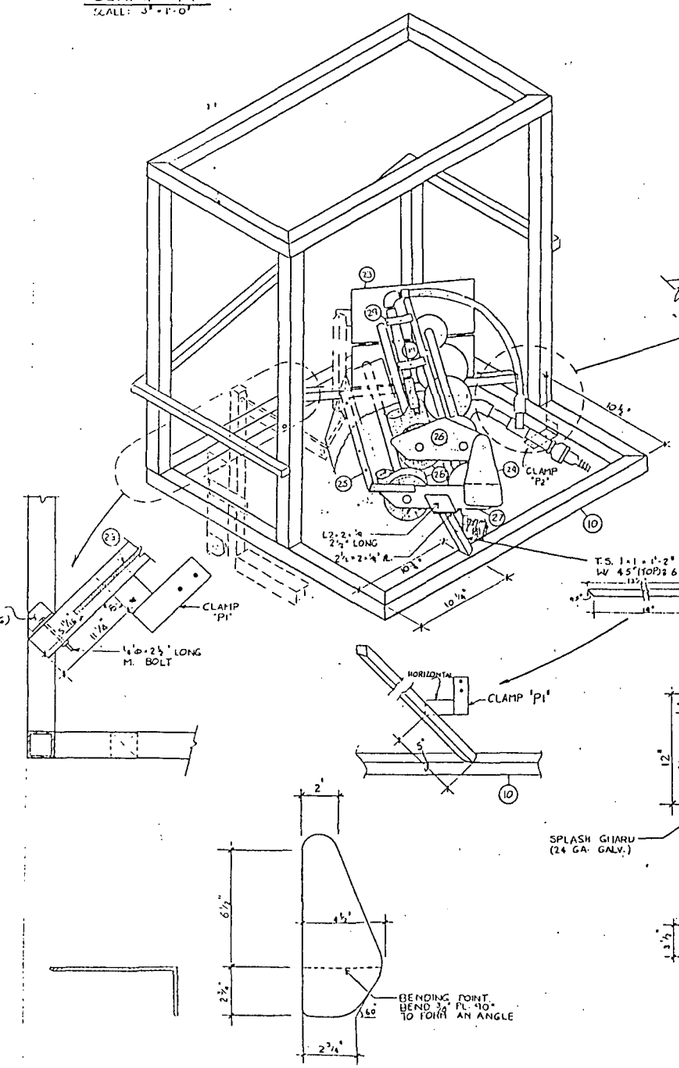


LIMIT SWITCH BRACKET
SCALE: 3" = 1'-0"

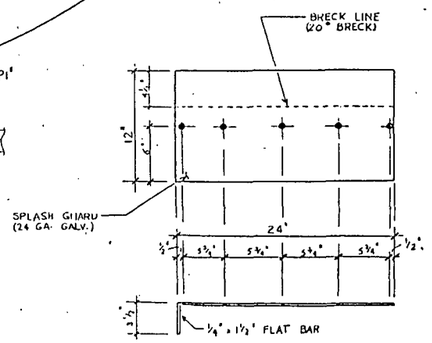


MARLOW PUMP STAND

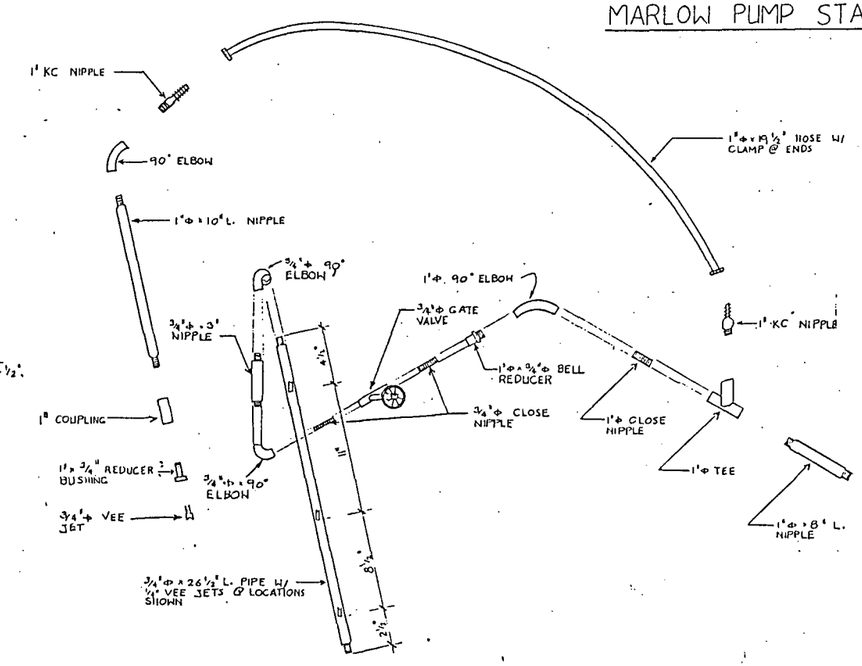




'24'
SCALE: 3" = 1'-0"



'25'
SCALE: 1 1/2" = 1'-0"



INNER & OUTER DRUM SPRAY GUN

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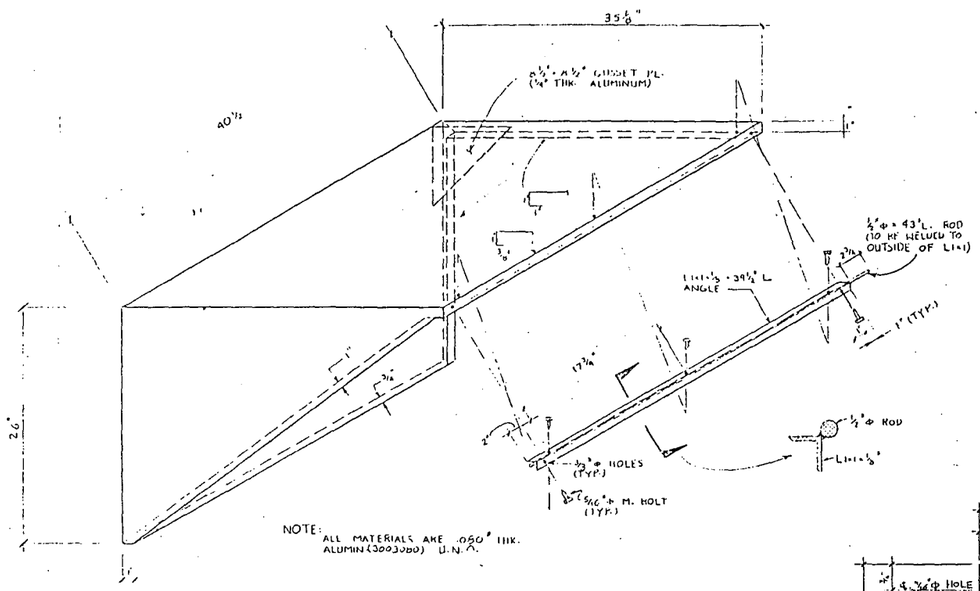
SOUTHWEST INDUSTRIAL CONSTRUCTORS INC.

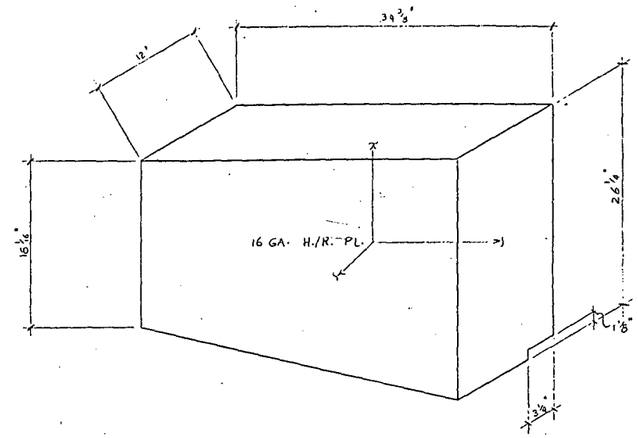
DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY KLEEN DRUM WASHER

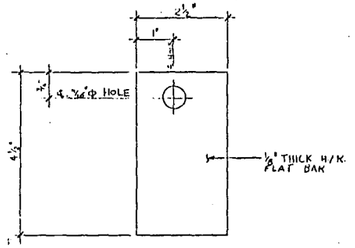
SHEET NO. 5 OF



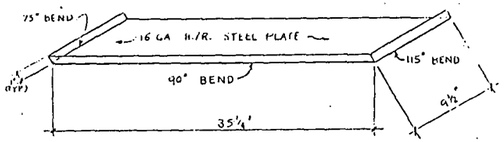
DRUM WASHER LID
SCALE: 1½" = 1'-0"



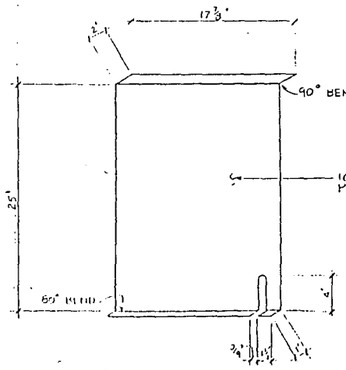
MOTOR COVER
SCALE: 1½" = 1'-0"



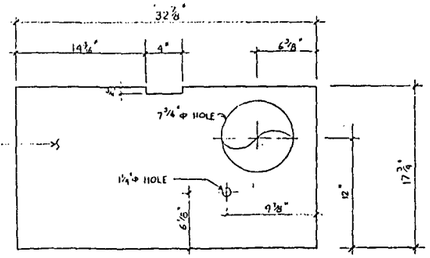
HINGE BRACKET
SCALE: 6" = 1'-0"



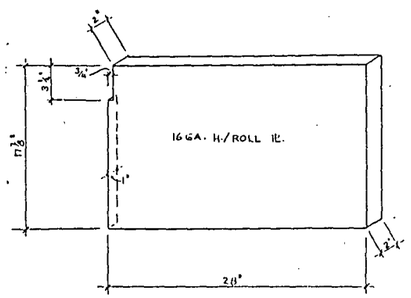
BOTTOM PAN FOR MOTOR COVER
SCALE: 1½" = 1'-0"



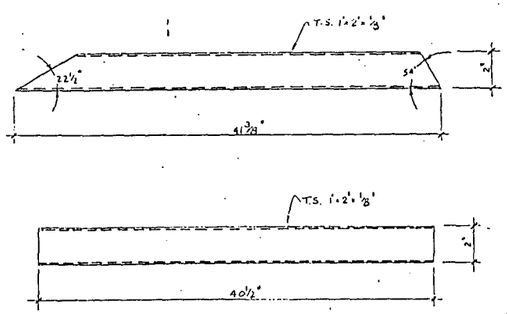
CABINET FRONT
SCALE: 1½" = 1'-0"



CABINET TOP
SCALE: 1½" = 1'-0"



CABINET BACK
SCALE: 1½" = 1'-0"



WOOD STIFFENER
N.T.S.

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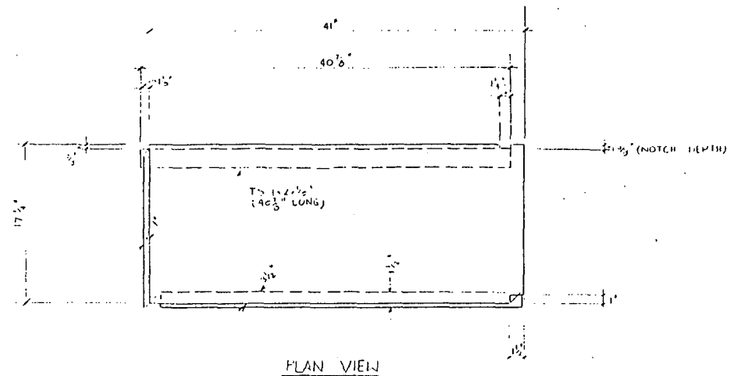
SOUTHWEST INDUSTRIAL CONSTRUCTORS INC

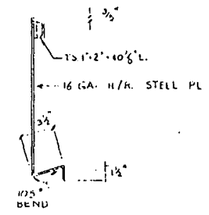
DATE: 1/ /90
JOB NO:
DWN: AL.I
CHK:

SAFETY-KLEEN DRUM WASHER

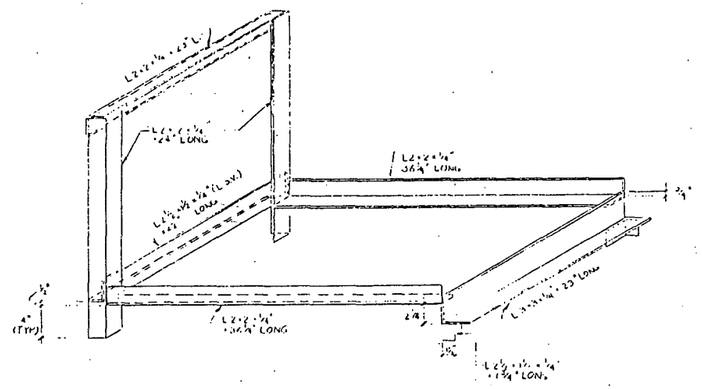
SHEET NO. 7 OF



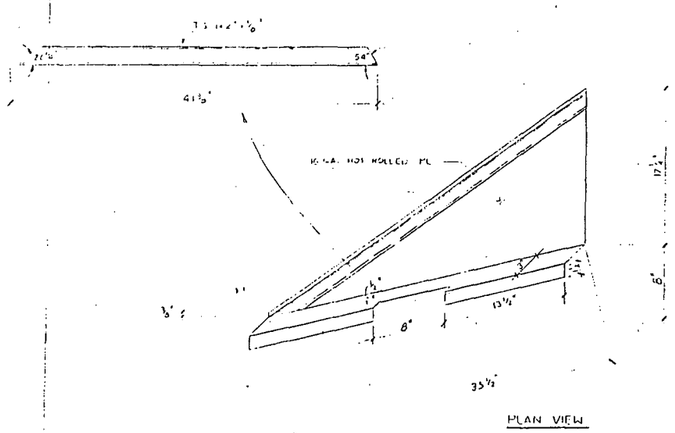
PLAN VIEW



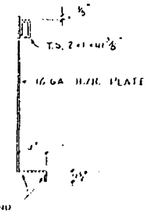
SIDE VIEW



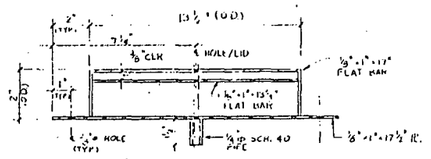
FRONT HOOD SUPPORT
SCALE: 1½" = 1'-0"



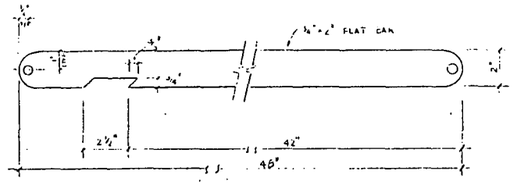
PLAN VIEW



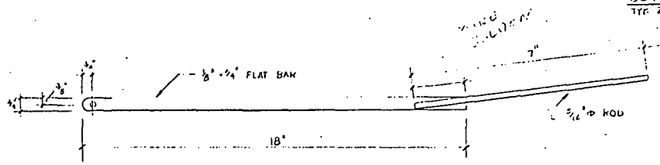
ELEVATION



SAFETY LATCH
SCALE: 3" = 1'-0"



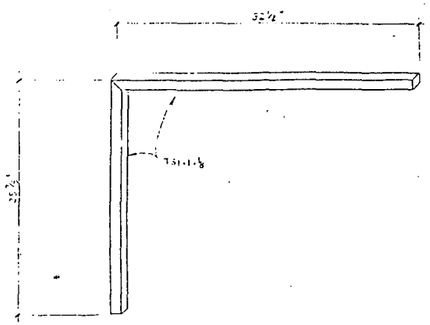
TEMP. SUPPORTING FRAME FOR LINER
SCALE: 1½" = 1'-0"



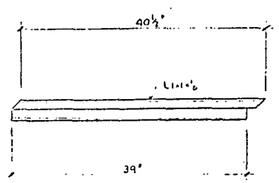
SCALE: 3" = 1'-0"

COVER BRACE STEEL
TYP. 2 REQ'D PER DRUM WASHER

SIDE HOOD SUPPORT
SCALE: 1½" = 1'-0"



INSIDE HOOD SUPPORT
SCALE: 1" = 1'-0"



FRONT HOOD BRACE
N.T.S.

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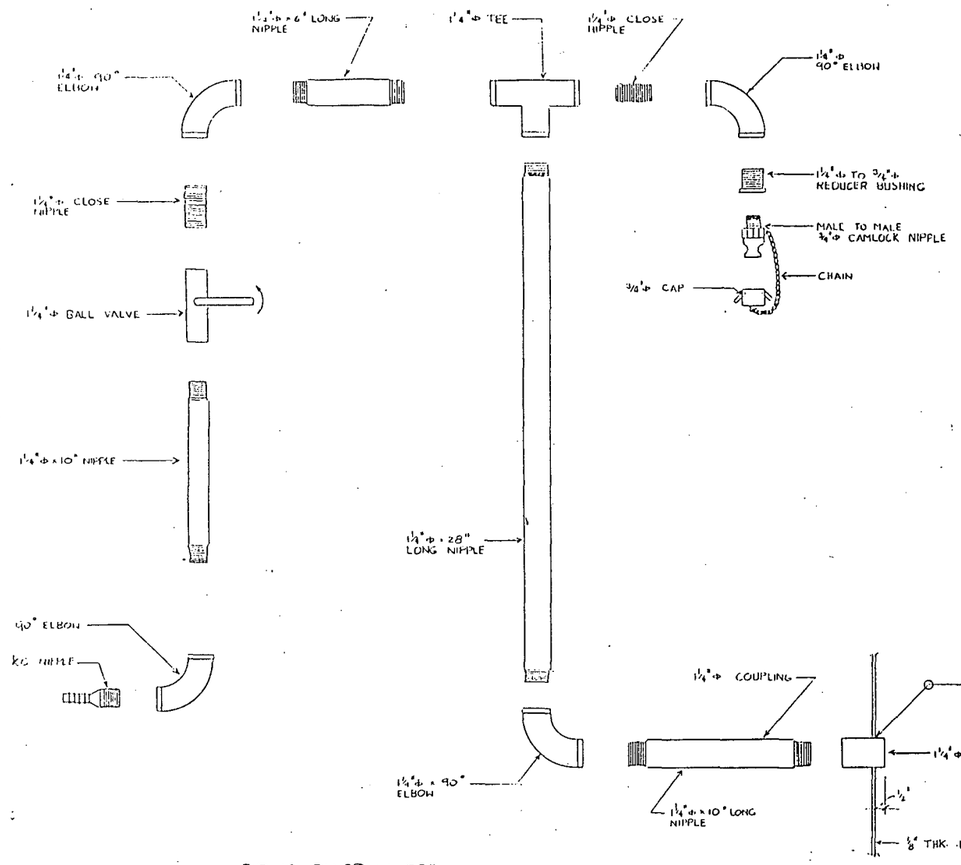
SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

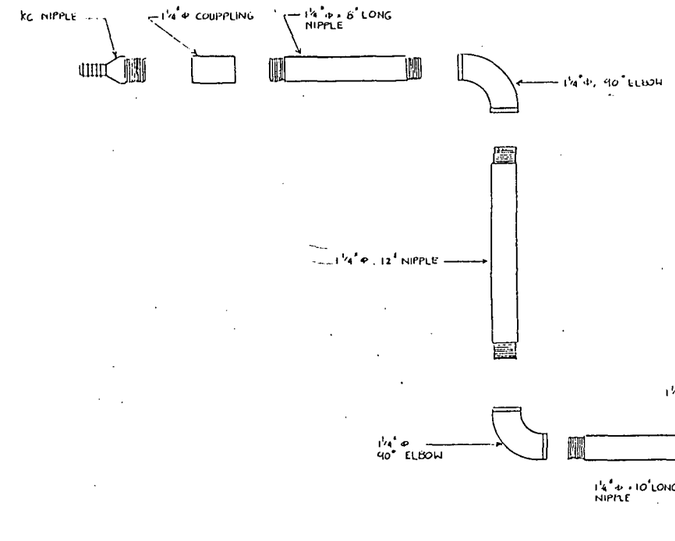
DATE: 1/17/90
JOB NO:
DWN: ALI
CHK:

· SAFETY- KLEEN
DRUM WASHER

SHEET NO. 8 OF

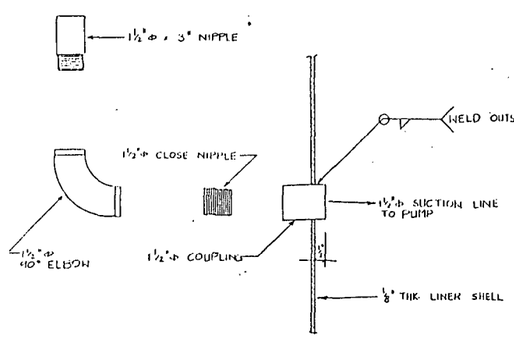


PIPING DIAGRAM FOR:
DRUM WASHER WITH
SELF SERVICE PART WASHER

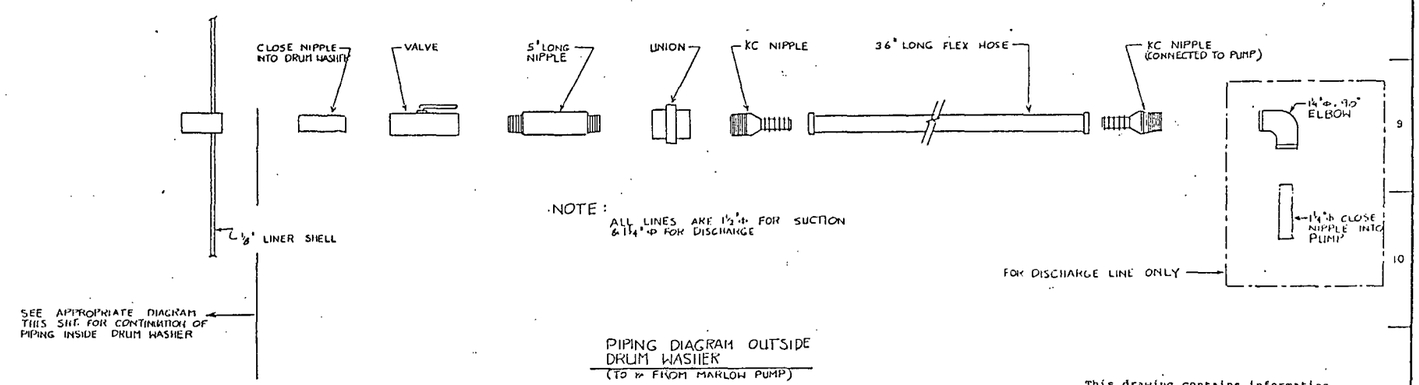


PIPING DIAGRAM FOR:
DRUM WASHER WITHOUT
SELF SERVICE PART WASHER

SPRY GUN FOR:
DRUM WASHER W/ S.S.P.W.



