Hazardous Waste Facility Operating Permit Renewal Application

Safety-Kleen Systems, Inc.
8755 Northwest 95th Street
Medley, Florida

FLD 984171694

Prepared For:

Safety-Kleen Systems, Inc.
Medley, Florida

Prepared By:

ERM
Tampa, Florida

ERM®

August 2002

Environmental Resources Management

3913 Riga Boulevard
Tampa, FL 33619-1345
(813) 622-8727
(813) 621-8504 (Fax)

August 30, 2002
Project No. SAFKLN 49301

Environmental Administrator
Hazardous Waste Regulation Section
M.S. 4560
Bureau of Solid and Hazardous Waste
Florida Department of Environmental Protection
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

RE: Safety-Kleen Systems, Inc. Medley Facility - 8755 Northwest 95th Street; FLD 984 171 694; Permit Application HO13-216311; Operating Permit Renewal Application

Dear Sir:

On behalf of Safety-Kleen Systems, Inc., Environmental Resources Management (ERM) is submitting the enclosed two copies of the above-referenced Operating Permit Renewal Application. Also enclosed is the $10,000 application fee.

A letter from the Chief Financial Officer of Safety-Kleen demonstrating the financial responsibility for closure costs through the financial test specified in Subpart H of 40 CFR Part 264, will be submitted to the Department upon completion of the application review process.

If you have any questions or comments, please contact either Matt Hedrick, Environmental, Health & Safety Manager for Safety-Kleen, at 813-626-1203, or me at 813-622-8727.

Sincerely,

Michael J. Starks, P.G.
Principal

cc: Matt Hedrick - Safety-Kleen (w/enclosure)
Mark Hicks - Safety-Kleen (w/enclosure)
Hazardous Waste Supervisor - FDEP West Palm Beach District Office (w/enclosure)
Chief, RCRA Programs Branch - U.S. EPA Region 4 (w/enclosure)

H:\se\safkln8\49301\permit app cover letter

RCRA OPERATING PERMIT RENEWAL APPLICATION

Safety-Kleen Systems, Inc.
Medley Branch Service Center
8755 Northwest 95th Street
Medley, Florida

August 2002

Prepared for:

Safety-Kleen Systems, Inc.
1301 Gervais Street
Columbia, South Carolina 29201

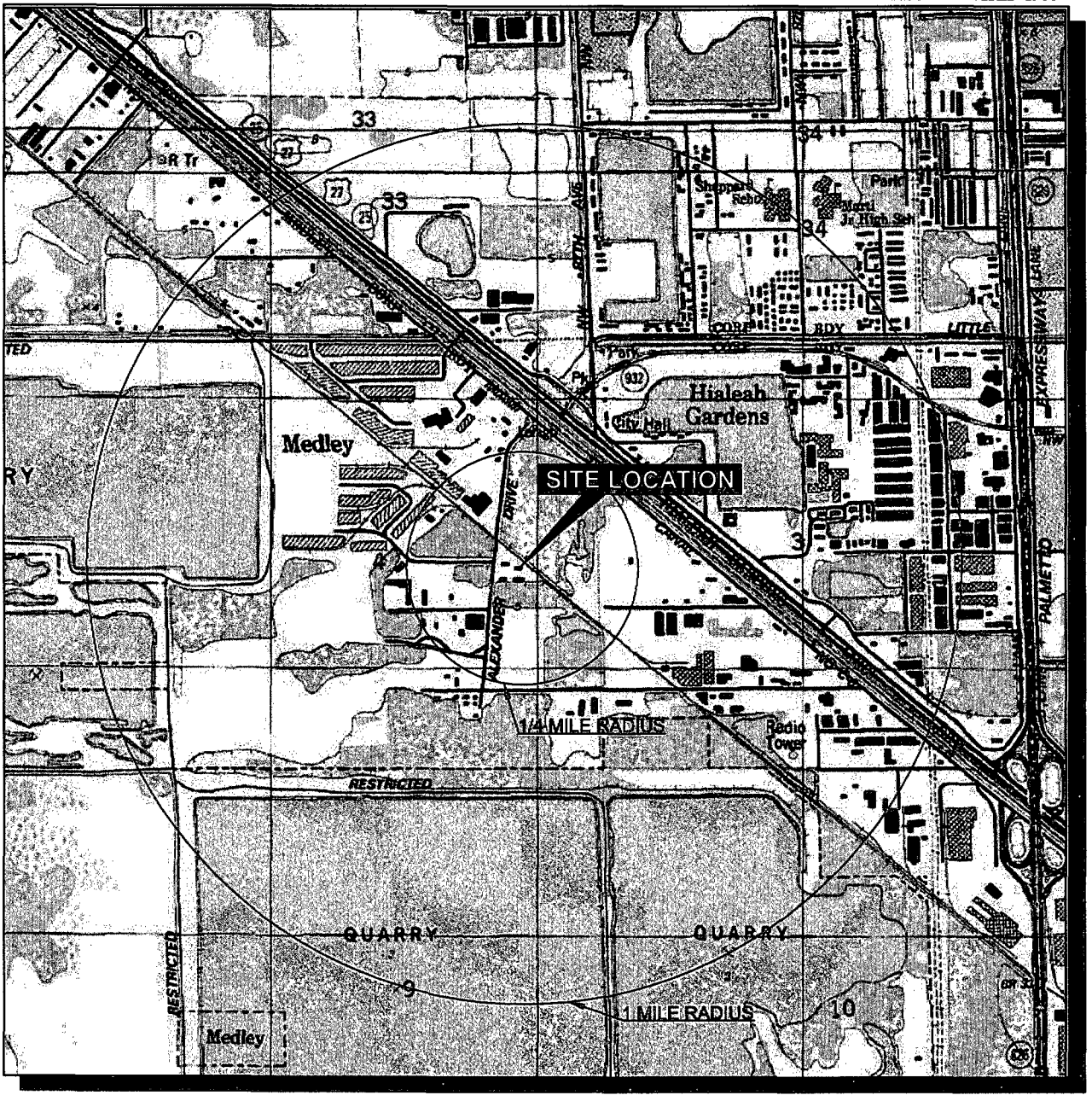
Environmental Resources Management
3913 Riga Boulevard
Tampa, Florida 33619-1345

TABLE OF CONTENTS

Revision 0 - 08/08/02

FIGURE 2.2–1
Topographic Map
Safety–Kleen Systems, Inc. Facility
Medley, Florida

HIALEAH QUADRANGLE
FLORIDA-DADE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
PHOTOREVISED 1988



T. 53 S.

R. 40 E.

QUADRANGLE LOCATION

N

0 2,000

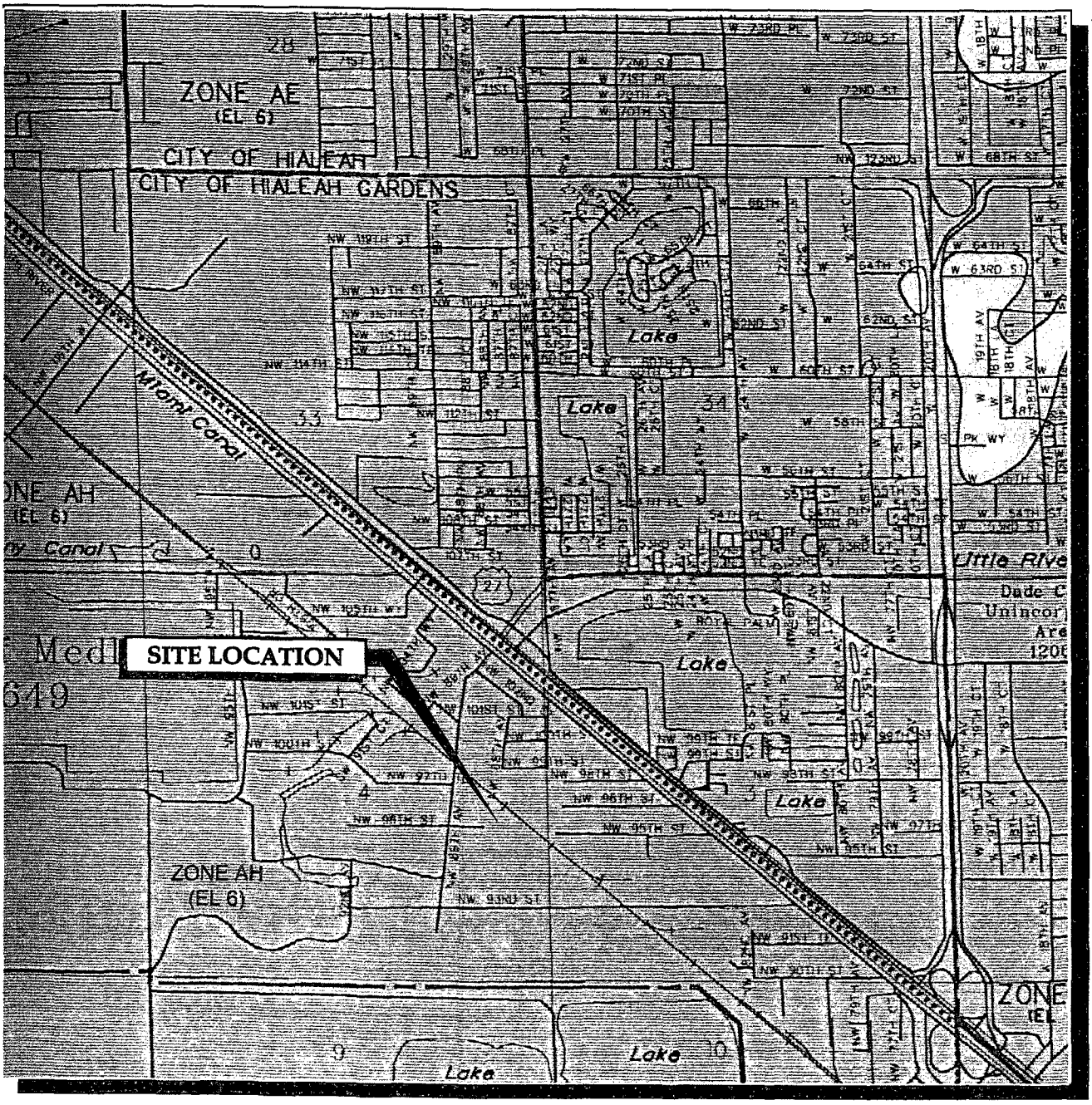
APPROXIMATE SCALE
(FEET)

9301SAFKLN/TOPO

ERM.

FIGURE 2.2-2
SITE LOCATION MAP
SAFETY-KLEEN SYSTEMS, INC. FACILITY
MEDLEY, FLORIDA

Revision 0 – 08/08/02



OBTAINED FROM FEMA FLOOD INSURANCE RATE MAP, DADE COUNTY, FLORIDA. MAP NUMBER 12025C0075J, FEMA MAP REVISED: MARCH 2, 1994

N

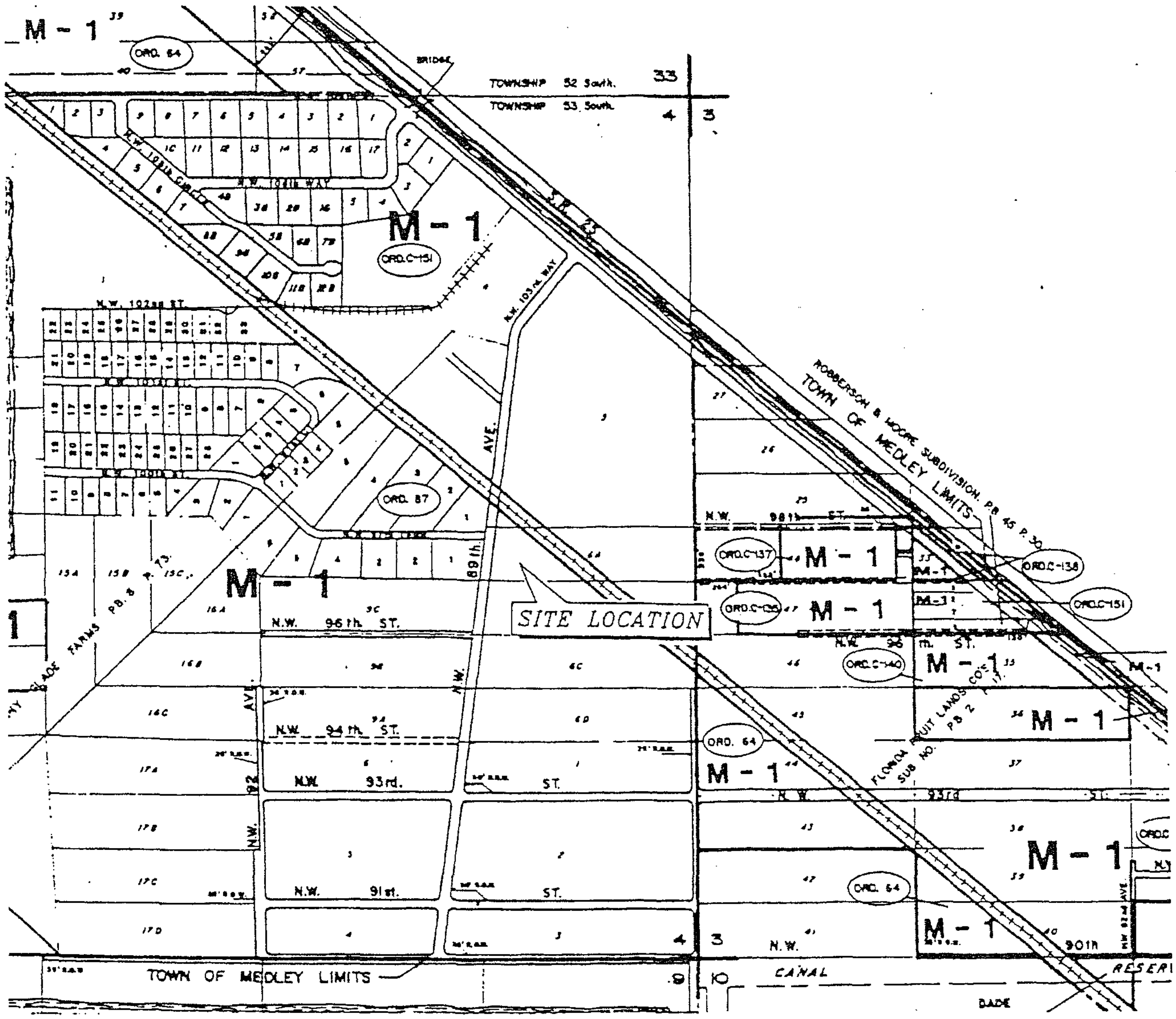
0 2,000

APPROXIMATE SCALE (FEET)

9301SAFKLN\SITELOCATION

ERM.

Figure 2.2-3
Surrounding Land Use Map
Safety-Kleen Systems, Inc. Facility
Medley, Florida



N

0 1000

FEET

LEGEND

M-1 LIGHT MANUFACTURING INDUSTRIAL DISTRICT

Source: Howard Needles Tammen & Bergendoff, Miami, Florida, September 1986.

outdated source
any Δ since '86?

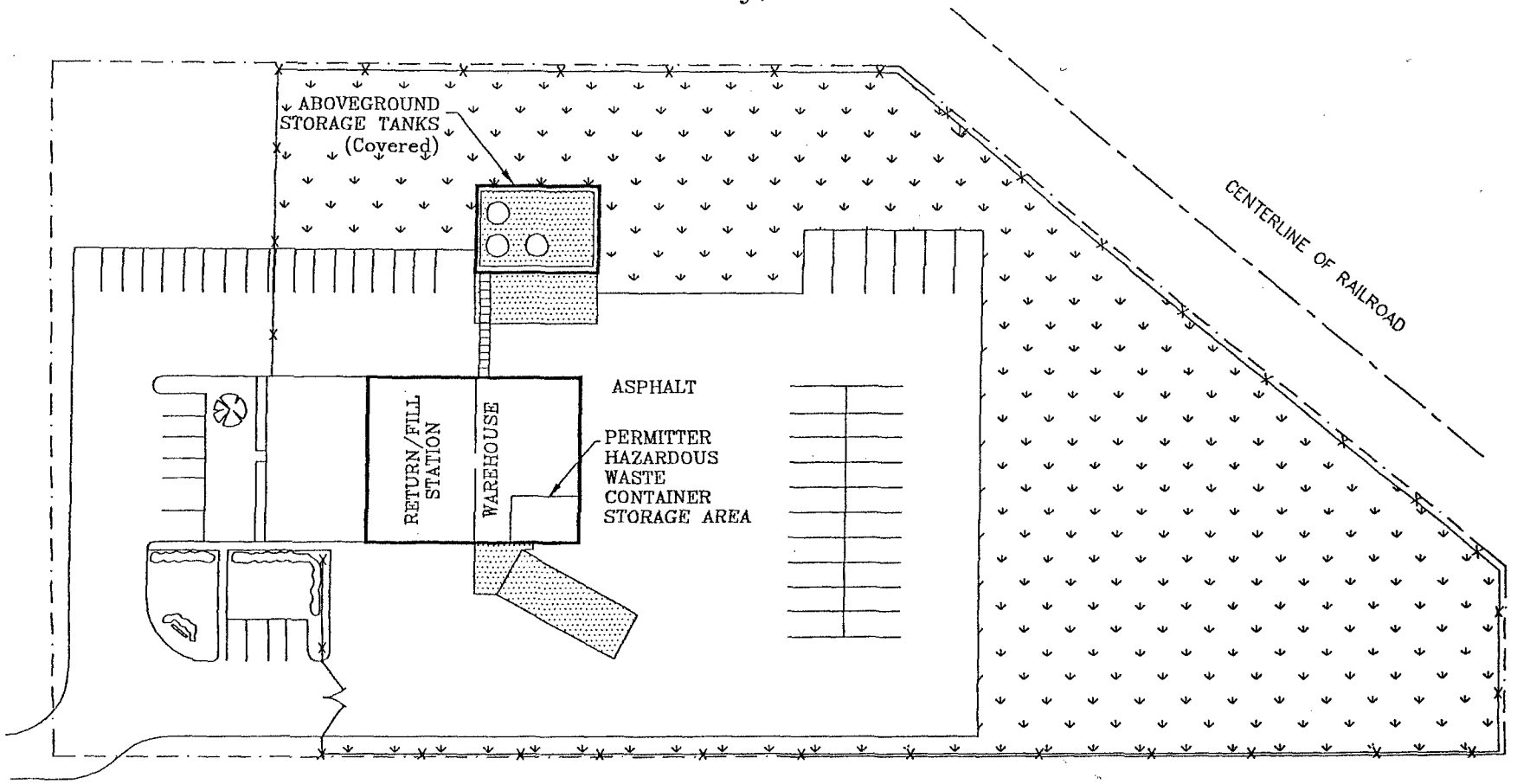
311.21/landuse/042897

ERM

311.21 31121-PM 042897-1

Figure 2.2-4
Legal Boundaries
Safety-Kleen Systems, Inc. Facility
Medley, Florida

Revision 0 – 08/08/02



LEGEND

- PROPERTY BOUNDARY
- CHAIN-LINK FENCE
- HAZARDOUS WASTE MANAGEMENT AREAS
- CONCRETE
- GRASS
- ABOVEGROUND STORAGE TANKS

N

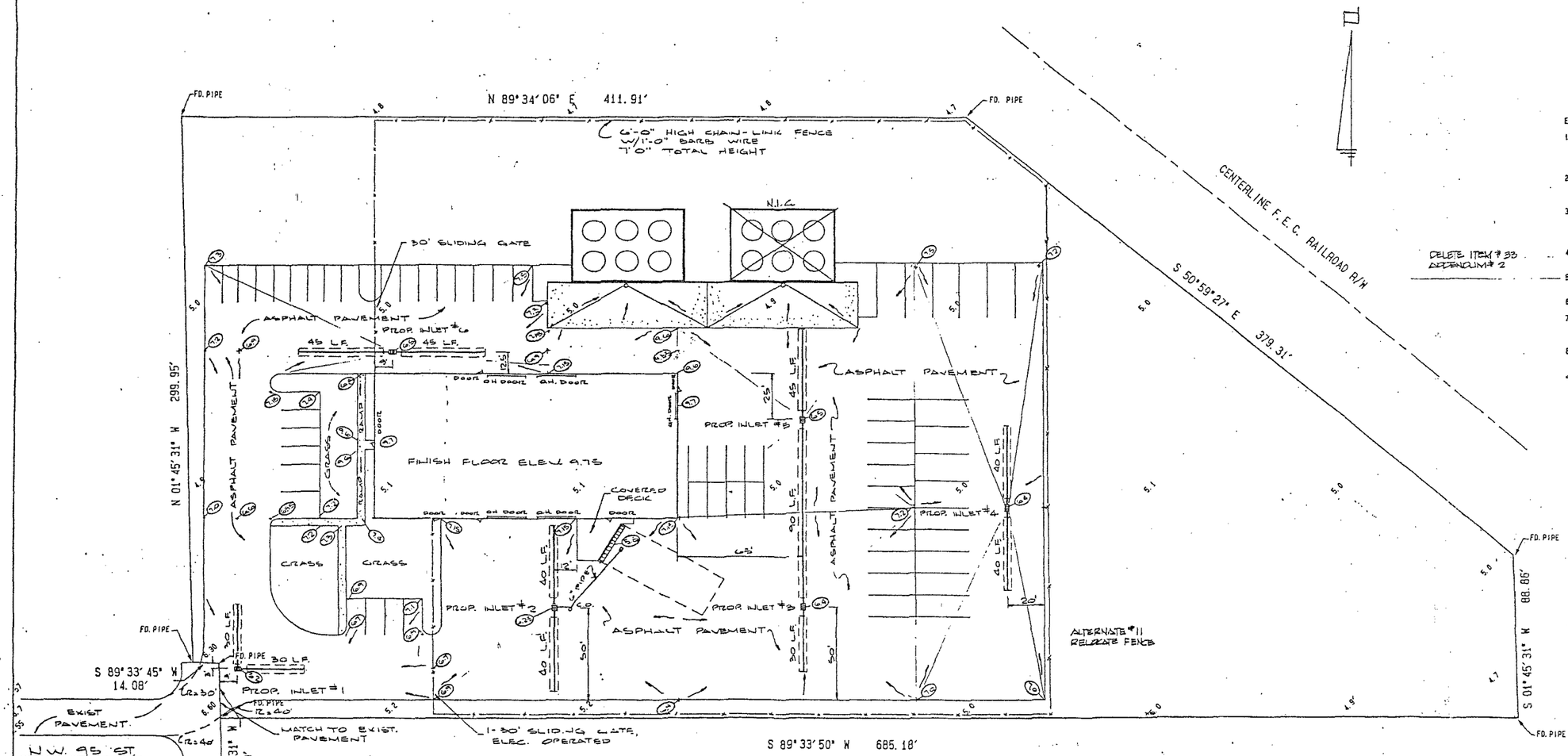
0 APPROXIMATE SCALE 80

FEET

ERM

PERMIT

Figure 2.2-5
Drainage Plan



ENGINEER'S NOTES:

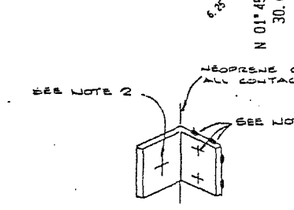
1. All materials and labor shall conform to Dade County Public Works standards and specifications, and to Florida Department of Transportation standards and specifications where appropriate.
2. Contractor shall verify acceptable utilities in the field by calling underground utility notification center 1-800-432-4770 prior to digging.
3. Fill shall be locally acceptable and suitable for fill purposes. Fill shall be compacted to 95% of Maximum density as determined by AASHTO T-180 test reports shall be submitted to the architect and owner.

DELETE ITEM # 33 ADDENDUM # 2

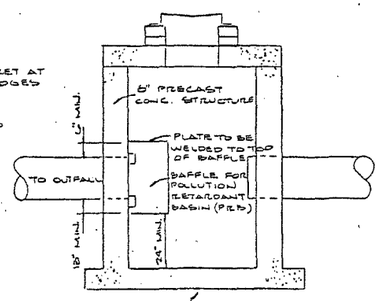
4. ~~PAVEMENT, CONCRETE FOR DRIVE AND SIDEWALK SURFACE COURSE, BASE, UNDER GROUND, OR UNDERDECK SLABS.~~
5. ~~Concrete shall have a minimum compressive strength of 4000 PSI in 28 days. Portland cement shall be Type I.~~
6. Elevations shown are referred to NGV Datus.
7. Any apparent discrepancies in the plans and field conditions shall be brought to the attention of the engineer before proceeding with the work.
8. Dade County Flood Criteria: Elevation 8.7
   Fema Flood Zone "AH", Elevation 8
9. SEEPAGE STRUCTURES SHALL BE A FRENCH DRAIN (SD. 1.1) WITH 15" PERFORATED CMP INVERT OF PIPE TO BE AT ELEVATION S.D. BOTTOM OF TRENCH TO BE 15 DEEP TRENCH WIDTH TO BE 5'0", PROVIDE MASONRY PLUG AT END OF TRENCH.

5.2 INDICATES EXISTING ELEVATION

(6.0) INDICATES PROPOSED ELEVATION

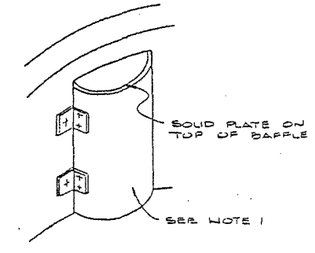


BRACKET DETAIL



CATCH BASIN PER DCPWD DETAIL SD. 2.6, MINIMUM SIZE 3.5 FT. BY 4.0 FT SQUARE.

TYPICAL CATCH BASIN



BAFFLE DETAIL

NOTES FOR P.R.B. BASIN

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

C-2

SAFETY-KLEEN SYSTEMS, INC.
DRAINAGE PLAN

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

No.	Date	Apvd.	J.H.	F.B.	Revision Description
1	9/12/90				COMMENTS PER W.H.

Professional Land Surveyor No.
Professional Engineer No. 31795
State of Florida

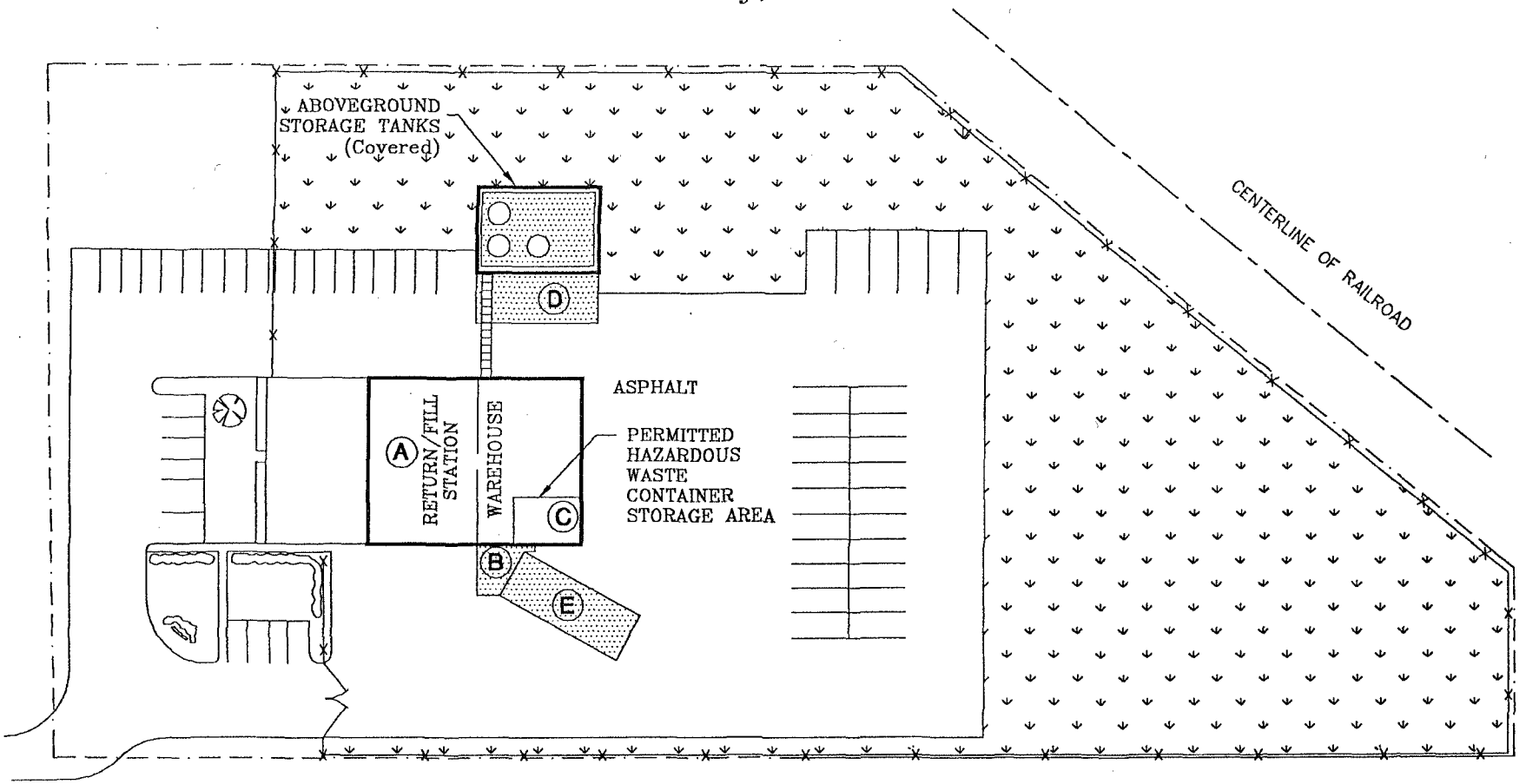
Drawn by: GZ | Ref.
Des. by: GZ | J.N. 41021 | F.B. FILE
Chk. by: TB | Scale: 1"=30' | Date: JULY 1990

Sheet 2 of 3
Sk. No. P-423

311.21 31121-PM 042897-1

Figure 2.2-6
Locations of Hazardous Waste Storage Areas
Safety-Kleen Systems, Inc. Facility
Medley, Florida

Revision 0 – 08/08/02



LEGEND

- PROPERTY BOUNDARY
- CHAIN-LINK FENCE
- HAZARDOUS WASTE MANAGEMENT AREAS
- CONCRETE
- GRASS
- ABOVEGROUND STORAGE TANKS

(A) PARTS WASHER SOLVENT DRUM DUMP/BARREL WASH/REFILL (TRUCKS DO NOT DRIVE THROUGH BUILDING)

(B) LOADING & UNLOADING OF DRUMS CONTAINING SOLVENTS AND WASTES FRS (TRANSFER) FROM TRUCKS

(C) LOADING & UNLOADING OF CONTAINERIZED WASTE FROM LOCAL AREA VANS & TRUCKS

(D) LOADING & UNLOADING OF PARTS WASHER SOLVENT (COVERED DRIVEWAY) AND ETHYLENE GLYCOL, USED OIL, AND OILY WASTEWATER

(E) TANK TRUCK TO TANK TRUCK TRANSFER OF USED OIL

N

0 APPROXIMATE SCALE 80

FEET

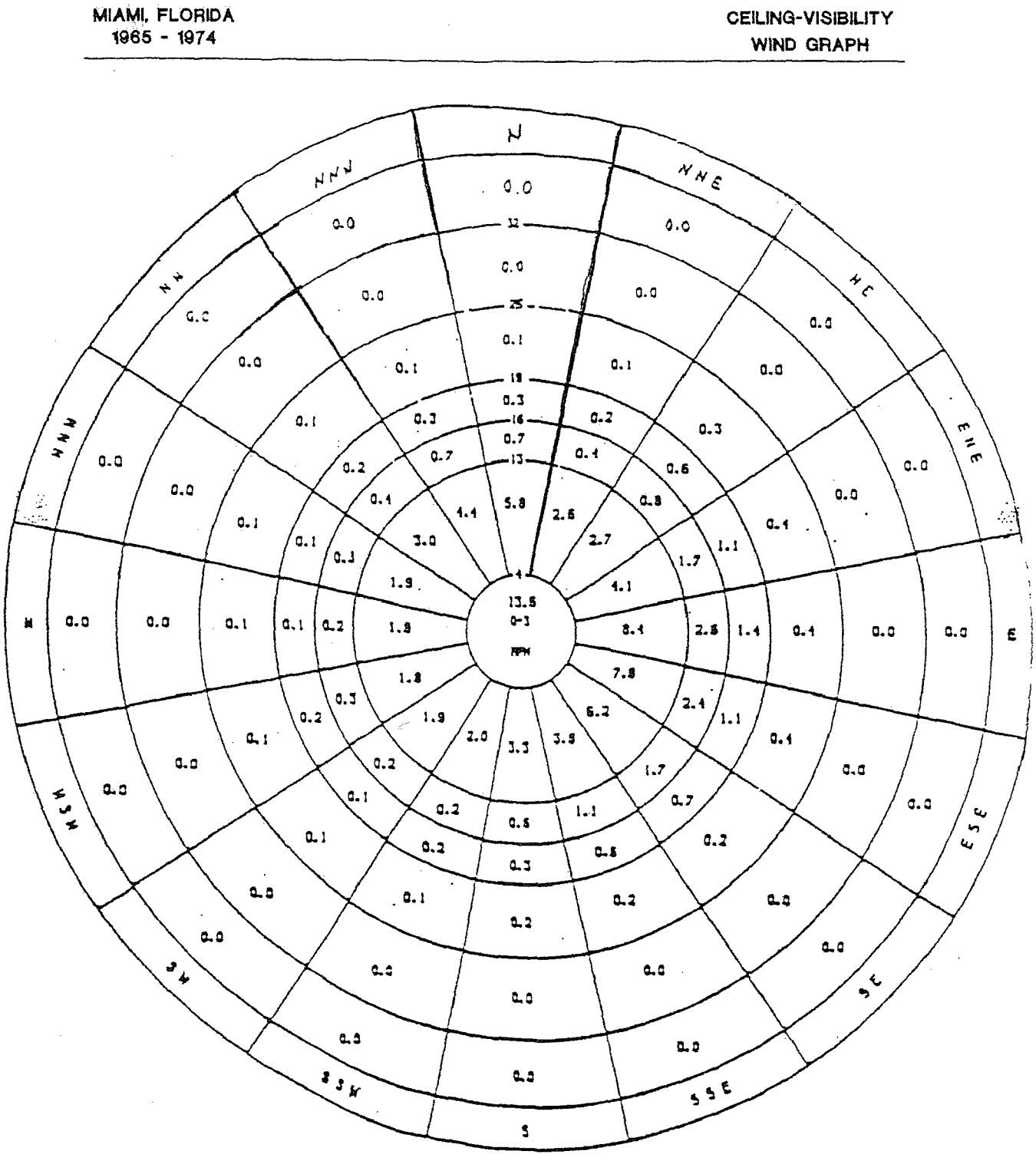
base,border,mw,swmu,fig2-2-5

ERM

PERMIT

Revision 0 – 08/08/02

Figure 2.2-7
Wind Rose
Safety-Kleen Systems, Inc. Facility
Medley, Florida



Source: NOAA National Oceanic and Atmospheric Administration

311.21/windrose/042897

ERM

3.0 FINANCIAL ASSURANCE FOR CLOSURE

Safety-Kleen is the operator of the Medley, 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).

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 entire facility is surrounded by an approximately eight-foot-high fence. The fence consists of six feet of chain-link topped by approximately two feet of barbed wire.

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 5.0

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

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

EMERGENCY PHONE NUMBERS

Emergency Coordinators

Primary:
Mark Hicks
677 SW 111th Avenue
Pembroke Pines, FL 33025
Home: (954) 392-1281
Office: (305) 884-0123
Cell: (651) 352-5105

Alternate:
Jennifer Sager
20012 NE 6th Court
North Miami, FL 33179
Home: (305) 770-2696
Office: (305) 884-0123
Cell: (305) 250-0889

Emergency Notification Phone Numbers

3E Company (Safety-Kleen's 24-Hour Emergency Reporting System)
1-800-468-1760

State Warning Point (24 hours)
(850) 413-9911 or 1-800-320-0519

Florida DEP - Southeast District
400 N. Congress Avenue
West Palm Beach, FL 33401
(561) 681-6600 (Monday-Friday, 8:00 am to 5:00 pm, except Holidays)

If you are unable to contact the DEP at the numbers above, please call:
National Response Center 1-800-424-8802

South Florida Water Management District
(561) 686-8800

Miami-Dade County Environmental Resources Management, Mr. Mike Graham: (305) 375-3376 (24 hrs)

Emergency Team to be Notified

Miami-Dade Fire and RescueDepartment
10200 NW 116th Way
Medley, FL 33178
911

Florida Spill Response
P. O. Box 1847
Cocoa, FL 32923-1847
800-237-7012
Primary Contractor

Medley Police Department
7331 NW 74th Street
Medley, FL 33166
(305) 883-2047 or 911

ACT, Inc.
1875 W. Main Street
Bartow, FL 33830-7718
800-226-0911
Secondary Contractor

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

5.0 *PREPAREDNESS, PREVENTION, CONTINGENCY PLAN, AND EMERGENCY PROCEDURES FOR DAILY BUSINESS OPERATIONS*

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 Medley 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. Two 20,000-gallon fresh parts washer solvent storage tanks currently are utilized at the facility. In addition, a 20,000-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, paint waste, Fluid Recovery Services (FRS) wastes, and dry cleaning wastes (chlorinated and nonchlorinated solvent). 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 20,000-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 Medley 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 Medley facility as transfer waste. All naphtha-based dry cleaning waste is shipped to a Safety-Kleen recycle center.

Sep H_2O ?

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 to a permitted recycling facility, in accordance with FDEP's *Florida Fact Sheet on the Best Management Practices for Managing Antifreeze Destined for Recycling,* dated August 5, 1996.

How/who recycled? How s/s + antifreeze separated?

Safety-Kleen also provides a paint waste reclamation service. Wastes containing various thinners and paints are collected in containers and are stored at the south building

permitted storage area. 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.

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.

Dedicate sections for HW and non-HW?

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) 62-737.400. 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 62-737.400(5)(b), 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.

- 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. In addition, measure the depth of used solvent in the tanks to confirm the proper functioning of the automatic alarm system and to determine unexpected deviations in tank measuring data, or a sudden drop in liquid level, which may indicate leakage.
- 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.

Also, the tanks will be visually inspected and tested periodically.

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 State Warning Point at (850) 413-9911 (24 hours).

- The coordinator must immediately notify the Southeast District of the FDEP, (561) 681-6600 during regular business hours, 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 Safety-Kleen emergency number ((800) 468-1760). The 24-hour emergency number identified as 3E Company 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 3E Company. 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 Southeast District of the FDEP, at P.O. Box 15425, West Palm Beach, Florida 33416 (mailing address) or 400 North Congress Avenue, West Palm Beach, Florida 33401 (physical address). 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 return it to dirty storage. 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.

are pads / 2° cont. lined for perc? and paint?

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.

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 the 24-hour Safety-Kleen emergency line ((800) 468-1760). If a representative of Safety-Kleen's Environmental Department does not respond within 30 minutes, the emergency coordinator should call the State Warning Point ((850) 413-9911), or the National Response Center ((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

Containers are stored in the container storage area. The storage area is totally contained by a concrete floor and the container area's four walls (Figure 5.6-3). The containment system is free of cracks. Containers are stored on pallets whenever possible.

The floor has a two-inch inward slope (four sides) that will direct a spill toward the collection trench located in the center of the room (Figure 5.6-3). Seven openings (doorways) in the containment area exist. Four of these lead to other containment areas; the return/fill station and the enclosed concrete dock. The other three openings (doorways) are located on the east and north side of the warehouse and lead to driveways and the parking lot. The containment system was measured to have a capacity of 2,996 gallons. Due to the volume of containment available and the configuration of the containment area, it is highly unlikely that any spill would extend beyond this area.

In the container storage area, containers are handled with a fork-lift and/or a hand-truck free of sharp points and stacked by hand. Every time a container is moved, the possibility exists that it will be tipped over, dropped, or punctured. To minimize the possibility of spillage, container lids secured and containers are 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 a lift gate or an electric hoist. The appropriate device is used in the loading/unloading operation to minimize chances for spillage and/or employee injury. Containerized wastes at the Medley facility are loaded/unloaded in the vicinity of the contained concrete dock on the southeast side of the building (Figure 5.1-2).

Because these areas are fully enclosed, spills originating in these areas should not come in contact with stormwater.

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 propane-fueled forklift truck. Therefore, power outages are not expected to threaten employee safety.

Return/Fill Station

The return/fill station is located in the building between the office and container storage area. A slight, nondetectable slope (three inches) exists, which terminates at the sumps (2' long, 2' wide, and 2' deep). The sloped floors and containment sump were measured to have a containment capacity of 3,693 gallons. A 20-foot wide steel grate dock (approximately 33 inches above the floor) is located perpendicular to the floor and extends the full width of this area (Figure 5.6-4). Any spill which occurs on the concrete floor is directed by gravity into the sumps. Any residual remaining on the floor can be cleaned up immediately through the use of mops, wet/dry vacuums, or sorbent materials, should a spill occur. Spilled waste is contained and sent for recycling/reclamation. Doors in this area include four overhead roll-up doorways for trucks entering/exiting the service building, two personnel doorways for employees entering/exiting the service building, one overhead doorway connecting the return/fill station and container storage area (warehouse), one doorway connecting the return/fill station and the container storage area, and one doorway connecting the return/fill station and the offices. The office floor and the container storage area floor are approximately 33 inches above the return/fill station floor and are flush with the steel grate dock. Therefore, spills originating in the return/fill station will go into the sump beneath the grate in the return/fill area and will not flow into these areas. Based on the capacity of the return/fill station collection sumps and sloped floor, it is extremely unlikely that a spill would escape through the overhead doorways or two doorways entering/exiting the service building. The area just outside the service building return/fill station is asphalt covered.

Because the return/fill station is fully enclosed and the pavement outside this area is sloped to carry water away from the building, spills originating in this area should not come in contact with stormwater.

Tank Area

The tank area (Figure 5.6-5) with capacity for six 20,000-gallon tanks and their associated displacement taken into account, is provided with more than 20,000 gallons of secondary containment which is in excess of the single largest tank (20,000 gallons). This secondary containment capacity is based on the presence of six tanks. Only three tanks are currently installed. This containment area is only slightly sloped. Any spilled material is removed by pump or wet vacuum. The tanks loading/unloading area is a concrete pad. This concrete pad has a slight slope directed to a sump. When rainwater accumulates in the containment area, and it has been verified that no spill has occurred, then the 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 or the water exhibits an iridescent sheen, then the rainwater will be pumped into the used parts washer solvent tank. Any spills which occur on the pad will be 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 will be disposed of as an industrial 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 Safety-Kleen spill number. 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 City of Medley supplies water for domestic use, decontamination, and fire fighting. The water pressure supplied by the City of Medley was inadequate for fire fighting purposes, so a booster pump has been installed at the facility. The fire protection system was installed and certified by the installation contractor in accordance with applicable fire codes.

Pails, hoses, and detergents are the primary equipment that will be used for decontamination. 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.

[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

Incompatible wastes are segregated in an appropriate manner in accordance with industry standards. 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 stormwater 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 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:

    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 as well as sorbent suppliers 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 A 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.

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**	813	D001 and D-Codes Listed in Note Below
Branch-Generated Liquids/Solids (Debris)	S01*	8	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005
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*	28	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*	69	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.

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

* This waste will be stored in containers in the container storage area. The maximum capacity in the container storage area for hazardous waste and product is 29,400 gallons, with 6,912 gallons being waste.

** The spent parts washer solvent storage tank has a capacity of 20,000 gallons and may be filled up to 19,000 gallons.

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

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	9
Fire Extinguisher	ABC	Tank Storage Area	1
Eyewash	Fountain	Container Storage Area	1
Eyewash	Fountain	Return/Fill Shelter	1
First-Aid	Standard	Container Storage Area	1
Telephones	Standard	Manager's Office	1
Telephones	Standard	Secretary's Desk	1
Telephones	Standard	Container Storage Area	2
Gloves	Rubber	Emergency Equip. Area	Min. 3 pair
Boots (optional)	Rubber	Emergency Equip. Area	Min. 3 pair
Protective Clothing	Apron	Emergency Equip. Area	Min. 3
Eye Protection	Goggles/Safety Glasses	Emergency Equip. Area	Min. 3
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	9
Fire Sprinkler System	N/A	Container Storage Area	1

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	Office to return/fill dock exit	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.
Fire Sprinkler System	Warehouse	An automatic sprinkler system that is activated in case of a fire in the building.

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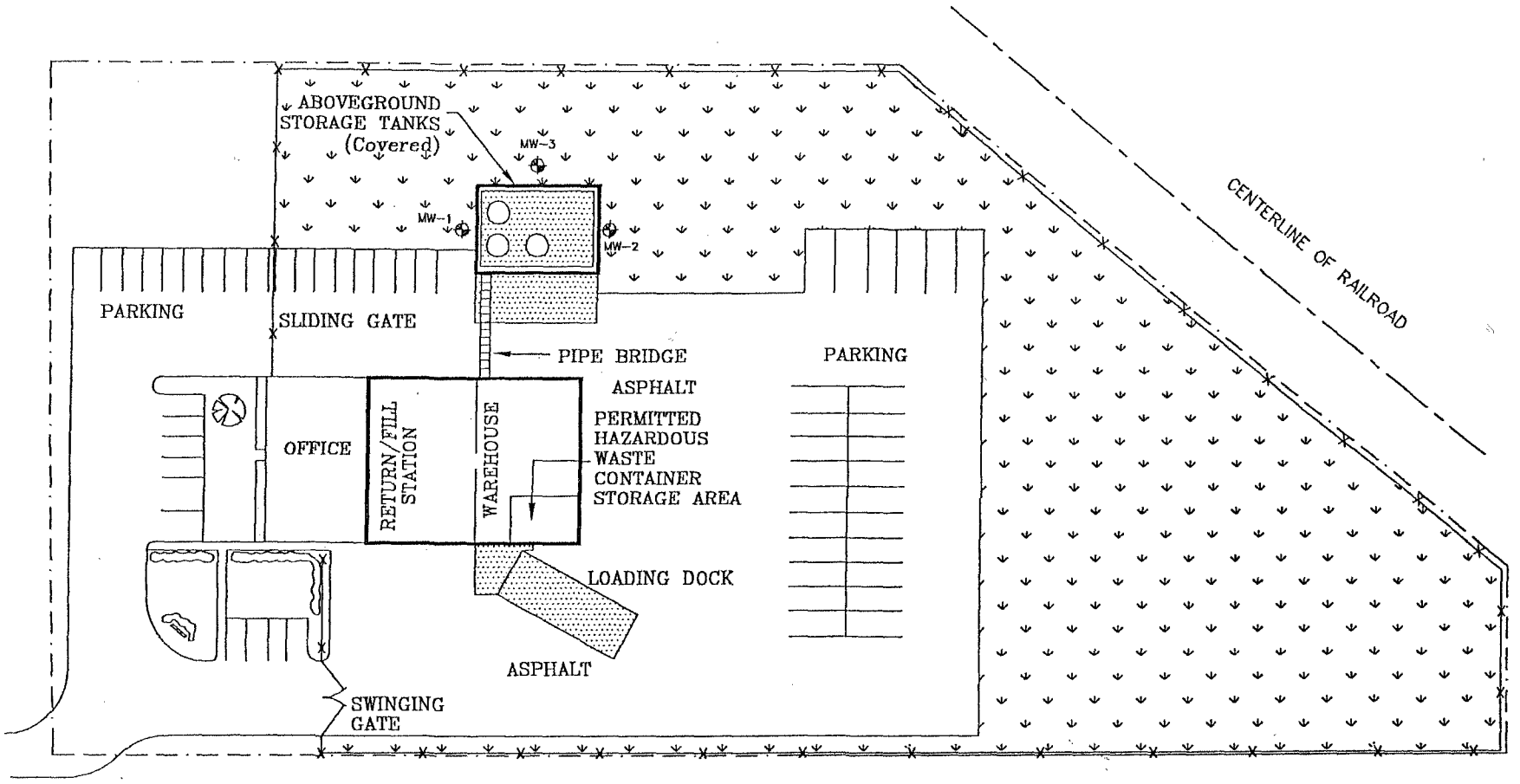
Revision 0 – 08/08/02

Figure 5.1-1
Facility Layout and Access Control Features
Safety-Kleen Systems, Inc. Facility
Medley, Florida



LEGEND

- PROPERTY BOUNDARY
- CHAIN-LINK FENCE
- HAZARDOUS WASTE MANAGEMENT AREAS
- CONCRETE
- GRASS
- ABOVEGROUND STORAGE TANKS
- MW-1 GROUND WATER MONITORING WELL

N

0 APPROXIMATE SCALE 80

FEET

base,border,mw,fig2-1-1

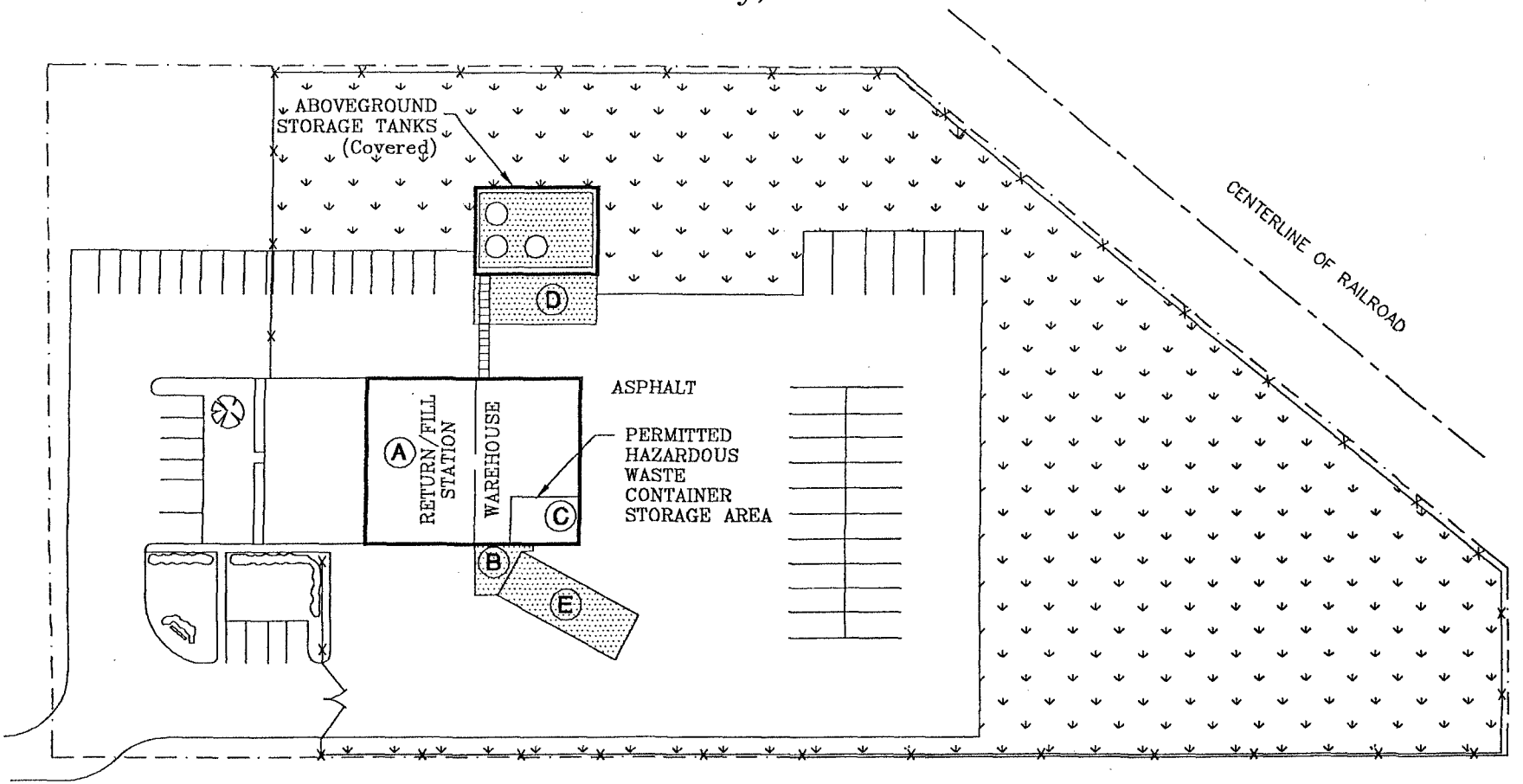
ERM

PERMIT

311.21 31121-PM 042897-1

Figure 5.1-2
Locations of Hazardous Waste Storage Areas
Safety-Kleen Systems, Inc. Facility
Medley, Florida

Revision 0 – 08/08/02



LEGEND

- PROPERTY BOUNDARY
- CHAIN-LINK FENCE
- HAZARDOUS WASTE MANAGEMENT AREAS
- CONCRETE
- GRASS
- ABOVEGROUND STORAGE TANKS

(A) PARTS WASHER SOLVENT DRUM DUMP/BARREL WASH/REFILL (TRUCKS DO NOT DRIVE THROUGH BUILDING)

(B) LOADING & UNLOADING OF DRUMS CONTAINING SOLVENTS AND WASTES FRS (TRANSFER) FROM TRUCKS

(C) LOADING & UNLOADING OF CONTAINERIZED WASTE FROM LOCAL AREA VANS & TRUCKS

(D) LOADING & UNLOADING OF PARTS WASHER SOLVENT (COVERED DRIVEWAY) AND ETHYLENE GLYCOL, USED OIL, AND OILY WASTEWATER

(E) TANK TRUCK TO TANK TRUCK TRANSFER OF USED OIL

N

0 APPROXIMATE SCALE 80

FEET

base,border,mw,swmu,fig2-2-5

ERM

PERMIT

FIGURE 5.2-1

SAFETY-KLEEN SYSTEMS, INC. - Branch # 3-097-02 MEDLEY, FLORIDA 1 of 1

Weekly Inspection of SAFETY & EMERGENCY EQUIPMENT, SECURITY DEVICES & MISCELLANEOUS EQUIPMENT

INSPECTOR'S NAME/TITLE: Lead Warehouseman_____ Warehouseman_____

(Sign on the day the inspection is performed; perform inspection on the same day every week)

INSPECTOR'S SIGNATURE:				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
_____	_____	_____	_____	_____
DATE (MM/DD/YY)				
_____	_____	_____	_____	_____
TIME				

SAFETY & 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 aprons, gloves, glasses, respirators, emergency respirators, emergency respirator is missing components, items requiring security or clean environments 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, distorting, deterioration, excess debris, liquids in unit other: _____

_____.

OBSERVATIONs, COMMENTS, DATE AND SPECIFIC NATURE OF REPAIRS OF ANY ITEMS INDICATED AS "NOT ACCEPTABLE":

_____

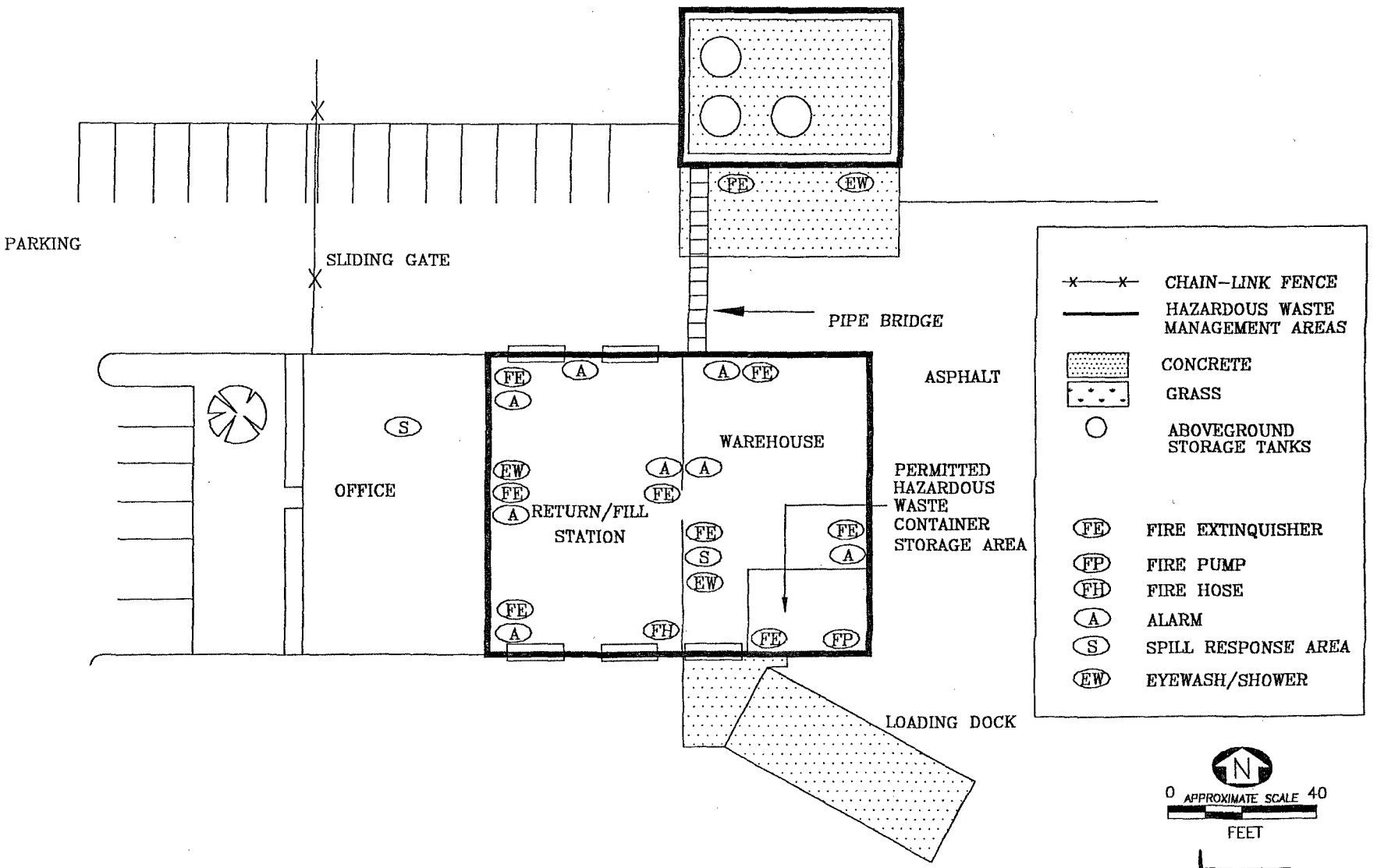
_____

_____

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 Systems, Inc. Facility
Medley, Florida



ERM

FIGURE 5.6-2

SAFETY-KLEEN SYSTEMS, INC. – U.S. SERVICE CENTERS AND DCs/ACs/OCs
INCIDENT REPORT FORM
Report all environmental incidents to 3E, 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 a 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 person/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 ED# (offsite releases): _____

17. IF NOT A RELEASE, DESCRIBE INCIDENT: _____
18. Follow-up action: _____

19. Notification:

	3E 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:				

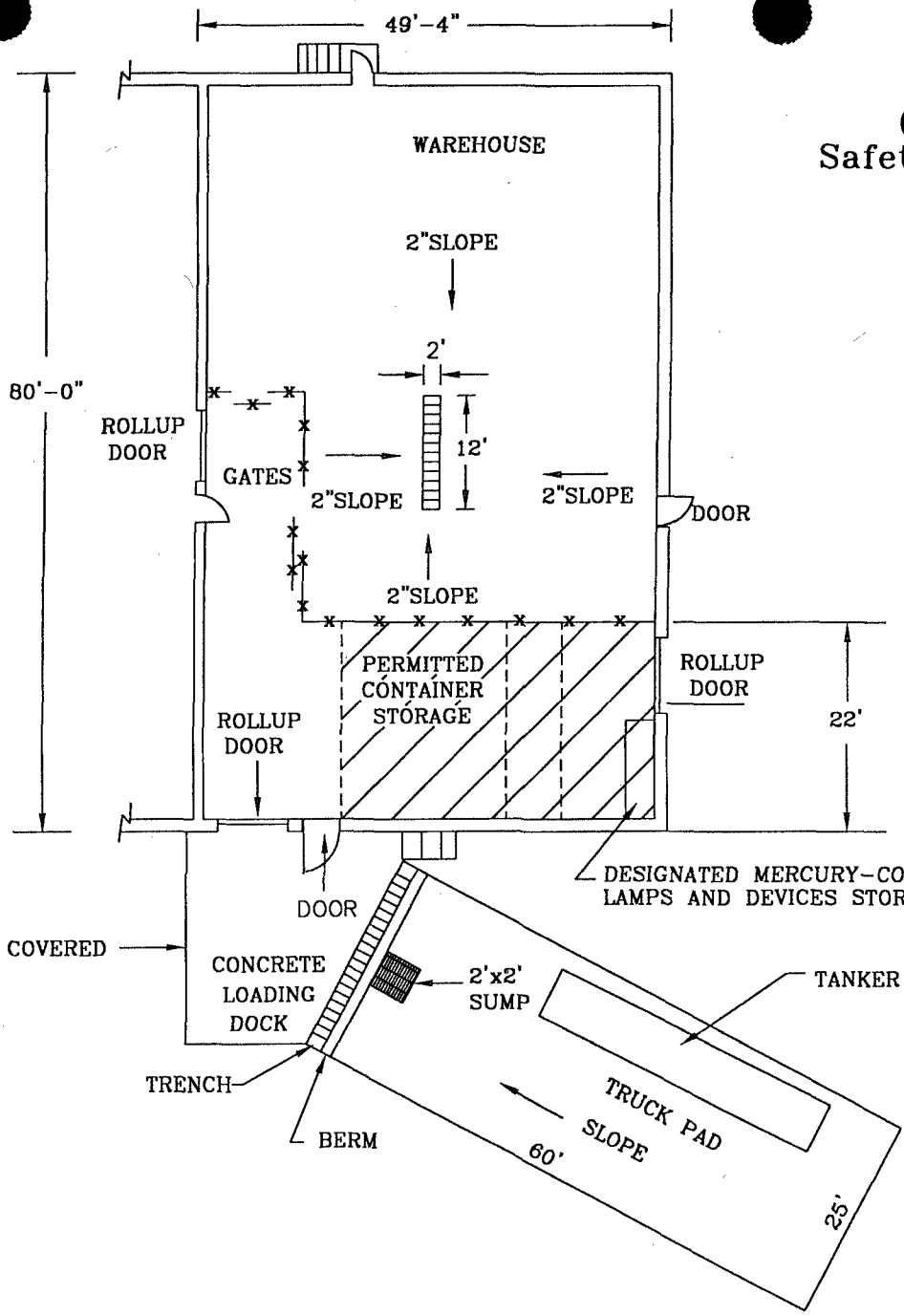
20. Written Reports:

Required?	_X_ no	___ yes ___ no	___ yes ___ no	___ yes ___ no

Name of preparer (print): _____

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.)