1½"Φ SUCTION LINE



NOTE:
ALL LINES ARE 1½"Φ FOR SUCTION
& 1¼"Φ FOR DISCHARGE

PIPING DIAGRAM OUTSIDE
DRUM WASHER
(TO & FROM MARLOW PUMP)

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Appendix H

Engineering Specification Drawings for Tank System

PROFESSIONAL ENGINEER'S STATEMENT

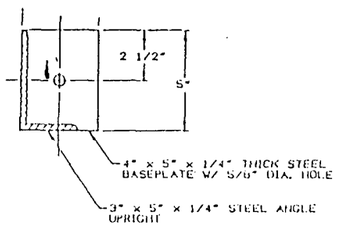
The design features presented in the following appendix were prepared by others not under my supervision. Therefore, I do not certify the accuracy of said drawings.

This is to certify that I have reviewed the design features presented in this Appendix (Appendix H). The following design documents are the same as those presented in the operating permit application for this facility that was submitted to FDEP in February 1992. During my site walk-through (conducted on June 17, 1997), I did not observe significant deviations from the features represented in these drawings. Safety-Kleen has personally indicated to me that no design changes have occurred since these drawings were first submitted.

Elana Modlin
#49946
Signature

ELANA MODLIN
Printed Name

8/14/97
Date

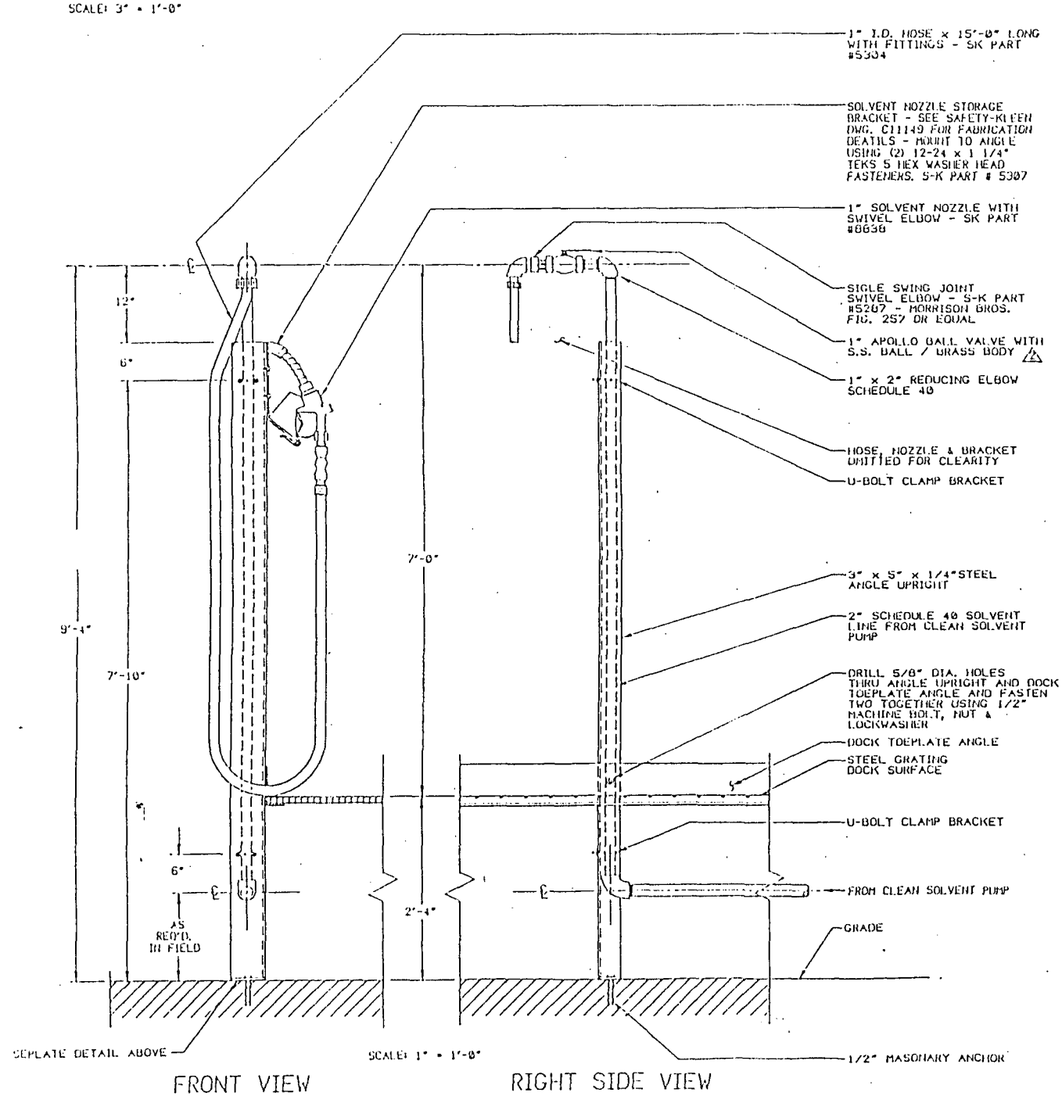


BASEPLATE DETAIL

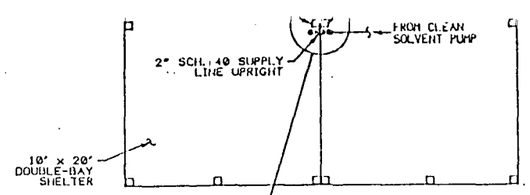
SCALE: 3" = 1'-0"

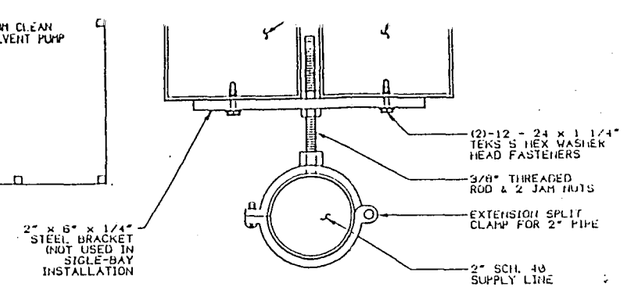
NOTE:

SURPLUS HOSE LENGTH CAN BE COILED & STORED ON ARM PROVIDED AT SIDE OF NOZZLE STORAGE BRACKET.



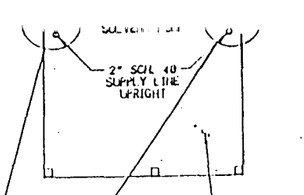
INSTALLATION FOR STANDARD BUILDING PLAN

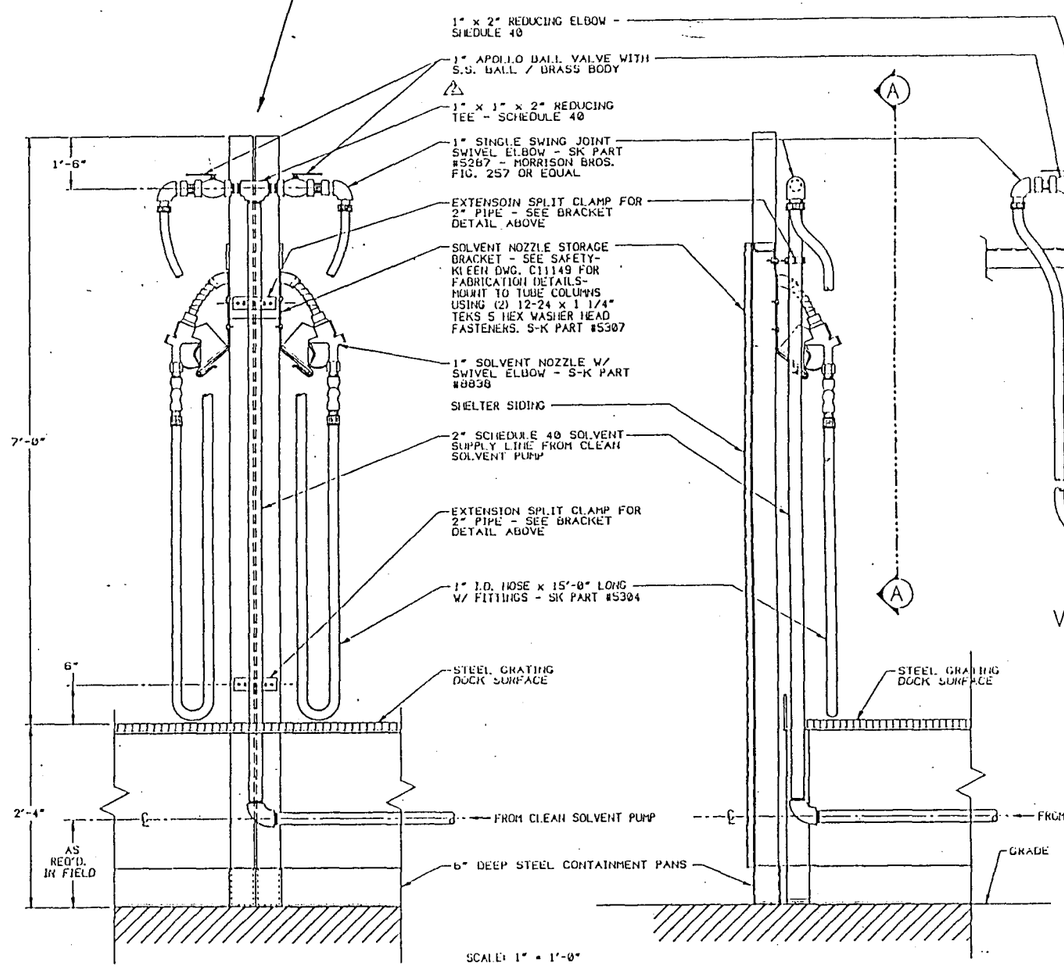




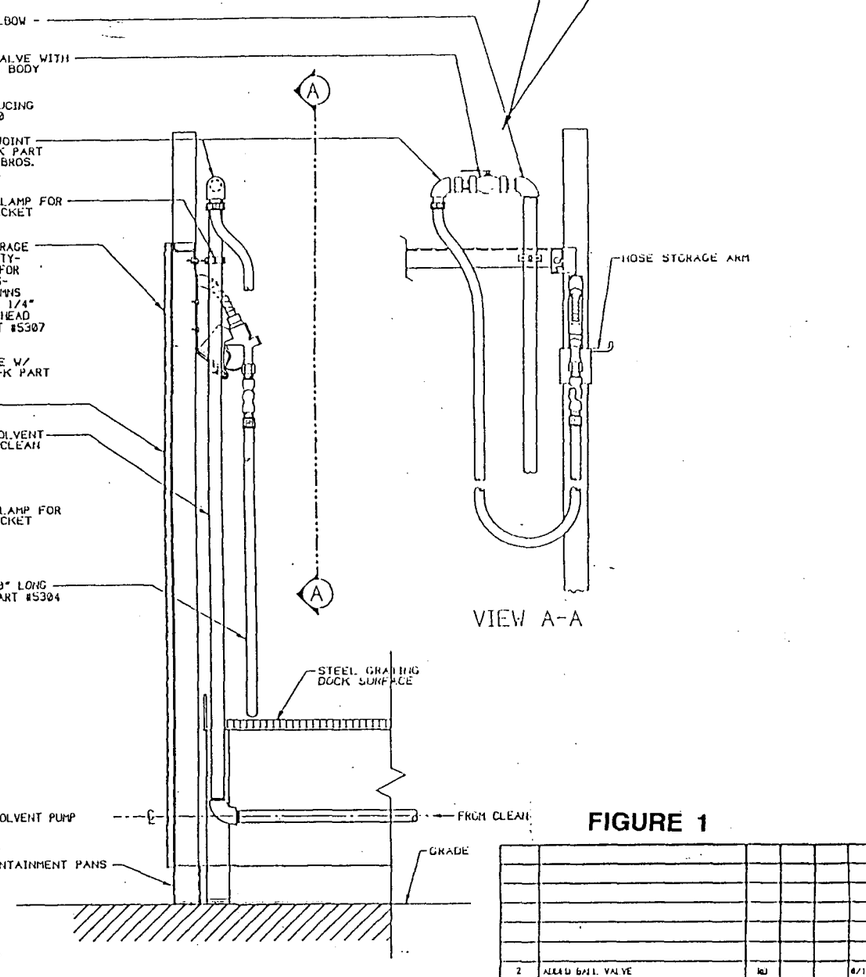
BRACKET DETAIL

HALF SCALE





DOUBLE OR MULTIPLE BAY INSTALLATION



VIEW A-A

SINGLE BAY INSTALLATION

NOTES:

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

(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.

(3) THIS DRAWING SUPERCEDES SAFETY-KLEEN DRAWINGS C10219 & C10961.

(4) SEE INDIVIDUAL SERVICE CENTER PLANS FOR LOCATION OF THESE DETAILS.

bfj
2/20/03-GD

FIGURE 1

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
	REVISED				
2	ADDED BALL VALVE	WJ			6/19/
1	ADDED NOTE 1 & REFERENCED NOTES	WJ			8/23/

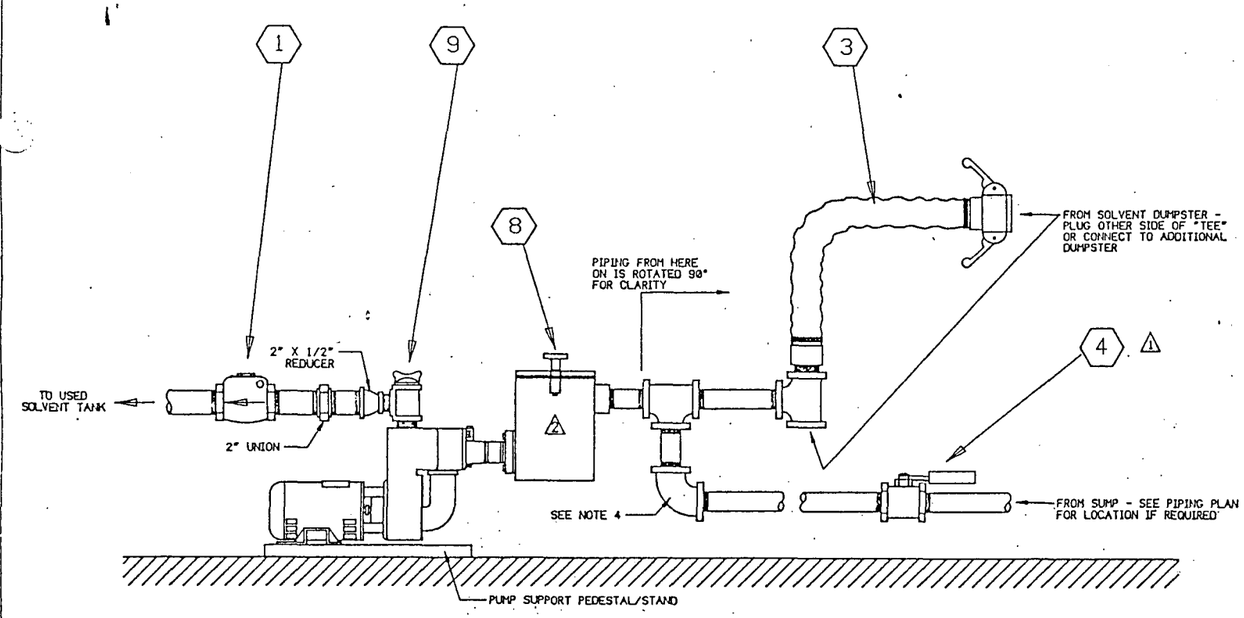
TITLE

SOLVENT DISPENSER TREE INSTALLATION DETAILS

SAFETY-KLEEN CORP.

777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 847/697-8460

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		AS SHOWN	NWD-GD	2/23/
BRANCH	FOR SERVICE CENTER BRANCH	DRAWING NO.	D11223	

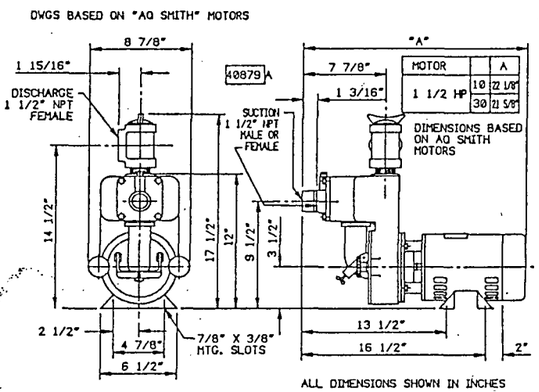


USED SOLVENT PUMP INSTALLATION

EQUIPMENT / FIXTURE SCHEDULE				
MARK	SIZE	DESCRIPTION	SK PART NO.	REMARKS
1	2"	2" BRONZE CHECK VALVE - HORRISON 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 1/2HR49EC, SINGLE PHASE, EXPLOSION PROOF, BUNA FITTED, SELF PRIMING CENTRIFUGAL	5330	SEE DETAIL BELOW LEFT

PUMP UNITS WITH OPEN MOTORS
1 1/2HR49EC

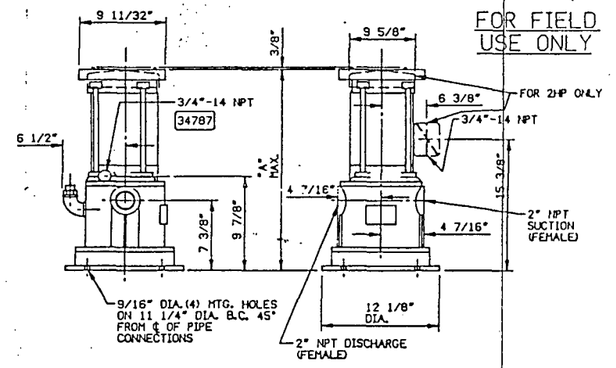
DWGS BASED ON "AO SMITH" MOTORS



ALL DIMENSIONS SHOWN IN INCHES

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

FOR FIELD USE ONLY

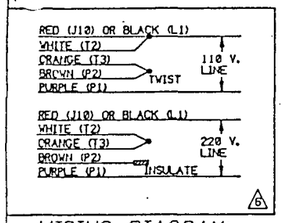


GENERAL NOTES

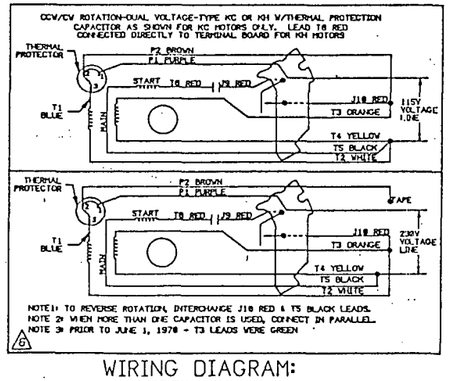
1 MODEL TO BE USED BY SAFETY-KLEEN CORP. - MODEL 20 EVP-10A, 1 HP - 2" WITH EXPLOSION PROOF MOTOR W/JUNCTION BOX & VITON FITTED, SINGLE PHASE 60 CYCLE 115/230V.

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

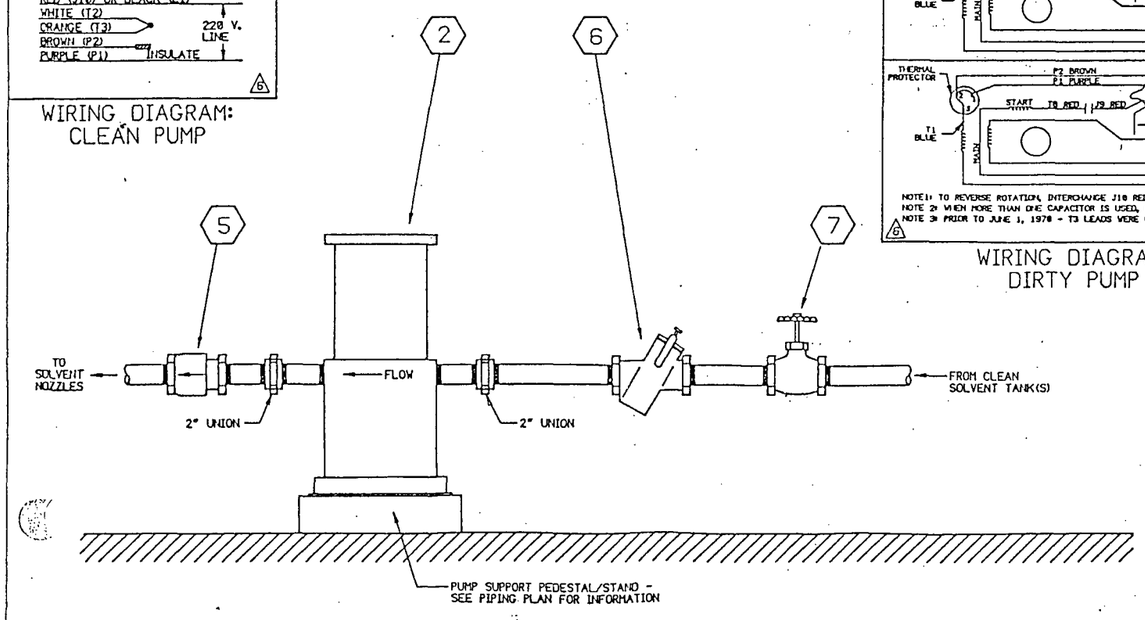
S-K PART NO.	C.E. EXPL. PROOF MOTORS				
	HP	PHASE	CYCLE	A	
5240		1	60	20 13/32"	115/230



WIRING DIAGRAM: CLEAN PUMP



WIRING DIAGRAM: DIRTY PUMP



CLEAN SOLVENT PUMP INSTALLATION

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.

FIGURE 2

NO.	DESCRIPTION	BY	CHKD
⚠6	ADDED W.O.'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	WLJ	
⚠3	ADDED PUMP SPECS - DWG A11118	WLJ	
⚠2	ADDED ITEM (8) & ADDED TO NOTE (4)	WLJ	
⚠1	CHANGED ITEM (4) TO NEW TYPE VALVE	WLJ	

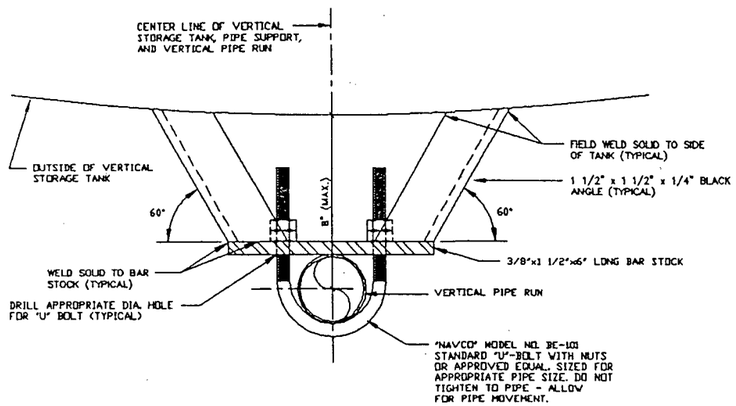
REVISIONS

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	MWD-PBG
BRANCH: FOR SERVICE CENTER BRANCH		DRAWING NO.	D11150

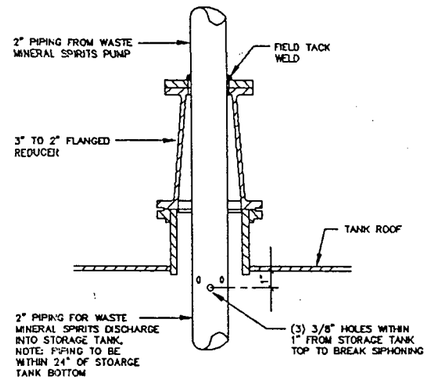
BJS 2/24/89 PBG



1 VERTICAL PIPE SUPPORT DETAIL

*NOTE: SIMILAR DETAIL TO BE USED FOR SUPPORTING PIPE RUNS ACROSS TANK TOPS.
*NOTE: PAINT "U"-BOLT & NUTS, BARSTOCK, & ANGLES PER TANK PAINTING SPECS.

SCALE: NONE

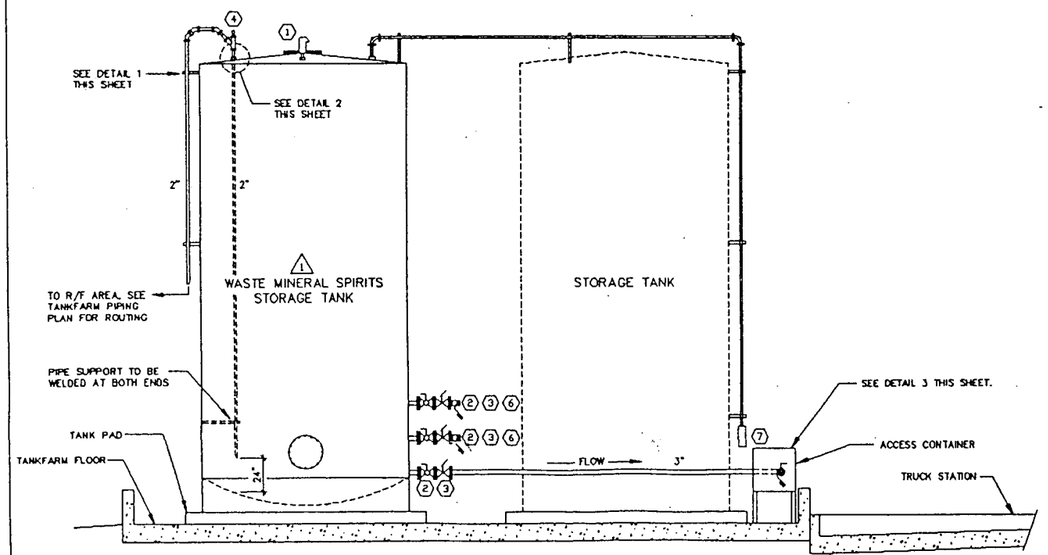


2 TANK DOME PIPING PENETRATION DETAIL

SCALE: NONE

EQUIPMENT SCHEDULE

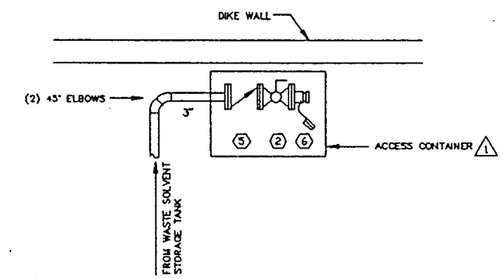
MARK	PART DESCRIPTION	SK PART	REMARKS
①	3" THREADED BRASS PRESSURE/VACUUM VENT, (2oz. pressure/1oz. vacuum)	5339	⚠1
②	3" FLANGED DUCTILE IRON BALL VALVE	–	LOCKING TYPE ⚠1
③	3" FLANGED DUCTILE IRON EXTERNAL EMERGENCY VALVE WITH FUSIBLE LINK (160° F)	–	⚠1
④	3/8" THREADED BRASS AUTOMATIC VACUUM BREAKER	5236	⚠1
⑤	3" FLANGED DUCTILE IRON SWING CHECK VALVE	–	⚠1
⑥	3" FLANGED ALUMINUM CAMLOC QUICK COUPLING WITH CAP AND CHAIN	–	⚠1
⑦	TANK GAUGE	–	SEE INSTALLATION DETAILS ON DRAWING #2025 ⚠1



PARTIAL TANK FARM PIPING ELEVATION, TYPICAL

(SEE TANK FARM PIPING PLAN FOR ACTUAL PIPING ROUTINGS.)

SCALE: NONE



3 ACCESS CONTAINER PIPING DETAIL

SCALE: NONE

FIGURE 3

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.

⚠1. SUPPLIED BY SAFETY-KLEEN.

2. ALL DIRECTION CHANGES IN WASTE SOLVENT PIPING LINES TO BE MADE USING A COMBINATION OF 45° ELBOWS OR LONG SWEEP 90° ELBOWS.

QUESTEC CONSULTING ENGINEERS
4962 Sinclaire Circle • Colorado • ISO 80303 • (719) 575-0850

NO.	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

TITLE

TANK FARM / WASTE MINERAL SPIRITS PIPING PLAN

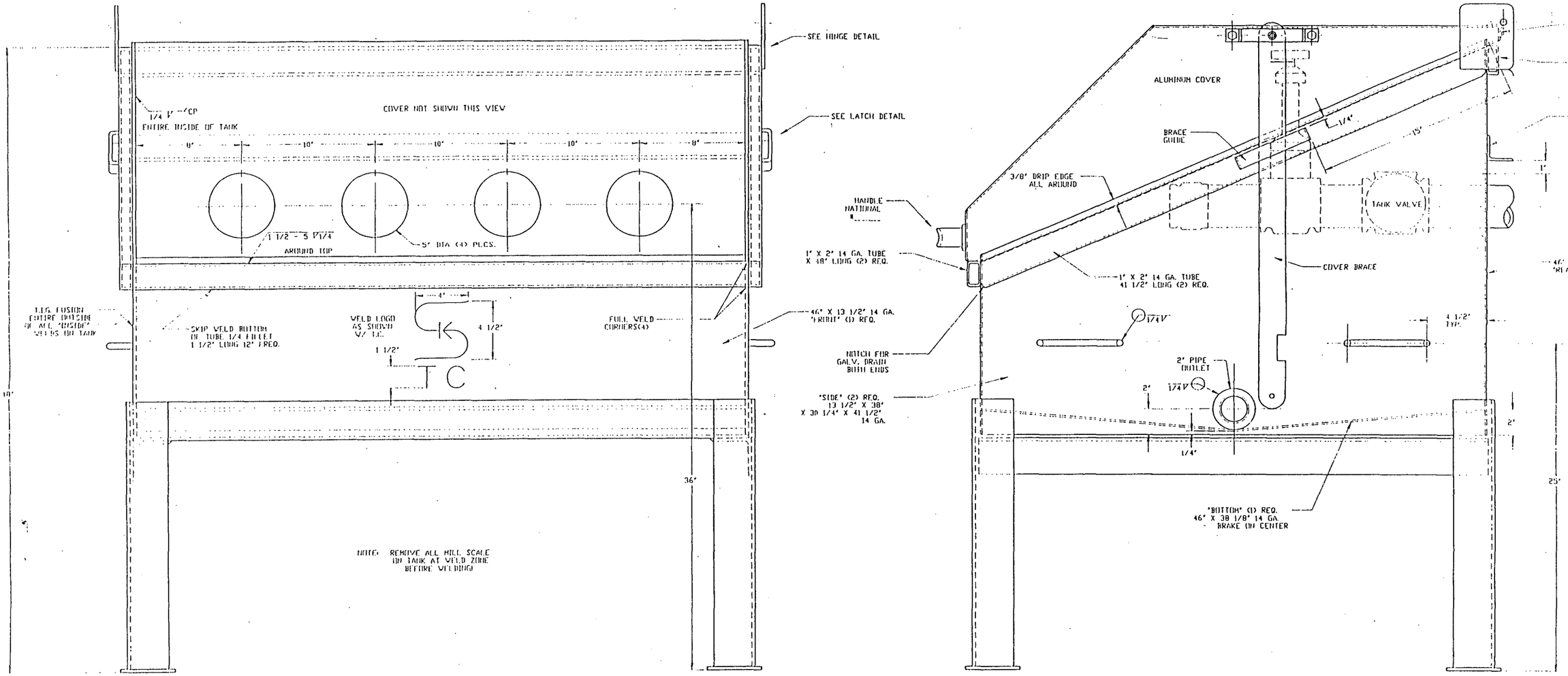
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

SCALE	BY	CHKD	P.E. APPR	OP. APPR	DATE
NONE	QuesTec				9-27-91

SC-DWG-REV NO. 316301-2011-00

SHEET NO. 49

10-7-91 9:30am 2011-0.DWG



NOTE: TANK MUST BE DESLAGGED AND MECHANICALLY DEBURRED. DEGREASE TANK BEFORE PICKELING AND HOT DIP GALVANIZING A 123 A.S.T.M.

FIGURE 4

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.

NO.	DESCRIPTION	BY	CHK	APPR	DATE

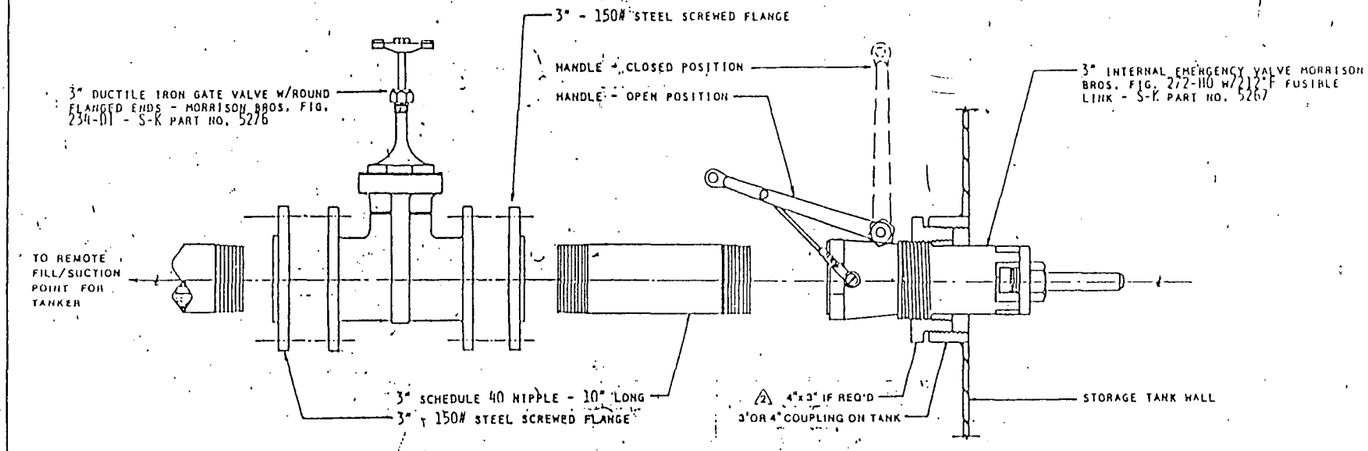
REVISIONS

TITLE: TANK ACCESS CONTAINER (GALV.)

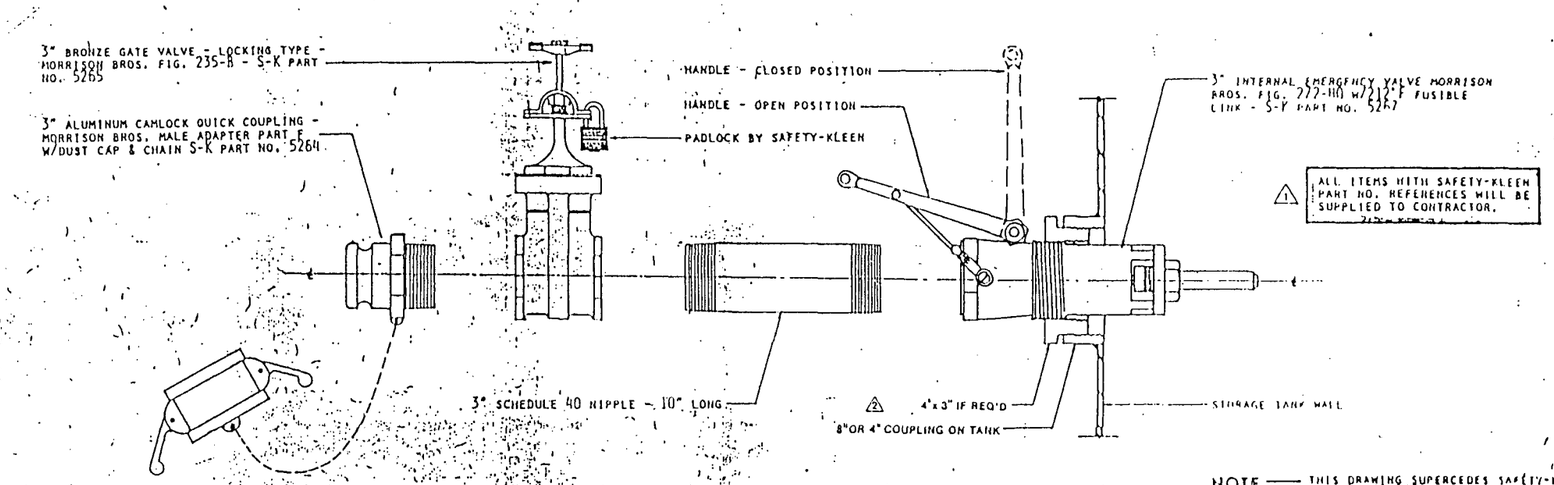
SAFETY-KLEEN CORP.

SCALE	BY	CHKD	P.E. APPR.	C.E. APPR.
1/4"=1'-0"	K.D.			

SERVICE CENTER STANDARDS | STD DWG NUMBER | FABRICATION



— STANDARD INSTALLATION FOR PIPING OF ALL STORAGE TANKS —



— ADDITIONAL INSTALLATION FOR PIPING OF NEW TANKS FOR STORAGE OF USED SOLVENT —
(FOR LOCATIONS PRONE TO FREEZING ONLY - SEE SAFETY KLEEN DRAWING D11124 ——)

NOTE —— THIS DRAWING SUPERCEDES SAFETY-KLEEN DRAWING C11036

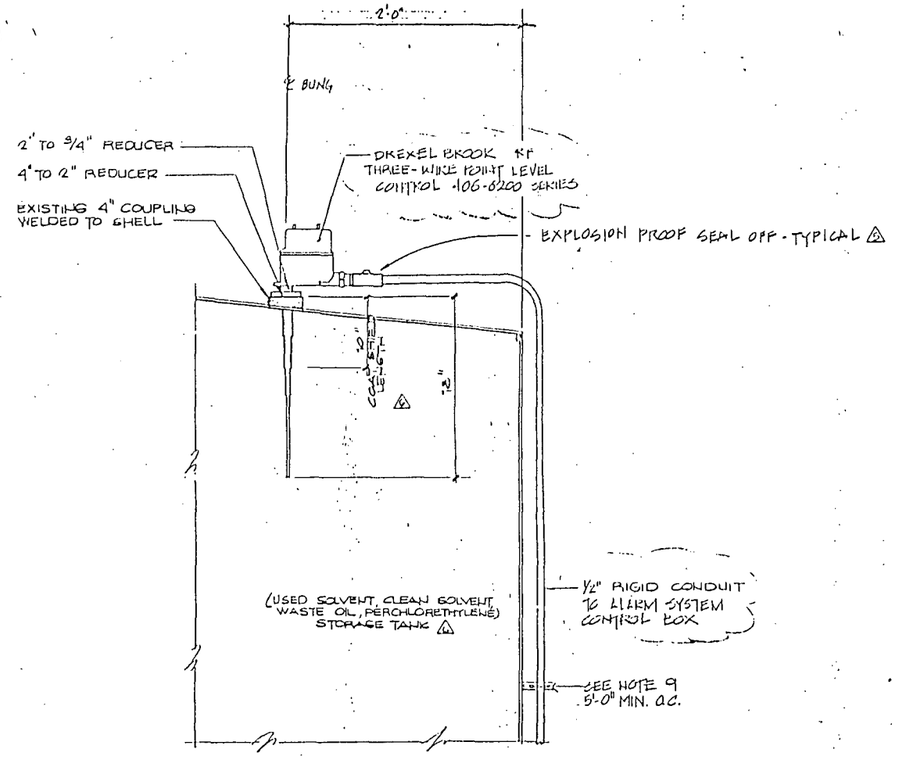
FIGURE 5

REV	DESCRIPTION	BY	
⚠2	ADDED CLARIFICATION	RD	8/24/90
⚠1	ADDED NOTE	WJ	12/23/87

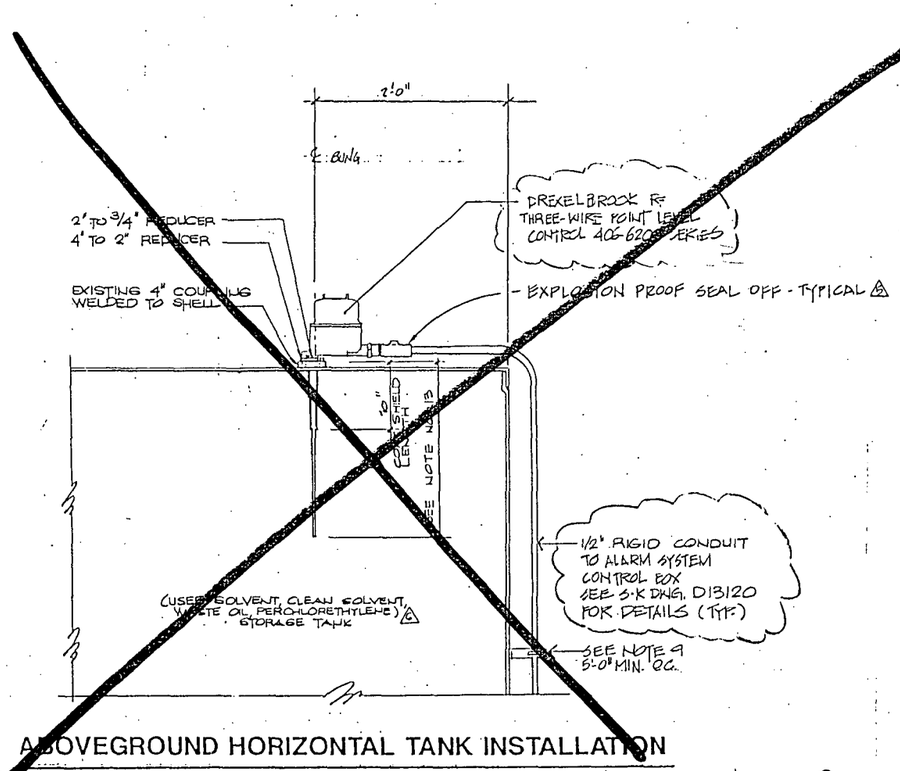
safety-kleen corp.