Figure 5.6-3
Container Storage Area
Safety-Kleen Systems, Inc. Facility
Medley, Florida



LEGEND

- CONCRETE
- AREA USED FOR WASTE TRANSFER
- GRATING
- FENCE

N

0 APPROXIMATE SCALE 20

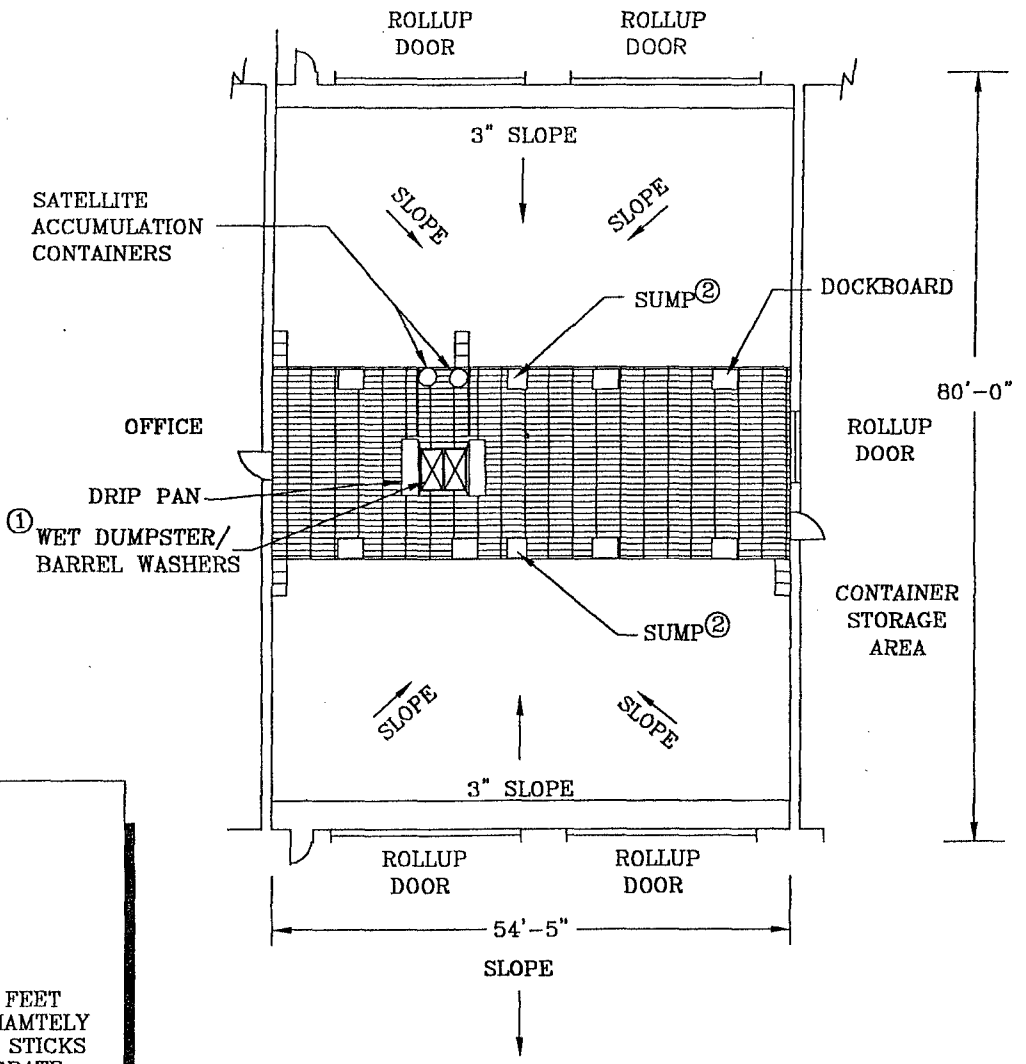
FEET

ERM

311.21 31121-PM 042897-1

Revision 0 – 08/08/02

Figure 5.6-4
Return/Fill Station
Safety-Kleen Systems, Inc. Facility
Medley, Florida



LEGEND

STEPS

GRATE

Notes:

1. WIDTH APPROXIMATELY 2 FEET
2. SUMPS MEASURE APPROXIAMTELY 2'x2'; THE NORTH SUMP STICKS OUT FROM UNDER THE GRATE BY APPROXIMATELY 6"

N

0 APPROXIMATE SCALE 20

FEET

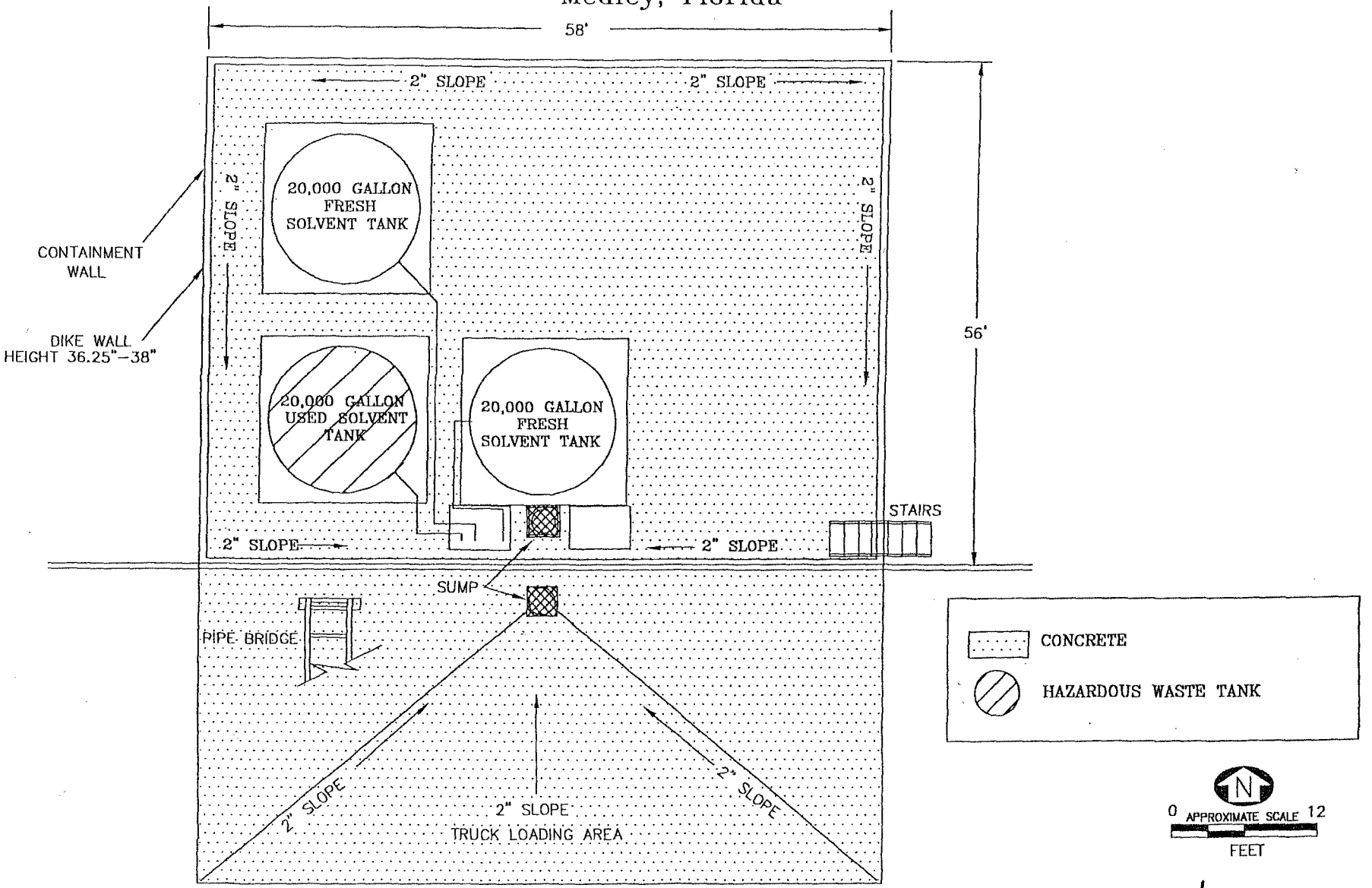
ERM

PERMIT

311.21 31121-PM 042897-1

Revision 0 – 08/08/02

Figure 5.6-5
Tank Storage Area
Safety-Kleen Systems, Inc. Facility
Medley, Florida



ERM

PERMIT

Appendix A

Example Letters to Local Authorities

safety-kleen®

_____
(Date)

CERTIFIED MAIL — RETURN RECEIPT REQUESTED

Miami-Dade Fire and Rescue Department
10200 NW 116th Way
Medley, FL 33178

RE: Safety-Kleen Systems, Inc., 8755 NW 95th Street, Medley, Florida 33166

Dear Sir:

Under terms of Environmental Protection Agency (EPA) Regulations 40 CFR 264, Subpart D, Safety-Kleen Systems, Inc. (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 (305) 884-0123.

Sincerely,

Mark Hicks
Branch Manager
Medley Facility

bai

Enclosure(s)

H:\SE\SAFKLN8\49301\S5APPA.L-1

_____
(Date)

Miami-Dade Fire and Rescue Department
10200 NW 116th Way
Medley, FL 33178

Mark Hicks
Branch Manager
Safety-Kleen Systems, Inc. - Medley
8755 NW 95th Street
Medley, FL 33166

RE: Safety-Kleen Systems, Inc., 8755 NW 95th Street, Medley, Florida 33166

Dear Mr. Hicks:

This is to acknowledge that the Miami-Dade County Fire and Rescue Department has been made aware of the potential need for emergency assistance associated with the operation of the Safety-Kleen Systems, Inc. facility at 8755 NW 95th Street, Medley, Florida. The Metro Dade Fire 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 Medley, Florida facility.

The Miami-Dade County Fire and Rescue Department _____ (agrees/declines) to be available to provide emergency assistance for the Safety-Kleen Systems, Inc. facility at 8755 NW 95th Street, Medley, Florida.

Sincerely,

_____
(Signature)

_____
(Title)

_____ Check here if you do not have a copy of the contingency plan for this Safety-Kleen Systems, Inc. facility.

safety-kleen®

_____
(Date)

CERTIFIED MAIL — RETURN RECEIPT REQUESTED

AMI-Palmetto General Hospital
2001 West 68th Street
Hialeah, FL 33016

RE: Safety-Kleen Systems, Inc. 8755 NW 95th Street, Medley, Florida 33166

Dear Sir:

Under terms of Environmental Protection Agency (EPA) Regulations 40 CFR 264, Subpart D, Safety-Kleen Systems, Inc. (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 (305) 884-0123.

Sincerely,

Mark Hicks
Branch Manager
Medley Facility

bai

Enclosure(s)

H:\SE\SAFKLN8\49301\S5APPA.L-2

_____
(Date)

AMI-Palmetto General Hospital
2001 West 68th Street
Hialeah, FL 33016

Mark Hicks
Branch Manager
Safety-Kleen Systems, Inc. - Medley
8755 NW 95th Street
Medley, FL 33166

RE: Safety-Kleen Systems, Inc., 8755 NW 95th Street, Medley, Florida 33166

Dear Mr. Hicks:

This is to acknowledge that the AMI-Palmetto General Hospital has been made aware of the potential need for emergency assistance associated with the operation of the Safety-Kleen Systems, Inc. facility at 8755 NW 95th Street, Medley, Florida. The AMI-Palmetto General Hospital 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 Medley, Florida facility.

The AMI-Palmetto General Hospital _____ (agrees/declines) to be available to provide emergency assistance for the Safety-Kleen Systems, Inc. facility at 8755 NW 95th Street, Medley, Florida.

Sincerely,

_____
(Signature)

_____
(Title)

_____ Check here if you do not have a copy of the contingency plan for this Safety-Kleen Systems, Inc. facility.

safety-kleen®

_____
(Date)

CERTIFIED MAIL — RETURN RECEIPT REQUESTED

Medley Police Department
7331 NW 74th Street
Medley, FL 33166

RE: Safety-Kleen Systems, Inc., 8755 NW 95th Street, Medley, Florida 33166

Dear Sir:

Under terms of Environmental Protection Agency (EPA) Regulations 40 CFR 264, Subpart D, Safety-Kleen Systems, Inc. (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 (305) 884-0123.

Sincerely,

Mark Hicks
Branch Manager
Medley Facility

bai

Enclosure(s)

H:\SE\SAFKLN8\49301\S5APPB.L-3

_____
(Date)

Medley Police Department
7331 NW 74th Street
Medley, FL 33166

Mark Hicks
Branch Manager
Safety-Kleen Systems, Inc. - Medley
8755 NW 95th Street
Medley, FL 33166

RE: Safety-Kleen Systems, Inc., 8755 NW 95th Street, Medley, Florida 33166

Dear Mr. Hicks:

This is to acknowledge that the Medley Police Department has been made aware of the potential need for emergency assistance associated with the operation of the Safety-Kleen Systems, Inc. facility at 8755 NW 95th Street, Medley, Florida. The Medley Police 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 Medley, Florida facility.

The Medley Police Department _____ (agrees/declines) to be available to provide emergency assistance for the Safety-Kleen Systems, Inc. facility at 8755 NW 95th Street, Medley, Florida.

Sincerely,

_____
(Signature)

_____
(Title)

_____ Check here if you do not have a copy of the contingency plan for this Safety-Kleen Systems, Inc. facility.

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 information presented in this section is a representative example of employee training at Safety-Kleen. Variations in individual training may occur.

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 Managers must complete a formal introductory training program before starting their jobs, with annual review and update thereafter. New Customer Service Representatives and all other hazardous waste employees must undergo a combination of classroom and on-the-job training prior to working with hazardous waste. Personnel involved in direct handling of hazardous waste do not work unsupervised until they have completed the entire initial hazardous waste training course.

Outline of Training Program

An outline of the training program given initially 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 are provided in Tables 6.1-2 through 6.1-14.

Training Content, Frequency, and Techniques

Employee training is accomplished using classroom, videotape, written, and on-the-job methods. All new employees whose responsibilities require 24 Hour Hazardous Waste Operations and Emergency Response (Hazwoper) training will receive at least five days of instruction at the Safety-Kleen Training Center. This training program was established to provide a consistent and quality hazardous waste operations training program.

The training that a new operations employee will receive is divided into two parts.

- The first week or second week of employment will be spent at the Safety-Kleen Training Center. The new employee will receive a Company orientation, including a review of Company benefits, and hazardous waste operations training.

- The second part of new employee training is site specific training. When the new employee returns to the reporting facility, qualified individuals delegated by facility management will complete facility specific training. This will include such things as permit requirements, emergency contingency plan training, location of fire extinguishers, etc.

The job tasks a person performs will dictate the type of instruction required. Courses taught at the Safety-Kleen Training Center will include a Company and Benefit Orientation, 24 Hour Hazwoper training, Hazardous Materials Transportation Skills (HMTS) training, and Driver Safety training.

The following presents the specific training requirements for new Safety-Kleen employees who will manage or handle hazardous waste.

Training of New Branch General Managers: New Branch Managers are trained for several weeks before they begin their new positions. This training is given on the job. 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.

Training of New Customer Service Manager and Branch Sales Manager: The Customer Service Manager and Branch Sales Manager are responsible for administrative operations at the Branch. Their training is on location in the form of periodic training topics. 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 facility. Also, while being trained at the branch at which they will be stationed, a new Customer Service Manager and Branch Sales Manager review environmental records and learn the recordkeeping and inspection requirements. These records include: manifests, personnel records, training records, service center inspection records, and spill reports.

Training of New Secretaries: 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 periodic training topics on emergency response, shipping documents (including manifests), drum labels, and other safety and environmental compliance issues.

Training of New Customer Service Representatives, Customer Service Technicians, and Sales Specialists: These personnel are trained on the job for two weeks during which they are introduced to manifests, service center inspection records, and training records. Additional training is in the form of periodic training topics and a review of the Contingency Plan.

Training of New Material Handlers: A Material Handler is trained to maintain the service center and assist the other branch employees in their tasks. The Material Handler may be a designee to perform the Branch inspection and must be trained by the Branch Manager.

Annual Training: On an annual basis, employees are trained using programs prepared and updated annually by the EHS and Training Departments which contains the topics in Table 6.1-15. 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 classroom instruction, 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 Columbia, South Carolina. 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 employees and conducting Annual Refresher Training.

Qualifications for individual staff members of the EHS Department who conduct training at the Branch 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 Tables 6.1-1 and 6.1-15. 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 Tables 6.1-1 and 6.1-15. 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.

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

All personnel training is documented and the documentation is kept on file at the Branch until closure. Documentation includes the training received, employee name, and the date of training.

TABLE 6.1-1

OUTLINE OF TRAINING TOPICS

	Topic	Course
Monday	Welcome / Introductions	
	Overview /History/ Products/Locations	
	Policies/Benefits	
	Orientation Activity and Quiz	
	Blood Borne Pathogens	Blood Borne Path
	Regulatory Compliance	24 Hour Hazwoper
	Hazard Recognition	
	Hazard Communication / WHMIS	
Tuesday	Topic	
	Hazard Communication / WHMIS	
	Test 1	
	Personal Protective Equipment (PPE)	
	Decontamination (Decon)	
	PPE/Decon Practical	
	Respiratory Protection	
	Respiratory Protection Practical	
	Toxicology	
Wednesday	Topic	
	Toxicology	
	Test 2	
	Drum Handling	
	Container Handling Practical	
	Exposure Monitoring	
	Medical Surveillance	
	Hearing Conservation	
	Ergonomics	
	Fire Protection	
	Test	
	HMTS-Regulations/ Transportation Contingency Plan	HMTS
	Hazard Classes/ HMT	
Thursday	Topic	
	Test 3	
	Confined Space/Guarding Equipm/Lockout-Tagout	
	Fall Protection/Walking & Working Surfaces	
	Electrical Safety	
	Site Health & Safety Plans	
	Test 4	
	HMTS-Regulations/ Transportation Contingency Plan	Hazardous Materials Transportation Skills
	Hazard Classes	
	Shipping Papers	
Friday	Topic	
	Labeling & Marking	
	Placarding / Segregation	
	HMTS Test	
	DDC Strategies	NSC Driver Skills
	Professional Drivers Characteristics	
	Driving Large Vehicles	
	Lane Management	
	Driving Conditions	
	Backing/Conclusion/Transportation Contingency Plan	

TABLE 6.1-2

JOB DESCRIPTION
BRANCH GENERAL MANAGER

Position title: **Branch General Manager**

Job code: **BGM**

Reporting Relationship: Reports to District Manager

Qualifications:
- College Degree or equivalent sales/management experience
- Must have five (5) years of progressively responsible branch sales and management experience
- Must possess leadership abilities, and have the capacity to interface effectively with Branch, District, Region, and Marketing personnel.

Position Overview: Overall responsibility for Branch operations including, but not limited to, Growth, Profit and Loss, EH&S compliance, Asset management, Employee turnover…

Essential Job Functions and Responsibilities:
- Profit and Loss
- Customer retention
- Reduce employee turnover
- Environmental, Health & Safety (ETTS Compliance)
- Personnel management with H-R assistance
- Assist with employee recruiting and training
- Fleet management
- Community relations
- Ensure ethical business practices
- Distribute and manage sales reports
- Monitor sales / service activities

TABLE 6.1-3

JOB DESCRIPTION
LEAD SECRETARY

Position title: Lead Secretary

Job code: LSEC

Reporting Relationship: Reports to Branch General Manager

Qualifications: Must be a high school graduate with good written and verbal communication skills, interpersonal skills and computer knowledge

Position Overview: Lead Secretary must posses the ability to interact efficiently with Branch General Manager, Customer Service Manager and Branch Sales Manager. Directs all paperwork flow and must exhibit a thorough knowledge of Hazardous Waste regulations, and all Safety-Kleen Corporate policies and procedures. Coordinates administration staff training on all issues, as well as maintaining ETTS information for facility.

Essential Job Functions and Responsibilities:

- Supervise Branch Secretaries.
- Verification of Sales and Haz Waste documents completed by Sales and Service Representatives.
- Act as escort for government inspectors through the facility in the absence of Branch General Manager, Lead Material Handler or Environmental Manager.
- Ensure proper completion of Facility Operating Log, and proper maintenance of Accounts Receivable, branch bank deposits, Manifests, and other key administrative areas.
- May act as primary or alternate Emergency Coordinator and assists management in incident response.
- Maintain ETTS database, and ensure all personnel are up to date and documented on all training as required by Safety-Kleen and applicable government agencies.
- Coordinate personnel requirements such as DOT physicals, employee physicals, State Transporter License Numbers (if applicable), start packs, Worker's Compensation claims, etc.
- Monitor contractors doing work on site.
- Provides corrections for annual reports.
- Obtains EPA ID number lists for state or region.
- Oversees FRS/Lab correspondence.
- Participate in the hiring and training of Admin. Staff.
- Maintain branch level Customer Service/Collection procedures.
- Perform other duties as assigned by BGM.

TABLE 6.1-4

JOB DESCRIPTION
BRANCH SECRETARY

Position title: **Branch Secretary**

Job code: BSEC

Reporting Relationship: Reports to Lead Secretary

Qualifications: : Must be a high school graduate with good written and verbal communication skills, interpersonal skills and computer knowledge

Position Overview: Secretary must posses the ability to interact efficiently with Lead Secretary, Customer Service Manager and Branch Sales Manager. Directs paperwork flow and must exhibit a thorough knowledge of Hazardous Waste regulations, and all Safety-Kleen Corporate policies and procedures.

Essential Job Functions and Responsibilities:

- Verification of Sales and Haz Waste documents completed by Sales and Service Representatives.
- Ensure proper maintenance of Accounts Receivable, branch bank deposits, Manifests, and other key administrative areas.
- Provides corrections for annual reports.
- Oversees FRS/Lab correspondence.
- Maintain branch level Customer Service/Collection procedures.
- Perform other duties as assigned by management.

TABLE 6.1-5

JOB DESCRIPTION
LEAD MATERIAL HANDLER

Position title: **Material Handler, Lead**

Job code: **MHL**

Reporting Relationship: Reports to Branch General Manager

Qualifications:
- High school graduate
- Ability to pass CDL and other hiring requirements

Position Overview: Responsible for operation of Return and Fill, site E,H & S compliance and general warehouse/housekeeping

Essential Job Functions and Responsibilities:
- Oversee operation of Return and Fill.
- Assist in training Material Handlers (MHBs)
- Act as escort for government inspectors through the facility in the absence of Branch General Manager or Environmental Manager or Lead Secretary.
- Ensure proper completion of Facility Operating Log and compliance with site specific regulatory issues.
- May act as primary or alternate Emergency Coordinator and assists management in incident response.
- Monitor contractors doing work on site.
- Oversee facility housekeeping schedule.
- Other duties as directed by BGM.

TABLE 6.1-6

JOB DESCRIPTION
BRANCH MATERIAL HANDLER

Position title: **Material Handler, Branch**

Job code: MHB

Reporting Relationship: Reports to Lead Material Handler

Qualifications:
- High school graduate
- Ability to pass CDL and other hiring requirements

Position Overview: Operation of Return and Fill, site E,H & S compliance and general warehouse/housekeeping duties

Essential Job Functions and Responsibilities:
- Operation of Return and Fill.
- Facility housekeeping.
- Other duties as directed by Lead Material Handler.

TABLE 6.1-7

JOB DESCRIPTION
CUSTOMER SERVICE MANAGER

Position title: **Customer Service Manager**

Job code: **CSM**

Reporting Relationship: Reports to the Branch General Manager

Qualifications:
- College Degree or equivalent sales/management experience
- Must have three (3) years of progressively responsible branch sales / service and management experience
- Must possess leadership abilities, and have the capacity to interface effectively with Branch, and District personnel.

Position Overview: Ensure optimum customer service leading to retention and expansion of branch business

Essential Job Functions and Responsibilities:
- Assure Customer satisfaction and retention
- Recruit / Train Customer Service Representatives
- Reduce employee turnover
- Maintain high On Time Performance
- Preprint / route management
- Manage Accounts receivable / DSO
- QA Sales and Service
- Fleet Management
- Environmental, Health and Safety

TABLE 6.1-8

JOB DESCRIPTION
CUSTOMER SERVICE TECHNICIAN

Position title: Customer Service Technician

Job code: CST

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
- High school graduate
- Ability to pass CDL and other hiring requirements
- Mechanical aptitude
- Ability to interface with Customers and branch personnel

Position Overview: Install, maintain, repair and refurbish equipment at Customers

Essential Job Functions and Responsibilities:
- Level Two equipment repair
- Assure Customer Satisfaction
- Technical installations
- QA – QC equipment prior to installation
- Refurbish equipment in the field
- Maintain appropriate certifications
- Assist branch in maintaining low DSO and high On time Performance

TABLE 6.1-9

JOB DESCRIPTION
SENIOR CUSTOMER SERVICE REPRESENTATIVE

Position title: **Senior Customer Service Representative**

Job code: CSRS

Reporting Relationship: Reports to the Branch Customer Service Manager

Qualifications:

Position Overview: Assist Branch Service Manager to ensure optimum customer service leading to retention and expansion of branch business

Essential Job Functions and Responsibilities:

- Assist in recruiting, training and managing Customer Service Reps
- Service equipment at Customers
- Develop strong customer relations
- Maintain high branch On Time Performance
- Maintain low branch DSO
- Installation/Recovery of equipment
- Level One equipment repair
- EH&S Compliance
- Other duties as assigned by the Branch Service Manager

TABLE 6.1-10

JOB DESCRIPTION
CUSTOMER SERVICE REPRESENTATIVE

Position title: **Customer Service Representative**

Job code: **CSREP**

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
- High school graduate
- Ability to pass CDL and other hiring requirements

Position Overview: Provide service at a level that meets or exceeds customer expectations.

Essential Job Functions and Responsibilities:
- Service equipment at Customers
- Develop strong customer relations
- Maintain high branch On Time Performance
- Maintain low branch DSO
- Installation/Recovery of equipment
- Level One equipment repair
- EH&S Compliance
- Other duties as assigned by the Branch Service Manager

TABLE 6.1-11

JOB DESCRIPTION
CUSTOMER SERVICE REPRESENTATIVE, OIL

Position title: **Customer Service Representative, Oil**

Job code: CSOIL

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
- High school graduate
- Ability to pass CDL and other hiring requirements

Position Overview: Provide service at a level that meets or exceeds customer expectations.

Essential Job Functions and Responsibilities:
- develop strong customer relations
- Maintain high branch On Time Performance
- Maintain low branch DSO
- H&S Compliance
- Other duties as assigned by the Branch Service Manager

TABLE 6.1-12

JOB DESCRIPTION
CUSTOMER SERVICE REPRESENTATIVE, VAC

Position title: Customer Service Representative, Vac

Job code: CSVAC

Reporting Relationship: Reports to Branch Customer Service Manager

Qualifications:
- High school graduate
- Ability to pass CDL and other hiring requirements

Position Overview: Provide service at a level that meets or exceeds customer expectations.

Essential Job Functions and Responsibilities:
- Develop strong customer relations
- Maintain high branch On Time Performance
- Maintain low branch DSO
- EH&S Compliance
- Other duties as assigned by the Branch Service Manager

TABLE 6.1-13

JOB DESCRIPTION
BRANCH SALES MANAGER

Position title: **Branch Sales Manager**

Job code: BSM

Reporting Relationship: Reports to Branch General Manager

Qualifications:
- College Degree or equivalent sales/management experience
- proven sales / management ability
- self motivated
- excellent communication and presentation skills

Position Overview: Manage sales to existing and new customers – supervise Branch Sales Specialists

Essential Job Functions and Responsibilities:
- Growth / Quota attainment
- Establish goals and monitor sales activity
- Recruit, train and develop Sales Specialists
- Customer retention / Accounts Receivable
- Key Account management
- Comply with Corporate Credit Policies
- Gather competitive information
- Collaborate with Branch Service Manager to ensure high level of Customer satisfaction / retention

TABLE 6.1-14

JOB DESCRIPTION
BRANCH SALES SPECIALIST

Position title: **Branch Sales Specialist**

Job code: BSS

Reporting Relationship: Reports to Branch Sales Manager or Senior Sales Specialist

Qualifications:
- high school graduate
- proven sales ability
- self motivated
- excellent communication and presentation skills

Position Overview: Grow branch businesses through direct selling to new and existing customers

Essential Job Functions and Responsibilities:
- Full time direct sales to specific SIC
  - Current account expansion
  - New account creation
- Account retention / Accounts Receivable
- Sample waste streams
- Comply with Corporate Credit Policies

TABLE 6.1-15

CONTINUING TRAINING TOPICS FOR BRANCH EMPLOYEES

- Hazard Communication Safety Training
- Hazard Communication Understanding MSDSs
- Preventing Injury and Illnesses
- Hazardous Materials Regulations
- Waste Analysis Plan
- Preparedness, Prevention, and Contingency Plan
- Respirator Fit Testing and Training
- Generator Requirements
- Hazardous Waste Paperwork

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 20,000-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 20,000-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-pyrrolidinone, 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 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.

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 container storage area. The paint wastes are then re-manifested and periodically sent to a 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. 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.

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) and used oil into a Safety-Kleen used oil tanker truck. On a daily basis, the used oil tanker trucks off-load into the used oil tank at the Branch. A common carrier is contracted to transport used oil, waste antifreeze, and oily water in a bulk tanker from the Branch tank to a permitted recycling facility, 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.