EMERGENCY & GATE VALVE INSTALLATION DETAILS —
FOR: SERVICE CENTER BRANCH CONSTRUCTION & OR IMPROVEMENTS

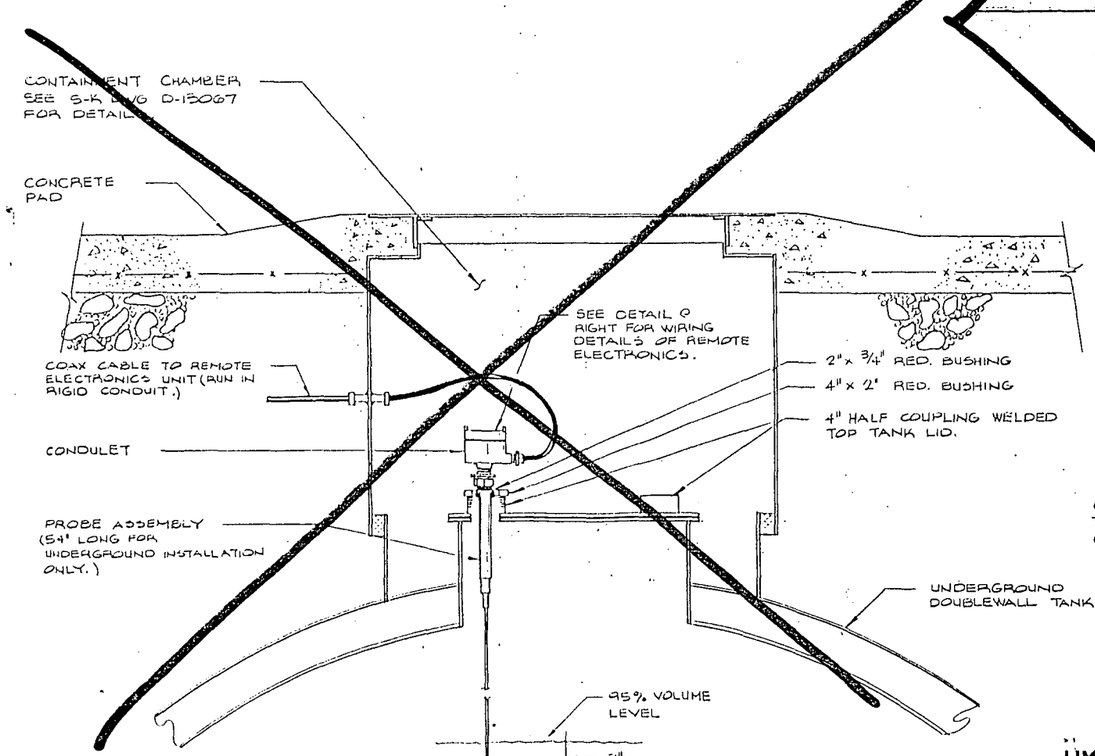
SCALE: NO SCALE
DRAWN: WLJ 11-5-
DRAFT:
APP'D:
DWG NO: C1130

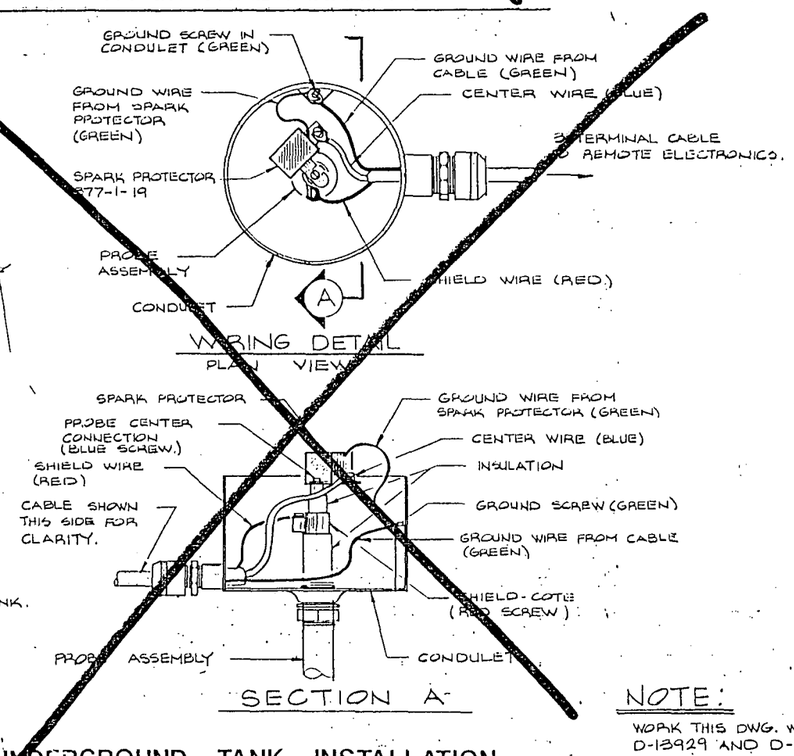


ABOVEGROUND VERTICAL TANK INSTALLATION



ABOVEGROUND HORIZONTAL TANK INSTALLATION





UNDERGROUND TANK INSTALLATION

NOTE:

WORK THIS DWG. WITH SK. DWGS D-13929 AND D-14218

GENERAL NOTES

1. POWER REQUIREMENT 13 TO 28 VDC
2. OUTPUT 4 - 10 m (ALARM STATE)
   15 - 25 m (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 mH, 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 DW, 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. S-K- - - - -)
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. ⚠3 ALL CALIBRATION OF UNIT SHALL BE DONE IN ACCORDANCE WITH DREXELBROOK'S 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.

FIGURE 6A

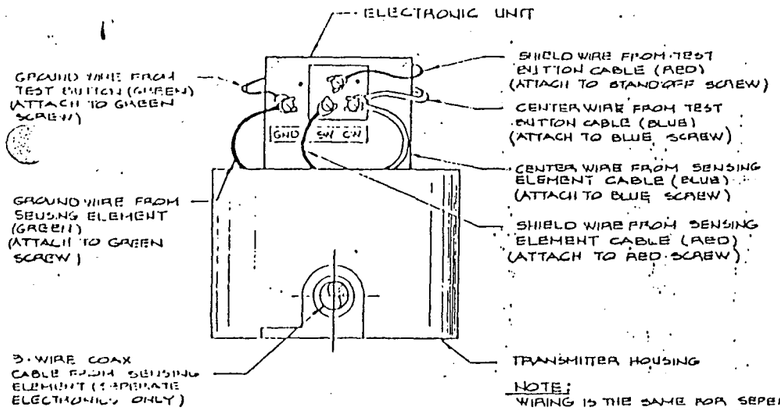
⚠1 REDRAW UNDERGROUND INSTALLATION ⚠2 ADDED DETAILS & CHANGED CONDUIT TO ADD ⚠3 ADD NOTES AND MODIFY THE DWG. ON VERT. & HOR. TANK INSTALLATION.	RJD	1-4-90
	MA	7-20-90
⚠1 ADD "EXPLOSION PROOF SEAL OFF" NOTE	RLB	12-13-90
⚠4 CHANGED PROBE DEPTH, NOTE 13	RLB	11-13-91

safety-kleen corp.
777 BIG TIMBER ROAD ● ELGIN, ILLINOIS 60123 PHONE 312/697-8460

HIGH LEVEL ALARM SYSTEM TRANSMITTER TO TANK INSTALLATION DETAILS

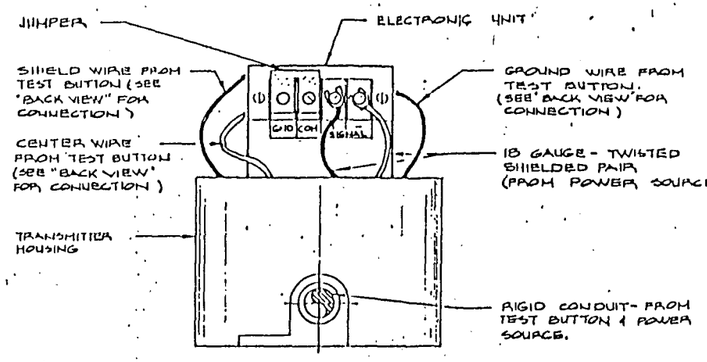
SCALE NONE	REVISIONS	BY	DATE
DATE 6-22-88	⚠1 ADDED CHART & MISC. INFO.	RD	7/5/89
DRN. RD CHK.	⚠2 4"ϕ WAS 18"; 24" WAS 18"	RJD	7/7/89
APPR.	⚠3 ADDED SEAL-OFF	RJD	7/7/89

TITLE for: SERVICE CENTER BRANCH



NOTE:
WIRING IS THE SAME FOR SEPERATE AND INTEGRAL ELECTRONICS @ THIS POINT.

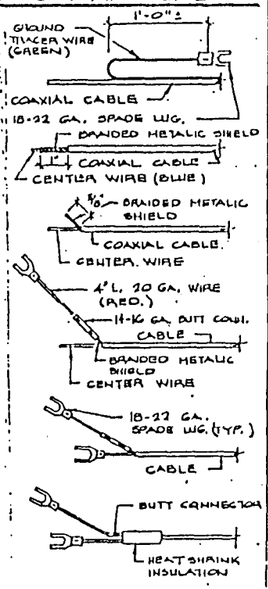
ELECTRONIC UNIT
BACK VIEW
(SENSING ELEMENT CONNECTIONS)



ELECTRONIC UNIT
FRONT VIEW
(SIGNAL WIRING)

TERMINATIONS OF COAXIAL CABLE

1. Cut cable to required length plus 1". Strip the ground tracer wire away from the core to a length of about 1". Strip about 5/16" of insulation from the end of the wires. Crimp an 18-22 ga. spade terminal lug onto the ground wire. If possible, this wire should be color-coded green to match the color scheme for the ground connections.
2. Trim outer insulation back 1", cutting down to but not including braided metallic shield.
3. Unravel the metallic braid from the center wire insulation. Twist the braid tightly together. Cut the twisted braid to a length of about 3/8".
4. Using a 14-16 ga. crimp-on butt connector, attach a 4" piece of 20 ga. stranded insulated wire to the twisted braid. In order to make a strong connection with the larger gauge of the butt connector, a 3/8" stripped length of the 20 ga. wire should be twisted and then folded back upon itself before insertion into the butt connector. Crimp on 18-22 ga. spade terminal lug onto the other end of the 4" wire. If possible, this wire should be color-coded red to match the color scheme for the center-shield connections.
5. Trim about 1/16" of the inner plastic insulation to expose the center wire. Slip an 18-22 ga. spade terminal lug over the bare center wire so that the insulation of the spade lug bottoms out on the inner insulation and the lip of the wire shows at the lug end. Crimp the lug and trim any excess center wire. If possible, this wire should be color-coded blue to match the color scheme for the probe/center wire connections.
6. Slip 1" of 1/2" diameter heatshrink insulation over cable end so that all metallic braid is well covered. Heat the insulation until it shrinks and tightly grips the cable. (Dry heat source of 300-350 degrees needed. A propane torch with a low flame is recommended.)

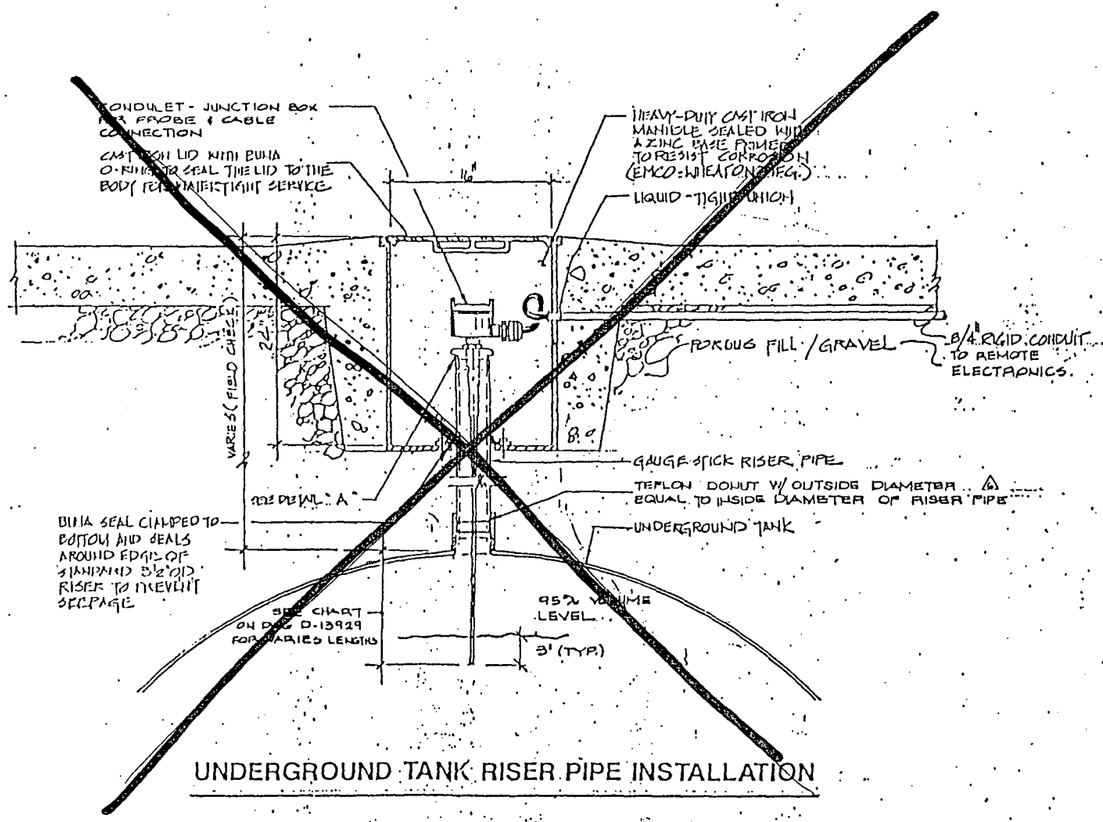


GENERAL NOTES

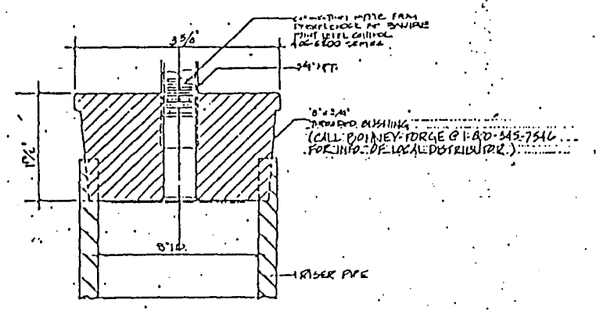
1. POWER REQUIREMENT 13 TO 28 VDC
2. OUTPUT 4 - 10 ma (ALARM STATE)
   13 - 23 ma (NORMAL STATE)
3. OPERATING TEMP. -40°F TO +140°F
4. SHIELD-TO-GROUND LOADING: 25 ohm MIN. RESISTANCE
5. RFI EFFECT: LESS THAN 3 pF SHIFT IN OPERATING POINT FOR UNIT IN EXPLOSION-PROOF HOUSING FROM 3 V FIELD @ 27, 150, OR 450 mH, AT A DISTANCE OF 3 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 DW, 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. CALCULATIONS FOR LENGTH OF PROBE INSIDE OF TANK ARE SET TO ACTIVATE THE ALARM AT THE 95% VOLUME LEVEL.
14. ALL CALIBRATION OF UNIT SHALL BE DONE IN ACCORDANCE WITH DIXIELOADING 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.

NOTE:

WORK THIS DWG. WITH SK DWGS D-13929 AND D-13102



UNDERGROUND TANK RISER PIPE INSTALLATION



DETAIL A

CALIBRATION OF ELECTRONICS

1. Verify that the liquid is not covering the probe. This can be done by checking the reading on the tank's tape gauge. If the tank is less than full, the probe will not be immersed in liquid.
2. The calibration should be performed with all electrical connections of the system already completed. Any change in these connections invalidates the calibration. Also, make sure that the wires are neatly dressed. This means that the slack in the wires should be pushed down in the conduit (without straining the wires). This protects the wires from damage when the cap of the conduit is screwed on. Also, if the wires are lying too high in the conduit, stray capacitance from the metal cap can alter the operating point of the electronics unit.
3. Using the plastic tuning wrench supplied with the electronics unit, turn the tuning capacitor to the fully counterclockwise position. Then slowly turn the tuning wrench clockwise until the green light illuminates. This is the operating point of the sensor.
4. Identify exactly the position of the operating point and then turn the tuning wrench clockwise exactly one-half additional turn (180 degrees). The green light should remain illuminated. Remove the tuning wrench. Carefully screw the cap on the conduit.

THIS DOCUMENT HAS BEEN PREPARED AND IS APPROVED BY ME FOR INCLUSION IN ENGINEERING REPORT; APPRECIATING THAT IT IS NEITHER A FINAL ISSUE NOR IS IT TO BE USED FOR EQUIPMENT OR MATERIAL PROCUREMENT, CONSTRUCTION, OR ANY OTHER PURPOSE.