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 will be accumulated in the 20,000-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 for spent parts washer solvent.

w/o screening?

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 will be accumulated in the 20,000-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 non-regulated 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 8.1-1). This storage area is labeled in accordance with 62-737.400(5)(b), 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. 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 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. 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;

6. Keeping a record of each incoming and outgoing shipment in the operating log at each facility;

7. 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

8. Routine analysis of the wastes received at the recycle centers.

Safety-Kleen's customers sign a service document containing the following information (in accordance with the requirements of 262.20(e)(1)):

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 type of waste, quantity of waste, and frequency of waste shipments.

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 contaminants.

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.

Some larger Saftey-Kleen parts washers and some customer-owned machines will require manual pumping of the solvent out of the unit. In these cases, solvent volumes in drums may exceed the values presented above. Volume screening of solvent from these units

will be conducted according to the total volume of liquid removed from the unit. If the quantity removed is larger than the quantity provided, 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 Sep H_2O.

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 material should be a "free flowing" liquid, but should not contain a significant amount of water.

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. Also, surfaces that have come into contact with pieces from a broken lamp will be decontaminated using HgX (sodium thiosulfate and ethylene diaminetetraacetie acid), in accordance with manufacturer's specifications.

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.

LDR not req'd if completed w/ 1st shipment

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; 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;
- 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;
- 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
- For any restricted waste generated that can be land disposed without further treatment, and is sent to a land disposal facility, a notice and certification will be sent to the treatment, storage, or land disposal facility with the waste. The notice will state that the waste meets the applicable treatment standards set forth in Subpart D of 40 CFR 268 and applicable prohibitions set forth in 40 CFR 268.32 or RCRA section 3004(d). The notice will include the following information:
  - EPA Hazardous Waste Number; and
  - The corresponding treatment standards and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d).

Further, the LDR certification will be signed by an authorized representative and will state the following:

> *I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standards specified in 40 CFR Part 268 Subpart D and all applicable prohibitions set forth in 40 CFR 268.32 or RCRA Section 3004(d). I believe that the information I submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment.*

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 FAC 62-737.

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 landfills 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. When a shipment with the 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**	813	D001 and D-Codes Listed in Note Below
Branch-Generated Liquids/Solids (Debris)	S01*	8	D001 and D-Codes Listed in Note Below ; F001, F002, F003, F004, F005
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*	28	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*	69	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.

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

* This waste will be stored in containers in the building container storage area. The maximum capacity in the container storage area for hazardous waste and product is 29,400 gallons, with 6,912 gallons being waste.

** The spent parts washer solvent storage tank has a capacity of 20,000 gallons and may be filled up to 19,000 gallons.

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

Brake fluid
u/o
antifreeze?
aqueous brake/parts cleaner

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.

8.0 CONTAINERS

The warehouse at the subject facility is depicted in Figure 8.1-1. The warehouse is used for storage of virgin materials, as well as permitted hazardous wastes and transfer wastes. The location of the permitted storage areas are shown as the container storage area in the figure.

8.1 CONTAINMENT SYSTEM

The warehouse area shown in Figure 8.1-1 occupies the eastern 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 warehouse has a total containment capacity of 2,996 gallons, including approximately 500 gallons within a sloped floor trench and the remainder due to the sloped floor in the area. This containment volume was measured in July 1992 by filling the area with water. This task was performed as part of the construction permitting process for this facility. A copy of the engineer's certification report is provided in Appendix C.

The entire warehouse may store up to 29,400 gallons (the containment capacity is 10% of this storage capacity). This capacity includes both fresh product and used material. The sizes and numbers of each type of container may vary, but the total volume of hazardous wastes (including transfer wastes) will not exceed 6,912 gallons in the container storage area. Because the floor is sloped, significant volumes of liquid will flow toward the containment trench, avoiding the concern of containers in standing liquids.

The containment areas have been coated with Sikagard® 62 or equivalent. The manufacturer's statement and information regarding this product are provided in Appendix D. Safety-Kleen has identified an alternate concrete sealer/coating, known as Chem Tech One®. This product may be used at the facility in the future. The manufacturer's statement and information regarding Chem Tech One® are included in Appendix E. The manufacturers state that Sikagard® 62 and Chem Tech One®, when properly applied, are capable of withstanding the products handled by Safety-Kleen.

Inspections of the sealant in the containment areas will be conducted as described in Section 8.4. If the sealant is found to be worn or deteriorated such that repairs are warranted, the sealant will be repaired in accordance with manufacturers' specifications.

The warehouse is completely enclosed so no precipitation can enter it. In the unlikely event the building's sprinkler system is activated, the building's secondary containment system should be sufficient to contain the water. The firewater, which may have come in contact with hazardous materials, will be containerized and handled appropriately.

Spills from containers are removed by a hand-held, portable electric pump (the COMS 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 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 2,996 gallon containment capacity. In this case, once outside the containment area, the wastes would flow onto paved surfaces outside the building. These are the same surfaces that serve to protect soils and ground water from contamination due to spills occurring during loading/unloading.

Pere will eat through pavement.

Container Movement

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 south or east side of the building. The 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 will prevent the containers from contacting standing liquid while they are in storage. Pallets may be shipped up to three high during transportation. The containers will be arranged so that a two-foot aisle space exists between all rows of pallets such that all containers can be readily visible for inspection and handling.

8.2 INCOMPATIBLE, IGNITABLE, AND REACTIVE WASTE MANAGEMENT

All materials are managed in accordance with the local fire protection code and fire department recommendations. All ignitable wastes are stored at least 50 feet from the property line.

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 typically compatible with each other and with other materials handled at this facility. In some isolated instances, special waste segregation

procedures may be necessary at this facility. Wastes are stored primarily in polyethylene and steel containers. Immersion cleaner, dry cleaning, paint waste, and FRS waste containers are never opened at the Branch. Overpack containers are used for the management of containers whose integrity has been compromised. 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.

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.

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).

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. 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.

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 into the wet dumpster at the return/fill station (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. The contents of the dry cleaning waste containers are not removed or processed at the Medley facility. Perchloroethylene-based dry cleaning waste is terminated at the Medley 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 Medley facility as transfer waste. All naphtha-based dry cleaning waste is shipped to a Safety-Kleen recycle center.

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 are managed as permitted wastes.

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.

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 Florida Administrative Code (FAC) 62-737.400(5)(b). 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.

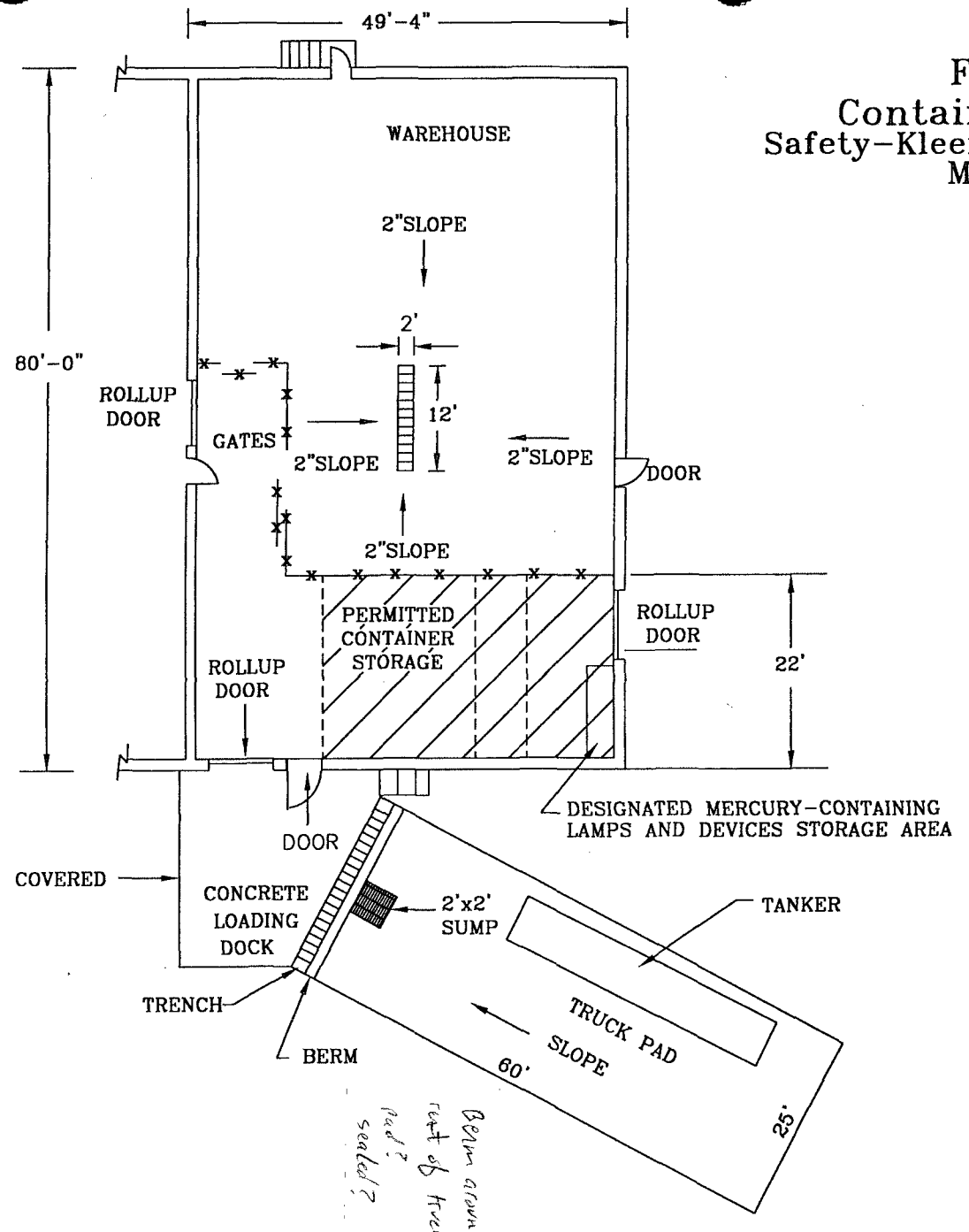
As deficiencies are detected, the Branch Manager will ensure that they are remedied promptly. Any deficiencies which could create and environmental or human health hazard will be rectified immediately.

Other inspections at the facility include those performed on a weekly basis for the security systems. These inspections are described in Section 5.

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.

Figure 8.1-1
Container Storage Area
Safety-Kleen Systems, Inc. Facility
Medley, Florida



LEGEND

- CONCRETE
- AREA USED FOR WASTE TRANSFER
- GRATING
- FENCE

N

0 APPROXIMATE SCALE 20

FEET

ERM

FIGURE 8.4-1
SAFETY-KLEEN SYSTEMS, INC. - Branch # 3-097-02 MEDLEY, FLORIDA
Daily Inspection of **WAREHOUSE CONTAINER STORAGE AREA**
Maximum Permitted Storage Volme – 6912 Gallons

INSPECTOR'S NAME/TITLE: Lead Warehouseman _____ Warehouseman _____

INSPECTOR'S SIGNATURE:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

DATE (MM/DD/YY)

TIME

Total volume in contaners of	**MONDAY**	**TUESDAY**	**WEDNESDAY**	**THURSDAY**	**FRIDAY**
Branch Generated – 16 gallon (Sludge and Debris)					
Branch Generated – 30 gallon (Sludge and Debris)					
Branch Generated – 55 gallon (Sludge and Debris)					
Immersion Cleaner					
Lacquer Thinner – 5 gallon					
Paint Waste – 16 gallon					
Paint Waste – 30 gallon					
Paint Waste – 55 gallon					
Perc filters – split 30					
Perc filters – 16 gallons					
Perc sludge					
FRS – 5 gallon (i.e. absorbent)					
FRS – 16 gallon (i.e. absorbent)					
FRS – 30 gallon					
FRS – 55 gallon					
FRS – 85 gallon					
Photo Waste – 5 gallon					
Photo Waste – 16 gallon					
Photo Waste – 30 gallon					
Photo Waste – 55 gallon					
TOTAL VOLUME (GALLONS)					
Waste Film (pounds)					
Fourescent Light Bulbs (Boxes)					
Used Oil Filters, non-regulated					

FIGURE 8.4-1 (Cont.)

Waste Volume: A N A N A N A N A N

If "N", what is the reason: _____

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, broken or damaged pallats, or other:

_____

CONTAINMENT

Curbing, Floor and Sump(s): A N A N A N A N A N

(Any material which 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, or 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 SPECIFIC 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)

9.0 TANK SYSTEM

9.1 ENGINEERING ASSESSMENT OF TANK SYSTEM

An engineering assessment of the various components of the tank system and the container storage area at the Medley facility was completed in July 1992 by W.O. Heyn. A copy of the engineering assessment report is included in Appendix C. A metal canopy has been installed at the tank farm to cover the three aboveground storage tanks and associated containment structure, as well as the truck loading area.

9.2 TANK SYSTEM SPECIFICATIONS

The facility includes three 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 20,000-gallon tank (12' diameter x 23½' in length), prior to bulk shipment to a Safety-Kleen recycle center. The other two tanks, both 20,000-gallon tanks, are used to store fresh parts washer solvent and are, therefore, not considered RCRA hazardous waste tanks.

A fourth aboveground storage tank (19,000-gallon capacity) currently exists onsite within the tank secondary containment area. This tank is not currently in use and is not connected to any piping. Safety-Kleen may utilize this fourth tank at some time in the future to store waste oil.

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. 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.

Tank Operation Procedures and Design

Used spent parts washer solvent from parts washers is accumulated in the 20,000-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 F). 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 G) similar to a gasoline dispenser. The waste is transferred to the tank via piping and a pump (Figure 2 in Appendix G).

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. the sludge is recycled?

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 G. 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 G. 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 1992.

The W.O. Heyn report (Appendix C) on the independent assessment of the tank system includes a detailed 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 skid placed on the 8-inch concrete foundation slab. 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.

Controls and Spill Prevention

The tank farm dike and the return/fill station have been sealed with a chemical resistant coating. Level gauges (Figure 7 in Appendix G) 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. The gauges of the tank are read before filling the tank with additional material. Tank level readings are also taken prior to filling of a tanker truck 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 tank should be operated at a maximum volume of 19,000 gallons (95 percent of capacity). The secondary containment under the tanks and return/fill station is cleaned within 24 hours of a spill, or in as timely a manner as possible, to prevent harm to human health or the environment.

9.3 TANK SYSTEM SECONDARY CONTAINMENT

Tank Containment

All tanks are aboveground, underlain by a 58' x 56' (length and width) concrete slab, surrounded by 36¼" to 38" concrete walls. The wall height in the containment varies with the floor slope and directs flow toward an approximately 60-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 eliminates any 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 20,800 gallons, as shown in the calculations presented in Appendix H. This volume represents greater than 100 percent of the capacity of the largest tank within the containment area.

The containment areas have been coated with Sikagard® 62 or equivalent. The manufacturer's statement and information regarding this product are provided in Appendix D. Safety-Kleen has identified an alternate concrete sealer/coating, known as Chem Tech One®. This product may be used at the facility in the future. The manufacturer's statement and information regarding Chem Tech One® are included in Appendix E. The manufacturers state that Sikagard® 62 and Chem Tech One®, when properly applied, are capable of withstanding the products handled by Safety-Kleen. Inspections of the sealant in the containment areas will be conducted as described in Section 9.4. If the sealant is found to be worn or deteriorated such that repairs are warranted, the sealant will be repaired in accordance with manufacturers' specifications.

Return/Fill Containment

The return/fill station is a 54½' x 80' structure (Figure 9.3-1) located between the office area and the warehouse. It contains two 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).

Floor sealed?

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 120 gallons (60 gallons each). The floor in the return/fill station is sloped to direct flow toward the two sumps.

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. In addition, measure the depth of used solvent in the tanks to confirm the proper functioning of the automatic alarm system and to determine unexpected deviations in tank measuring data, or a sudden drop in liquid level, which may indicate leakage.
- 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.

Also, the tanks will be visually inspected and tested periodically. The period of time between tank inspections, including shell thickness testing, will not exceed ten years. This time frame for tank inspection is adequate based on Safety-Kleen's experience at its other facilities in Florida. A tank inspection is planned for the Medley facility by the end of 2002. Results of the tank inspection will be forwarded to the Department.

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 Medley 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.

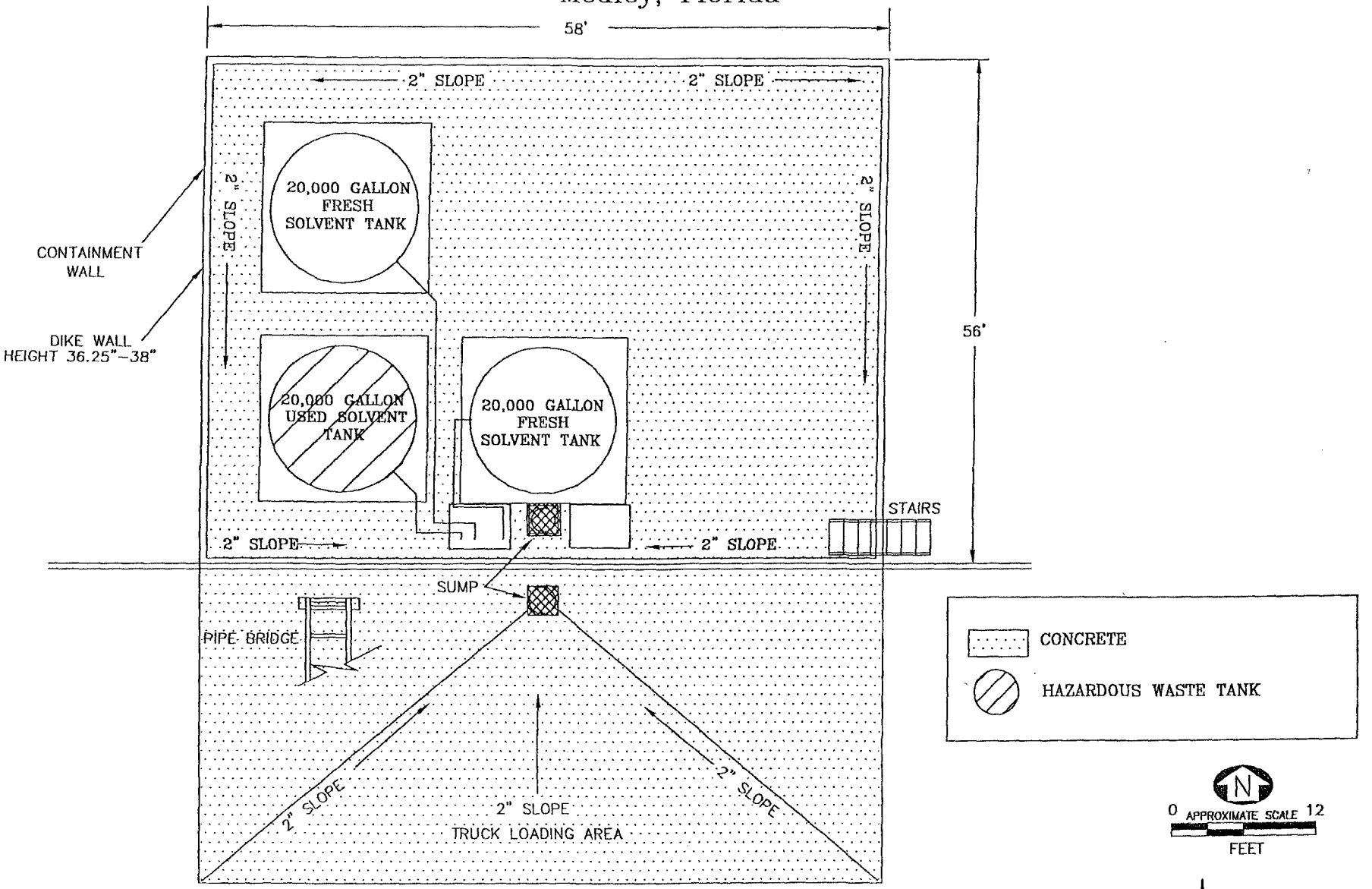
If the release was from a tank system component which did not have secondary containment, then secondary containment must be provided for this component before the system can be returned to service. The exception to this is if the component can be visually inspected. In this instance, the component may 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.

Figure 9.2-1
Tank Storage Area
Safety-Kleen Systems, Inc. Facility
Medley, Florida

Revision 0 – 08/08/02

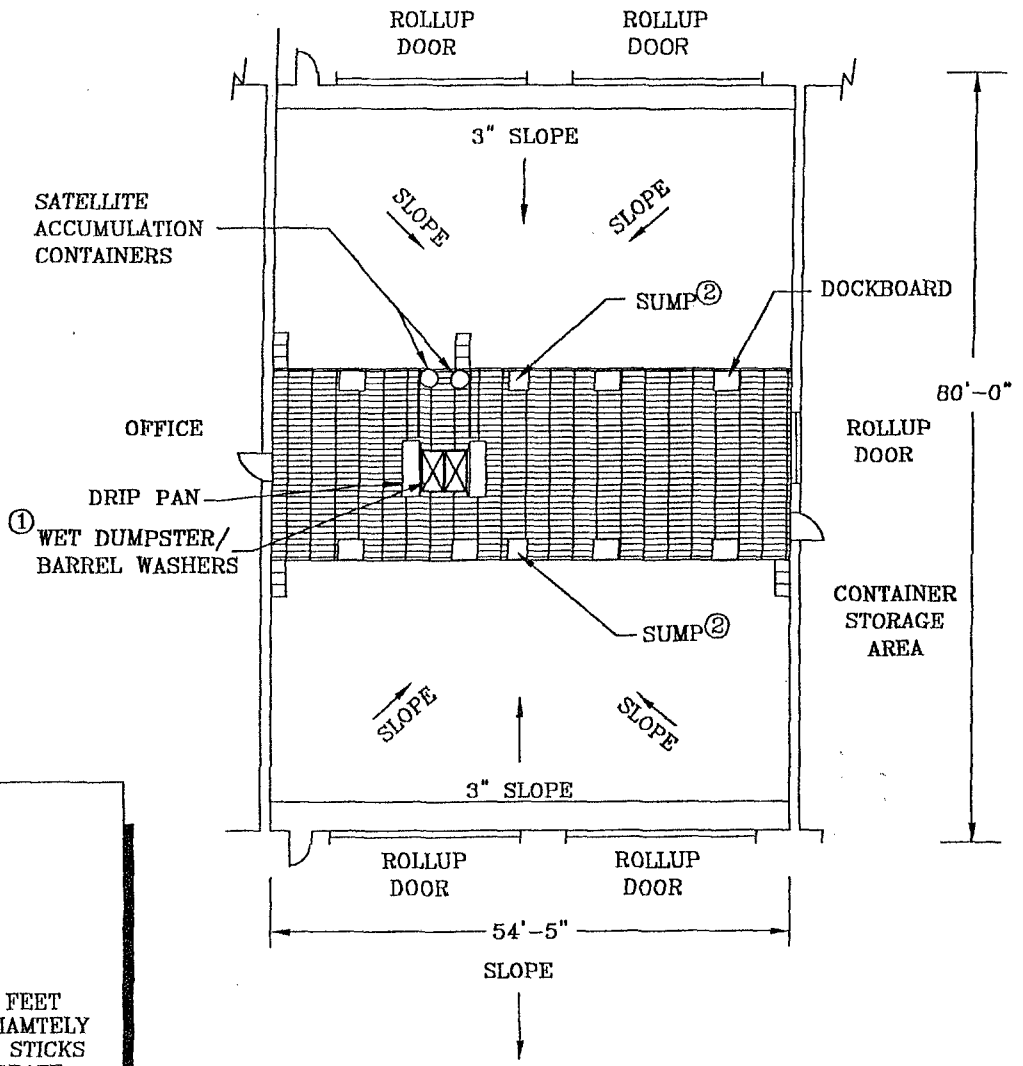


ERM

311.21 31121-PM 042897-1

Figure 9.3-1
Return/Fill Station
Safety-Kleen Systems, Inc. Facility
Medley, Florida

Revision 0 – 08/08/02



LEGEND

STEPS

GRATE

Notes:

1. WIDTH APPROXIMATELY 2 FEET
2. SUMPS MEASURE APPROXIAMTELY 2'x2'; THE NORTH SUMP STICKS OUT FROM UNDER THE GRATE BY APPROXIMATELY 6"

N

0 APPROXIMATE SCALE 20

FEET

ERM

PERMIT

FIGURE 9.4-1

SAFETY-KLEEN SYSTEMS, INC. - Branch # 3-097-02 MEDLEY, FLORIDA

Daily Inspection of **STORAGE TANK SYSTEM**

INSPECTOR'S NAME/TITLE: Lead Warehouseman _____ Warehouseman _____

INSPECTOR'S SIGNATURE:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

DATE (MM/DD/YY) _____ _____ _____ _____ _____

TIME _____ _____ _____ _____ _____

STORAGE TANKS: (Tanks must NEVER be more than 95% full!)

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
Clean 105 Solvent (in/gl)					
Waste Solvent Tank (in/gl)					
Clean 150 Solvent (in/gl)					
Oily Water					

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, or other: _____

High Level Alarms: A N A N A N A N A N

If "N" circle appropriate problem: malfunctioning Power On" light, malfunction siren/strobe light, or other: _____

Volume Gauges: A N A N A N A N A N

If "N" *circle appropriate problem: disconnected, sticking, condensation,* or 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, discoloration, displacement, leaks or 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, or other _____

OBSERVATIONS, COMMENTS, DATE AND SPECIFIC 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 (Cont.)
SAFETY-KLEEN SYSTEMS, INC. - Branch # 3-097-02 MEDLEY, FLORIDA
Daily Inspection of **STORAGE TANK SYSTEM**

INSPECTOR'S NAME/TITLE: Lead Warehouseman _____ Warehouseman _____

INSPECTOR'S SIGNATURE:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

DATE (MM/DD/YY) _____ _____ _____ _____ _____

TIME _____ _____ _____ _____ _____

	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
TRANSFER PUMPS & 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, other _____					
Hose Connections & Fittings:	A N	A N	A N	A N	A N
If "N" circle appropriate problem: leaks, other _____					
Hose Body:	A N	A N	A N	A N	A N
If "N" circle appropriate problem: leaks, other _____					
RETURN AND FILL STATION					
Drum Washer:	A N	A N	A N	A N	A N
If "N" circle appropriate problem: leaks, other _____					
Secondary Containment:	A N	A N	A N	A N	A N
If "N" circle appropriate problem: leaks, other _____					
Loading/Unloading Area:	A N	A N	A N	A N	A N
If "N" circle appropriate problem: leaks, other _____					

OBSERVATIONs, COMMENTS, DATE AND SPECIFIC 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 (Cont.)
SAFETY-KLEEN SYSTEMS, INC. - Branch # 3-097-02 MEDLEY, FLORIDA
Daily Inspection of **TANK EQUIPMENT**

INSPECTOR'S NAME/TITLE: Lead Warehouseman _____ Warehouseman _____

INSPECTOR'S SIGNATURE:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

DATE (MM/DD/YY) _____ _____ _____ _____ _____

TIME _____ _____ _____ _____ _____

Pump, Flange, or Valve Number	MON	TUES	WED	THURS	FRI
1. 2" Threaded Ball Valve	A N	A N	A N	A N	A N
2. 2" Threaded Ball Valve	A N	A N	A N	A N	A N
3. 2" Threaded Gate Valve	A N	A N	A N	A N	A N
4. 2" Threaded Gate Valve	A N	A N	A N	A N	A N
5. 2" Threaded Gate Valve	A N	A N	A N	A N	A N
6. 1 ½" Threaded Ball Valve	A N	A N	A N	A N	A N
7. 1 ¼" Threaded Ball Valve	A N	A N	A N	A N	A N
8. Waste M.S. Recirculation Pump	A N	A N	A N	A N	A N
1 ½" Threaded Ball Valve	A N	A N	A N	A N	A N
10. 1 ¼" Threaded Ball Valve	A N	A N	A N	A N	A N
11. Waste M.S. Recirculation Pump	A N	A N	A N	A N	A N
12. Waste Mineral Spirits Pump	A N	A N	A N	A N	A N
13. 2" Threaded Check Valve	A N	A N	A N	A N	A N
14. 3" Threaded Internal Emergency Valve	A N	A N	A N	A N	A N
15. 3" Flanged Connection	A N	A N	A N	A N	A N
16. 3" Flanged Gate Valve	A N	A N	A N	A N	A N
17. 3" Flanged Connection	A N	A N	A N	A N	A N
18. 3" Threaded Check Valve	A N	A N	A N	A N	A N
19. 3" Flanged Gate Valve	A N	A N	A N	A N	A N
20. 1" Threaded Ball Valve	A N	A N	A N	A N	A N
21. 1" Threaded Ball Valve	A N	A N	A N	A N	A N
22. 2" CAM Lock	A N	A N	A N	A N	A N
23. 2" CAM Lock	A N	A N	A N	A N	A N
24. Strainer ASSY.	A N	A N	A N	A N	A N
25. 3" CAM Lock	A N	A N	A N	A N	A N
26. Manway Flange	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, or 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.

10.0 CLOSURE PLAN

Safety-Kleen constructed the Medley 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 Medley 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.

10.1 FACILITY DATA

1. Waste Management Facility Descriptions

   a. Aboveground Storage Tank: The tank is a 20,000-gallon vertical steel tank used for the storage of used parts washer solvent. This tank is located within a containment system consisting of a 58' by 56' foundation slab with 36¼" to 38" perimeter walls as the floor slopes toward the south.

   b. Solvent Return/Fill Station: The station is a 54½' x 80' portion of the building located between the office area and the warehouse. It contains two wet dumpsters, which 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).

c. Container Storage Area: The warehouse is a 49¼' x 80' portion of the site building. The floors in this area are sloped toward a 2' x 12' containment trench in the area. The maximum volume of product and waste stored is 29,400 gallons. Hazardous wastes, including transfer wastes, are stored in a 22' x 33' area in the southeast portion of the warehouse. Wastes stored in this area consist of dry cleaner wastes, spent immersion cleaner, antifreeze, paint wastes, FRS wastes, and tank bottoms and dumpster mud. The container storage area is permitted to store up to 6,912 gallons of hazardous and transfer wastes.

2. Maximum Inventory of Wastes

a. Used Parts Washer Solvent: 20,000 gallons.

b. Wet Dumpsters: 1,008 gallons.

c. Containerized Waste: 6,912 gallons. [NOTE: This includes any combination of 5-, 16-, 20-, 30-, 55-, or 85-gallon containers used for various management purposes].

10.2 CLOSURE PROCEDURES

Container 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.

- The concrete floor and spill containment trench will be scrubbed with a detergent solution and rinsed with clean water to remove waste residuals from the surface. A final rinsate sample 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 from container storage area and will be analyzed by EPA Method 6010 for the eight RCRA metals and nickel, and for volatile and semivolatile organics by EPA Methods 8015, 8260, and 8270. The area will continue to be scrubbed and rinsed until concentrations meet Ground Water Cleanup Target Levels (GWCTLs) established in Chapter 62-777, Florida Administrative Code (FAC). Decontamination of the mercury-containing lamps and devices storage area will be conducted at the time of closure as part of the overall decontamination of the container storage areas. No additional, special decontamination of the mercury-containing lamps and devices storage area will be conducted at the time of closure, because any decontamination associated with releases from mercury-containing lamps and devices will be conducted at the time of release.

- 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 an industrial waste. Based on an assumed decontamination water usage rate of four gallons per square foot, approximately 64,000 gallons of rinsate will require disposal as a hazardous waste. This amount includes rinsate from all structures at the facility, including the container 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.

may dilute a "hot" area

- 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

mud not "recycled"?

- 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 sample. The area will continue to be scrubbed and rinsed until rinsate concentrations meet GWCTLs established in Chapter 62-777, FAC.

effectiveness? swipes instead?

Aboveground Storage Tank System

Metal Components of the Storage Tank System

focus on HW tank only. 2 other tanks.

- 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.

  no GW?

  An additional soil sample will be collected near one of the containment sumps in the return/fill station. These sample locations may be adjusted as actual field conditions warrant, but a minimum of three samples will be retrieved. These samples will be analyzed by EPA Method 6010 for the eight RCRA metals and nickel, and for volatile and semivolatile organics by EPA Methods 8015, 8260, 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 sample. The area will continue to be scrubbed, rinsed, and resampled until rinsate concentrations meet GWLTLs established in Chapter 62-777, FAC. 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 by EPA Method 8010 for the eight RCRA metals and nickel, and by EPA Methods 8015, 8260, 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 FAC Chapter 62-730.260(1). 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 Medley facility.

10.4 CONTINGENT POST-CLOSURE PLAN

The tank system at the Medley 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	=	$211,068*
•	Closure of Tank System	=	$ 13,298
	Total Estimated Closure Cost	=	$224,366

* Includes facility costs for decontamination and waste transportation and disposal (in 1997 dollars).

Total Estimated Closure Cost (1997 dollars)	=	$224,366	

Adjusted for inflation and rounded:

1998	-	$224,366 + 2.5%	=	$229,975
1999	-	$229,975 + 1.0%	=	$232,275
2000	-	$232,275 + 1.0%	=	$234,598
2001	-	$234,598 + 1.5%	=	$238,117
2002	-	$238,117 + 1.5%	=	$241,689

CONTAINER STORAGE AREAS CS-1

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** (Permit limit)	6912	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):** The warehouse and container storage are will be decontaminated until 62-777 CRITERIA ARE MET		

2 SURFACE AREA OF SECONDARY CONTAINMENT SYSTEM PAD

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)	47.3	ft	
2.B	Width (excluding any curbs berm)	78	ft	
2.C	**Surface Area of Containment System Pad (Multiply line 2.A by line 2.B)** *			3787 ft²
2.D	**Surface Area of Containment System Pad in yd² (Divide line 2.C by 9 ft²/yd²)**			421 yd²

3 VOLUME OF SECONDARY CONTAINMENT SYSTEM PAD NA**

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

* SEE ATTACHED CALCULATIONS.

** DECON TO CONTINUE UNTIL COMPLETE.

4 SURFACE AREA OF SECONDARY CONTAINMENT SYSTEM BERM NA - NO BERM OR CURBING

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)	ft	
4.B	Height	ft	
4.C	**Surface Area of Containment System Berm (Multiply line 4.A by line 4.B)**		ft^2
4.D	**Surface Area of Containment System Berm in yd^2 (Divide line 4.C by 9 ft^2/yd^2)**		yd^2

5 VOLUME OF SECONDARY CONTAINMENT SYSTEM BERM NA - NO BERM OR CURBING

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)**		yd^3

6 SURFACE AREA OF OTHER STRUCTURES

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** TRENCH		80* ft^2
6.B	**Surface Area of Other Structures in yd^2 (Divide line 6.A by 9 ft^2/yd^2)**		8.89 yd^2

7 VOLUME OF OTHER STRUCTURES NA

Calculate the volume of materials constituting the other structures to be removed.

7	**Volume of Other Structures**		yd^3

* See attached calculations

8 VOLUME OF CONTAMINATED SOIL TO BE REMOVED NA - ASSUMED CLEAN

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

Basis for Data Input Values

Form	Item	Explanation		Value	Units	Comment
CS-1	2C	*Floor area*				
		Floor	47.3' x 80'	3,787	sf	
CS-1	6A	*Trench area*				
		Trench side 1	2' x 2' x 2'	8	sf	
		Trench side 2	2' x 2' x 12'	48	sf	
		Trench floor	2' x 12'	24	sf	
		Total surface area		80	sf	

Facility Name: Safety-Kleen Hedley

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	$ 18303
5.	Sampling and Analysis[b] *	SA-2	$ 14077
6.	*Monitoring Well Installation*[c]	MW-1	$ 0
7.	Transportation[d] *	TR-1	$ 28688
8.	Treatment and Disposal[e] *	TD-1	$ 96377
9.	**Subtotal of Closure Costs (Add lines 1 through 8)**		$157,445
10.	Engineering Expenses (Approximately 10% of closure costs, excluding certification of closure [Multiply line 9 by 0.10])		$ 15745
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])**		$ 175,890
13.	Contingency Allowance (Allow 20% of closure costs, engineering expenses, and cost of certification of closure [Multiply line 12 by 0.20])		$ 35178
14.	*Landfill Closure*[f]	LF-2	$ 0
	TOTAL COST OF CLOSURE ***(Add lines 12, 13, and 14)***		**$ 211,068**

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.

* Items 4, 5, 7, and 8 are facility-wide costs, not just those associated with the container storage area.

DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM - Page 1 of 2

The containment system will be decontaminated, not demolished.

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)**		$ -0-
TOTAL COST OF DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM (Add lines 1.E and 2.J) (Enter total on worksheet CS-2, line 1)			$ -0-

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.

No soil will be excavated - assumed clean.

REMOVAL OF SOIL - Page 1 of 1

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[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)		$ 0
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)		$ 0
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)			$ 0

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.

NO BACKFILL WILL BE REQUIRED - ASSUMED CLEAN & NO EXCAVATION

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)		$ ~~0~~
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)			$ ~~0~~

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)			$ 2,700

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 *	20,008 gal	
1.C	Maximum capacity of ancillary piping *	70 gal	
1.D	Maximum capacity of tank and ancillary piping (Add lines 1.B and 1.C)	20,078 gal	
1.E	Total length of ancillary piping	±100 ft	
1.F	Type of secondary containment system	___ Double-wall tank ___ Vault X 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):** METAL COMPONENTS TO BE DECONNED, SCRAPPED AND/OR REUSED. CONTAINMENT TO BE DECONNED, (TANK + RETURN/FILL) - CONTAINMENT WALLS ONLY TO BE DEMOLISHED.		

2 SURFACE AREA OF TANK SYSTEM

Determine the surface area of the tank system to determine decontamination costs.

2.A	Tank & dumpsters *	1312 ft²	
2.B	Ancillary piping & grating *	2290 ft²	
2.C	**Surface Area of Tank System (Add lines 2.A and 2.B)**		3602 ft²
2.D	**Surface Area of Tank System in yd² (Divide line 2.C by 9 ft²/yd²)**		400 yd²

* SEE ATTACHED CALCULATIONS

3 VOLUME OF TANK SYSTEM TO BE REMOVED NA - NO IN-GROUND COMPONENTS

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	58 ft	
4.B	Width	56 ft	
4.C	**Surface Area of Secondary Containment System Pad (Multiply line 4.A by line 4.B)** *		3268 ft²
4.D	**Surface Area of Secondary Containment System Pad in yd² (Divide line 4.C by 9 ft²/yd²)**		363 yd²

5 VOLUME OF SECONDARY CONTAINMENT SYSTEM PAD NA - THE PAD WILL NOT BE DEMOLISHED; DECONNED UNTIL CLEAN CRITERIA ARE MET

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 2(56'+58')	228 ft	
6.B	Height	3,17 ft	
6.C	**Surface Area of Secondary Containment System Berm (Multiply line 6.A by line 6.B)**		722 ft²
6.D	**Surface Area of Secondary Containment System Berm in yd² (Divide line 6.C by 9 ft²/yd²)**		80 yd²

* SEE ATTACHED CALCULATIONS

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	8 IN ~~yd~~	
7.B	Volume of Secondary Containment System Berm (Multiply line 6.D by line 7.A)		18 yd³

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 RETURN/FILL SHELTER *	4400 ft²
8.B	Surface Area of Other Structures in yd² (Divide line 8.A by 9 ft²/yd²	489 yd²

9 VOLUME OF OTHER STRUCTURES IN SECONDARY CONTAINMENT SYSTEM NA

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	yd³

10 VOLUME OF CONTAMINATED SOIL TO BE REMOVED NA - ASSUMED CLEAN.

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)		ft³
10.E	Volume of Contaminated Soil to be Removed in yd³ (Divide line 10.D by 27 ft³/yd³		yd³

* 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 X	4.026	X 0.661	X 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

Basis for Data Input Values

Form	Item	Explanation		Value	Units	Comment
TS-1	1B	*Tank volume*				
		Tank permitted capacity		19,000	gal	(95% of 20,000 gal)
		Dumpster capacity	2 @ 504 gal/ea	1,008	gal	
		Total volume		20,008	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	12' diameter by 23.5 ft height	1,112	sf	(PI x Diameter x Ht) + (2 PI D^2/4)
		Total surface area		1,312	sf	
TS-1	2B	*Surface area of piping and grating*				
		Piping	100 ft x 1.06 gal/ft	110	sf	
		Grating	20 ft x 54.5 ft x 2	2,180	sf	Decon top and bottom
		Total surface area		2,290	sf	
TS-1	4C	*Surface area of secondary containment pad*				
		Floor	56' x 58'	3,248	sf	
		Sump walls	4 walls x 2' x 2'	16	sf	
		Sump floor	2' x 2'	4	sf	
		Total surface area		3,268	sf	
TS-1	8A	*Surface area of return/fill station*				
		Floor Area	54.5' x 80'	4,360	sf	
		Sump floor	2 sumps x 2' x 2'	8	sf	
		Sump walls	2 sumps x 4 walls x 2' x 2'	32	sf	
		Total surface area		4,400	sf	

Facility Name: Safety-Kleen Hayley

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	$ 348
2.	Tank System Purging (ignitable wastes *only*)	TS-4	$ 378
3.	*Flushing the Tank and Piping*	TS-5	$ 713
4.	*Excavation, Disassembly, and Loading*	TS-6	$ 1720
5.	*Demolition and Removal of Containment System*	TS-7	$ 4461
6.	*Removal of Soil*	TS-8	$ ~~0~~
7.	*Backfill*	TS-9	$ ~~0~~
8.	Decontamination[a] *	DC-1	$ ~~0~~
9.	Sampling and Analysis[b] *	SA-2	$ ~~0~~
10.	*Monitoring Well Installation*[c]	MW-1	$ ~~0~~
11.	Transportation[d] *	TR-1	$ ~~0~~
12.	Treatment and Disposal[e] *	TD-1	$ ~~0~~
13.	**Subtotal of Closure Costs (Add lines 1 through 12)**		$ 7620
14.	Engineering Expenses (Approximately 10% of closure costs, excluding certification of closure [Multiply line 13 by 0.10])		$ 762
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])**		$ 11082
17.	Contingency Allowance (Allow 20% of closure costs, engineering expenses, and cost of certification of closure [Multiply line 16 by 0.20])		$ 2216
18.	*Landfill Closure*[f]	LF-2	$ ~~0~~
	TOTAL COST OF CLOSURE ***(add lines 16, 17, and 18)***		**$ 13,298**

Notes:

* See CS-2 for these costs, which were calculated on a facility-wide basis

[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. Pg. 10-6, but $0 assigned to soil excavation

[f] Landfill Summary Worksheets are found in Chapter 7. Costs of post-closure care are included in this total.

1	Maximum volume of waste to be removed from the tank and ancillary piping (Enter from worksheet TS-1, line 1.D) (incl. dumpsters)	20,078 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)	3.5 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)			$ 348

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) (incl. dumpsters)	20,078 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)	302 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)		$ 227
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)	5 work hrs	
9	Labor cost to purge tank system (Multiply line 6 by line 8)		$ 151
	TOTAL COST OF TANK SYSTEM PURGING (Add lines 5 and 9) (Enter total on worksheet TS-2, line 2)		$ 378

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.

[c] 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

incl. dumpsters

1	Maximum capacity of the tank and ancillary piping (Enter from worksheet TS-1, line 1.D)	20,078 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)	20,078 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)	7 work hrs	
7	Subtotal of labor and equipment costs to flush tank and ancillary piping (Multiply line 4 by line 6)		$ 713
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.)	gal 20,078 (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)	drums ~~0~~	
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)		$ 713

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) NA			
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[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 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

EXCAVATION, DISASSEMBLY, AND LOADING - Page 2 of 3

3 LOADING (FOR ON-GROUND AND ABOVEGROUND TANKS ONLY)			
3.A	Capacity of tank (Enter from worksheet TS-1, line 1.B) (no piping) (incl. dumpsters)	20,008 gal	
3.B	Labor and equipment cost per work hour[j]	$ 41.78	
	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)	20.5 work hrs	
3.E	**Cost to Load Tank (Multiply line 3.B by line 3.D)**		$ 855
	TOTAL COST OF EXCAVATION, DISASSEMBLY, AND LOADING (Add lines 1.E, 2.E, and 3.E) (Enter total on worksheet TS-2, line 4)		$ 1720

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 WALLS ONLY			
1.A	Area of containment system (Enter from worksheet TS-1; add lines 4.C, 6.C, and 9)	722 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)	29 work hrs	
1.E	**Cost to Demolish the Containment System (Multiply line 1.B by line 1.D)**		$ 1014
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)	18 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)	5.5 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)		$ 227
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)	12 containers	
2.G	Cost of one 20-yd³-capacity debris box container (Rent per week)[i]	$ 260/container	

DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM - Page 2 of 2

2.H	Cost of containers (Multiply line 2.F by line 2.G)	$ 2951
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)	$ 3447
TOTAL COST OF DEMOLITION AND REMOVAL OF CONTAINMENT SYSTEM (Add lines 1.E and 2.J) (Enter total on worksheet TS-1, line 5)		$ 4461

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

NA - ASSUMED TO BE CLEAN - NO SOIL TO BE REMOVED

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)		$ -0-
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)		$ -0-
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)			$ -0-

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.

NO BACKFILL NEEDED - ASSUMED CLEAN

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)		$ -0-
7	Cost of mobilization and demobilization (flat rate)[c]		$269.00
TOTAL COST OF BACKFILL (Add lines 6 and 7) (Enter total on worksheet TS-2, line 7)			$ -0-

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)			$ 2700

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.

DECONTAMINATION DC-1

Facility Name: SAFETY-KLEEN MEDLEY

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	$ 15029
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)*			**$** 18303

DECONTAMINATION OF UNIT BY STEAM CLEANING OR PRESSURE WASHING - Page 1 of 2

Use this worksheet when the proposed method of decontaminating the unit is steam cleaning or pressure washing.

1	Area of unit to be decontaminated (Enter * from appropriate unit inventory worksheet)	16,000 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)	432 work hrs	
5	Subtotal of labor and equipment costs to decontaminate unit by steam cleaning or pressure washing (Multiply line 2 by line 4)		$ 15,029
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.)	64,000 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)		$ 15029

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

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.

Basis for Data Input Values

Form	Item	Explanation	Value	Units	Comment
DC-2	1	*Area to be Decontaminated*			
		Container storage area floor	3,787	sf	
		Container storage area trench	80	sf	
		Tank and dumpsters	1,312	sf	
		Piping and grating	2,290	sf	
		Tank storage area floor	3,268	sf	
		Tank storage area berm	722	sf	
		Return/fill station	4,400	sf	
		Total surface area	16,000	sf	Rounded from 15,859 sf

DECONTAMINATION OF UNIT BY SANDBLASTING - Page 1 of 2

DECON BY WATER ONLY (DC-2)

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)		$ 0
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)		$ 0
	TOTAL COST OF DECONTAMINATION OF UNIT BY SANDBLASTING (Add lines 5 and 9) (Enter total on worksheet DC-1, line 2)		$ 0

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 - Page 1 of 3

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.)	1000 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	X 1
Rotary disc	1
Tractor	2
Tank wagon	2
Front-end loader	X 3
Dozer	X 3
Backhoe	X 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

INVENTORY - Page 1 of 2

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 composite wash water 1 RETURN/FILL 2 TANK CONT. 2 CONTAINER STORAGE 1	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** 3 SOIL SAMPLES FROM BENEATH TANK STORAGE AREA 1 SOIL SAMPLE FROM RETURN/FILL SUMP 1 COMPOSITE OF BACKFILL 1 COMPOSITE OF TANK SECONDARY CONTAINMENT CONCRETE	6 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** 3 EXISTING WELLS	3 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 MEDLEY

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	$ 5,346
5.	Nonaqueous Sample	SA-7	$ 5,496
6.	Groundwater Sample	SA-8	$ 3,235
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)*			$ 14,077

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)			$ 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.

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[d]	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)	$ 4,890 /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)**		$ 4,890
	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)		$ 5,346

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)
RCRA METALS	90	8*	720
NICKEL	20	8*	160
8015	55	8*	440
8260	120	8*	960
8270	250	8*	2000
TCLP METALS AND ORGANICS (less pesticides and HERBICIDES)	610	1	610
		*6 SAMPLES plus 2 QC SAMPLES	
TOTAL COST FOR ANALYSIS OF AQUEOUS SAMPLES (Total of all costs in column 4)			$ 4,890 /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)	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[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)	6 work.hrs	
1.E	**Cost to Collect Nonaqueous Samples (Multiply line 1.B by line 1.D)**		$ 548
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)	$ 5,040 /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)**		$ 5,040
	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)		$ 5,496

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)
RCRA METALS	90	8*	720
8015	55	8*	440
8260	120	8*	960
8270	250	8*	2000
NICKEL	20	8*	160
TCLP metals and organics (less pesticides/herbicides)	610	1	610
		* 6 samples plus 2 QC samples	
Add CONCRETE CORING - 3 holes		at $50/HOLE →	$150
TOTAL COST FOR ANALYSIS OF NONAQUEOUS SAMPLES (Total of all costs in column 4)			$ 5,040 /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.

SAMPLING AND ANALYSIS SA-8

GROUND WATER SAMPLE - Page 1 of 3

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)	3 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]	4 work hrs/sample location	
1.D	Number of hours required to collect all samples (Multiply line 1.A by line 1.C)	12 work hrs	
1.E	**Cost to Collect Groundwater Samples for Closure (Multiply line 1.B by line 1.D)**		$ 1,095
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)	$ 2,140 /event	
2.B	Enter the number of sampling events	1 events	
2.C	**Cost to Analyze Groundwater Samples for Closure (Multiply line 2.A by line 2.B)**		$ 2,140
	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)		$ 3,235
3 COLLECTION OF GROUNDWATER SAMPLE FOR POST-CLOSURE CARE NOT APPLICABLE			
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)**		$ ~~0~~ /yr

4 ANALYSIS OF GROUNDWATER SAMPLE FOR POST-CLOSURE CARE NOT APPLICABLE			
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)**		$ ~~0~~ /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.)		$ 3,235 /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)
8 RCRA METALS	90	4	360
8015	55	4	220
8260	120	4	480
8270	250	4	1000
NICKEL	20	4	80
		includes 1 QC sample	
TOTAL COST FOR ANALYSIS OF GROUNDWATER SAMPLES (Total of all costs in column 4)			$ 2,140 /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)			$ 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.

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)			$ ⊖

ANALYSIS OF SUBSURFACE SOIL SAMPLE ATTACHMENT - Page 2 of 2

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)			$ 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.

TRANSPORTATION TR-1

TRANSPORTATION OF WASTE - Page 1 of 1

Facility Name: SAFETY-KLEEN MEDLEY

Depending on the activities being conducted, it may not be necessary to complete each section of the transportation worksheet.

1 TRANSPORTATION OF DRUMMED WASTE			
1.A	Number of drums of waste *	126 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 DECON FLUID & TANK CONTENTS			
2.A	Gallons of liquid waste *	84,078 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)	13 truckloads	
2.D	**Cost to Transport Bulk Liquid Waste (Multiply line 2.B by line 2.C)**		$ 13813
3 TRANSPORTATION OF BULK WASTE			
3.A	Number of waste debris boxes	12 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)	12 truckloads	
3.D	**Cost to Transport Bulk Solid Waste (Multiply line 3.B by line 3.C)**		$ 12750
TOTAL COST OF TRANSPORTATION OF WASTE (Add lines 1.D, 2.D, and 3.D) (Enter total on appropriate unit summary worksheet)			$ 28,688

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.

Basis for Data Input Values

Form	Item	Explanation		Value	Units	Comment
TR-1	1A	*Number of drums of waste*				
		From container storage area	6912 gallons	126	drums	Assumes 55-gallon drums
TR-1	2A	*Gallons of liquid waste*				
		From tank and piping		20,078	gal	
		From Decontamination		64,000	gal	
		Total gallons		84,078	gal	

TREATMENT AND DISPOSAL

TD-1

Facility Name: SAFETY-KLEEN MEDLEY

SUMMARY WORKSHEET

	Activity	Worksheet Number	Cost
1.	Treatment and Disposal of Waste	TD-2	$ 47406
2.	Transportation and Disposal of Decontamination Fluids	TD-3	$ ~~0~~
	TOTAL COST OF TREATMENT AND DISPOSAL *(Add lines 1 and 2)*		$ 47406

TREATMENT AND DISPOSAL TD-2

1 TREATMENT AND DISPOSAL OF WASTE 1			
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)	126 ~~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)[a]	$ 60/DR ~~/ton~~	
1.F	**Cost to Treat and Dispose of Waste 1 (Multiply line 1.D by line 1.E)**		$ 7560
2 TREATMENT AND DISPOSAL OF WASTE 2			
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)	84,078 ~~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)[a]	$ 1.00/GAL ~~/ton~~	
2.F	**Cost to Treat and Dispose of Waste 2 (Multiply line 2.D by line 2.E)**		$ 84078

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)	18 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)	7290 lb	
3.D	Amount of waste to be treated or disposed of in tons (Divide line 3.C by 2,000 lb/ton)	3645 tons	
3.E	Treatment cost (Enter cost from Attachment B, C, or D to this worksheet)[a]	$ 130 /ton	
3.F	**Cost to Treat and Dispose of Waste 3 (Multiply line 3.D by line 3.E)**		$ 473,850
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)[a]	$ /ton	
4.F	**Cost to Treat and Dispose of Waste 4 (Multiply line 4.D by line 4.E)**		$ 0
	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)		$ 96377

Notes:

[a] 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	1,280
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[a]	
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:

[a] 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.

TRANSPORTATION AND DISPOSAL OF DECONTAMINATION FLUIDS- Page 1 of 2

ACCOUNTED FOR UNDER: TD-2 & TR-1

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. _____ gal _____ gal _____ gal _____ gal _____ gal	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]	$	
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)	work hours	
5	Subtotal of labor and equipment costs to pump decontamination fluid to a holding tank (multiply line 2 by line 4)		$
6	Number of days required to rent holding tank (Round up line 4 to nearest 8 hours; divide by 8 hours per day)	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)	tanks	
9	Subtotal of tank rental costs (Multiply lines 6, 7, and 8)		$
10	Removal costs for bulk liquid (Multiply line 1 by $1.05 per gallon)[f]		$
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)			$

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.

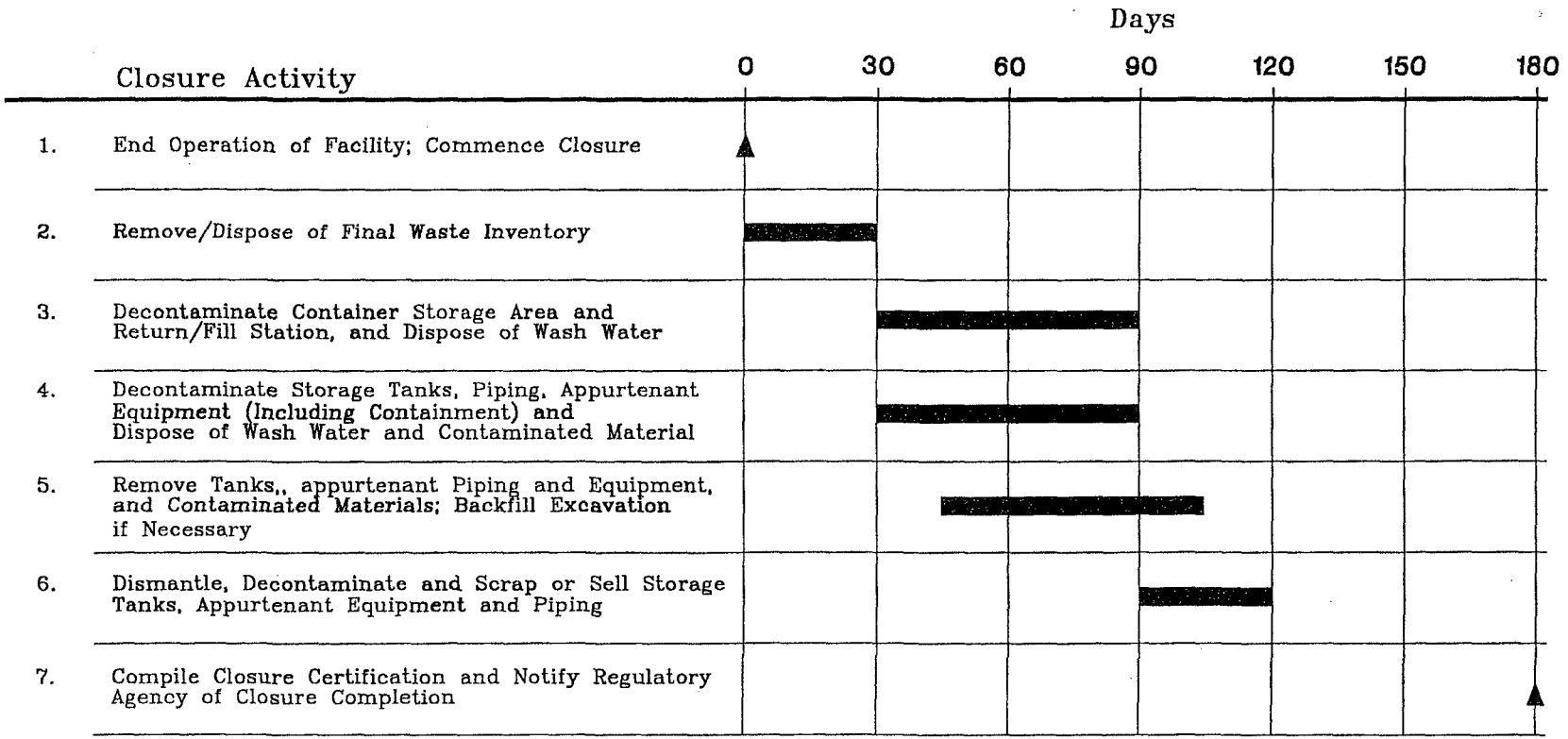
[c] Cost derived from R.S. Means Company, Inc., *Means Building Construction Cost Data*, 1994, pg. 500, crew B-10J. Crew B-10J consists of one equipment operator, one-half building laborer, and one 3-inch centrifugal water pump and accessories. See Appendix B of this manual for details of the calculations.

[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.

Figure 10.3-1
Typical Closure Schedule
Safety-Kleen Systems, Inc. Facility
Medley, Florida



ERM

11.0 AIR EMISSION STANDARDS

11.1 AIR EMISSSIONS STANDARDS FOR EQUIPMENT LEAKS

The requirements of 40 CFR 264 Subpart BB – Air Emission Standards for Equipment Leaks apply to certain equipment associated with the used parts washer solvent storage tanks system. Figure 2.2-6 plots the facility layout with the location of the hazardous waste management units that utilizes equipment subject to Subpart BB. Equipment subject to Subpart BB requirements is included in the "aboveground storage tanks" area shown in Figure 2.2-6. 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 11.1-1 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 Appendix I and other procedures detailed below.

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 Appendix I).

SCHEDULE AND PROCEDURES FOR INSPECTIONS

Pursant to Subpart BB of 40 CFR Part 264 and 40 CFR 270.25, Safety-Kleen inspects all regulated units for leaks each business day. An inspection checklist (example shown in Figure 11.1-2) 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 11.1-1. 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 11.1-3 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.

ALTERNATIVE CONTROL DEVICES

No alternative control devices are in use at this facility.

DOCUMENTATION OF COMPLIANCE

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 degrees C. Therefore pursuant to 40 CFR 264.1030, these materials are classified as heavy liquids.

The existing pumps that manage hazardous wastes at the Medley facility are identified and listed for use in heavy liquid service. Therefore, the Medley facility does not have any pumps that are in light liquid service subject to the requirements of 40 CFR 264.1052.

Compressors (40 CFR 264.1053)

The facility does not have any compressors that are in contact with organic chemicals. Therefore, 40 CFR 264.1053 is not applicable.

Pressure Relief Devices in Gas/Vapor Service (40 CFR 264.1054)

The facility does not have any pressure relief devices subject to the requirements of 40 CFR 264.1054.

Sampling Connecting Systems (40 CFR 264.1055)

The facility does not have any sampling connecting systems or in situ sampling systems.

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 11.1-1). 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.

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.

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 Medley 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 a 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 Medley facility have a maximum of 2,000 ppm concentration in the vapor phase. Therefore, a portable organic vapor analyzer will not detect leaks at 10,000 ppm and a leak will be observed based on a 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) the following 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.
- "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.

Records Kept 3 years.

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 11.1-1.

The following records will be maintained at the Medley Branch 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 organic 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.

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 Medley facility 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)).

11.2 AIR EMISSION STANDARDS FOR TANKS, AND CONTAINERS

Safety-Kleen's Medley facility 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 2.2-6 depicts the location and type of hazardous waste management units subject to Subpart CC located at the facility. Equipment subject to Subpart CC requirements is included in the "warehouse" area and the "aboveground storage tanks" shown in Figure 2.2-6.

SUBPART CC TANK STANDARDS (40 CFR 265.1084)

The Safety-Kleen Medley facility manages hazardous wastes in a tank system that consists of one 20,000-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 11.2-1 for a summary of the tank at the Medley facility subject to the requirements of Subpart CC, and the applicable controls.

LEVEL 1 TANK REQUIREMENTS (40 CFR 264.1084(c))

Safety-Kleen spent parts washer solvent has a vapor pressure of less than 0.3 kilopascals at 20 degrees C. The tank used for storing this waste has a capacity of 20,000 gallons. A

complete description of the tank system is found in Section 9. Waste materials stored in these tanks are spent Safety-Kleen 105 Solvent and Safety-Kleen Premium Gold Solvent. The storage tanks meeting Level 1 requirements are equipped with fixed roofs with the following specifications:

- The fixed roof and its closure devices form a continuous barrier over the entire surface area of the hazardous waste in the tank.