FIGURE 6B

⚠ ADDED WIRING DETAILS AND NOTES FOR CABLE TERMINATIONS	07
⚠ ADD NOTE AND MODIFY THE DWG. ON VERT. & HOR. TANK INSTALLATION.	MA
⚠ ADD "EXPLOSION PROOF SEAL OFF" NOTE	2 LE
⚠ ESTABLISH PROBE DEPTH, NOTE 13	11/8

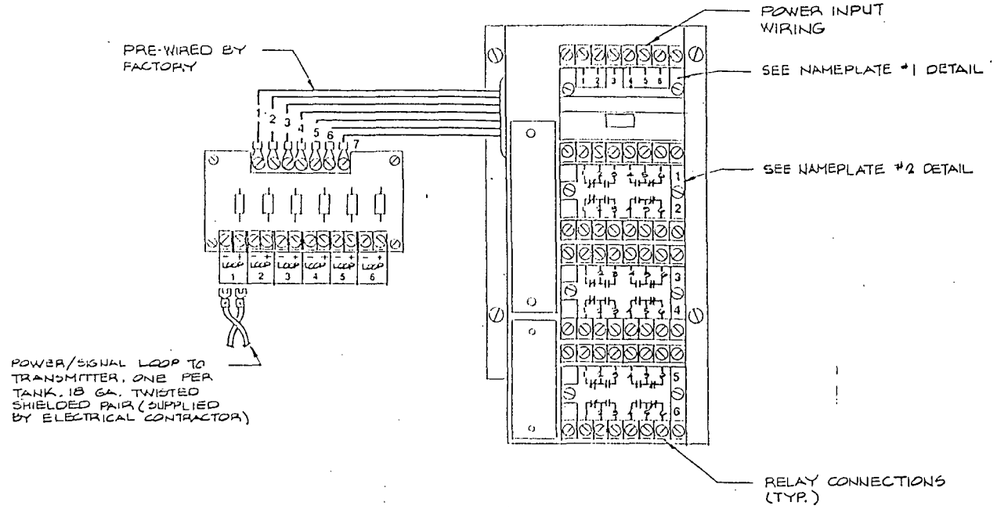
safety-kleen corp.
777 BIG TIMBER ROAD • ELGIN, ILLINOIS 60123 • PHONE (708)

HIGH LEVEL ALARM REMOTE TRANSMI
TO TANK INSTALLATION DETAILS

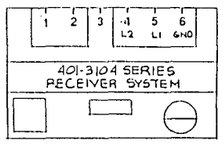
SCALE NONE		
DATE 6-22-88	⚠ ADDED CIRCUIT # TO SIG. WIRE	
DR RD	⚠ 10" & LESS 18", 12" & LESS 18"	11
DATE	⚠ ADDED SEAL-OFF	15

for: SERVICE CENTER BRANCH

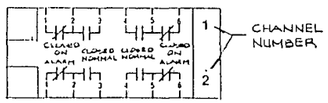
D-14



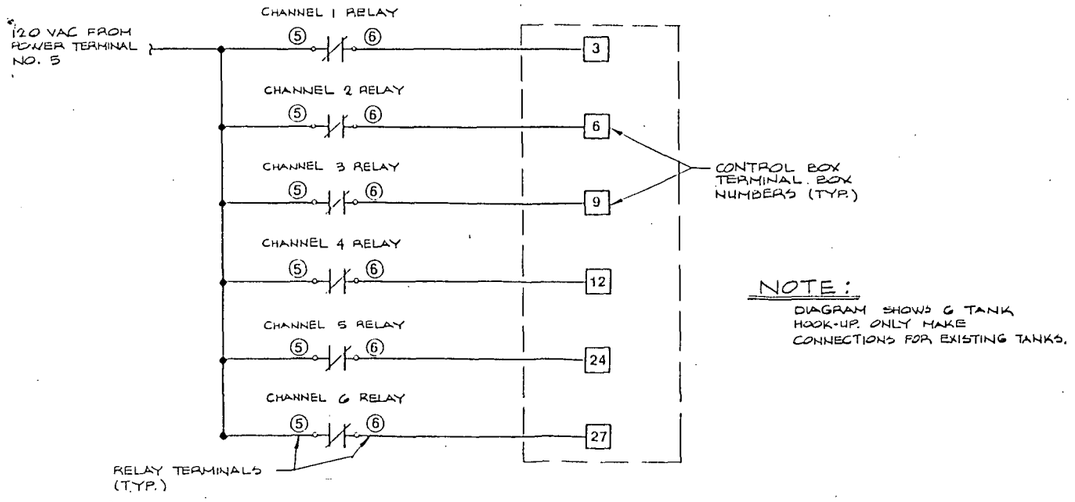
EXISTING TANK PROBE LENGTH		
TANK DIAMETER	DISTANCE FROM TOP OF TANK TO 95% VOL. LEVEL.	MINIMUM LENGTH OF PROBE INSIDE TANK
8' = 96"	9"	12"
10' - 120"	11"	14"
12' - 144"	14"	17"



NAMEPLATE #1 DETAIL



NAMEPLATE #2 DETAIL (TYP.)



WIRING TO ALARM CONTROL BOX

NOTE:
DIAGRAM SHOWS 6 TANK HOOK-UP. ONLY MAKE CONNECTIONS FOR EXISTING TANKS.

FIGURE 6C

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.

NO	DESCRIPTION	BY	CHK	APPR	DATE

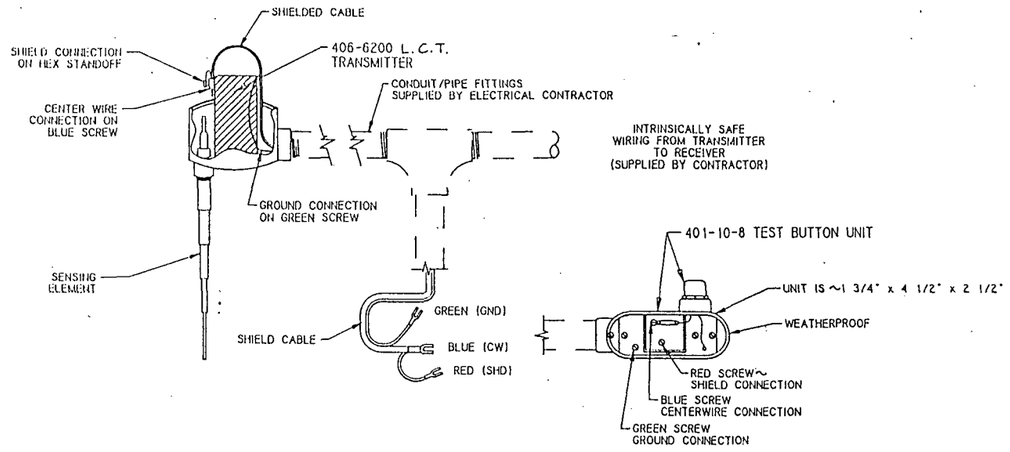
REVISIONS

TITLE: L.C.T. HIGH LEVEL ALARM RECIEVER SYSTEM DETAILS

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

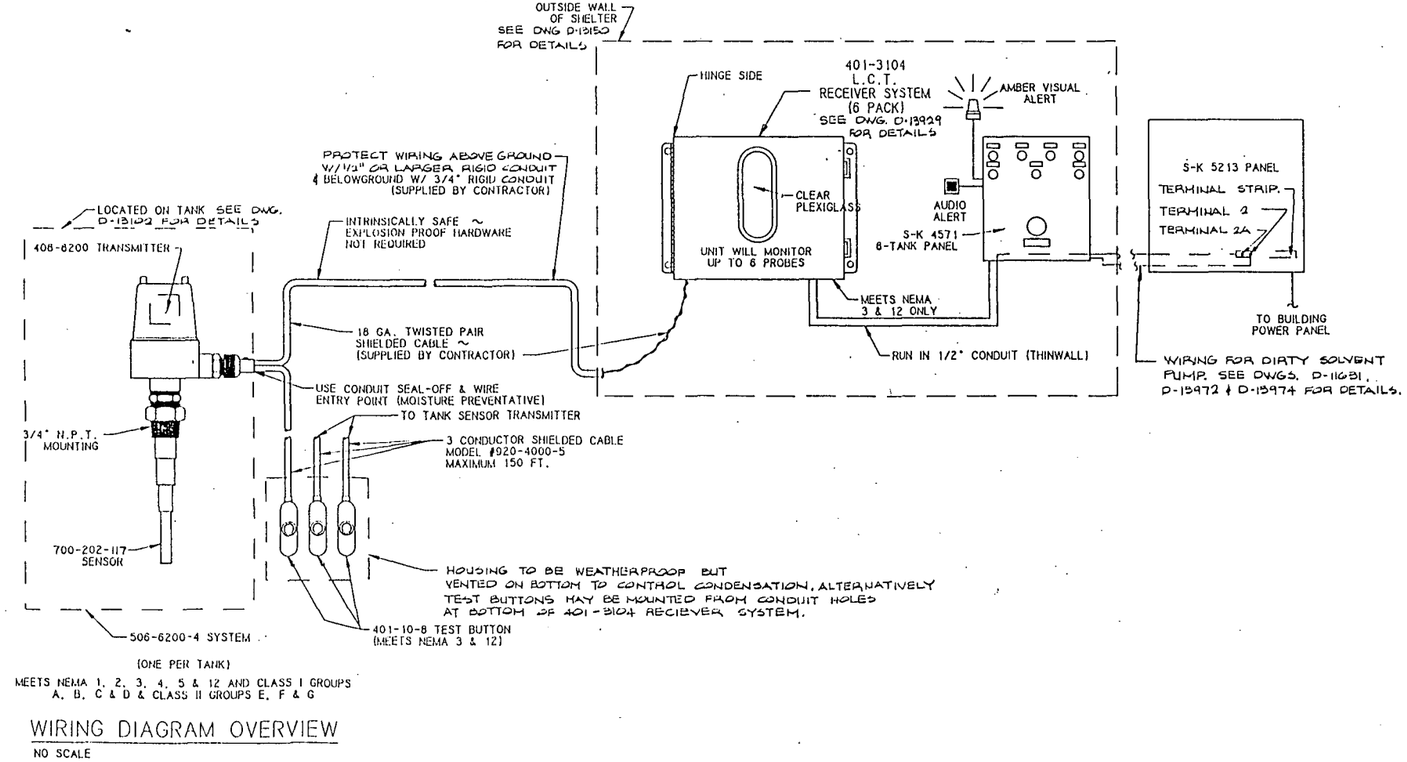
SCALE	DRAWN	CHECKED	ENGINEERING APPR	OPERATION APPR	DATE
NONE	DLS				1-10-89

DRAWING NO. D-12909 REV



TEST BUTTON DIAGRAM

CUSTOMER CONNECTIONS



MEETS NEMA 1, 2, 3, 4, 5 & 12 AND CLASS I GROUPS A, B, C & D & CLASS II GROUPS E, F & G

WIRING DIAGRAM OVERVIEW

NO SCALE

GENERAL NOTES:

1. DRAWING IS INTENDED TO SHOW A TYPICAL INSTALLATION ONLY. SEE ACTUAL SITE PLAN.
2. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ACTUAL FIELD CONDITIONS.
3. ALL ITEMS SHOWN WITH A SAFETY-KLEEN PART NO. , THESE ITEMS WILL BE SUPPLIED BY S-K.
4. IF ANY FIELD MODIFICATIONS ARE REQUIRED, SAFETY-KLEEN BRANCH CONSTRUCTION GROUP IS TO BE NOTIFIED BEFORE PROCEEDING.
5. E.C. TO SUPPLY & INSTALL ALL RIGID CONDUIT, EMT & ANY NECESSARY LABOR & MATERIALS TO COMPLETE PROJECT.

FIGURE 6D

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
	REVISIONS				
E	ADDED VARIOUS NOTATIONS	DS			1-10-9
D	REV'D. & REDRAWN ON COMP'TR.	NWD			8/18/9
C	ADDED TEST BUTTON UNIT	MA			7/31/9
B	ADDED SEALOFF FITTING	RD			10/17/
A	REVISED & REDRAWN	RD			5/31/9

TITLE

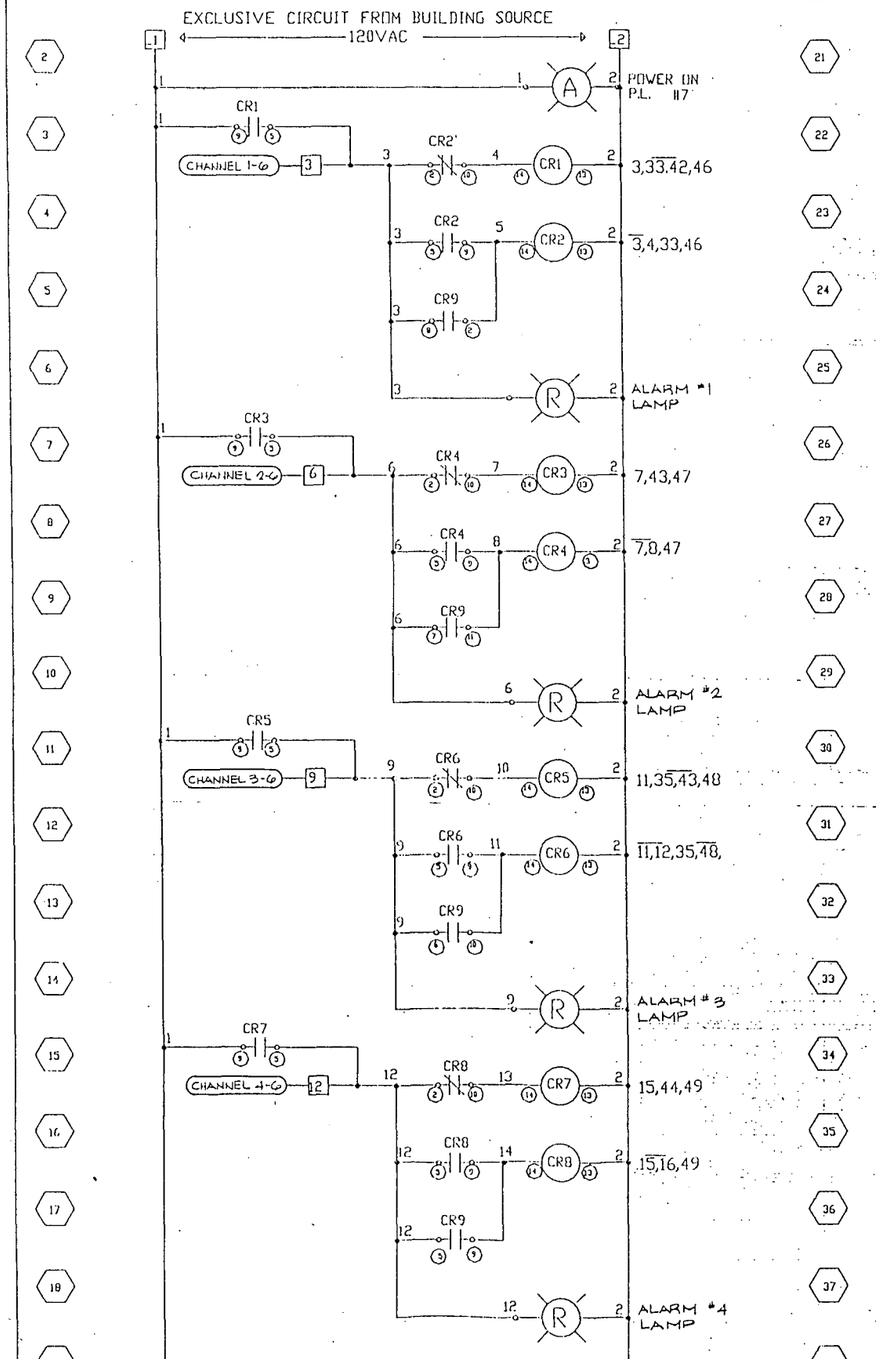
L.C.T. HIGH LEVEL ALARM ELECTRICAL DIAGRAM

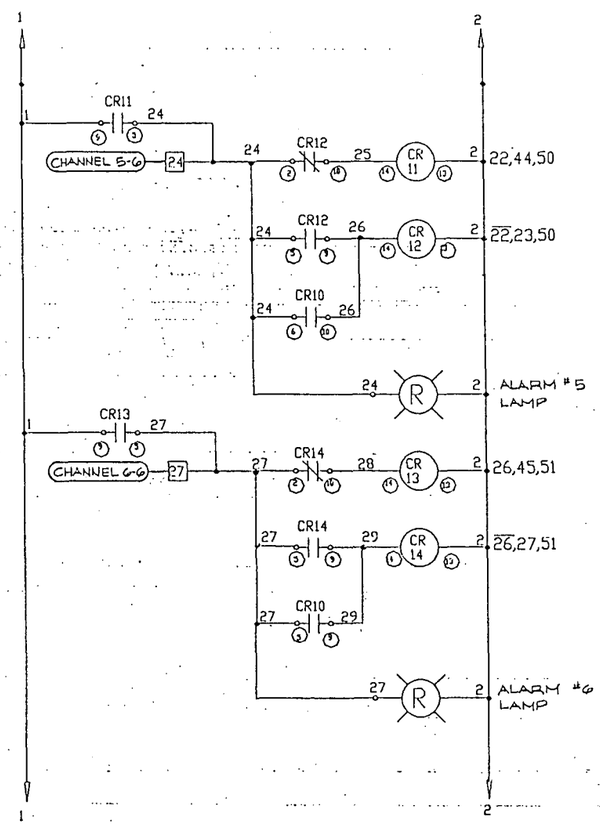
SAFETY-KLEEN CORP.

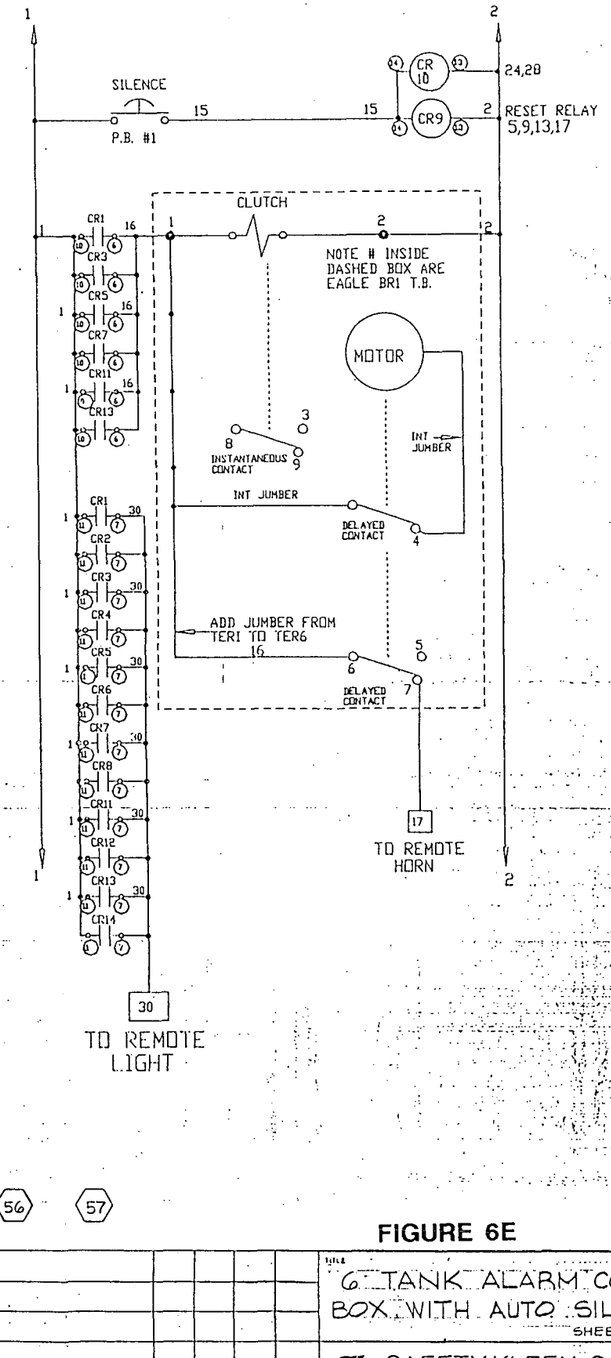
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		NONE	RD	5/12/8

BRANCH







NOTE NUMBERS IN CIRCLES ARE RELAY SOCKET TERMINALS

NOTE NUMBERS IN SQUARE BOXES ARE TERMINAL BLOCK WIRE NUMBERS

NOTE:

NUMBERS IN OVALS ARE RELAY TERMINALS IN PRENELBROOK RECIEVER PANEL, SEE DWG D-13929 FOR DETAILS.

FIGURE 6E

NO.	DESCRIPTION	BY	CHK	APPR	DATE
1	REMOVE FLOAT SWITCH WIRING AND ADDED HIGH LEVEL ALARM WIRING.	RJS			1-11-90

TITLE: 6 TANK ALARM CONTROL BOX WITH AUTO SILENCE

SHEET 1 OF 2

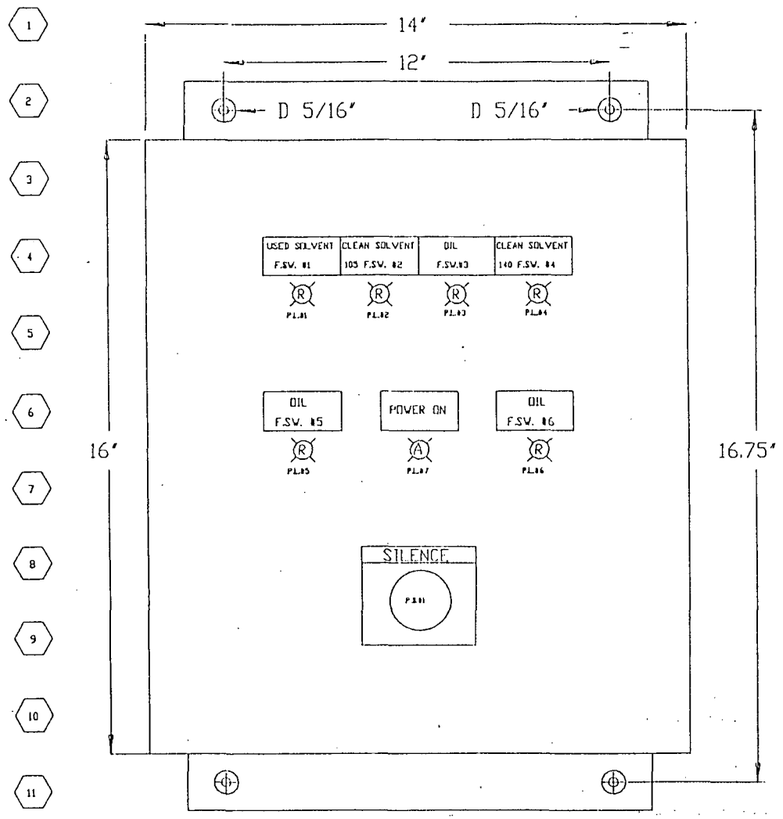
SAFETY-KLEEN CORP.