- There are no visible cracks, holes, gaps, or other open spaces between roof section and the tank wall.

- 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).

Inspection Requirements for Level 1 Tanks are as follows:

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.

A copy of the most recent tank assessment is included in this permit renewal application in Appendix C.

LEVEL 2 TANKS (40 CFR 265.1084(d))

There are no Level 2 tanks at this facility.

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 11.2-2 provides a summary of the areas, and types of containers managed, at the Medley facility for which Subpart CC is applicable.

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:

- Containers that meet DOT standards are in compliance with Subpart CC Level 1 container design standards. Safety-Kleen drums meet DOT's standards; or

- 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

- 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.

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:

- 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.

- 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.

- Sampling wastes, measuring depth or quantity of wastes:

  closed unless actively removing

  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.

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 a container, cover, or closure devices, a repair shall be attempted 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.

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.

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 Subpart CC Compliance Plan is included in Appendix I.

TABLE 11.2-1
SUMMARY OF TANK MANAGEMENT UNITS SUBJECTED TO SUBPART CC
SAFETY-KLEEN SYSTEMS, INC. MEDLEY, FL
EPA ID NO: FLD 984 171 694

HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION OF HAZARDOUS WASTE MANAGEMENT UNIT	EPA HAZARDOUS WASTE CODES MANAGED	BRIEF WASTE DESCRIPTION	AVERAGE VOLATILE ORGANIC CONCENTRATION OF THE HAZARDOUS WASTE	SUBPART CC STATUS	CONTROL OPTION (See Table 11.2-3)
Waste Parts Washer Solvent Tank (20,000 gallons)	See Figure 2.2-6	D001, and codes listed in Note 1 below	Waste Parts Washer Solvent (Petroleum Naphtha)	> 500	Level 1 Control	1

Note: D004 through D011, D018, D019, D021 through D030, and D032 through D043

TABLE 11.2-2
SUMMARY OF CONTAINER MANAGEMENT UNITS SUBJECTED TO SUBPART CC
SAFETY-KLEEN SYSTEMS, INC. MEDLEY, FL
EPA ID NO: FLD 984 171 694

HAZARDOUS WASTE MANAGEMENT UNIT	LOCATION OF HAZARDOUS WASTE MANAGEMENT UNIT	EPA HAZARDOUS WASTE CODES MANAGED	BRIEF WASTE DESCRIPTION	AVERAGE VOLATILE ORGANIC CONCENTRATION OF THE HAZARDOUS WASTE	CONTAINER TYPE	SUBPART CC STATUS	CONTROL OPTION (See Table 11.2-3)
Container Storage Area - Warehouse	See Figure 2.2-6	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 2.2-6	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: D004 through D011, D018, D019, D021 through D030, and D032 through D043

TABLE 11.2-3

SUBPART CC CONTROL OPTIONS

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)(I) 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)]

SUBPART CC CONTROL OPTIONS

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) & (c)(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)]

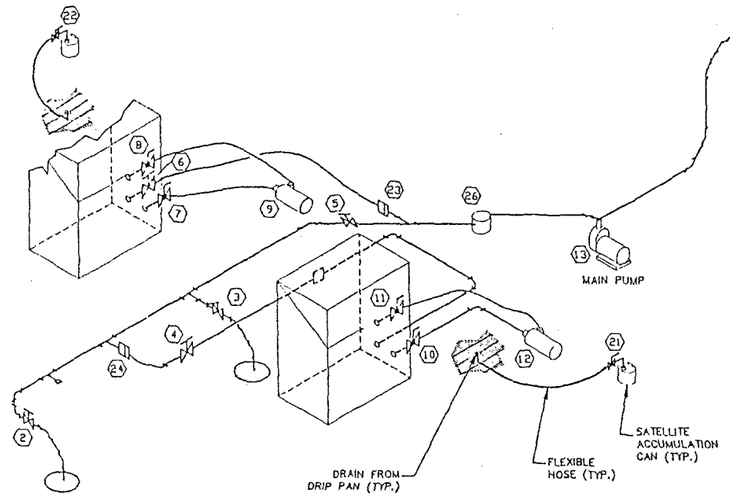
SUBPART CC CONTROL OPTIONS

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)]

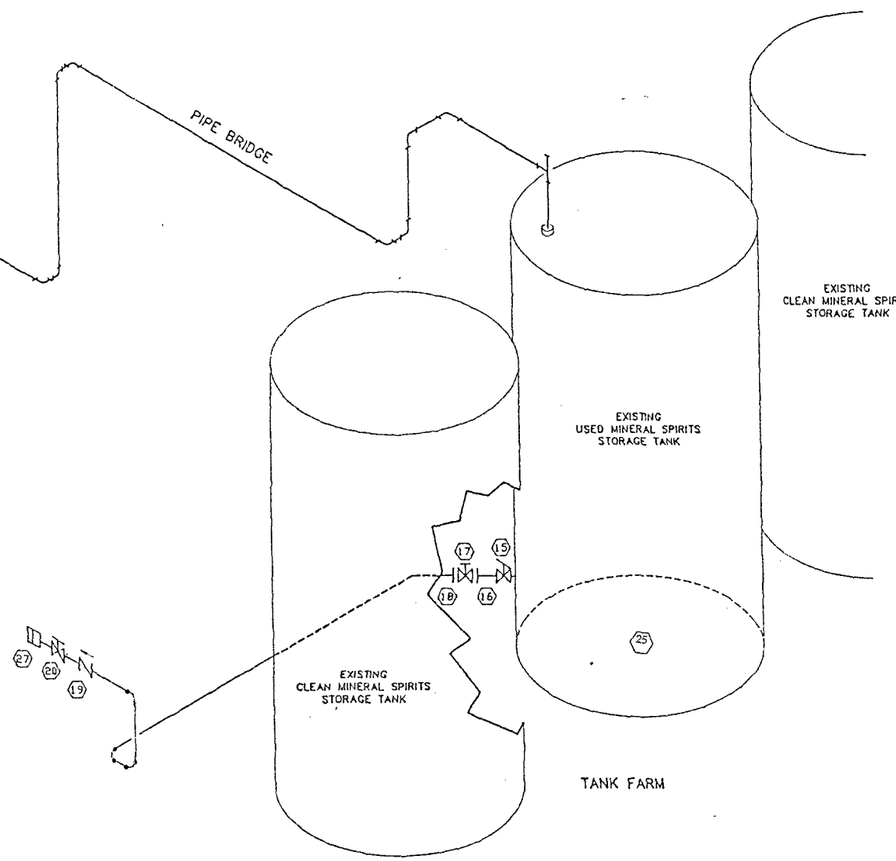
19. These containers have a design capacity greater than 0.46 m^3, are in light material service and that have been demonstrated within the preceding 12 months to be vapor tight using 40 CFR Part 60, Appendix A, Method 27. The container and its cover and closure devices shall be visually inspected for 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)]



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	MANWAY FLANGE
26	STRAINER ASSY.
27	3" CAM LOCK

GENERAL NOTES

1.) ACTUAL PIPING CONFIGURATION MAY VARY.

2.) NON-PERMITTED TANKS AND EQUIPMENT MAY CHANGE.

3

Figure 11.1-1

NO.	DESCRIPTION	BY	CHK	APPR	DATE
REVISIONS					
06	REMOVED WASTE ANTIFREEZE TANK & SCHEDULE REMOVED DUMPSTER & VALVES 1 & 25	MBH	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 #34)	MBH	-	-	031192
01	REVISED GLYCOL PIPING & VALVES	MBH	-	-	012292

TITLE: ENVIRONMENTAL PIPING SCHEMATIC FOR WASTE M.S. – EXISTING

Safety-Kleen Systems, Inc. Facility
1000 NORTH RANDALL ROAD ELGIN, ILLINOIS 60123
PHONE (708)697-8460

SCALE	BY	CHKD	APPROVED	OPERATIONS	DATE
NTS	MBH	-	-	-	080291

SERVICE CENTER LOCATION	SC-DWG NUMBER	REV. NO.
TAMPA, FL.	316301-2003B	06

FIGURE 11.1-2
SAFETY-KLEEN SYSTEMS, INC. - Branch # 3-097-02 MEDLEY, FLORIDA
Daily Inspection of TANK EQUIPMENT

INSPECTOR'S NAME/TITLE: Lead Warehouseman _____ Warehouseman _____

INSPECTOR'S SIGNATURE:				
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

DATE (MM/DD/YY)				
TIME				

Pump, Flange, or Valve Number	MON	TUES	WED	THURS	FRI
1. 2" Threaded Ball Valve	A N	A N	A N	A N	A N
2. 2" Threaded Ball Valve	A N	A N	A N	A N	A N
3. 2" Threaded Gate Valve	A N	A N	A N	A N	A N
4. 2" Threaded Gate Valve	A N	A N	A N	A N	A N
5. 2" Threaded Gate Valve	A N	A N	A N	A N	A N
6. 1 ½" Threaded Ball Valve	A N	A N	A N	A N	A N
7. 1 ¼" Threaded Ball Valve	A N	A N	A N	A N	A N
8. Waste M.S. Recirculation Pump	A N	A N	A N	A N	A N
9. 1 ½" Threaded Ball Valve	A N	A N	A N	A N	A N
10. 1 ¼" Threaded Ball Valve	A N	A N	A N	A N	A N
11. Waste M.S. Recirculation Pump	A N	A N	A N	A N	A N
12. Waste Mineral Spirits Pump	A N	A N	A N	A N	A N
13. 2" Threaded Check Valve	A N	A N	A N	A N	A N
14. 3" Threaded Internal Emergency Valve	A N	A N	A N	A N	A N
15. 3" Flanged Connection	A N	A N	A N	A N	A N
16. 3" Flanged Gate Valve	A N	A N	A N	A N	A N
17. 3" Flanged Connection	A N	A N	A N	A N	A N
18. 3" Threaded Check Valve	A N	A N	A N	A N	A N
19. 3" Flanged Gate Valve	A N	A N	A N	A N	A N
20. 1" Threaded Ball Valve	A N	A N	A N	A N	A N
21. 1" Threaded Ball Valve	A N	A N	A N	A N	A N
22. 2" CAM Lock	A N	A N	A N	A N	A N
23. 2" CAM Lock	A N	A N	A N	A N	A N
24. Strainer ASSY.	A N	A N	A N	A N	A N
25. 3" CAM Lock	A N	A N	A N	A N	A N
26. Manway Flange	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, or 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.

FIGURE 11.1-3

Leak Detection and Repair Record (Example)

Safety-Kleen Systems, Inc. Facility
MEDLEY, 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).

12.0 INFORMATION REQUIREMENTS FOR SOLID WASTE MANAGEMENT UNITS

Part I.Q. of the Florida Department of Environmental Protection's (FDEP's) *Application for a Hazardous Waste Permit* outlines the information requirements for solid waste management units (SWMUs) at the facility. This section provides the required information.

On February 12, 1993, the facility was issued a HSWA permit from Region 4 of the United States Environmental Protection Agency (USEPA). The HSWA permit (Permit No. FLD 984171694) expires on February 12, 2003. All HSWA corrective action conditions of the existing USEPA HSWA permit will continue beyond the permit expiration date if a new state permit incorporating HSWA corrective action is not issued on or before the permit expiration date.

The USEPA conducted a RCRA Facility Assessment (RFA) at the Medley facility and identified three SWMUs at the facility. The three SWMUs are listed below.

SWMU No.	Description
1	Container Storage/Transfer Waste Area
2	Aboveground Tank Storage Area
3	Return/Fill Area

USEPA determined that no further action was required at these three SWMUs. Appendix A from the USEPA's RFA is provided in Appendix J.

statement that there will be no CVP?

Appendix A
Site Photographs

Photograph 1: Return/fill station; view looking northward.

need to ensure these are recent photos.

Photograph 2: Containment sump beneath return/fill station; view looking northward beneath the grating.

Photograph 3: Container storage area in warehouse; view looking toward southeastern corner of container storage area.

Photograph 4: Container storage area in warehouse; view looking generally eastward.

Photograph 5: Truck dock behind warehouse; view looking westward.

Photograph 6: Tank storage area; view looking northward.

Appendix B
Chemical Analysis Reports

2001 ANNUAL RECHARACTERIZATION WASTE CODES
FINAL WASTE CODE ASSIGNMENTS EXCLUDING MN

WASTE STREAMS		WASTE CODE CHANGES			
2000 SKDOT #		2000 Waste Codes (From 1999 Data)	2000 Waste Codes (From 1999 Data)	Changes from 2000 to 2001	2001 SKDOT #
839	Aqueous Brake Cleaner	D039	D039	No Change	839
10070	Aqueous Parts Washer	D039	D039	No Change	10070
11478 - Liquid 11479 - Solid	Branch Contaminated Debris	F001, F002, F003, F005, D001, D006, D007,D008,D011,D018, D022,D027,D028, D035,D039,D040	F001, F002, F003, F005, D001, D006, D007,D008,D011,D018, D022,D027,D028, D035,D039,D040	No Change	11478 - Liquid 11479 - Solid
1808	Immersion Cleaner (IC 699)	D006, D008, D027, D039, D040	D006, D008, D027, D039, D040	No Change	1808
704 801 (RQ)	Parts Washer Solvent - 105 Recycled	D001, D018, D039 D040	D001, D018, D039 D040	No Change	704 801 (RQ)
11657 (Bulk)	Bulked Solvents / Combination of 105 / 150 / possibly Aqueous	D001, D018, D039 D040	D001, D018, D039 D040	No Change	11657 (Bulk)
11656	Parts Washer Solvent Sludge/Dumpster Mud	D001, D039	D001, D039	No Change	11656
11659	** Parts Washer Solvent Tank Bottoms	D039	D039	No Change	11659
717	Premium Gold Parts Washer Solvent -150	D039	D039	No Change	717
11658	S-K Paint Gun Cleaner	F005, F003, D001 D018, D035, D039, D040	F005, F003, D001 D018, D035, D039, D040	No Change	11658
12628	*** Paint Wastes Other	F005, F003, D001, D008, D018, D035, D039, D040	F005, F003, D001, D008, D018, D035, D039, D040	No Change	12628
12627	Dry Cleaner Bottoms	F002, D007, D039, D040	F002, D007, D039, D040	No Change	12627
12626	Dry Cleaner Filter Powder	F002, D039, D040	F002, D039, D040	No Change	12626
569	* Dry Cleaning Naphtha (Mineral Spirits)	D001, D039	D001, D039	No Change	569

* Under consideration for removal from recharacterization.

** Parts washer solvent tank bottoms are SK-generated wastes from the cleanout of solvent storage tanks. Safety-Kleen does not accept this waste stream from non-SK generators.

*** This DOT is acceptable to use for any size container of paint waste. For those states that require 30-gal paint waste to be listed separately, use SK DOT 12630; for states that require 55-gal paint waste to be listed separately, use SK DOT 12631.

WASTE PARTS WASHER SLUDGE

Total # of Samples: ***82***

	Physical Properties			TCLP Metals Analysis (ppm)							TCLP Sem
Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
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-1999	CO-E	7.67	1.50	**140**	<0.500	1.59	0.755	0.138	**5.33**	<0.0008	<0.750	<0.050
SK-1999	GA-C	7.78	1.17	160	<0.545	0.865	0.329	<0.055	0.774	<0.002	<0.747	<0.055
SK-1999	GA-GC	5.71	1.15	155	<0.500	0.522	0.379	<0.050	**8.79**	<0.010	<0.750	<0.050
SK-1999	GA-GC	7.26	1.99	>200	<0.500	0.097	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	GA-M	6.91	0.92	160	<0.500	3.07	0.59	0.357	2.7	<0.0008	<0.750	<0.050
SK-1999	GA-N	8.41	1.13	**119**	<0.545	0.927	0.591	<0.055	1.00	<0.002	<0.747	<0.055
SK-1999	KS-DC	7.35	1.22	172	<0.635	0.759	0.471	0.078	**9.83**	<0.004	<0.741	0.068
SK-1999	KS-W	8.3	1.58	>200	<0.500	2.47	0.342	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	LA-K	7.86	1.42	>200	<0.590	0.714	0.662	<0.059	**31.2**	<0.003	<0.744	<0.059
SK-1999	LA-P	6.55	0.90	**140**	<0.500	0.629	<0.050	0.169	**70.1**	<0.0008	<0.750	<0.050
SK-1999	MO-C	9.02	1.16	165	<0.680	2.31	0.4	0.105	1.04	<0.005	<0.738	<0.068
SK-1999	MO-GA	6.89	1.03	**112**	<0.725	1.62	0.107	<0.073	<0.580	<0.006	<0.735	<0.073
SK-1999	NC-A	7.47	1.33	**135**	<0.500	1.03	0.397	0.109	0.595	<0.0008	<0.750	<0.050
SK-1999	NC-R	7.59	1.20	**109**	<0.815	2.27	0.641	<0.082	1.02	<0.008	<0.729	<0.082
SK-1999	ND-F	8.4	0.99	148	<0.635	1.57	0.806	<0.064	0.841	<0.002	<0.741	<0.064
SK-1999	ND-F	8.28	1.57	175	<0.545	0.772	0.643	0.055	0.517	<0.002	<0.747	<0.055
SK-1999	NE-GI	8.12	0.83	188	<0.500	1.1	0.352	0.216	1.9	<0.0008	<0.750	<0.050
SK-1999	NE-O	7.71	1.05	143	<0.725	0.465	**1.27**	0.077	0.711	<0.006	<0.735	0.154
SK-1999	NM-F	6.33	1.11	159	<0.680	1.6	0.44	<0.068	1.93	<0.005	<0.738	<0.068
SK-1999	NY-A	7.22	1.76	**121**	<0.500	1.04	0.448	<0.050	**7.94**	<0.0008	<0.750	<0.050
SK-1999	NY-A	9.36	1.15	>200	<0.635	1.57	0.886	0.073	2.42	<0.004	<0.741	<0.064
SK-1999	NY-A	9.6	1.50	>200	<0.725	1.34	0.573	<0..073	1.7	<0.006	<0.735	<0.073
SK-1999	NY-C	7.99	1.64	**119**	<0.500	4.27	0.611	0.186	4.01	<0.0008	<0.750	<0.050
SK-1999	NY-C	8.36	1.79	**87**	<0.500	0.85	0.796	<0.050	2.64	<0.0008	<0.750	<0.050
SK-1999	NY-L	6.57	0.95	>200	<0.500	0.239	<0.050	<0.050	**46.8**	<0.0008	<0.750	<0.050
SK-1999	NY-L	8.1	0.93	>200	<0.500	2.98	0.213	<0.050	1.05	<0.0008	<0.750	<0.050
SK-1999	NY-NA	8.56	0.87	144	<1.04	2.02	0.711	0.139	1.76	<0.013	<0.714	<0.104
SK-1999	NY-NA	8.3	0.96	**115**	<0.725	1.62	0.677	0.093	1.44	<0.006	<0.735	<0.073
SK-1999	NY-S	8.68	1.07	**110**	<0.500	3.1	0.796	<0.050	0.967	<0.0008	<0.750	<0.050
SK-1999	NY-S	8.79	0.82	190	<0.500	1.7	0.368	0.077	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-S	9.1	1.50	152	<0.500	2.24	0.571	<0.050	0.902	<0.0008	<0.750	<0.050
SK-1999	OR-C	7.86	1.42	**126**	<0.500	1.9	**1.27**	<0.050	3.71	<0.0008	<0.750	<0.050
SK-1999	SC-G	6.6	0.95	144	<0.500	4.14	0.397	<0.050	2.55	<0.0008	<0.750	<0.050
SK-1999	SD-S	7.04	0.81	>200	<0.500	1.27	0.874	<0.050	1.03	<0.0008	<0.750	<0.050

WASTE PARTS WASHER SLUDGE

Total # of Samples: ***82***

	Physical Properties			TCLP Metals Analysis (ppm)							TCLP Sem
Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
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-1999	SD-S	8	1.41	**127**	<0.500	1.05	0.606	<0.050	0.827	<0.0008	<0.750	<0.050
SK-1999	TX-D	8.31	1.34	>200	<0.500	0.65	0.211	<0.050	**34.4**	<0.0008	<0.750	<0.050
SK-1999	TX-D	8.78	0.83	191	<5.00	20.6	**2.31**	1.54	**55.1**	<0.100	<0.452	<0.500
SK-1999	UT-SLC	6.2	1.09	160	<0.500	0.687	0.678	0.212	3.36	<0.0008	<0.750	<0.050
SK-1999	UT-SLC	7.2	0.92	152	<0.590	0.826	0.354	<0.059	1.18	<0.003	<0.744	<0.059
SK-2000	CA-F	7.63	1.09	**135**	<0.500	1.26	0.352	<0.050	0.65	<0.0008	<0.750	<0.050
SK-2000	CA-O	6.93	0.89	152	<5.00	1.26	0.662	0.557	**10.4**	<0.10	<0.45	<0.500
SK-2000	CA-RP	6.72	1.40	**115**	<0.500	0.789	0.595	<0.050	1.21	<0.0008	<0.750	<0.050
SK-2000	CA-SA	6.93	1.28	153	<0.500	1.42	**1.19**	0.125	2.96	<0.0008	<0.750	<0.050
SK-2000	CO-E	8.11	1.08	148	<0.590	1.28	0.476	<0.050	0.667	<0.0008	<0.750	<0.050
SK-2000	FL-B	7.94	0.91	**126**	<0.500	0.555	0.617	<0.050	**6.5**	<0.0008	<0.750	<0.050
SK-2000	GA-C	7.94	1.56	**118**	<0.500	0.089	0.392	0.193	**2650**	<0.0008	<0.750	<0.050
SK-2000	GA-GC	3.32	1.35	148	<0.590	0.467	0.166	0.112	<0.472	<0.002	<0.735	<0.059
SK-2000	GA-M	9.57	1.14	>200	<0.500	8.55	0.323	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	GA-MO	7.29	1.30	180	<0.500	1.21	**3.12**	<0.050	**18.1**	<0.0008	<0.750	<0.050
SK-2000	GA-N	7.33	0.96	**136**	<0.500	1.36	0.089	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	KS-DC	6.8	1.07	>200	<0.500	1.15	0.169	<0.050	0.851	<0.0008	<0.750	<0.050
SK-2000	KS-E	4.8	1.37	148	<0.500	1.52	0.151	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	KS-W	6.9	0.84	**115**	<0.500	1.21	0.218	<0.050	1.04	<0.0008	<0.750	<0.050
SK-2000	LA-P	6.7	1.04	**115**	<0.500	0.527	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	MO-SC	8.01	1.44	**101**	<0.500	0.975	**1.3**	<0.050	1.42	<0.0008	<0.750	<0.050
SK-2000	NC-HP	9.72	1.11	**114**	<0.500	3.4	0.46	0.076	**24.9**	<0.0008	<0.750	<0.050
SK-2000	NC-R	4.76	1.22	152	<0.500	0.891	0.931	<0.050	2.67	<0.0008	<0.750	<0.050
SK-2000	NC-C	7.09	1.19	>140	<0.500	2.94	0.572	<0.050	4.82	<0.0008	<0.750	<0.050
SK-2000	ND-F	7.06	1.82	**106**	<0.500	0.933	0.63	<0.050	0.451	<0.0008	<0.750	<0.050
SK-2000	NE-GI	7.2	1.12	**132**	<0.545	0.472	0.73	0.056	0.735	<0.002	<0.747	<0.055
SK-2000	NE-GI	7.3	1.41	**135**	<0.500	1.71	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	NE-O	7.1	1.00	146	<0.905	2.17	**3.95**	<0.091	**138**	<0.010	<0.723	<0.091
SK-2000	NE-O	7.21	0.83	142	<5.00	1.3	<0.50	<0.500	4.96	<0.100	<0.45	<0.500
SK-2000	NM-A	7.2	1.30	**110**	<0.500	0.964	0.427	<0.050	0.47	<0.0008	<0.750	<0.050
SK-2000	NM-F	7.5	1.08	126	<0.500	1.9	**29.8**	0.124	3.47	<0.0008	<0.750	<0.050
SK-2000	NY-A	5.88	1.65	**85**	<0.500	0.924	**12.1**	<0.050	**14.3**	<0.0008	<0.750	<0.050
SK-2000	NY-C	6.03	0.87	154	0.668	0.701	<0.064	<0.064	<0.508	<0.004	<0.741	<0.064
SK-2000	NY-C	5.98	1.20	**108**	<0.500	0.881	0.507	<0.050	0.722	<0.0008	<0.750	<0.050

WASTE PARTS WASHER SLUDGE

Total # of Samples: ***82***

		Physical Properties			TCLP Metals Analysis (ppm)							TCLP Sem
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-2000	NY-C	6.78	1.40	**137**	<0.500	0.935	0.438	<0.050	0.774	<0.0008	<0.750	<0.050
SK-2000	NY-C	6.68	1.40	**119**	<0.500	0.47	0.307	<0.050	0.697	<0.0008	<0.750	<0.050
SK-2000	NY-L	7.02	1.21	141	<0.500	1.15	0.84	<0.050	1.93	<0.0008	<0.750	<0.050
SK-2000	NY-L	8.36	1.15	150	<0.500	1.32	0.557	<0.050	1.45	<0.0008	<0.750	<0.050
SK-2000	NY-L	7.44	1.14	142	<0.500	1.96	0.522	<0.050	0.633	<0.0008	<0.750	<0.050
SK-2000	NY-NA	6.46	1.53	**91**	<0.500	0.971	**8.57**	<0.050	**14.4**	0.0009	<0.750	<0.050
SK-2000	NY-S	6.24	1.40	**120**	<0.500	2.08	0.405	<0.050	0.697	<0.0008	<0.750	<0.050
SK-2000	NY-S	7.04	1.34	142	<0.500	1.36	0.266	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	SC-G	7.06	1.15	143	<0.500	0.488	0.276	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	SD-SF	7.4	1.50	**108**	<0.500	1.14	**1.29**	<0.050	1.63	<0.0008	<0.750	<0.050
SK-2000	SD-SF	6.96	1.47	**121**	<0.500	1.32	0.447	<0.050	0.46	<0.0008	<0.750	<0.050
SK-2000	NY-A	9.28	1.13	146	<0.500	4.3	0.191	0.096	1.23	<0.0008	<0.750	<0.050
SK-2000	UT-SLC	7.44	1.34	144	<0.500	0.832	0.406	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	UT-SLC	7.06	1.50	183	<0.500	0.904	0.619	<0.050	1.21	<0.0008	<0.750	<0.050
	Maximum	9.72	1.99	>200	0.668	20.6	29.8	1.54	2650	0.0009	ND	0.154
	Minimum	3.32	0.813	85	0.668	0.089	0.089	0.055	0.451	0.0009	ND	0.068
	90th UCL for			**140**	ND	1.55	0.699	ND	0.643	ND	ND	ND
	50th Percentile	7.5		**140**					1.7			

WASTE PARTS WASHER SLUDGE

Total # of Samples: ***82***

		Volatiles Analysis (ppm)									TCLP Vol
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	CO-E	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	GA-C	6.75	<1.37	<2.31	<2.41	<2.10	<2.00	<4.94	<6.19	<2.10	<3.15
SK-1999	GA-GC	0.361	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	GA-GC	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	GA-M	0.609	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	GA-N	<0.228	<0.067	<0.110	<0.110	<0.100	<0.097	<0.240	<0.290	<0.100	<0.150
SK-1999	KS-DC	<14.03	<3.96	<6.71	<7.01	<6.10	<5.79	<14.3	<18.0	<6.10	<9.15
SK-1999	KS-W	2.087	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	LA-K	9.62	<2.67	<4.51	<4.71	<4.10	<3.90	<9.64	<12.1	<4.10	<6.15
SK-1999	LA-P	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	MO-C	<20.54	<5.84	<9.86	<10.3	<8.96	<8.53	<21.1	<26.4	<8.96	<13.4
SK-1999	MO-GA	<25.1	<7.14	<12.0	<12.5	<11.0	<10.4	<25.8	<32.3	<11.0	<16.4
SK-1999	NC-A	1.071	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NC-R	<19.76	<2.61	<2.40	<3.59	<3.31	<4.09	<6.27	<12.7	<5.00	<6.06
SK-1999	ND-F	<14.03	<3.96	<6.71	<7.01	<6.10	<5.79	<14.3	<18.0	<6.10	<9.15
SK-1999	ND-F	5.58	<1.37	<2.31	<2.41	<2.10	<2.00	<4.94	<6.19	<2.10	<3.15
SK-1999	NE-GI	1.154	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NE-O	<25.1	<7.14	<12.0	<12.5	<11.0	<10.4	<25.8	<32.3	<11.0	<16.4
SK-1999	NM-F	11.48	<1.50	<1.38	<2.06	<1.90	<2.35	<3.60	<7.29	<2.87	<3.48
SK-1999	NY-A	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	NY-A	9.49	<1.13	<1.04	<1.56	<1.43	<1.77	<2.71	<5.49	<2.16	<2.62
SK-1999	NY-A	15.29	<1.87	<1.72	<2.57	<2.37	<2.93	<4.49	<9.09	<3.58	<4.34
SK-1999	NY-C	0.951	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-C	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-L	<1.44	<0.19	<0.17	<0.26	<0.24	<0.29	<0.45	<0.91	<0.36	<0.43
SK-1999	NY-L	<0.144	<0.019	<0.017	<0.026	<0.024	<0.029	<0.045	<0.091	<0.036	<0.043
SK-1999	NY-NA	55.9	<15.7	<26.5	<27.7	<24.1	<22.9	<56.6	<71.1	<24.1	<36.1
SK-1999	NY-NA	<25.1	<7.14	<12.0	<12.5	<11.0	<10.4	<25.8	<32.3	<11.0	<16.4
SK-1999	NY-S	<2.28	<0.68	<1.1	<1.1	<1.00	<0.98	<2.4	<2.9	<1.0	<1.5
SK-1999	NY-S	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-S	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	OR-C	0.743	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	SC-G	<0.144	<0.019	<0.017	<0.026	<0.024	<0.029	<0.045	<0.091	<0.036	<0.043
SK-1999	SD-S	1.351	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15

WASTE PARTS WASHER SLUDGE

Total # of Samples: ***82***

		Volatiles Analysis (ppm)									TCLP Vol
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	SD-S	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	TX-D	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.40	<0.40
SK-1999	TX-D	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	UT-SLC	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	UT-SLC	6.03	<0.759	<0.697	<1.05	<0.964	<1.19	<1.82	<3.69	<1.46	<1.76
SK-2000	CA-F	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	CA-O	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	CA-RP	<500	<0.50	<0.50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
SK-2000	CA-SA	<1.0	<0.1	<0.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SK-2000	CO-E	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	FL-B	<0.20	<0.057	<0.084	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	GA-C	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	GA-GC	<27.4	<0.820	<0.820	<4.10	<4.10	<4.10	<4.10	<4.31	<4.10	<4.10
SK-2000	GA-M	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	GA-MO	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	GA-N	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	KS-DC	<100.0	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	KS-E	<01.15	<0..10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	KS-W	0.137	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
SK-2000	LA-P	<20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	MO-SC	<20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NC-HP	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SK-2000	NC-R	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	NC-C	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.58	<0.50	<0.50
SK-2000	ND-F	1.123	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NE-GI	<5.00	<0.499	<0.499	<2.50	<2.5	<2.50	<2.50	<2.63	<2.50	<2.50
SK-2000	NE-GI	<0.20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10
SK-2000	NE-O	72.6	<7.22	<7.22	<36.1	<36.1	<36.1	<36.1	<38.8	<36.1	<36.1
SK-2000	NE-O	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	NM-A	<0.20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10
SK-2000	NM-F	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NY-A	<20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NY-C	<109.0	<1.30	<1.30	<6.49	<6.49	<6.49	<6.49	<6.82	<6.49	<6.49
SK-2000	NY-C	<20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10

WASTE PARTS WASHER SLUDGE

Total # of Samples: ***82***

		Volatiles Analysis (ppm)									TCLP Vol
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-2000	NY-C	<20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NY-C	<20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NY-L	43.6	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NY-L	7.36	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NY-L	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	NY-NA	<20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NY-S	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SK-2000	NY-S	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SK-2000	SC-G	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	SD-SF	<0.20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10
SK-2000	SD-SF	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	NY-A	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	UT-SLC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	UT-SLC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
Maximum		72.6	0	ND	ND	ND	ND	ND	ND	ND	ND
Minimum		0.137	0	ND	ND	ND	ND	ND	ND	ND	ND
90th UCL for 50th Percentile		1.154	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE PARTS WASHER SLUDGE

Total # of Samples: 82

atiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	CO-E	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.65	<0.20	<0.14
SK-1999	GA-C	<0.218	<0.218	<0.218	<0.218	0.252	<0.218	<0.238	<0.545	**7.98**	0.238	<0.154
SK-1999	GA-GC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.21	<0.20	<0.14
SK-1999	GA-GC	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**174.41**	<2.0	<1.4
SK-1999	GA-M	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.68	<0.20	<0.14
SK-1999	GA-N	0.232	<0.218	<0.218	<0.218	<0.248	<0.218	<0.238	<0.545	**7.25**	0.249	<0.154
SK-1999	KS-DC	<0.254	<0.254	<0.254	<0.254	<0.344	<0.254	<0.314	<0.635	**7.42**	**0.518**	<0.181
SK-1999	KS-W	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	2.87	**0.94**	<0.20	<0.14
SK-1999	LA-K	<0.344	<0.254	<0.254	<0.254	<0.254	<0.254	<0.254	<0.785	**20.8**	**3.56**	<0.196
SK-1999	LA-P	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	MO-C	0.278	<0.254	<0.254	<0.254	<0.344	<0.254	<0.314	<0.635	**161**	**1.26**	<0.181
SK-1999	MO-GA	**2.18**	<2.00	<2.00	<2.00	<2.15	<2.00	<2.10	<5.00	**179**	**3.02**	<1.41
SK-1999	NC-A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	**1.74**	<1.0	<1.4
SK-1999	NC-R	<0.308	<0.308	<0.308	<0.308	<0.488	<0.308	<0.428	<0.770	**63.9**	**3.93**	<0.222
SK-1999	ND-F	<0.296	<0.176	<0.176	<0.176	<0.176	<0.176	<0.176	<0.880	**27.1**	0.411	<0.214
SK-1999	ND-F	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.218	<0.545	13.7	0.443	<0.154
SK-1999	NE-GI	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.63	<0.20	<0.14
SK-1999	NE-O	<0.272	<0.272	<0.272	<0.272	<0.392	<0.272	<0.352	0.987	**139**	**11.8**	<0.194
SK-1999	NM-F	0.496	<0.236	<0.236	<0.236	<0.296	<0.236	<0.276	<0.590	**20.8**	<0.236	<0.167
SK-1999	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	NY-A	<0.236	<0.236	<0.236	<0.236	<0.296	<0.236	<0.276	<0.590	**11.7**	**1.03**	<0.167
SK-1999	NY-A	0.272	<0.272	<0.272	<0.272	<0.392	<0.272	<0.352	<0.680	**60.9**	**3.62**	<0.194
SK-1999	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**0.73**	<0.20	<0.14
SK-1999	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.25	<0.20	<0.14
SK-1999	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.23	<0.20	<0.14
SK-1999	NY-L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**26.23**	<2.0	<1.4
SK-1999	NY-NA	**2.82**	<2.00	<2.00	<2.00	<2.27	<2.00	<2.18	<5.00	**2.73**	**2.1**	<1.41
SK-1999	NY-NA	**2.31**	<2.00	<2.00	<2.00	<2.12	<2.00	<2.08	<5.00	**129**	<2.00	<1.40
SK-1999	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.65**	<0.20	<0.14
SK-1999	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**0.76**	<0.20	<0.14
SK-1999	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**4.84**	<0.20	<0.14
SK-1999	OR-C	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**5.65**	**25.36**	<1.4
SK-1999	SC-G	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.5	**18.4**	<1.0	<0.70
SK-1999	SD-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.5**	<0.20	<0.14

WASTE PARTS WASHER SLUDGE

Total # of Samples: 82

atiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	SD-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.97	**0.8**	<0.20	<0.14
SK-1999	TX-D	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.6	0.51	<0.20	<0.14
SK-1999	TX-D	<5.0	<2.0	<2.0	<2.0	3.662	<2.0	<2.0	<10.0	**3.023**	<2.0	<2.0
SK-1999	UT-SLC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.51	0.39	<0.20	<0.14
SK-1999	UT-SLC	0.266	<0.236	<0.236	<0.236	<0.296	<0.236	<0.276	0.766	**30.7**	**0.638**	<0.167
SK-2000	CA-F	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.94	**0.769**	<0.20	<0.14
SK-2000	CA-O	**3.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	12.8	**1240**	**48.1**	<1.5
SK-2000	CA-RP	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**8.549**	<0.20	<0.14
SK-2000	CA-SA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**4.475**	0.324	<0.14
SK-2000	CO-E	0.258	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**0.945**	<0.20	<0.14
SK-2000	FL-B	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	GA-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.476**	<0.20	<0.14
SK-2000	GA-GC	0.224	<0.200	<0.200	<0.200	0.215	<0.200	<0.204	0.528	**15.5**	0.434	<0.140
SK-2000	GA-M	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.682	<0.20	<0.14
SK-2000	GA-MO	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	GA-N	**2.785**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**46.82**	<2.0	<1.4
SK-2000	KS-DC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	KS-E	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**10.82**	<2.0	<1.4
SK-2000	KS-W	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.535	0.265	<0.20	<0.14
SK-2000	LA-P	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.096**	<0.20	<0.14
SK-2000	MO-SC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	2.224	0.21	<0.20	<0.14
SK-2000	NC-HP	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**5.51**	<0.20	<0.14
SK-2000	NC-R	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.628	<0.20	<0.14
SK-2000	NC-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**3.356**	**0.894**	<0.14
SK-2000	ND-F	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**5.03**	<0.20	<0.14
SK-2000	NE-GI	**0.719**	<0.812	<0.812	<0.812	<0.742	<0.812	<0.832	2.17	**12.1**	**0.966**	<0.569
SK-2000	NE-GI	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.649	<0.20	<0.14
SK-2000	NE-O	<0.362	<0.362	<0.362	<0.362	<0.632	<0.362	<0.542	0.998	**253**	**2.52**	<0.262
SK-2000	NE-O	**1.1**	<0.40	<0.40	1.2	1.5	<0.40	<0.80	2	**547**	**2.11**	<0.30
SK-2000	NM-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.413	<0.20	<0.14
SK-2000	NM-F	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.422	<0.20	<0.14
SK-2000	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-C	<0.236	<0.236	<0.236	<0.236	<0.296	<0.236	<0.276	<0.590	**2.88**	<0.236	<0.167
SK-2000	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.244	<0.20	<0.14

WASTE PARTS WASHER SLUDGE

Total # of Samples: 82

atiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-2000	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.309	<0.20	<0.14
SK-2000	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.215	<0.20	<0.14
SK-2000	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.244	<0.20	<0.14
SK-2000	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.269	<0.20	<0.14
SK-2000	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.955**	**1.486**	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.363**	<0.20	<0.14
SK-2000	SC-G	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	SD-SF	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**0.705**	<0.20	<0.14
SK-2000	SD-SF	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**4.496**	**0.514**	<0.14
SK-2000	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	UT-SLC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.387	<0.20	<0.14
SK-2000	UT-SLC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**0.827**	<0.20	<0.14
	Maximum	3.4	ND	ND	ND	3.662	ND	ND	12.8	1240	48.1	ND
	Minimum	0.224	ND	ND	ND	0.215	ND	ND	0.51	0.21	0.238	ND
	90th UCL for	ND	ND	ND	ND	ND	ND	ND	ND	**5.710**	0.227	ND
	50th Percentile									**3.023**	<0.236	

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	GA-C	10.43	1.01	>200	<5.00	2.7	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-MO	10.18	1.04	**125**	<5.00	1.62	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-1999	IL-EGV	11.3	1.01	>140	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	IL-EGV	10.64		>142	<5.00	0.351	<0.050	<0.050	**32.7**	<0.0008	<0.750	<0.050
SK-1999	IL-EGV	10.2		>142	<5.00	0.406	<0.050	0.066	0.445	<1.00	<0.750	<0.050
SK-1999	IL-EGV	10.5	1.01	>140	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	IL-EGV	10.4	1.02	>140	<5.00	1.48	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	IL-EGV	10.2	1.02	>140	<5.00	0.517	<0.500	<0.500	<4.00	<0.10	<0.450	<0.500
SK-1999	IL-EGV	9.8	1.03	>140	<5.00	<0.500	<0.500	0.873	<4.00	<0.100	<0.452	<0.500
SK-1999	IL-EGV	10.3	1.01	>140	<5.00	0.766	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	KS-DC	9.33	0.99	>200	<5.00	3.66	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	KS-E	8.14	1.04	>200	<5.00	<0.500	<0.500	<0.500		<0.190	<0.859	<0.500
SK-1999	KS-W	8.47	1.00	>200	<5.00	1.33	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	MO-C	10.18	1.05	>200	<5.00	6.27	**1.09**	**6.6**	<4.00	<0.10	<0.45	<0.500
SK-1999	ND-B	9.27	0.99	**69**	<5.00	0.842	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NE-GE	9.98	1.03	>200	<5.00	1.2	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-1999	NM-A	9.72	1.02	>200	<5.00	3.83	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NM-A	9.93	1.02	>200	<5.00	5.41	<0.500	<0.500	**8.25**	<0.040	<0.452	<0.500
SK-1999	NY-A	10.52	1.06	>200	<5.00	6.38	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-A	10.5	0.98	>200	<5.00	3.78	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-A	9.78	1.04	>200	<5.00	1.45	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-A	10.05	1.03	>200	<5.00	0.595	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-A	9.88	1.00	>200	<5.00	4.09	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-A	9.99	0.99	>200	<5.00	6.98	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-C	9.27	1.07	>200	<5.00	0.822	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-C	8.93	1.01	>200	<5.00	1.73	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-C	9.54	1.05	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-C	10.57	1.04	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-C	10.39	1.04	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-L	10.15	0.99	**91**	<5.00	1.55	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-L	9.08	1.05	>200	<5.00	2.16	0.541	<0.500	<4.00	<0.100	<0.450	<0.500
SK-1999	NY-L	10.35	1.02	>200	<5.00	10.5	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-L	9.8	1.06	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-NA	7.89	0.89	>200	<5.00	3.74	<0.500	3.23	**53.1**	<0.10	<0.45	<0.500

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	NY-NA	9.89	0.91	>200	<5.00	5.01	<0.500	4.3	**68.8**	<0.10	<0.45	<0.500
SK-1999	NY-NA	7.69	0.90	>200	<5.00	2.51	<0.500	**8.61**	**68.1**	<0.10	<0.45	<0.500
SK-1999	NY-NA	9.73	1.03	>200	<5.00	1.68	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-NA	9.7	1.03	>142	<5.00	0.704	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-NA	10.34	1.04	>200	<5.00	8.4	0.771	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-S	10.28	1.00	>200	<5.00	4.04	0.804	0.867	**16.4**	<0.10	<0.45	<0.500
SK-1999	NY-S	9.53	0.92	149	<5.00	0.155	<0.050	<0.050	**48.3**	<0.0008	<0.750	<0.050
SK-1999	NY-S	9.37	1.04	>200	<5.00	3.52	0.697	0.928	**13.8**	<0.10	<0.45	<0.500
SK-1999	NY-S	9.78	1.03	**111**	<5.00	2.26	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-S	10.33	1.00	>200	<5.00	10.4	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-S	10.34	1.01	>200	<5.00	10.3	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	OR-C	10.43	0.98	>200	<5.00	2.84	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	TX-D	9.84	0.99	>200	<5.00	1.41	**1.24**	<0.500	<4.00	<0.100	<0.452	<0.500
SK-2000	GA-C	7.90	1.01	>200	<5.00	1.17	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	GA-GC	11.30	1.08	>200	<5.00	6.04	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	GA-MO	11.02	0.92	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	KS-DC	10.71	1.06	>200	<5.00	9.02	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	KS-E	9.20	1.01	>200	<5.00	1.79	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	KS-W	8.32	1.00	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	MO-SC	7.42	1.01	>200	<5.00	2.1	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	ND-B	9.90	1.10	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-2000	NE-GE	10.12	1.02	>200	<5.00	0.926	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-2000	NM-A	8.60	1.05	**69**	<5.00	12.7	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NM-A	10.00	1.00	>200	<5.00	7.46	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-A	11.78	1.01	>200	<5.00	5.54	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-A	10.66	1.01	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-A	10.66	1.01	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-C	9.42	1.04	>200	<5.00	1.63	<0.500	<0.500	<4.00	<0.10	<1.00	<0.500
SK-2000	NY-L	9.79	1.02	>200	<5.00	1.49	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-L	7.28	0.87	>200	<5.00	0.693	0.588	<0.500	4.9	<0.10	<0.45	<0.500
SK-2000	NY-L	9.79	0.98	>200	<5.00	0.893	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-L	9.47	0.93	180	<5.00	1.57	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-L	9.20	0.98	>200	<5.00	1.68	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-L	10.57	1.01	**120**	<5.00	1.17	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

	Physical Properties			TCLP Metals Analysis (ppm)							
Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
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-2000	NY-NA	9.38	1.00	>200	<5.00	0.558	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-NA	9.36	1.00	>200	<5.00	0.502	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-NA	9.37	1.01	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-NA	8.95	1.01	>200	<5.00	1.17	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-NA	9.09	1.01	>200	<5.00	1.19	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	9.93	1.01	>200	<5.00	0.528	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	10.17	1.04	>200	<5.00	5.06	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	9.95	1.03	>200	<5.00	1.17	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	10.25	1.03	>200	<5.00	1.06	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	9.86	1.04	>200	<5.00	0.854	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	7.24	1.36	**135**	<5.00	2.91	0.692	<0.500	0.748	<0.0008	<0.750	<0.050
SK-2000	NY-S	10.03	1.03	>200	<5.00	8.76	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	9.66	1.02	>200	<5.00	1.78	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	9.47	1.01	>200	<5.00	2.02	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-A	11.07	1.05	>200	<5.00	5.4	<0.50	<0.50	<0.400	<0.0008	<0.750	<0.050
SK-2000	TX-D	10.60	1.00	>200	<5.00	2.33	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

	Physical Properties			TCLP Metals Analysis (ppm)							
Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
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**											
Maximum	11.78	1.36	180.00	ND	12.7	1.24	8.61	68.8	0	ND	ND
Minimum	7.24	0.87	69.00	ND	0.155	0.541	0.066	0.445	0	ND	ND
90th UCL for	10.15	1.02	>200	ND	2.51	ND	ND	ND	ND	ND	ND
50th Percentile	10.00	NA	>200		1.73						

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

TCLP Semi-Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	GA-C	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	GA-MO	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	IL-EGV	<0.144	<0.019	<0.017	<0.026	<0.024	<0.029	<0.045	<0.091	<0.036	<0.043
SK-1999	IL-EGV	<0.73	<0.093	<0.086	<0.13	<0.12	<0.15	<0.22	<0.45	<0.18	<0.22
SK-1999	IL-EGV	<0.73	<0.093	<0.086	<0.13	<0.12	<0.15	<0.22	<0.45	<0.18	<0.22
SK-1999	IL-EGV	<0.73	<0.093	<0.086	<0.13	<0.12	<0.15	<0.22	<0.45	<0.18	<0.22
SK-1999	IL-EGV	<0.73	<0.093	<0.086	<0.13	<0.12	<0.15	<0.22	<0.45	<0.18	<0.22
SK-1999	IL-EGV	<0.73	<0.093	<0.086	<0.13	<0.12	<0.15	<0.22	<0.45	<0.18	<0.22
SK-1999	IL-EGV	<0.144	<0.019	<0.017	<0.026	<0.024	<0.029	<0.045	<0.091	<0.036	<0.043
SK-1999	IL-EGV	<0.144	<0.019	<0.017	<0.026	<0.024	<0.029	<0.045	<0.091	<0.036	<0.043
SK-1999	KS-DC	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	KS-E	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	KS-W	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	MO-C	<5.8		<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	ND-B	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	NE-GE	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NM-A	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NM-A	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-A	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-A	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-A	<10.1	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	NY-A	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	NY-A	<1.44	<0.19	<0.17	<0.26	<0.24	<0.29	<0.45	<0.91	<0.36	<0.43
SK-1999	NY-A	<7.3	<0.93	<0.86	<1.3	<1.2	<1.5	<2.2	<4.5	<1.8	<2.1
SK-1999	NY-C	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-C	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-C	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-C	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-C	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-L	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-L	<1.44	<0.19	<0.17	<0.26	<0.24	<0.29	<0.45	<0.91	<0.36	<0.43
SK-1999	NY-L	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-L	<10.2	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

		TCLP Semi-Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	NY-NA	<460		<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-NA	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-NA	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-NA	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-S	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-S	<0.228	<0.067	<0.11	<0.11	<0.10	<0.97	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-S	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-S	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-S	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	NY-S	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	OR-C	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	TX-D	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-2000	GA-C	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	GA-GC	<100	<0..10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	GA-MO	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KS-DC	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KS-E	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	KS-W	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	MO-SC	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	ND-B	<0.20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NE-GE	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	NM-A	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	NM-A	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	NY-A	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-A	<20.0	<0.26	<0.26	<0.40	<1.0	<0.80	<10.0	<2.0	<10.0	<4.0
SK-2000	NY-A	<20.0	<0.26	<0.26	<0.40	<1.0	<0.80	<10.0	<2.0	<10.0	<4.0
SK-2000	NY-C	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.1	<5.0	<2.0
SK-2000	NY-L	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	<100.0	<1.3	<1.3	<2.0	<5.0	<4.0	<50	<10.0	<50	<20
SK-2000	NY-L	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

TCLP Semi-Volatiles Analysis (ppm)

LAB	SITE										
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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
SK-2000	NY-NA	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-NA	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-NA	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-NA	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-NA	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.1	<5.0	<2.0
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-S	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.2	<5.0	<2.0
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-S	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-A	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	TX-D	<10.0	<0.13	<0.13	<0.20	<0.50	<0.40	<5.0	<1.1	<5.0	<2.0

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

		TCLP Semi-Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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**										
	Maximum	0	ND	0	0	ND	ND	ND	0	ND	ND
	Minimum	0	ND	0	0	ND	ND	ND	0	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	GA-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**31.68**	<0.20	<0.14
SK-1999	GA-MO	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<2.0	1.22	**827.27**	0.29	<0.14
SK-1999	IL-EGV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.500	<0.20	<0.20	<0.14
SK-1999	IL-EGV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.500	<0.20	<0.20	<0.14
SK-1999	IL-EGV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.500	<0.20	<0.20	<0.14
SK-1999	IL-EGV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.500	<0.20	<0.20	<0.14
SK-1999	IL-EGV	0.27	<0.20	<0.20	<0.20	0.97	<0.20	<0.20	<0.50	**0.9**	<0.20	<0.14
SK-1999	IL-EGV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.500	<0.20	<0.20	<0.14
SK-1999	IL-EGV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	IL-EGV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	KS-DC	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**7.63**	<2.0	<1.4
SK-1999	KS-E	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.73**	<0.20	<0.14
SK-1999	KS-W	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<10.0	**458**	<2.8	<2.8
SK-1999	MO-C	<2.0	<2.0	<2.0	<2.0	<0.20	<0.20	<0.20	<0.50	**26413.9**	<2.0	<1.4
SK-1999	ND-B	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	12.65	**54.91**	<1.0	<0.70
SK-1999	NE-GE	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**416.34**	0.43	<0.14
SK-1999	NM-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.61	<0.20	<0.14
SK-1999	NM-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	2.52	0.31	<0.20	<0.14
SK-1999	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	NY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**53.12**	**10.67**	<1.4
SK-1999	NY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<2.0	<1.5
SK-1999	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.698**	<0.20	<0.14
SK-1999	NY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**8,844**	<2.0	<1.4
SK-1999	NY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**59.45**	<2.0	<1.4
SK-1999	NY-C	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**1065.65**	<2.0	<1.4
SK-1999	NY-C	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	11.73	**52.88**	<2.0	<1.4
SK-1999	NY-C	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**1930.55**	<2.0	<1.4
SK-1999	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.58	<0.20	<0.14
SK-1999	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**651.3**	<0.20	<0.14
SK-1999	NY-L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**12.63**	<2.0	<1.4
SK-1999	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	NY-NA	<20	<20	<20	<20	<20	<20	<40	<50	**202**	<20	<15

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	<2.0	<2.0	<1.5
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	<2.0	<2.0	<1.5
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**13.56**	<2.0	<1.4
SK-1999	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.25**	<0.20	<0.14
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**664.57**	<2.0	<1.4
SK-1999	NY-S	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	**0.709**	<0.10	<0.10
SK-1999	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-1999	NY-S	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**17.91**	<2.0	<1.4
SK-1999	NY-S	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.50	**204.31**	<0.10	<0.10
SK-1999	NY-S	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**11.58**	<2.0	<1.4
SK-1999	NY-S	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**10.15**	<2.0	<1.4
SK-1999	OR-C	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**66.4**	<2.0	<1.4
SK-1999	TX-D	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**2.88**	<2.0	<1.4
SK-2000	GA-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.889**	0.2	<0.14
SK-2000	GA-GC	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**93.85**	<2.0	<1.4
SK-2000	GA-MO	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**25.76**	<0.20	<0.14
SK-2000	KS-DC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**7.654**	0.25	<0.14
SK-2000	KS-E	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.743**	<0.20	<0.14
SK-2000	KS-W	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	MO-SC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.686	<0.20	<0.14
SK-2000	ND-B	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**184.8**	<2.0	<1.4
SK-2000	NE-GE	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.43**	<0.20	<0.14
SK-2000	NM-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.776**	<0.20	<0.14
SK-2000	NM-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**131.2**	<2.0	<1.4
SK-2000	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**9.002**	<0.20	<0.14
SK-2000	NY-L	**16.26**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	22.49	<2.00	<2.0	<1.4
SK-2000	NY-L	**1.1**	<0.20	<0.20	<0.20	2	<0.20	<4.0	0.58	<0.20	<0.20	<0.14
SK-2000	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**37.28**	0.285	<0.14
SK-2000	NY-L	**15.34**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**2.069**	<2.0	<1.4
SK-2000	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**12.61**	<0.20	<0.14

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-2000	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.696	0.523	<0.20	<0.14
SK-2000	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.524	<0.20	<0.14
SK-2000	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.043**	<0.20	<0.14
SK-2000	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.369**	<0.20	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**34.82**	<0.20	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.145**	<0.20	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**3.247**	**1.129**	<0.14
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	NY-S	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**1615**	**2.814**	<1.4
SK-2000	NY-S	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**2.104**	**0.781**	<0.14
SK-2000	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14
SK-2000	TX-D	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.20	<0.14

WASTE AQUEOUS CLEANERS

Total # of Samples: 84

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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											
	Maximum	16.26	ND	0	ND	2	ND	ND	22.49	26413.9	10.67	ND
	Minimum	0.27	ND	0	ND	0.97	ND	ND	0.58	0.31	0.2	ND
	90th UCL for	ND	ND	ND	ND	ND	ND	ND	ND	**5.92**	ND	ND
	50th Percentile									**2.88**		

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1998	GA-C	6.91	1.08	>200	<0.500	0.148	0.092	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	GA-GC	6.28	1.1	>200	<0.500	0.278	0.089	0.1	<0.400	<0.0008	<0.750	<0.050
SK-1998	GA-MO	6.73	1.24	>200	<0.500	0.434	<0.050	0.092	<0.400	<0.0008	<0.750	<0.050
SK-1998	GA-N	5.54	1.03	>200	<0.500	0.277	0.068	0.284	<0.400	<0.0008	<0.750	<0.050
SK-1998	KS-E				<0.500	0.28	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	KS-W	8.37	1.01	>200	<0.500	0.408	<0.050	0.051	<0.400	<0.0008	<0.750	<0.050
SK-1998	LA-K	7.13		>200	<0.500	0.151	<0.050	0.178	<0.400	<0.0008	<0.750	<0.050
SK-1998	LA-P	6.24	1.21	>200	<0.500	0.256	<0.050	0.085	<0.400	<0.0008	<0.750	<0.050
SK-1998	MO-CO	4.96	1.18	>200	<0.500	<0.050	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	ND-B	6.17	1.02	>200	<0.500	0.219	<0.050	0.413	<0.400	<0.0008	<0.750	<0.050
SK-1998	NE-GI	7.24	1.32	>200	<0.500	0.097	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	NE-O	6.43	1.22	>200	<0.500	0.132	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	NM-A	6.93	1.40	>200	<0.500	0.182	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-A	7.26	0.95	>200	<0.500	0.295	0.063	0.621	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-A	7.05	1.07	>200	<0.500	0.327	0.09	0.245	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-A	5.91	1.00	>200	<0.500	0.253	0.055	0.653	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-C	6.53		>200	<0.500	0.319	0.096	0.13	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-C	5.92	1.14	>200	<0.500	0.175	0.096	0.113	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-C	6.43	1.05	>200	<0.500	0.325	0.075	0.105	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-L	6.36	1.07	>200	<0.500	0.136	<0.050	0.065	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-L	5.93	1.18	>200	<0.500	0.226	0.075	0.146	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-L	6.35		>200	<0.500	0.292	0.062	0.407	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-NA	7.62	1.47	>200	<0.500	0.402	<0.050	0.067	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-NA	6.86	1.51	>200	<0.500	0.269	<0.050	0.054	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-NA	6.84	1.62	>200	<0.500	0.501	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-S	6.35			<0.500	0.259	0.059	0.177	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-S	5.69			<0.500	0.288	0.071	0.21	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-S	6.32			<0.500	0.269	0.074	0.218	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-S	6		>200	<0.500	0.201	0.056	0.092	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-S	6.08	0.99	>200	<0.500	0.263	<0.050	0.11	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-S	5.88	1.09	>200	<0.500	0.174	<0.050	0.078	<0.400	<0.0008	<0.750	<0.050
SK-1998	OR-C	6.88	1.19	>200	<0.500	0.068	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	SC-G	7.28	1.39	>200	<0.500	0.351	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	SD-SF	7.79		>200	<0.500	0.254	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	GA-C	6.18	0.91	>200	<0.500	<0.500	<0.500	<0.500	<0.400	<0.0008	<0.750	<0.050
SK-1999	GA-GC	6.85	0.93	>200	<0.500	0.225	<0.050	0.071	<0.400	<0.0008	<0.750	<0.050
SK-1999	GA-MO	6.68	1.02	>200	<0.500	0.376	0.091	0.148	<0.400	<0.0008	<0.750	<0.050
SK-1999	GA-N	5.9	1.34	>200	<0.500	0.331	0.091	0.062	<0.400	<0.0008	<0.750	<0.050
SK-1999	KS-E	6.69	1.01	>200	<0.500	0.184	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	KS-W	7.68	0.91	>200	<0.500	0.081	<0.050	0.15	<0.400	<0.0008	<0.750	<0.050
SK-1999	LA-P	6.08	0.94	>200	<0.500	0.168	<0.050	0.094	<0.400	<0.0008	<0.750	<0.050
SK-1999	MO-CO	6.59	0.89	>200	<0.500	0.163	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	ND-B	6.48	0.71	85	<0.500	0.306	0.177	0.101	<0.400	<0.0008	<0.750	<0.050
SK-1999	NE-GI	6.7	0.92	>200	<0.500	0.478	0.161	0.125	<0.400	<0.0008	<0.750	<0.050
SK-1999	NE-O	7.09	1.62	>200	<0.680	0.19	0.082	0.543	0.656	<0.005	<0.738	<0.068
SK-1999	NY-C	6.19	1.09	>200	<0.500	0.182	0.056	0.156	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-C	6.29	1.10	>200	<0.500	0.246	<0.050	0.109	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-L	6.63	0.92	>200	<0.500	0.265	0.067	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-L	6.52	0.92	>200	<0.500	0.314	0.082	0.509	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-NA	6.12	1.29	>200	<0.500	0.332	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-NA	6.32	1.21	>200	<0.500	0.208	0.051	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-NA	6.55	1.24	>200	<0.500	0.232	0.062	0.087	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-S	7.11	1.15	>200	<0.500	0.103	<0.050	0.06	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-S	6.93	1.06	>200	<0.500	0.077	<0.050	0.054	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-S	6.82	1.05	>200	<0.500	0.082	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	OR-C	5.78	0.56	>200	<0.500	0.483	<0.050	0.066	<0.400	<0.0008	<0.750	<0.050
SK-1999	SC-G	7.1	0.91	>200	<0.500	0.212	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1999	SD-S	7.4	1.20	>200	<0.500	0.142	<0.050	0.866	<0.400	<0.0008	<0.750	<0.050
SK-2000	GA-C	7.2	0.47	>200	<0.500	0.847	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	GA-GC	6.9	1.23	>200	<0.500	0.363	<0.050	<0.050	<0.400	<1.00	<0.750	<0.050
SK-2000	GA-MO	6.8		>200	<0.500	1.32	0.158	0.167	<0.400	<0.0008	<0.750	<0.050
SK-2000	KS-E	7.5	1.55	>200	<0.770	0.296	<0.077	0.083	<0.616	0.016	<0.705	<0.077
SK-2000	KS-W	8.7	1.83	>200	<0.500	0.084	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	LA-P	7.3	0.20	>200	<0.500	0.273	<0.050	0.08	<0.400	<0.0008	<0.750	<0.050
SK-2000	MO-SC	6.3	0.93	>200	<0.500	0.683	<0.050	0.088	<0.400	<0.0008	<0.750	<0.050
SK-2000	ND-B	7.3	0.91	>200	<0.500	0.273	0.06	0.253	<0.400	<0.0008	<0.750	<0.050
SK-2000	NE-GI	7.9	0.99	>200	<0.500	0.526	<0.050	0.252	<0.400	<0.0008	<0.750	<0.050
SK-2000	NE-O	7.2	1.11	>200	<0.500	0.337	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-2000	NM-A	6.9	0.38	>200	<0.500	0.513	<0.050	0.308	<0.400	0.002	<0.750	<0.050
SK-2000	SD-SF	7.0	1.30	>200	<0.500	0.157	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	SD-SF	6.9	0.93	>200	<0.500	0.269	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	TX-D	6.5	1.10	>200	<0.500	0.414	<0.050	0.084	<0.400	<0.0008	<0.750	<0.050
SK-2000	TX-D	6.3	1.20	>200	<0.500	0.375	<0.050	0.09	<0.400	<0.0008	<0.750	<0.050
SK-2000	TX-D	6.7	1.10	>200	<0.500	0.374	<0.050	0.09	<0.400	<0.0008	<0.750	<0.050
	Maximum	8.70	1.83	>200	ND	1.32	0.18	0.87	0.66	ND	ND	ND
	Minimum	4.96	0.20	85	ND	0.07	0.05	0.05	0.66	ND	ND	ND
	90th UCL	6.7	1.21	>200	ND	0.277	ND	0.413	ND	ND	ND	ND
	for 50th%	6.85	NA	>200		0.278		0.092				