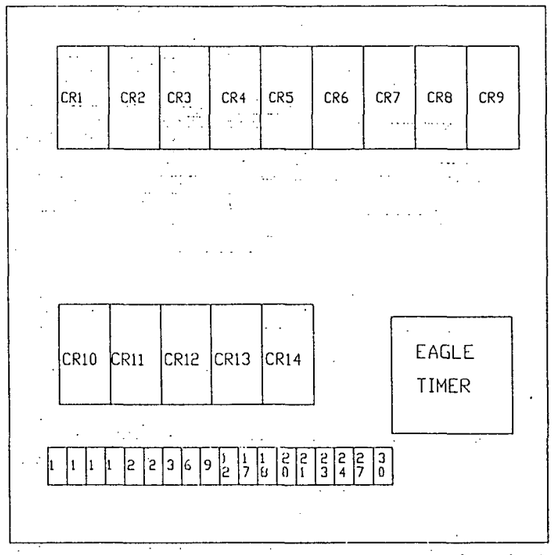
SCALE: NONE | DRAWN: MCU | CHECKED | ENGINEERING APPR. | OPERATIONS APPR. | 10-10-89

#5347

DRAWING NO. D-13974

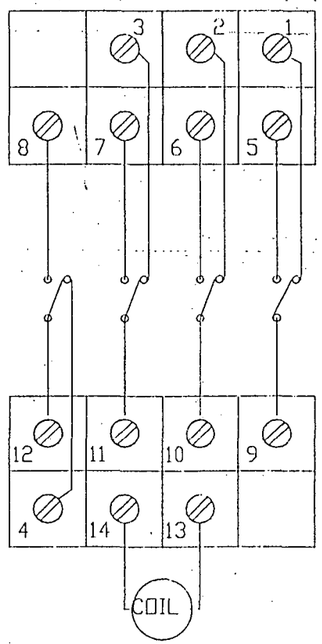
1





PARTS LIST

QTY		
1	A1614CH	HOFFMAN ENCLOSER
1	A16P14	HOFFMAN SUB PLATE
1	800T-D6D1	A-B RED PUSHBUTTON
1	800T-X700	A-B NAME PLATE
1	BR1-7-A6-00	EAGLE TIMER 5MIN
14	MY4AC120	OMRON RELAY
14	PYF14A	OMRON RELAY BASE
1	PFP-50N	MOUNTING TRACK
7	30099	SYLVANIA LIGHT BASE
6	30120	SYLVANIA RED LENS
1	30126	SYLVANIA AMBER LENS
7	120 PSB	LIGHT BULBS
	1492-H1	TERMINAL BLOCKS A-B
	E-1x2WH6	PANDUIT WIRE WAY
	C-1WH6	PANDUIT COVER



OMRON RELAY
MY4AC120
TERMINAL
LAYOUT

FIGURE 6F

NO.					
1	CHANGED PART NO. FOR EAGLE 5 MIN. TIMER	DS			1-8-90

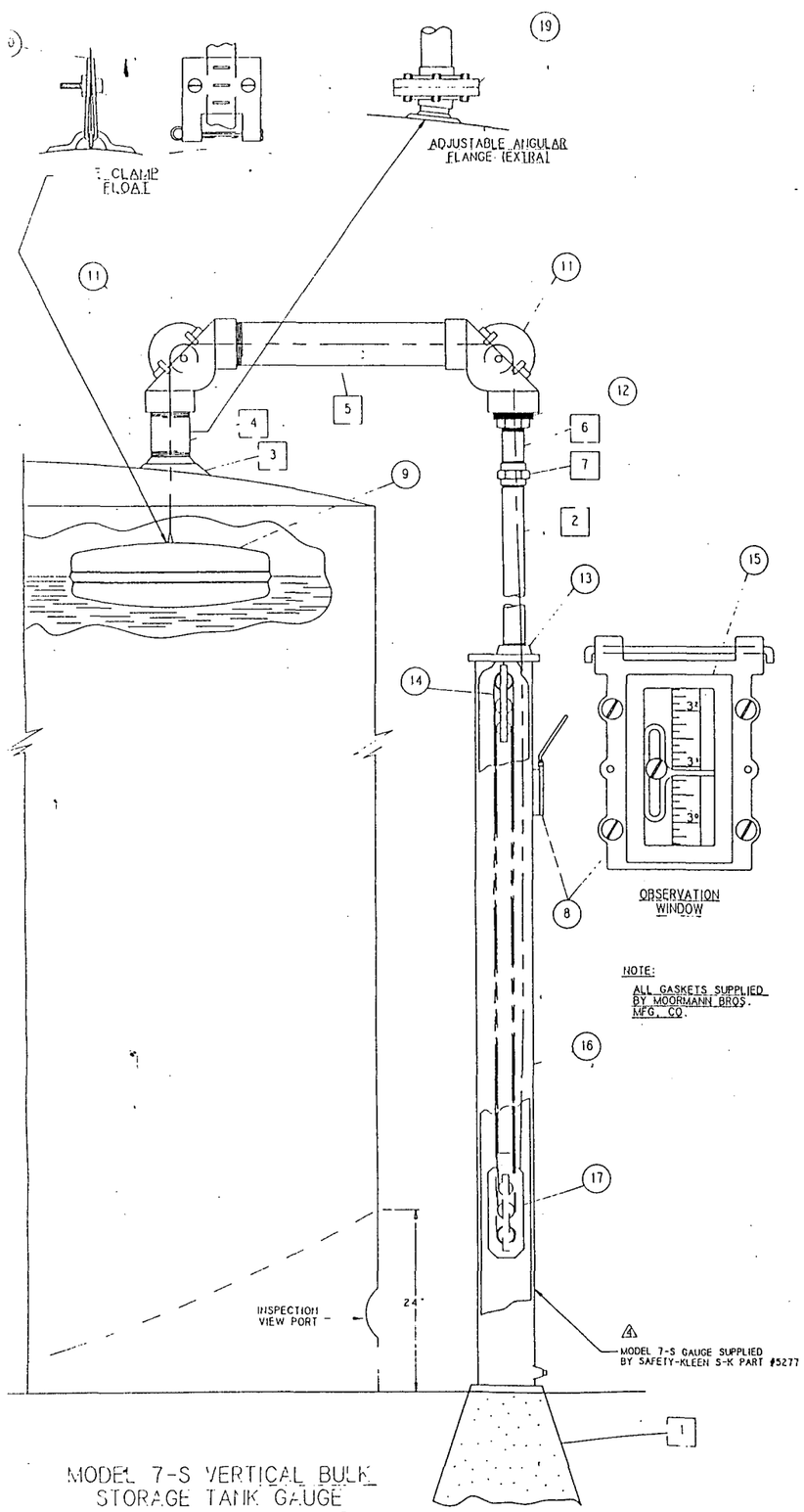
TITLE: 6 TANK ALARM CONTROL BOX WITH AUTO SILENCE
SHEET 2 OF 2

SAFETY-KLEEN CORP.

SCALE: NONE. | DRAWN: MCU | CHECKED: | ENGINEERING APPR: | OPERATIONS APPR: | DATE: 10.10.89

DRAWING NO: D-13975 | REV: 1

N 5317



NOTE:
ALL GASKETS SUPPLIED BY MOORMANN BROS. MFG. CO.

MODEL 7-S VERTICAL BULK STORAGE TANK GAUGE

INSTALLATION INSTRUCTIONS - MODEL 7-S

1. LOCATE GAUGE POSITION ON GROUND - MARK TOP EDGE OF TANK DIRECTLY ABOVE GROUND LOCATION.
2. MEASURE, CUT AND THREAD 2" PIPE (AS MARKED ON PRINT).
3. USE PIPE DOPE ON ALL CONNECTIONS.
4. ASSEMBLE BOTH A-30 ELBOWS AND 2" PIPE AS SHOWN ON PRINT.
5. SCREW (1) ELBOW A-30 ONTO 2" PIPE WITH REDUCING BUSHING, CLOSE NIPPLE AND UNION AS SHOWN ON PRINT; OTHER A-30 ELBOW ONTO 2" NIPPLE IN TANK THEN SCREW OTHER END OF 2" PIPE INTO TANK ELBOW, MAKE STRAIGHT WITH TANK MARKING.
6. LEVEL 2" PIPE. USE TEMPORARY WOOD BRACE OR ALIGNMENT FLANGE; IF NECESSARY.
7. SET GAUGE HOUSING WITH ECCENTRIC CAP ASSEMBLED ON GROUND DIRECTLY BELOW OVERHANGING ELBOW.
8. MEASURE FOR 1" PIPE (REDUCING BUSHING IN ELBOW TO ECCENTRIC CAP V-71 ON GAUGE HOUSING) ALLOW FOR THREADS, CUT AND THREAD 1" PIPE.
9. SCREW 1" PIPE INTO ELBOW, THEN REMOVE V-71 ECCENTRIC CAP FROM HOUSING AND PUT ON 1" PIPE. CAUTION - BE SURE ECCENTRIC CAP IS STRAIGHT AND 1" OUTLET IS FARTHEST AWAY FROM TANK.
10. FASTEN PULLEY RACK WITH LARGE PULLEY UP TO ECCENTRIC CAP USING STAINLESS STEEL PINS.
11. ASSEMBLE OTHER PULLEY RACK IN COUNTERWEIGHTS WITH LARGE PULLEY DOWN.
12. PLACE COUNTERWEIGHT ON GROUND DIRECTLY BENEATH ECCENTRIC CAP PULLEY RACK.
13. REMOVE A-33 CAPS FROM BOTH ELBOWS.
14. THREAD TAPE FROM TANK ELBOW WITH NUMBERS UP AND CLIP ENDS FIRST THROUGH 2" PIPE AND OVER ELBOW PULLEYS DOWN THROUGH 1" PIPE AND OUT ECCENTRIC CAP, STRAIGHT DOWN AND AROUND BOTTOM PULLEY IN C/W AND UP AND OVER TOP PULLEY IN ECCENTRIC CAP, DOWN TO MEDIUM PULLEY UP AND OVER MEDIUM PULLEY, DOWN AND AROUND SMALL PULLEY ON C/W AND UP AND AROUND SMALL PULLEY ON ECCENTRIC CAP, DOWN AND FASTEN TO LUG ON COUNTERWEIGHT PULLEY RACK - USE STAINLESS STEEL PIN. CAUTION - DO NOT THREAD TAPE OVER OR UNDER CROSS BARS IN PULLEY RACK. USE CAUTION - DO NOT KINK OR BEND TAPE.
15. FASTEN TAPE TO FLOAT WITH TAPE CLAMP (AS PER PRINT) CAUTION - DO NOT FASTEN TAPE CLAMP TOO TIGHT AS THIS MAY DAMAGE TAPE.
16. PLACE ECCENTRIC CAP GASKET ON HOUSING TOP AND INSERT COUNTERWEIGHT ASSEMBLY INTO HOUSING. CAUTION - DO NOT ALLOW C/W TO DROP OR JERK AS THIS MAY CAUSE DAMAGE TO BEARINGS. ALSO BE SURE THE TAPE IS IN GROOVE OF PULLEYS AND NOT ON THE EDGE.
17. FASTEN HOUSING TO ECCENTRIC CAP WITH OBSERVATION WINDOW DIRECTLY BELOW 1" PIPE.
18. PLACE OUTSIDE STRAND OF TAPE OVER TAPE GUIDE IN OBSERVATION WINDOW. CAUTION - DO NOT BEND OR KINK TAPE. AND PUT ONLY ONE(1) STRAND OF TAPE OVER THE TAPE GUIDE.
19. FIX BASE FOR HOUSING EITHER, CONCRETE, WOOD POST, OR STEEL PLATE WELDED TO TANK. - CAUTION - DO NOT WELD GAUGE HOUSING TO TANK.
20. PERFORM CALIBRATION AS DESCRIBED IN "CALIBRATION DETAILS - EMPTY TANK" (THIS DRAWING) IN PERFORMING THIS CALIBRATION, 1/2", 1/4" OR EVEN 1/8" IS NOT CLOSE ENOUGH. BE PARTICULAR; SET THE GAUGE AS CLOSE AS POSSIBLE TO THE CORRECT READING (1 3/8" FOR EMPTY TANK, TRUE FLUID LEVEL FOR NON EMPTY TANK).
21. CAUTION - LET FLOAT DOWN IN TANK EASILY. DO NOT LET IT DROP.
22. ASSEMBLE OBSERVATION FRAME AND LID A-34 & 38 PLACE ON HOUSING, TIGHTEN FOR VAPOR-PROOFING.
23. IN MOST CLIMATES, CONDENSATION FORMS INSIDE TANK AND GAUGE. A DRAIN PLUG HAS BEEN PROVIDED FOR DRAINING AT THE BOTTOM OF HOUSING. IN MOST CLIMATES THIS IS NECESSARY 2 TIMES A YEAR (SPRING & FALL). HOWEVER, IN EXTREME CASES DRAINING IS REQUIRED MORE OFTEN.

CALIBRATION DETAILS - EMPTY TANK

1. BEFORE CALIBRATION, COMPLETE INSTALLATION THROUGH STEP 19 OF INSTALLATION INSTRUCTIONS (THIS DRAWING).
2. IN ALL SUCCEEDING STEPS, BE CAREFUL NOT TO TWIST OR KINK THE TAPE.
3. THROUGH OPEN MANWAY AT THE TOP OF THE TANK, LOWER FLOAT SLOWLY AND LET IT COME TO REST GENTLY AT THE BOTTOM OF THE TANK, DIRECTLY BENEATH THE TANK ROOF FLANGE. BECAUSE THE TANK BOTTOM IS CONCAVE, THE FLOAT MAY TEND TO SIDESLIP TO THE CENTER OF THE TANK BOTTOM, THUS INTRODUCING ERROR INTO THE CALCULATION. GENTLY LOWERING THE FLOAT MINIMIZES THIS SLIPPAGE AND THE RESULTING ERROR.
4. DETERMINE THE REQUIRED TAPE ADJUSTMENT AS FOLLOWS: WITH THE FLOAT AT THE TANK BOTTOM DIRECTLY BENEATH THE ROOF FLANGE, RECORD THE TAPE READING AT THE OBSERVATION WINDOW. AN EMPTY TANK SHOULD READ 1 3/8" (THE FLOAT DRAFT). THE REQUIRED TAPE ADJUSTMENT CAN BE COMPUTED AS THE ACTUAL READING MINUS 1 3/8".
5. MARK THE TAPE AT THE POSITION AT WHICH IT IS FASTENED TO THE FLOAT, UNCLAMP THE TAPE FROM THE FLOAT. MEASURE OFF THE REQUIRED ADJUSTMENT USING A TAPE MEASURE AND MARK THE NEW POSITION. CUT THE TAPE TO SIZE, LEAVING ABOUT 2" EXCESS SLACK. THIS SLACK IS NECESSARY BECAUSE CUTTING OFF TOO MUCH TAPE WILL RENDER THE TAPE UNUSABLE. REFASTEN THE TAPE TO THE FLOAT AT THE NEWLY MARKED POSITION. DO NOT FASTEN THE TAPE CLAMP TOO TIGHTLY, AS THIS MAY DAMAGE THE TAPE.
6. REPEAT STEPS 3 & 4 TO CHECK THE CALIBRATION. IF THE ERROR IS LESS THAN 1", THE REMAINING ADJUSTMENT MAY BE MADE USING THE FINGER IN THE OBSERVATION WINDOW. FOR MAJOR ADJUSTMENTS (OVER 1"), REPEAT STEP 5.
7. WHEN CALIBRATION IS COMPLETE, CUT THE EXCESS TAPE AT FLOAT, LEAVING 6" FOR MINOR ADJUSTMENTS. LOWER THE FLOAT GENTLY TO THE TANK BOTTOM.

CALIBRATION DETAILS - NON-EMPTY TANK

1. DETERMINE THE REQUIRED TAPE ADJUSTMENT AS FOLLOWS:

   A) USE A MEASURING STICK OR WEIGHTED LINE TO MEASURE THE TRUE FLUID LEVEL IN THE TANK. BECAUSE THE CONCAVE BOTTOM OF THE TANK RESULTS IN VARYING DEPTHS, THIS MEASUREMENT SHOULD BE PERFORMED AS CLOSE AS POSSIBLE TO THE ACTUAL POSITION OF THE FLOAT IN THE TANK.

   B) RECORD THE TAPE READING AT THE OBSERVATION WINDOW.

   C) THE REQUIRED TAPE ADJUSTMENT CAN BE COMPUTED AS THE TAPE READING MINUS THE TRUE FLUID LEVEL.

2. TO GAIN ACCESS TO THE FLOAT AND TAPE IN THE TANK, OPEN THE MANWAY AT THE TOP OF THE TANK. ALSO REMOVE THE A-33 CAP FROM A-30 ELBOW ASSEMBLY. IN ALL SUCCEEDING STEPS, BE CAREFUL NOT TO TWIST OR KINK THE TAPE.
3. GRASPING THE TAPE THROUGH THE OPEN MANWAY, CAREFULLY RAISE THE FLOAT OUT OF THE TANK. MARK THE TAPE AT THE POSITION AT WHICH IT IS FASTENED TO THE FLOAT. UNCLAMP THE TAPE FROM THE FLOAT, MEASURE OFF THE REQUIRED ADJUSTMENT USING A TAPE MEASURE AND MARK THE NEW POSITION. CUT THE TAPE TO SIZE, LEAVING ABOUT 2" EXCESS SLACK. THIS SLACK IS NECESSARY BECAUSE CUTTING OFF TOO MUCH TAPE WILL RENDER THE TAPE UNUSABLE. REFASTEN THE TAPE TO THE FLOAT AT THE NEWLY MARKED POSITION. DO NOT FASTEN THE TAPE CLAMP TOO TIGHTLY, AS THIS MAY DAMAGE THE TAPE. CAREFULLY LOWER THE FLOAT INTO THE TANK.
4. REPEAT STEP 1 TO CHECK THE CALIBRATION. IF THE ERROR IS LESS THAN 1" THE REMAINING ADJUSTMENT MAY BE MADE USING THE FINGER IN THE OBSERVATION WINDOW. FOR MAJOR ADJUSTMENTS (OVER 1"), REPEAT STEP 3.
5. WHEN CALIBRATION IS COMPLETE, CUT THE EXCESS TAPE AT THE FLOAT, LEAVING 6" FOR MINOR ADJUSTMENTS. LOWER THE FLOAT GENTLY INTO THE TANK. REPLACE THE A-33 CAP ON THE A-30 ELBOW ASSEMBLY. CLOSE THE MANWAY.

MATERIAL LIST
MODEL 7-S

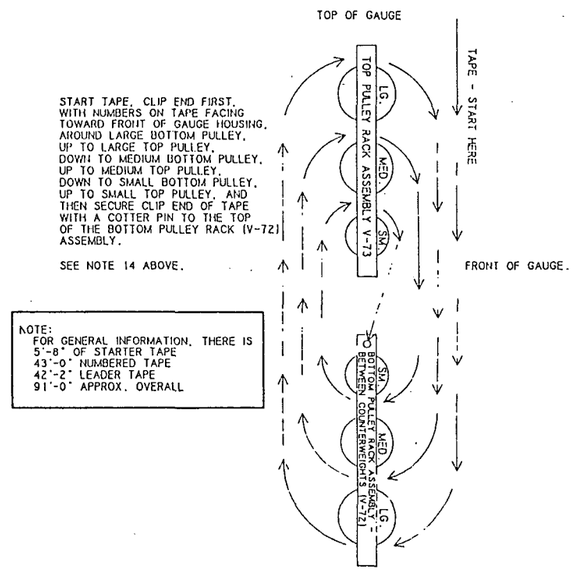
FOR ALL VERTICAL TANKS UP TO & INCLUDING 35'

[ ] MATERIAL SUPPLIED BY CONTRACTOR

1. GAUGE HOUSING BASE SUPPORT.
2. 1" GALVANIZED PIPE (CUT TO LENGTH).
3. TANK ROOF FLANGE.
4. 2" TANK OPENING PIPE.
5. 2" GALVANIZED PIPE (CUT TO LENGTH).
6. 1" GALVANIZED NIPPLE (ANY LENGTH).
7. 1" GALVANIZED UNION.

( ) MATERIAL SUPPLIED BY MOORMANN BROS. (SAFTY-KLEEN)

	PART NAME	PART NO.	QUANTITY PER UNIT
8.	OBSERVATION WINDOW ASSEMBLY	A-34-A-38	1
9.	FLOAT	V-75	1
10.	STAINLESS STEEL TAPE CLAMP & SCREWS	V-93	1
11.	ELBOW ASSEMBLY COMPLETE	A-30, A-33	2
12.	2" TO 1" REDUCING BUSHING		1
13.	ECCENTRIC CAP COMPLETE WITH NUTS & BOLTS	V-71	1
14.	PULLEY RACK ASSEMBLY	V-73	2
15.	LUFKIN STAINLESS STEEL HIGH VISIBILITY TAPE	V-49	1
16.	RUST-PROOFED STEEL GAUGE HOUSING	V-77	1
17.	COUNTERWEIGHT	V-72	2
18.	CONDENSATION DRAIN PLUG		1
	FRAME & LID ASSEMBLY FOR OBSERVATION WINDOW	A-34, A-38	1
	GASKETS - SET FOR OBSERVATION WINDOW	V-81, V-82	1
	GASKET - ELBOW CAP	V-83	2
	GASKET - V-71 ECCENTRIC CAP	V-84	1
	GLASS - WINDOW	V-86	1
	STAINLESS STEEL INDICATOR FINGER FOR OBSERVATION WINDOW	V-94	1
	WIRE PIN - STAINLESS STEEL	V-96	5



START TAPE, CLIP END FIRST, WITH NUMBERS ON TAPE FACING TOWARD FRONT OF GAUGE HOUSING, AROUND LARGE BOTTOM PULLEY, UP TO LARGE TOP PULLEY, DOWN TO MEDIUM BOTTOM PULLEY, UP TO MEDIUM TOP PULLEY, DOWN TO SMALL BOTTOM PULLEY, UP TO SMALL TOP PULLEY, AND THEN SECURE CLIP END OF TAPE WITH A COTTER PIN TO THE TOP OF THE BOTTOM PULLEY RACK (V-72) ASSEMBLY.

SEE NOTE 14 ABOVE.

NOTE:
FOR GENERAL INFORMATION, THERE IS
5'-8" OF STARTER TAPE
43'-0" NUMBERED TAPE
42'-2" LEADER TAPE
91'-0" APPROX. OVERALL

ENLARGED DETAIL SHOWING HOW TAPE IS WOUND ON PULLEY RACK ASSEMBLIES OF MOORMANN MODEL #7-S. CUT OFF EXCESS TAPE AT FLOAT.

GENERAL NOTES

1. TANK GAUGE ASSEMBLY SUPPLIED BY SAFETY-KLEEN CORP.
2. SEE INDIVIDUAL SERVICE CENTER SITE PLANS FOR LOCATION OF THE INSTALLATION.
3. GAUGE MUST BE ORDERED WITH THE PERFORATED TAPE FOR FUTURE REMOTE READ-OUT SYSTEM.
4. ALL EXPOSED NON-PROTECTED STEEL IS TO BE PAINTED PER SAFETY-KLEEN SPECIFICATIONS.
5. IF REQUIRED, ADDITIONAL VERBAL INSTALLATION INSTRUCTIONS CAN BE OBTAINED BY CALLING MOORMANN BROS. MFG. CO., RUSHVILLE, INDIANA - (317) 932-3590 - ASK FOR: BOB GAINES OR JIM RAVENCRAFT

FIGURE 7

	DESCRIPTION	BY	CHKD	APPR	DATE
8	ADDED ITEM #, CCD # 8206	LHD			7-5-90
7.	DRG. # WAS A10243	RD			2/28/90
6.	REV'D NOTES 19-23 AND ADDITIONAL CALIBRATION INFORMATION	RD			1/12/89
5.	RMV'D. HI-LEV. ALARM INFO.	RD			7/5/88
4.	ADDED SAFETY-KLEEN PART #5	RD			2/15/88
3.	ADDED ADDITIONAL HIGH LEVEL ALARM INFO	RD			10/6/87
2.	ADDED TAPE WINDING INFO.	WLJ			6/21/88
1.	ADDED NOTE 5	WLJ			2/13/88

REVISIONS

TITLE: MOORMANN BROS. TANK GAUGE INSTALLATION (DISHED BOTTOM TANKS ONLY)

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

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		NONE	WLJ	10/7/87
BRANCH	FOR SERVICE	DRAWING NO.		REV.

BJ4

Appendix I

Drum Rinsing System

PROFESSIONAL ENGINEER'S STATEMENT

The design features presented in the following appendix were prepared by others not under my supervision. Therefore, I do not certify the accuracy of said drawings.

This is to certify that I have reviewed the design features presented in this Appendix (Appendix I). The following design documents are the same as those presented in the operating permit application for this facility that was submitted to FDEP in February 1992. During my site walk-through (conducted on June 17, 1997), I did not observe significant deviations from the features represented in these drawings. Safety-Kleen has personally indicated to me that no design changes have occurred since these drawings were first submitted.

Elaina J. Modlin
#49946
Signature

ELAINA J. MODLIN
Printed Name

AUG 14, 1997
Date

Safety-Kleen

DRUM RINSING SYSTEM OPERATION

I. Electrical

The unit is powered by 120 VAC service as noted on the drawing. All electrical wiring is Class I, Division I (explosion-proof) with seal-offs in all required locations per NEC (National Electric Code). All circuitry is housed within the NEMA 7 enclosure, Item No. 1. All switching is enclosed in the NEMA 7 start/stop station, Item No. 3. The limit switch, Item No. 2, prevents the system from being operated without a drum in position, by interrupting the power supply.

II. Process

The operation of the system includes first filling the 55 gal drum reservoir (not numbered) with clean solvent. This is accomplished through the fill cap, Item No. 16 which can be pad-locked closed to prevent inadvertent use by unauthorized personnel. During filling of the reservoir, the drum is venting through the vent and flame arrestor, Item No. 15. Once this has been completed the unit is ready to begin rinsing drums. The system is designed to rinse either 16 or 30 gallon size drums which fit into either the internal concentric ring or the drain pan respectively, Item No. 12. With a drum in place, the safety conditions are met for the limit switch, Item No. 2 as discussed previously to allow the system to operate. The operator presses the start button which activates the pump, Item No. 13. A red pilot light, Item No. 4, also comes on at this time. A delay timer, (internal circuit component), allows the pump to come to rinsing pressure (~ 9.5 psig) to ensure the best nozzle performance. This takes about 4 seconds. Once this condition has been met, a second timer activates controlling the rinsing cycle duration. This timer opens a solenoid valve, Item No. 14 which allows the flow of solvent from the pump to the rinsing nozzle, Item No. 10. When the rinsing cycle is complete (~ 3 seconds), the solenoid valve closes and the pump is turned off automatically. At this point a third timer activates a drain cycle of approximately 45 seconds. This is designed into the system to ensure the proper drainage time is allowed for the rinsing solvent to drain out of the drum. This has been determined experimentally for optimum results. The system cannot be restarted until this cycle is complete.

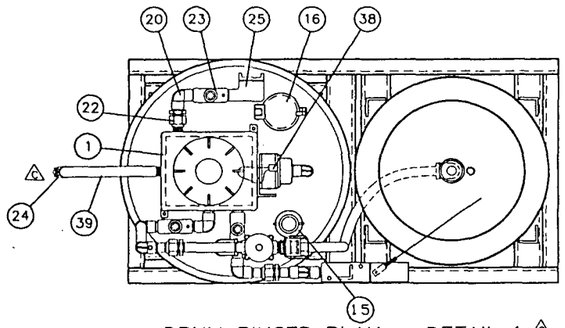
All solvent draining from the drum is channeled through a ¾" hose between the drain coupling, Item No. 6 and the used solvent dumpster, (note shown-separate existing system). Once the 45 second drain cycle is complete, the system resets, the red pilot light goes out and the drum may be removed for filling with clean solvent for use.

Allan A. Manteuffel Technical Center

P.O. Box 92050
Elk Grove Village, IL
60009-2050

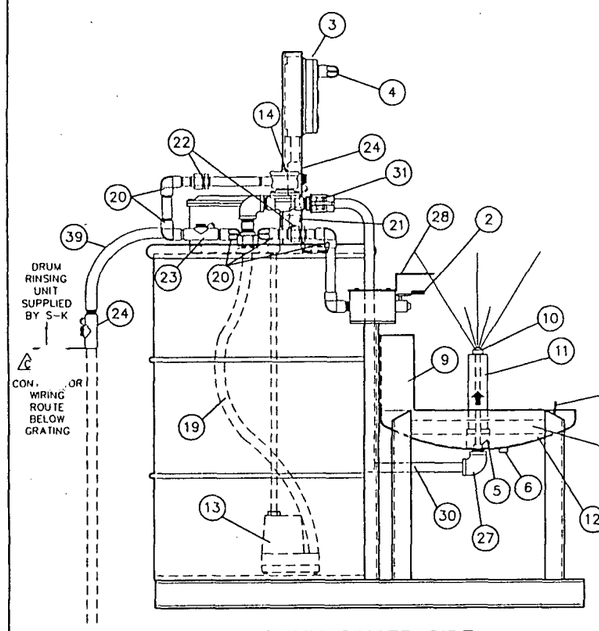
12555 W. Old Higgins Rd.
Elk Grove Village, IL 60007
Telephone: 312/694-2700
Fax: 312/825-7850

847 468-8510



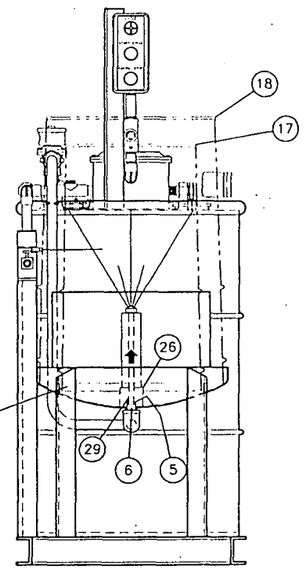
DRUM RINSER PLAN – DETAIL 1 ⚠

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



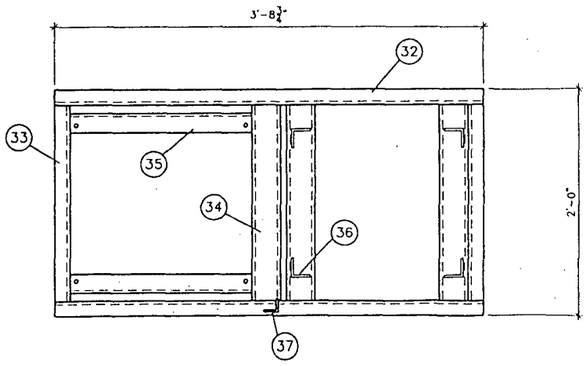
DRUM RINSER SIDE ELEVATION – DETAIL 2 ⚠

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



DRUM RINSER FRONT ELEVATION – DETAIL 3 ⚠

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



SKID PLAN – DETAIL 4

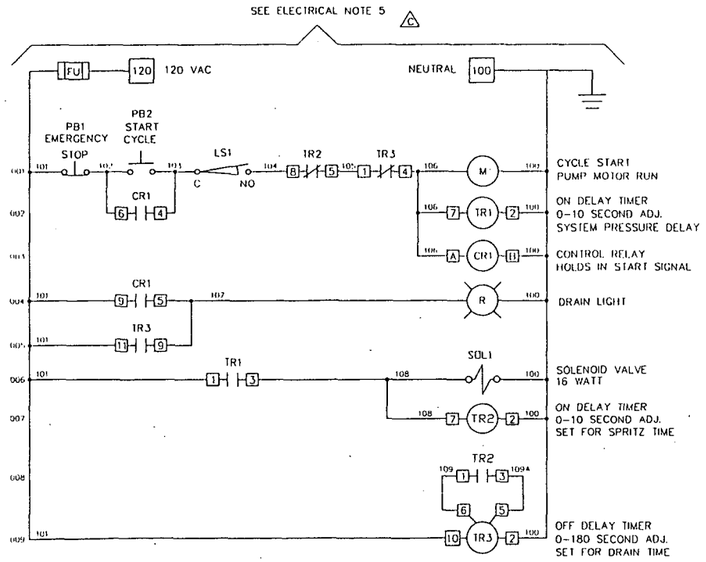
SCALE: 1 1/2"=1'-0"

SEQUENCE OF OPERATION ⚠

1. POSITION DRUM IN DRAIN PAN MAKING SURE LIMIT SWITCH LEVER IS ENGAGED.
2. DEPRESS START CYCLE PUSHBUTTON AND RELEASE. PUMP MOTOR WILL RUN BUT SOLENOID VALVE REMAINS CLOSED FOR SET TIME OF TR1 (1–10 SEC.). THE RED CYCLE LIGHT WILL BE ON.
3. AFTER TR1 HAS TIMED OUT THE SOLENOID VALVE OPENS AND REMAINS OPEN UNTIL TR2 (1–10 SEC.) HAS TIMED OUT. DURING THE TIME SET ON TR2 SOLVENT IS BEING SPRAYED INTO THE DRUM.
4. AFTER TR2 HAS TIMED OUT, A DRAIN CYCLE TR3 (1–180SEC.) BEGINS. DURING THIS TIME THE PUMP CANNOT BE RESTARTED. THE RED CYCLE LIGHT WILL REMAIN ON UNTIL TR3 HAS TIMED OUT.
5. THE PUMP MOTOR WILL STOP IF EITHER THE EMERGENCY STOP PUSHBUTTON IS DEPRESSED OR IF THE DRUM IS MOVED, DISENGAGING THE LIMIT SWITCH.

ELECTRICAL NOTES ⚠

1. ALL CONDUIT, J-BOXES AND FITTINGS TO MEET CLASS 1 DIV. 1, GROUP B, C & D REQUIREMENTS.
2. USE #14 THHN MTW ONLY.
3. USE WIRE LABELS ON BOTH ENDS OF ALL WIRES.
4. RUN SAFETY GROUND WIRES IN GREEN #14.
5. CONTRACTOR SCOPE OF WORK IS TO ROUTE 110V POWER SUPPLY TO UNIT TO UNIT AND CONNECT TO TERMINAL STRIP AND TO INCLUDE GROUND CONNECTION.



DRUM RINSER ELECTRICAL SCHEMATIC – DETAIL 5 ⚠

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

EQUIPMENT SCHEDULE FOR DETAILS 1, 2, 3 & 4 ⚠

ITEM	QTY.	DESCRIPTION	P/N	MFR.
1	1	ELECTRICAL ENCLOSURE,	GUB06109-00-AA-B0-AA-MT	CROUSE-HINDS
2	1	LIMIT SWITCH, NEMA 7	802X-A7	ALLEN-BRADLEY
3	1	START/STOP STATION, "EMERG. STOP" & "START CYCLE", NEMA 7	800H2HAP7	ALLEN-BRADLEY
4	1	PILOT LIGHT, NEMA 7, "CYCLE LIGHT"	800H-LP10R	ALLEN-BRADLEY
5	1	NOZZLE COUPLING, 1/2", STEEL	COMMON COMMODITY	–
6	1	DRAIN COUPLING, 3/4", FEMALE TANK FLG.	COMMON COMMODITY	–
7	1	16 GALLON DRUM POSITIONING RING	–	SEMLER IND.
8	1	30 GALLON DRUM LOCATING STOP	–	SEMLER IND.
9	1	DRUM BACK STOP	–	SEMLER IND.
10	1	SPRAY NOZZLE	1/4-G-SS-10	SPRAYING SYSTEMS
11	1	SPRAY NOZZLE GUARD PIPE, 2" X 8" NIP. THD. ONE END	–	SEMLER IND.
12	1	DRIP PAN	–	–
13	1	COMS PUMP	SK PART # 3790	LITTLE GIANT
14	1	SOLENOID VALVE, 1/2"	EF8210G94	ASCO
15	1	VENT & FLAME ARRESTOR, 2"	522	PROTECTOSEAL
16	1	FILL CAP	179M-0200 AC	MORRISON
17	1	16 GALLON DRUM	SHOWN FOR CLARITY	
18	1	30 GALLON DRUM	SHOWN FOR CLARITY	–
19	1	HOSE, WINGFOOT, 1" X 3', W/ MNPT X FCOUP ENDS	–	HOSE PROS
20	7	1/2" XP ELBOW	EL19	CROUSE-HINDS
21	1	3/4" XP ELBOW	EL29	CROUSE-HINDS
22	3	1/2" XP UNION	UNF105	CROUSE-HINDS
23	3	SEAL OFF, 1/2" XP	EYS116	CROUSE-HINDS
24	2	SEAL OFF, 3/4" XP	EYS216	CROUSE-HINDS
25	1	CONDULET, 1/2", 90°	GUAL 14	CROUSE-HINDS
26	1	HALF COUPLING, 2", FEMALE	COMMON COMMODITY	–
27	1	ELBOW, 1/2", 90°, BLACK	COMMON COMMODITY	–
28	1	LIMIT SWITCH GUARD	–	SEMLER IND.
29	1	NIPPLE, 1/2" X 8", BLACK PIPE	–	SEMLER IND.
30	1	HOSE, WINGFOOT, 1/2" X 4', W/ MNPT X FCOUP ENDS	–	HOSE PROS
31	1	COUPLER, MALE, 1/2", BRASS	633-F-0400	CIVACON
32	2	CHANNEL IRON, 3" X 4.1#	COMMON COMMODITY	SEMLER IND.
33	2	CHANNEL IRON, 3" X 4.1#	COMMON COMMODITY	SEMLER IND.
34	3	CHANNEL IRON, 3" X 4.1#	COMMON COMMODITY	SEMLER IND.
35	2	ANGLE IRON, 2" X 2" 1/4"	COMMON COMMODITY	SEMLER IND.
36	4	ANGLE IRON, 2" X 2" 1/4"	COMMON COMMODITY	SEMLER IND.
37	1	ANGLE IRON, 1 1/2" X 1 1/2" X 3/16"	COMMON COMMODITY	SEMLER IND.
38	1	CLIP, TAMPER RESISTANT, CRIMP TYPE W/ WIRW	COMMON COMMODITY	SEMLER IND.
39	1	18"L. FLEXIBLE ELECTRIC CABLE (NEMA 9)	COMMON COMMODITY	SEMLER IND.

EQUIPMENT SCHEDULE FOR DETAIL 5

ITEM	QTY.	DESCRIPTION	PART NO.	MFR.
1	1	CLASS 1, GROUP B,C,D DEVICE ENCLOSURE	GUB06109-00-AA-B0-AA-MP	CROUSE-HINDS
2	1	NEMA 7/9 3-GANG PUSHBUTTON STATION	GCS 16	KILLARK
3	1	NEMA 7/9 START PUSHBUTTON	800H-AP1	ALLEN-BRADLEY
4	1	NEMA 7/9 STOP PUSHBUTTON	800H-BP6	ALLEN-BRADLEY
5	1	NEMA 7/9 120V. RED PILOT LIGHT	800H-LP10R	ALLEN-BRADLEY
6	1	NEMA 7/9 LIMIT SWITCH	802X-A7	ALLEN-BRADLEY
7	1	12" NYLON LIMIT SWITCH ROD LEVER	802T-W3C	ALLEN-BRADLEY
8	1	HYPALON PROTECTIVE GREEN P.B. BOOT	800H-NP5B	ALLEN-BRADLEY
9	1	HYPALON PROTECTIVE RED P.B. BOOT	800H-NPE5A	ALLEN-BRADLEY
10	2	0-10 SEC. ON DELAY TDR 120V.	H3C-BC AC120	OMRON
11	2	TDR 8 PIN SOCKET	P2CF-08	OMRON
12	1	1.8-180 SEC. OFF DELAY TDR	TJK-180-461(120V.)	NATIONAL CONTROLS
13	1	TDR 11 PIN SOCKET	PP113A	OMRON
14	1	CLASS CC FUSE BLOCK	BC6031S	BUSSMAN
15	1	10 AMP. CLASS CC FUSE	KTK-R-10	BUSSMAN
16	2	WIRE TERMINAL BLOCK	524	BUCHANAN
17	1	WIRE TERMINAL BLOCK END PIECE	530	BUCHANAN
18	3	LEGEND PLATES	800H-W500	ALLEN-BRADLEY
19	1	DPDT 120 V. 10 AMP. RELAY	K10P-11A15-120	P & B
20	1	RELAY SOCKET BASE	–	P & B

REVISIONS ⚠

NO.	DESCRIPTION	BY	CHK	APPR	DATE
A	RELEASED TO BJ FOR REVIEW	MBH			011196
B	ADDED ITEMS 38 & 39 RELEASED TO BJ FOR REVIEW	MBH			030796
⚠C	UPDATED ITEMS: 4, 10, 13, 17 & 18 ON EQUIP. SCHED. (1, 2, 3 & 4) UPDATED SEQ. OF OPER. (2, 3 & 4) UPDATED ELEC NOTES (1 & 5) BEND ITEMS 24 & 39 VERT & DOWN AND ADDED ARROWS & TEXT CHANGED, DWG. & DETAIL (1, 2, 3, & 5) TITLES – REMOVED INITIALS IN CHKD/APPR/OPER. BOXES	MBH			032396

TITLE

DRUM RINSING (SPRITZER) SYSTEM ⚠

ASSY. DETAILS & ELECTRICAL SCHEMATIC

PROPRIETARY STATEMENT

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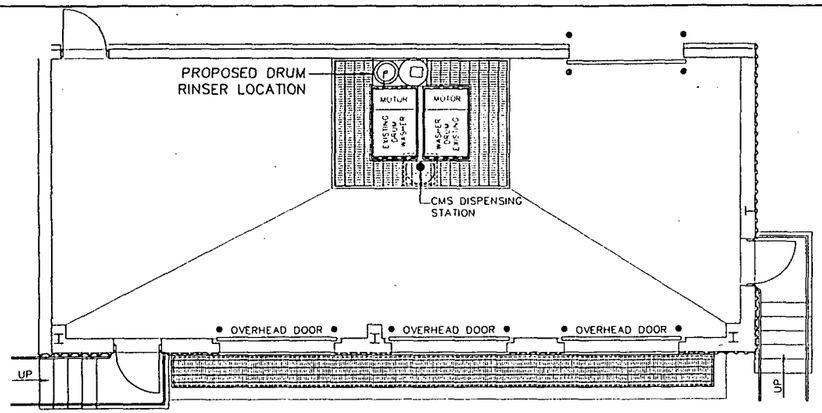
Safety-Kleen Corp.
1000 NORTH RANDALL ROAD ELGIN, ILLINOIS 60123
PHONE (847)697-8460

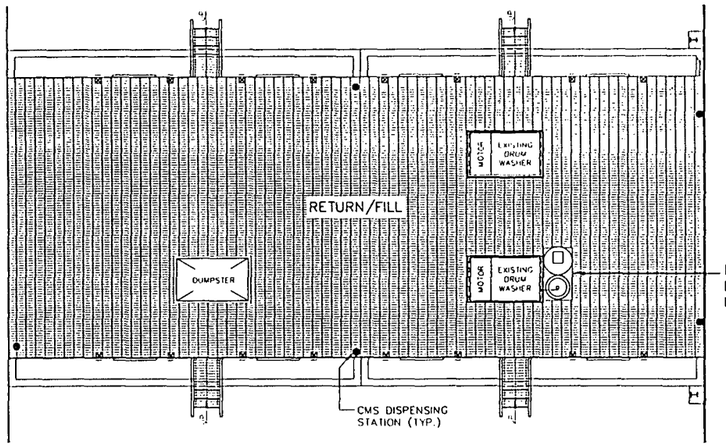
SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
1.5" = 1'-0"	MBH				030796

SERVICE CENTER STANDARDS	STD-DWG NUMBER	REV. NO.
FABRICATION	BSD-932	C

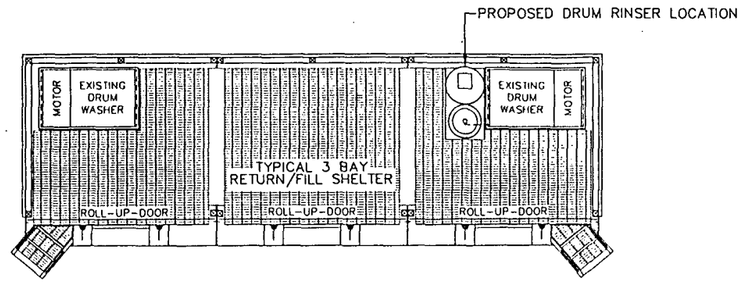
TYPICAL RETURN/FILL PLANS



RETURN/FILL BUILDING PLAN
SCALE: 3/16"=1'-0"

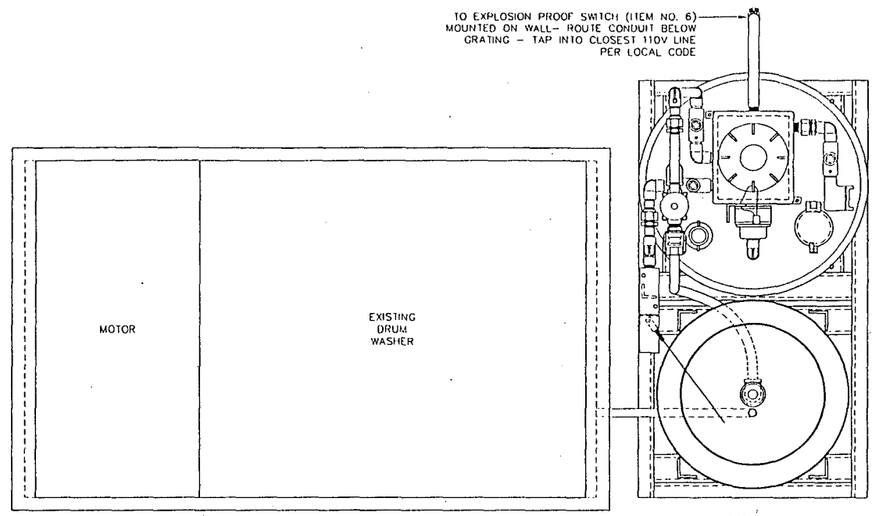


RETURN/FILL DOCK PLAN
SCALE: 3/16"=1'-0"

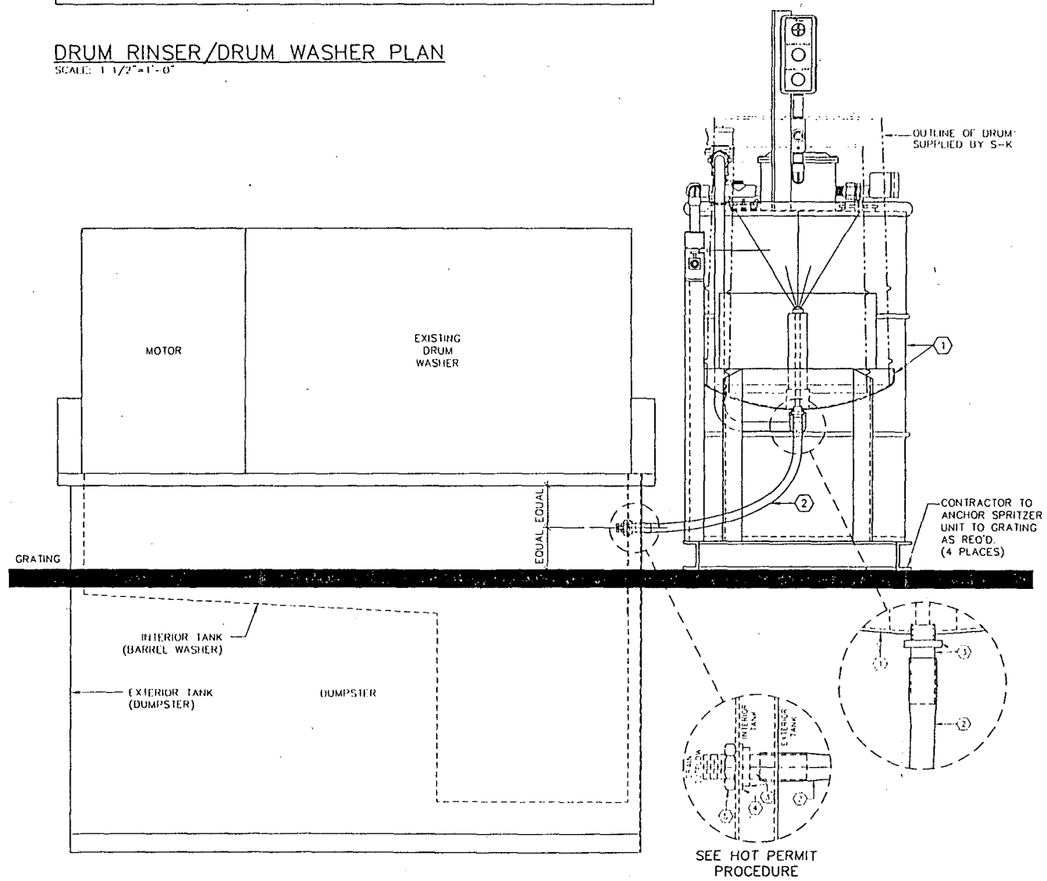


RETURN/FILL SHELTER PLAN
SCALE: 1/4"=1'-0"

TYPICAL DRUM RINSER INSTALLATION DETAILS



DRUM RINSER/DRUM WASHER PLAN
SCALE: 1 1/2"=1'-0"



DRUM RISER/WASHER FRONT ELEVATION
SCALE: 1 1/2"=1'-0"

GENERAL NOTES

1.) THIS FACILITY IS FOR THE STORAGE AND HANDLING OF CLASS IB, CLASS II & CLASS IIIA & IIIB LIQUIDS.
2.) CONTRACTOR TO VERIFY EXISTING SITE CONDITIONS.
3.) CONTRACTOR TO PROVIDE A COMPLETE SYSTEM.
4.) *UNLESS NOTED OTHERWISE ALL ITEMS REQ'D. FOR* INSTALLATION SHALL BE SUPPLIED BY CONTRACTOR.
5.) SEE THE EQUIPMENT SCHEDULE FOR A LIST OF S-K SUPPLIED ITEMS.
6.) CONTRACTOR TO CUT 30"L. x 3/4"ø HOSE (ITEM 2) AS REQ'D. TO PROVIDE SMOOTH ARC. IF LONGER HOSE IS REQ'D. CONTRACTOR TO SUPPLY A NEW LONGER HOSE.
7.) CONTRACTOR TO TIE INTO EXISTING 110V ELECTRICAL SYSTEM AS REQ'D. PER CODE.
8.) CONTRACTOR TO CONSULT W/ THE LOCAL BRANCH MANAGER REGARDING THE FINAL LOCATION OF THE DRUM RINSER UNIT.
9.) CONTRACTOR TO MOUNT EXPLOSION PROOF SWITCH (ITEM NO. 6) ON WALL AS REQ'D.

HOT PERMIT PROCEDURE

1.) CONTRACTOR HARDWARE:
  A.) HOLE SAW ARBOR WITH 1/4" PILOT DRILL
  B.) 1 3/4" HOLE SAW
  C.) 1 1/8" HOLE SAW
2.) PROCEDURE:
  A.) USE SAW ARBOR TO DRILL 1/4" PILOT HOLE THRU EXTERIOR AND INTERIOR TANKS
  B.) WITH ARBOR AND 1 3/4" HOLE SAW, CUT HOLE INTO EXTERIOR TANK.
  C.) WITH ARBOR AND 1 1/8" HOLE SAW, CUT HOLE INTO INTERIOR TANK.

EQUIPMENT SCHEDULE

TAG	DESCRIPTION	QTY	REMARKS
1	SPRITZER UNIT SEE DWG. BSD-932	1	SUPPLIED BY S-K INSTALLED BY CONTRACTOR
2	30"L. x 3/4"ø HOSE	1	SUPPLIED BY S-K INSTALLED BY CONTRACTOR
3	HOSE BARB	2	SUPPLIED BY S-K INSTALLED BY CONTRACTOR
4	GASKET	1	SUPPLIED BY S-K INSTALLED BY CONTRACTOR
5	NUT	1	SUPPLIED BY S-K INSTALLED BY CONTRACTOR
6	EXPLOSION PROOF SWITCH	1	SUPPLIED BY S-K INSTALLED BY CONTRACTOR SEE GEN. NOTE 9

REVISIONS

NO.	DESCRIPTION	BY	CHK	APPR	DATE
A	RELEASED TO BJ FOR REVIEW	MBH			030796
B	UPDATED GEN NOTES (3, 6, 7, 8&9) UPDATED EQUIP. SCHED. (3 & 6) BEND ELEC. CONN. VERT & DOWN AND UPDATED ARROW REF. CHANGED DWG. TITLE DRUM RINSER WAS SPRITZER REMOVED ALTERNATE LOC. DRUM WASHER WAS BARREL WASHER	MBH			032296

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TITLE

DRUM RINSER (SPRITZER) INSTALLATION DETAILS & TYPICAL R/F LOCATION PLANS

Safety-Kleen Corp.
1000 NORTH RANDALL ROAD ELGIN, ILLINOIS 60123
PHONE (847)697-8460

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
AS NOTED	MBH	KJM	DDD	RJ/WJ	030796

SERVICE CENTER STANDARDS	STD-DWG NUMBER	REV. NO.
FABRICATION	BSD-933	B

Appendix J

Subpart BB Information

safety-kleen corp.

MEMORANDUM

SUBJECT: RCRA Air Emission Standards
Immediate Action Required

DATE: December 17, 1990

TO: Branch Managers

FROM: Ellen Jurczak

cc: Reg. Engrs.
Rick Peoples
Anita Pendry
Jennifer Jendras
Melissa Hlebasko
Reg. Mgrs.
Div. V.P.'s
Bill Heyn
Dan Dowling

On December 21, 1990, new EPA rules take effect which regulate air emissions from equipment (such as pumps and valves) used to manage hazardous wastes. Included are requirements for equipment marking and identification, inspection, recordkeeping and specific repair procedures.

Enclosed are some new inspection forms which you must complete to comply with these rules. An explanation of the forms follows:

1. Equipment Inventory Form

This form must be completed and kept in file 1070 (with a copy sent to EHS, Elgin). SITE PLANS SHOWING THE I.D. NUMBER AND LOCATION OF ALL EQUIPMENT WILL BE SENT TO YOU BY TECH SERVICES. Each valve and pump which is associated with the hazardous waste tank(s) (i.e. from the dumpster/barrel washer to the tank and from the tank to the fill pipes) must be marked and listed on this form. The site plan shows the location and newly assigned (by Tech Services) I.D. numbers of all the equipment. You should verify this information to make sure it is correct and use the same I.D. numbers when completing the inventory forms. Tags are used to mark the equipment with its I.D. number. In the column headed Hazardous Waste Management Unit, enter "storage tank". If there are two tanks at the branch, (e.g. waste mineral spirits and waste antifreeze) differentiate between the two for equipment which is only associated with one tank. In the columns headed Pump Description or Valve Type, enter a descriptive term such as spent solvent pump, dumpster shutoff valve, gate valve or check valve.

2. Revised Facility Inspection Record

An additional page has been added to the facility inspection record (file 1210) for the daily inspection of equipment. You should begin using it on December 21, 1990. If a potential leak is discovered (by visual evidence or excessive odor) note it as "N" on the form and follow procedures in #3 below.

3. Leak Detection and Repair Record

After detection of a potential or actual leak, a pump or valve must be monitored with a photoionizer-type instrument within five days. If the instrument reading is 10,000 ppm or greater, a leak is confirmed and a repair must be made within 15 days. Contact your Regional Environmental Engineer immediately to arrange for the equipment to be monitored by a local environmental consultant.

The third form must only be completed for each potential or actual leak detected. The piece of equipment must be tagged with the I.D. number, date of potential or actual leak detection and date of leak confirmation. Tags may be obtained from Tech. Services. After a valve has been repaired, it must be monitored monthly by a consultant using a photoionization detector. After two successive months with no leak detection, the identification may be removed and monitoring discontinued. For other equipment, such as pumps, the tag may be removed after a successful repair. This form must be kept in a new file (1220.2 - Leak Detection and Repair Record).

EQUIPMENT INVENTORY

TO BE FILLED OUT AT THE BRANCH AND KEPT IN THE OPERATING RECORD (FILE 1070) WITH THE SITE PLAN AND PUMP AND VALVE LIST

Listed on the attached pump list and valve list is all equipment at the facility which is subject to the requirements of 40 CFR 264 and 265, Subpart BB. The equipment is also identified on the attached site plan.

The hazardous waste influent to and effluent from the hazardous waste management unit(s) is spent mineral spirits (D001, D004-D011, D018, D019, D021-D030 and D032-D043). Tanks are used for storage of spent mineral spirits which is usually 100% by weight organic. The vapor pressure of mineral spirits at 68^{O} F is 0.27 kPa (equivalent to 2 mm Hg - see MSDS and the attached EPA guidance document page). The waste stream has a vapor pressure equal or lower than that of the clean mineral spirits due to contamination during use with oil, grease and sediment and it is in a liquid state at the equipment, so all equipment is in contact with materials defined as heavy liquid under the cited regulations.

Equipment associated with the waste antifreeze tank(s) is also in heavy liquid service. Ethylene glycol has a vapor pressure at 68^{OF} of .08 mm Hg or 0.01 kPa and is usually 100% organic.

Compliance with the standard (264.1058) will be achieved through daily facility inspections, and if required, leak detection monitoring and repair. The facility inspection record has been updated to include a detailed daily equipment inspection. Records of equipment monitoring and repair are maintained on a separate form in the operating record.

LEAK DETECTION AND REPAIR RECORD

EQUIPMENT I.D.# _____ BRANCH #_____
DESCRIPTION_____

	DATE	INSPECTOR'S SIGNATURE
HOW WAS POTENTIAL OR ACTUAL LEAK DETECTED?_____	_____	_____
DESCRIBE THE POTENTIAL OR ACTUAL LEAK:_____ _____		
INSTRUMENT MONITORING WITHIN FIVE DAYS	_____	_____
(1.) RESULTS_____		
REPAIR ATTEMPT METHOD_____	_____	_____
(2.) RESULTS_____		
REPAIR ATTEMPT METHOD_____	_____	_____
(3.) RESULTS_____		
DATE OF SUCCESSFUL REPAIR (must be completed w/in 15 days)	_____	_____
METHOD_____		
(4.) RESULTS_____		
FOLLOWUP MONTHLY MONITORING FOR VALVES		
(5.) RESULTS_____	_____	_____
(6.) RESULTS_____	_____	_____

MONITORING SUMMARY

	(REFERENCE NUMBER - SEE ABOVE)					
	(1)	(2)	(3)	(4)	(5)	(6)
INSTRUMENT #/OPERATOR	___	___	___	___	___	___
CALIBRATION	___	___	___	___	___	___
BACKGROUND READING	___	___	___	___	___	___
READING AT EQUIPMENT	___	___	___	___	___	___
LEAK DETECTED?	___	___	___	___	___	___

ATTACH ANY DOCUMENTATION PREPARED BY THE CONSULTANT

INSPECTION LOG SHEET FOR: Daily Inspection List of EQUIPMENT

INSPECTOR'S NAME/TITLE: _____

INSPECTOR'S SIGNATURE: _____

	MON	TUES	WED	THURS	FRI
DATE: (M/D/Y)	____	____	____	____	____
TIME:	____	____	____	____	____

Pump or Valve Number

1	A* N	A N	A N	A N	A N
2	A N	A N	A N	A N	A N
3	A N	A N	A N	A N	A N
4	A N	A N	A N	A N	A N
5	A N	A N	A N	A N	A N
6	A N	A N	A N	A N	A N
7	A N	A N	A N	A N	A N
8	A N	A N	A N	A N	A N
9	A N	A N	A N	A N	A N
10	A N	A N	A N	A N	A N
11	A N	A N	A N	A N	A N
12	A N	A N	A N	A N	A N
13	A N	A N	A N	A N	A N
14	A N	A N	A N	A N	A N
15	A N	A N	A N	A N	A N
16	A N	A N	A N	A N	A N
17	A N	A N	A N	A N	A N
18	A N	A N	A N	A N	A N
19	A N	A N	A N	A N	A N
20	A N	A N	A N	A N	A N
21	A N	A N	A N	A N	A N
22	A N	A N	A N	A N	A N
23	A N	A N	A N	A N	A N
24	A N	A N	A N	A N	A N
25	A N	A N	A N	A N	A N
26	A N	A N	A N	A N	A N
27	A N	A N	A N	A N	A N
28	A N	A N	A N	A N	A N
29	A N	A N	A N	A N	A N
30	A N	A N	A N	A N	A N
31	A N	A N	A N	A N	A N
32	A N	A N	A N	A N	A N
33	A N	A N	A N	A N	A N
34	A N	A N	A N	A N	A N
35	A N	A N	A N	A N	A N
36	A N	A N	A N	A N	A N
37	A N	A N	A N	A N	A N
38	A N	A N	A N	A N	A N
39	A N	A N	A N	A N	A N

If "N", enter pump or valve # _____ and circle appropriate problem: potential leak, actual leak, sticking, wear, does not operate smoothly, other: _____ .

For all leaks and potential leaks, the Leak Detection and Repair Record must be completed.

* A = ACCEPTABLE
N = NOT ACCEPTABLE

Draw a line through valve and pump I.D. numbers which do not apply.

FLANGE LIST

PAGE

DATE

BRANCH #

PREPARER'S SIGNATURE

SIZE	INDIVIDUAL NUMBER	TYPE	HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION
				Refer to site plan