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1998	GA-C	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	GA-GC	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	GA-MO	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	GA-N	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	KS-E	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	KS-W	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	LA-K	<2.55	<0.750	<0.800	<1.05	<1.00	<0.950	<2.80	<3.30	<1.15	<1.95
SK-1998	LA-P	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	MO-CO	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.200	<0.040	<0.040	<0.040
SK-1998	ND-B	<2.56	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NE-GI	<2.55	<0.750	<0.800	<1.05	<1.00	<0.950	<2.80	<3.30	<1.15	<1.95
SK-1998	NE-O	<2.55	<0.750	<0.800	<1.05	<1.00	<0.950	<2.80	<3.30	<1.15	<1.95
SK-1998	NM-A	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-A	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-A	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-A	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-C	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-C	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-C	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.040	<0.040
SK-1998	NY-L	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-L	<2.55	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-L	<2.55	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-NA	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-NA	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-NA	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-S	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-S	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-S	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-S	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-S	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-S	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	OR-C	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	SC-G	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.040	<0.040
SK-1998	SD-SF	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	GA-C	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	GA-GC	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.040	<0.040
SK-1999	GA-MO	<2.28	<0.67	<1.1	<1.1	<1.00	<0.96	<2.4	<2.9	<1.0	<1.5
SK-1999	GA-N	0.559	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	KS-E	<2.28	<0.67	<1.1	<1.1	<1.00	<0.96	<2.4	<2.9	<1.0	<1.5
SK-1999	KS-W	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	LA-P	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	MO-CO	<2.27	<0.66	<1.1	<1.1	<1.00	<0.96	<2.4	<2.9	<1.0	<1.5
SK-1999	ND-B	<0.228	<0.067	<0.11	<0.11	<0.15	<0.15	<0.35	<0.44	<0.15	<0.22
SK-1999	NE-GI	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NE-O	<20.54	<5.84	<9.86	<10.3	<8.96	<8.53	<21.1	<26.4	<8.96	<13.4
SK-1999	NY-C	<0.144	<0.019	<0.017	<0.026	<0.024	<0.029	<0.045	<0.091	<0.036	<0.043
SK-1999	NY-C	<0.144	<0.019	<0.017	<0.026	<0.024	<0.029	<0.045	<0.091	<0.036	<0.043
SK-1999	NY-L	<0.34	<0.10	<0.11	<0.11	<0.15	<0.15	<0.35	<0.44	<0.15	<0.22
SK-1999	NY-L	<0.229	<0.068	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-NA	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.040	<0.040
SK-1999	NY-NA	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.040	<0.040
SK-1999	NY-NA	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.040	<0.040
SK-1999	NY-S	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-S	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-S	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	OR-C	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	SC-G	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.050	<0.040	<0.040
SK-1999	SD-S	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-2000	GA-C	<8.0	<0.0080	<0.0080	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040
SK-2000	GA-GC	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040
SK-2000	GA-MO	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
SK-2000	KS-E	<24.0	<2.44	<2.44	<12.0	<12.0	<12.0	<12.0	<12.2	<12.0	<12.0
SK-2000	KS-W	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040
SK-2000	LA-P	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	MO-SC	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	ND-B	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	NE-GI	<0.20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NE-O	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-2000	NM-A	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	SD-SF	<0.20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	SD-SF	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SK-2000	TX-D	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040
SK-2000	TX-D	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040
SK-2000	TX-D	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040
	Maximum	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Minimum	0.56	ND	ND	ND	ND	ND	ND	ND	ND	ND
	90th UCL for 50th%	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1998	GA-C	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**159**	<0.100	<0.140
SK-1998	GA-GC	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**64.6**	<1.00	<1.40
SK-1998	GA-MO	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**126**	<0.100	<0.140
SK-1998	GA-N	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<20.0	<100.0	**646**	<20.0	<28.0
SK-1998	KS-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**92.1**	<0.100	<0.140
SK-1998	KS-W	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**83.2**	<1.00	<1.4
SK-1998	LA-K	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**214**	<1.00	<1.40
SK-1998	LA-P	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**169**	<0.100	<0.140
SK-1998	MO-CO	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**4.35**	<0.100	<0.140
SK-1998	ND-B	<0.100	<0.100	0.19	<0.100	<0.100	<0.100	<0.100	<0.500	**277**	0.3	<0.140
SK-1998	NE-GI	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**145**	<1.0	<1.40
SK-1998	NE-O	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**138**	0.17	<0.140
SK-1998	NM-A	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**219**	<1.00	<1.40
SK-1998	NY-A	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**65.1**	<1.00	<1.40
SK-1998	NY-A	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**142**	<1.00	<1.40
SK-1998	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**125**	0.22	<0.140
SK-1998	NY-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.11	<0.500	**102**	0.21	<0.140
SK-1998	NY-C	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**135**	**2.36**	<1.40
SK-1998	NY-C	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<50.0	**213.9**	<10.0	<14
SK-1998	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.11	<0.501	**212**	<0.100	<0.140
SK-1998	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**303**	<0.100	<0.140
SK-1998	NY-L	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**69.6**	<0.100	<0.140
SK-1998	NY-NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**183**	<1.00	<1.40
SK-1998	NY-NA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**234**	<1.00	<1.40
SK-1998	NY-NA	<1.00	<1.00	<1.00	4.56	<1.00	<1.00	<1.00	<5.00	**237**	<1.00	<1.40
SK-1998	NY-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**153**	**3.89**	<1.40
SK-1998	NY-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**141**	**3.2**	<1.40
SK-1998	NY-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**180**	**4**	<1.40
SK-1998	NY-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**153**	**4.34**	<0.140
SK-1998	NY-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**189**	**0.72**	<0.140
SK-1998	NY-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**162**	**0.68**	<0.140
SK-1998	OR-C	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**297**	**2.51**	<1.40
SK-1998	SC-G	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**217.35**	<1.0	<1.4
SK-1998	SD-SF	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**18.5**	0.37	<0.140

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	GA-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**338.01**	<0.20	<0.14
SK-1999	GA-GC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<5.0	**190.18**	0.35	<0.14
SK-1999	GA-MO	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**176.65**	**2.53**	<1.4
SK-1999	GA-N	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**127.95**	<0.20	<0.14
SK-1999	KS-E	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**367.46**	<2.0	<1.4
SK-1999	KS-W	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<10.0	**193**	<4.0	<2.8
SK-1999	LA-P	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	**157.41**	<1.0	<1.4
SK-1999	MO-CO	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.1	**487.48**	<2.0	<1.4
SK-1999	ND-B	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**305.92**	<2.0	<1.4
SK-1999	NE-GI	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**109.9**	<2.0	<1.4
SK-1999	NE-O	<0.992	<0.992	<0.992	<0.992	<2.19	<0.992	<1.79	<2.48	**6550**	**2.4**	<0.734
SK-1999	NY-C	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**94.08**	<2.0	<1..4
SK-1999	NY-C	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<0.80	<2.0	**124.01**	**0.94**	<0.56
SK-1999	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.39**	<0.20	<0.14
SK-1999	NY-L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1.54**	<0.20	<0.14
SK-1999	NY-NA	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	**104.59**	<0.40	<0.28
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**135.46**	**3.47**	<1.4
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	11.26	**162.09**	<2.0	<1.4
SK-1999	NY-S	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	**117.7**	<0.40	<0.28
SK-1999	NY-S	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.5	**136.8**	<1.0	<0.70
SK-1999	NY-S	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**190.16**	<2.0	<1.4
SK-1999	OR-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**122.29**	**1.14**	<0.14
SK-1999	SC-G	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**130.8**	<0.20	<0.14
SK-1999	SD-S	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**1940**	<2.0	<1.4
SK-2000	GA-C	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**12.53**	<0.20	<0.14
SK-2000	GA-GC	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**150.4**	<2.0	<1.4
SK-2000	GA-MO	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**9.23**	<0.20	<0.14
SK-2000	KS-E	<2.00	<2.0	2.01	<2.00	<2.18	<2.00	<2.12	<5.00	**1390**	**9.32**	<1.41
SK-2000	KS-W	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**102**	<2.0	<1.4
SK-2000	LA-P	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**180.5**	<0.20	<0.14
SK-2000	MO-SC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**129.1**	**1.108**	<0.14
SK-2000	ND-B	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**53.34**	<2.0	<1.4
SK-2000	NE-GI	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**455.4**	<2.0	<1.4
SK-2000	NE-O	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**123.8**	**8.131**	<1.4

WASTE DRY CLEANER FILTER POWDER

Total # of samples: 74

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-2000	NM-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**100.8**	<0.20	<0.14
SK-2000	SD-SF	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**129.6**	<0.20	<0.14
SK-2000	SD-SF	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**201.2**	**9.398**	<0.14
SK-2000	TX-D	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**180.7**	<2.0	<1.4
SK-2000	TX-D	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**341.6**	<2.0	<1.4
SK-2000	TX-D	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**307.5**	<2.0	<1.4
	Maximum	ND	ND	2.01	4.56	ND	ND	1.11	11.26	6550.0	9.40	ND
	Minimum	ND	ND	0.19	4.56	ND	ND	0.11	11.26	1.39	0.17	ND
	90th UCL	ND	ND	ND	ND	ND	ND	ND	ND	**180**	**0.50**	ND
	for 50th%									**176.65**	<2.0	<1.4

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	CO-E	6.88	1.40	>200	<5.00	3.47	<0.500	**14.9**	<4.00	<0.10	<0.45	<0.500
SK-1999	FL-M	6.36	1.02	**90**	<5.00	<0.500	<0.500	1.69	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-GC	4.51	1.24	>200	<0.500	<0.050	<0.050	0.123	<0.400	<0.0008	<0.750	<0.050
SK-1999	GA-MO	6.14	1.45	>200	<0.500	0.15	<0.050	0.24	<0.400	<0.0008	<0.750	<0.050
SK-1999	GA-N	6.34	1.13	**80**	<1.04	2.54	<0.104	3.06	1.27	<0.013	<0.714	<0.104
SK-1999	KS-E	6.22	1.18	>200	<0.500	<0.050	<0.050	0.081	<0.400	<0.0008	<0.750	<0.050
SK-1999	KS-W	7.12	1.41	>200	<0.500	0.09	<0.050	0.19	<0.400	<0.0008	<0.750	<0.050
SK-1999	LA-K	7.94	1.50	>200	<5.00	0.933	<0.500	**13.6**	<4.00	<0.100	<0.45	0.52
SK-1999	MO-CO	5.78	1.19	>200	<5.00	25.5	0.817	**199**	**13**	0.414	<0.45	1.02
SK-1999	ND-B	6.73	0.71	>200	<0.500	0.693	0.119	0.348	<0.400	0.001	<0.750	<0.050
SK-1999	NE-GER	4.47	1.25	>200	<1.25	7.92	**2.01**	**19.5**	**130**	<0.040	<0.903	<1.00
SK-1999	NE-GI	7.38	1.34	>200	<1.54	0.91	<0.154	4.58	1.33	<0.024	<0.681	<0.154
SK-1999	NE-O	7.20	1.14	>200	<5.00	4.95	0.524	**62.6**	**23.7**	<0.10	<0.45	<0.500
SK-1999	NM-A	7.10	1.36	>200	<0.950	0.807	0.105	3.4	<0.760	<0.011	<0.720	<0.095
SK-1999	NY-A	6.74	1.25	>200	<0.500	0.185	<0.050	0.1	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-C	6.78	1.20	>200	<0.680	0.288	<0.068	1.4	0.625	<0.005	<0.738	<0.068
SK-1999	NY-L	5.22	1.22	>200	<0.500	1.41	0.643	**25.7**	**6.39**	<0.100	<0.452	<0.500
SK-1999	NY-L	5.26	1.21	>200	<5.00	1.65	0.698	**27.1**	**7.33**	<0.100	<0.452	<0.500
SK-1999	NY-L	5.84	1.18	>200	<0.500	0.378	<0.050	0.735	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-NA	6.55	1.25	>200	<0.500	0.069	<0.050	0.508	1.49	<0.0008	<0.750	<0.050
SK-1999	NY-NA	6.40	1.14	>200	<0.500	0.105	<0.050	0.582	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-NA	6.67	1.18	>200	<0.500	0.119	<0.050	0.5	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-S	8.61	1.01	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-S	8.51	1.26	>200	<4.46	7.92	0.475	**88.9**	**41.4**	<0.088	<0.486	<0.446
SK-1999	NY-S	6.55	1.23	>200	<0.500	0.406	0.115	0.114	<0.400	<0.0008	<0.750	<0.050
SK-1999	NY-S	6.09	1.23	>200	<0.860	0.699	0.132	**11.4**	1.89	<0.009	<0.726	<0.086
SK-1999	OR-C	6.19	1.36	>200	<5.00	3.87	<0.500	**12.9**	**13.7**	<0.10	<0.45	<0.500
SK-1999	SC-G	5.16	1.36	>200	<5.00	0.903	<0.500	**11.8**	<4.00	<0.100	<0.45	0.501
SK-1999	SD-S	6.15	1.47	>200	<5.00	1.89	<0.500	**12.5**	**9.22**	<0.10	<0.45	<0.500
SK-2000	CO-E	5.44	1.08	>200	<0.500	0.776	<0.050	0.0665	<0.400	0.0009	<0.750	<0.050
SK-2000	GA-C	7.54	0.82	>200	<0.500	0.297	<0.050	0.073	<0.400	0.002	<0.750	<0.050
SK-2000	GA-GC	6.80	1.31	>200	<0.500	0.925	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	GA-MO	5.95	1.15	>200	<5.00	3.05	<0.500	**14.1**	<0.400	<0.10	<0.45	<0.500
SK-2000	GA-N	5.37	1.27	>200	<5.00	1.47	<0.500	**17.2**	<4.00	<0.10	<0.45	<0.500

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-2000	KS-E	6.62	1.17	>200	<0.500	0.459	<.050	0.547	<0.400	0.004	<0.750	<0.050
SK-2000	KS-W	6.34	1.08	>200	<5.00	3.93	<0.500	**14.2**	**8.58**	<0.040	<0.008	<0.500
SK-2000	LA-P	5.64	1.11	>200	<0.500	3.15	<0.500	**8.44**	4.45	<0.10	<0.45	<0.500
SK-2000	MO-SC	6.82	1.18	>200	<0.500	0.093	<0.050	0.327	<0.400	<0.0008	<0.750	<0.050
SK-2000	ND-F	6.27	1.00	>200	<5.00	2.76	0.663	**33.8**	**8.65**	<0.040	<0.008	<0.500
SK-2000	NE-GI	6.96	1.19	>200	<5.00	1.1	<0.500	**14**	4.28	0.125	<0.45	<0.500
SK-2000	NE-O	6.90	1.59	>200	<5.00	<0.500	<0.500	<0.500	<4.00	**0.246**	<0.45	<0.500
SK-2000	NM-A	6.50	1.16	>200	<5.00	0.548	<0.500	2.21	4.34	0.056	<0.008	<0.500
SK-2000	SD-SF	6.85	1.20	>200	<0.500	2.44	<0.050	0.706	<0.400	<0.0008	<0.750	<0.050
SK-2000	TX-D	4.10	1.10	>200	<0.500	0.2	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	TX-D	5.90	1.30	>200	<0.500	0.137	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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											
	Maximum	8.61	1.59	90	ND	25.5	2.01	199	130	0.414	ND	1.02
	Minimum	4.1	0.707	80	ND	0.069	0.105	0.0665	0.625	0.0009	ND	0.501
	90th UCL for	6.62	1.25	>200	ND	3.87	ND	10.2	1.14	ND	ND	ND
	50th Percentile	6.73	1.24	>200	<4.46	0.933		8.44	0.625	<0.10		

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

		TCLP Semi Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	CO-E	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	FL-M	<2.28	<0.68	<1.1	<1.1	<1.00	<0.98	<2.4	<2.9	<1.0	<1.5
SK-1999	GA-GC	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	GA-MO	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	GA-N	<57.2	<16.2	<27.4	<28.6	<24.9	<23.7	<58.5	<73.4	<24.9	<37.3
SK-1999	KS-E	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	KS-W	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	LA-K	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	MO-CO	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	ND-B	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	NE-GER	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NE-GI	<106.0	<30.0	<50.7	<53.0	<46.1	<43.8	<108	<136	<46.1	<69.1
SK-1999	NE-O	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NM-A	<46.2	<13.1	<22.1	<23.1	<20.1	<19.1	<47.2	<59.3	<20.1	<30.1
SK-1999	NY-A	<22.8	<6.7	<11	<11	<9.9	<9.7	<24	<29	<10	<15
SK-1999	NY-C	20.54	<5.84	<9.86	<10.3	<8.96	<8.53	<21.1	<26.4	<8.96	<13.4
SK-1999	NY-L	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-L	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-L	<1.44	<0.19	<0.17	<0.26	<0.24	<0.29	<0.45	<0.91	<0.36	<0.43
SK-1999	NY-NA	0.515	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-NA	<2.29	<0.68	<1.1	<1.1	<1.00	<0.98	<2.4	<2.9	<1.0	<1.5
SK-1999	NY-NA	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-S	<405	<114	<194	<203	<176	<167	<414	<520	<176	<264
SK-1999	NY-S	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	NY-S	<22.6	<2.98	<2.74	<4.10	<3.78	<4.67	<7.16	<14.5	<5.71	<6.92
SK-1999	OR-C	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	SC-G	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	SD-S	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-2000	CO-E	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	GA-C	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	GA-GC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	GA-MO	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	GA-N	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

		TCLP Semi Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-2000	KS-E	<1.00	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SK-2000	KS-W	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	LA-P	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	MO-SC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	ND-F	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	NE-GI	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	NE-O	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	NM-A	<80.8	<8.08	<8.08	<40.4	<40.4	<40.4	<40.4	<40.4	<40.4	<40.4
SK-2000	SD-SF	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	TX-D	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040
SK-2000	TX-D	<0.080	<0.040	<0.040	<0.040	<0.040	<0.040	<0.20	<0.040	<0.040	<0.040

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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**										
	Maximum	20.54	ND	0	ND	ND	ND	ND	ND	ND	ND
	Minimum	0.515	ND	0	ND	ND	ND	ND	ND	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D041
	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-1999	CO-E	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**36600**	**16.8**	<1.5
SK-1999	FL-M	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**1054.95**	**8.98**	<1.4
SK-1999	GA-GC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**159.12**	<0.20	<0.14
SK-1999	GA-MO	<20	<20	<20	<20	<20	<20	<20	<50	**515.76**	<20	<14
SK-1999	GA-N	<2.00	<2.00	<2.00	<2.00	<2.36	<2.00	<2.24	<5.00	**201000**	<2.00	<1.41
SK-1999	KS-E	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**180.86**	<2.0	<1.4
SK-1999	KS-W	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<10.0	**260**	<4.0	<2.8
SK-1999	LA-K	<50	<20	<20	**20**	<20	<20	<20	<100	**496240**	**1200**	<20
SK-1999	MO-CO	<20	<20	<20	<20	<50	<20	<40	<50	**237000**	**20.7**	<15
SK-1999	ND-B	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**1139.01**	<2.0	<1.4
SK-1999	NE-GER	<5.0	<2.0	<2.0	2.747	**151.545**	<2.0	<2.0	<10.0	**47001.11**	**271.23**	<2.0
SK-1999	NE-GI	<13.5	<6.32	<6.32	<6.32	<6.32	<6.32	<6.32	<27.8	**14700**	**16.4**	<5.86
SK-1999	NE-O	<20	<20	<20	<20	<50	<20	<40	94.9	**212000**	**23.8**	<15
SK-1999	NM-A	<2.51	<2.0	<2.00	<2.00	<2.00	<2.00	<2.00	<5.85	**3120**	**6.01**	<1.50
SK-1999	NY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**702.02**	<2.0	<1.4
SK-1999	NY-C	<2.72	<2.72	<2.72	**6.6**	<3.92	<2.72	<3.52	<6.80	**5430**	**10.5**	<1.94
SK-1999	NY-L	<50	<20	<20	<20	<20	<20	<20	<100	**62764.93**	**79.683**	<20
SK-1999	NY-L	<50	<20	<20	<20	<20	<20	<20	<100	**56781.19**	**51.605**	<20
SK-1999	NY-L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**3524.56**	**6.19**	<1.4
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**3120.64**	<2.0	<1.4
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**199.97**	<2.0	<1.4
SK-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**427.92**	<2.0	<1.4
SK-1999	NY-S	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**75.13**	<2.0	<2.0
SK-1999	NY-S	<45.7	<18.4	<18.4	<18.4	<18.4	<18.4	<18.4	<91.5	**327000**	**741**	<18.3
SK-1999	NY-S	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<1.0	**129.37**	**0.53**	<0.28
SK-1999	NY-S	<2.00	<2.00	2.00	<2.00	<2.21	<2.00	<2.14	5.35	**22200**	**113**	<1.41
SK-1999	OR-C	<20	<20	<20	<20	<50	<20	<40	<50	**1000000**	<20	<15
SK-1999	SC-G	<20	<20	35.4	<20	<50	<20	<40	<50	**1000000**	**31.9**	<15
SK-1999	SD-S	<20	<20	<20	<20	<50	<20	<40	<50	**362000**	**73.4**	<15
SK-2000	CO-E	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**1521**	<0.20	<0.14
SK-2000	GA-C	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**113.9**	<2.0	<1.4
SK-2000	GA-GC	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	15.55	**649**	<2.0	<1.4
SK-2000	GA-MO	<0.40	<0.40	<0.40	0.94	**10.1**	<0.40	<0.80	<1.0	**94700**	**291**	<0.30
SK-2000	GA-N	<0.40	<0.40	<0.40	0.81	**18.9**	<0.40	<0.80	<1.0	**14200**	**2.4**	<0.30

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

		TCLP Volatiles Analysis (ppm)										
	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D041
	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-2000	KS-E	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**3203**	<2.0	<1.4
SK-2000	KS-W	<20	<20	<20	<20	<50	<20	<40	<50	**94600**	**22.1**	<15
SK-2000	LA-P	<2.0	<2.0	<2.0	<2.0	**8**	<2.0	<4.0	<5.0	**60400**	**7.3**	<1..5
SK-2000	MO-SC	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**393**	<2.0	<1.4
SK-2000	ND-F	<20	<20	<20	<20	<50	<20	<40	<50	**72100**	**34.3**	<15
SK-2000	NE-GI	<20	<20	<20	<20	<50	<20	<40	124	**89100**	**84**	<15
SK-2000	NE-O	<20	<20	<20	<20	<50	<20	<40	<50	**137000**	**882**	<15
SK-2000	NM-A	<2.0	<2.0	<2.0	2.08	<2.60	<2.0	<2.40	5.44	**29200**	**212**	<1..42
SK-2000	SD-SF	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**183.8**	<0.20	<0.14
SK-2000	TX-D	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**173.9**	<2.0	<1.4
SK-2000	TX-D	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**156.7**	<2.0	<1.4

WASTE DRY CLEANER BOTTOMS

Total # of samples: 46

	TCLP Volatiles Analysis (ppm)										
Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D041
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**											
Maximum	ND	ND	35.4	20	151.545	ND	ND	124	1000000	1200	ND
Minimum	ND	ND	2	0.81	8	ND	ND	5.35	75.13	0.53	ND
90th UCL for	ND	ND	ND	ND	ND	ND	ND	ND	**14700**	**6.19**	ND
50th Percentile									**47001.11**	**16.8**	

WASTE IMMERSION CLEANER

Total # of Samples: 54

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Code:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	GA-C	8.83	0.868	170	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-GC	9.72	0.9619	176	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-M	9.29	0.942	160	<5.00	<0.500	**1.75**	<0.500	<4.01	<0.040	<0.452	<0.500
SK-1999	GA-M	9.68	0.941	162	<5.00	<0.500	<0.500	<0.500	**11.9**	<0.100	<0.45	<0.500
SK-1999	GA-N	9.84	0.944	143	<5.00	<0.500	0.997	<0.500	**12.9**	<0.10	<0.45	<0.500
SK-1999	KS-DC	9.47	0.965	**120**	<5.00	0.747	**11.2**	0.858	**11.1**	<0.10	<0.45	<0.500
SK-1999	KS-E	9.51	0.9695	>200	<5.00	<0.500	<0.500	0.886	<4.01	<0.10	<0.45	<0.500
SK-1999	KS-W	9.54	0.921	160	<5.00	<0.500	<0.500	<0.500	**7.55**	<0.10	<0.45	<0.500
SK-1999	LA-K	10.29	0.968	160	<5.00	<0.500	**63.6**	**9.02**	**14.9**	<0.10	<0.45	<0.500
SK-1999	LA-P	9.82	0.918	155	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-1999	MO-CO	9.66	0.962	>200	<5.00	<0.500	**1.48**	<0.500	**10.8**	<0.10	<0.45	<0.500
SK-1999	ND-B	9.60	0.9255	180	<5.00	<0.500	**2.08**	<0.500	**9.03**	<0.10	<0.45	<0.500
SK-1999	NE-GE	9.95	0.942	150	<5.00	<0.500	<0.500	0.937	<4.00	<0.040	<0.452	<0.500
SK-1999	NE-GI	9.90	0.959	146	<5.00	<0.500	4.84	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NE-O	9.26	0.939	154	<5.00	4.06	**66.8**	1.17	**817**	<0.10	<0.45	<0.500
SK-1999	NM-A	9.87	0.9719	147	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-C	10.21	0.889	168	<5.00	8.36	**2.35**	0.572	**12.1**	<0.10	<0.45	<0.500
SK-1999	NY-C	10.21	0.889	168	<5.00	8.34	**2.35**	0.572	**12.1**	<0.10	<0.45	<0.500
SK-1999	NY-L	10.37	0.926	>200	<5.00	0.526	0.821	<0.500	<4.00	<0.1	<0.45	<0.500
SK-1999	NY-NA	9.83	0.956	145	<5.00	<0.500	<0.500	<0.500	4.62	<0.10	<0.45	<0.500
SK-1999	NY-NA	9.98	0.924	163	<5.00	<0.500	<0.500	<0.500	**5.48**	<0.10	<0.45	<0.500
SK-1999	NY-NA	9.93	0.939	154	<5.00	<0.500	<0.500	<0.500	4.84	<0.10	<0.45	<0.500
SK-1999	NY-S	10.09	0.941	>200	<5.00	<0.500	<0.500	<0.500	<4.01	<0.100	<0.452	<0.500
SK-1999	NY-S	9.60	0.954	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-S	10.01	0.938	146	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	OR-C	9.77	0.952	146	<5.00	<0.500	**8.79**	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	SC-G	10.54	0.961	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.1	<0.45	<0.500
SK-1999	SD-S	9.80	0.925	>200	<5.00	<0.500	**16.3**	1.48	**71.5**	<0.10	<0.45	<0.500
SK-1999	SD-S	9.62	0.968	158	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	TX-D	10.21	1.0726	>200	<5.00	<0.500	**7.41**	**6.88**	**12.8**	<0.100	<0.452	<0.500
SK-1999	UT-S	9.72	0.884	144	<5.00	<0.500	**3.7**	<0.500	**30.9**	<0.10	<0.45	<0.500
SK-1999	UT-SLC	9.47	0.944	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	CA-SAL	9.76	0.97	150	<5.00	<0.500	**1.07**	<0.500	**7.42**	<0.10	<0.45	<0.500
SK-2000	CO-E	7.37	0.95	158	<5.00	<0.500	**1.13**	<0.500	<4.00	<0.10	<0.45	<0.500

WASTE IMMERSION CLEANER

Total # of Samples: 54

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Code:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-2000	GA-C	10.43	0.9213	164	<5.00	<0.500	<0.500	0.589	<4.00	<0.10	<0.45	<0.500
SK-2000	GA-GC	10.30	0.961	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-2000	GA-M	10.07	0.948	>200	<5.00	<0.500	**123**	1.61	**21.2**	<0.10	<0.45	<0.500
SK-2000	GA-M	9.96	0.8527	>200	<5.00	<0.500	<0.500	<0.500	4.42	<0.10	<0.45	<0.500
SK-2000	GA-N	10.17	0.9397	**128**	<5.00	<0.500	**2.84**	0.566	<4.00	<0.10	<0.45	<0.500
SK-2000	KS-DC	9.26	0.946	>200	<5.00	0.768	**9.29**	0.653	**38.3**	<0.10	<0.45	<0.500
SK-2000	KS-E	9.70	0.927	>200	<5.00	**131**	**1.41**	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	KS-W	8.74	0.949	155	<5.00	0.649	**20.8**	2.28	**343**	0.163	<0.008	2.81
SK-2000	LA-P	9.49	0.9467	>200	<5.00	<0.500	<0.500	<0.500	<4.00	0.178	<0.45	<0.500
SK-2000	MO-SC	8.90	0.9369	>200	<5.00	<0.500	0.735	0.658	**92.4**	<0.10	<0.45	<0.500
SK-2000	ND-F	10.30	0.932	155	<5.00	<0.500	**19.91**	<0.500	4.92	<0.040	<0.008	<0.500
SK-2000	NE-G	9.51	0.94	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NE-GI	10.00	0.957	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NE-O	9.60	0.929	142	<5.00	0.543	**27.6**	4.95	**140**	<0.040	<0.008	<0.500
SK-2000	NM-A	9.60	0.926	145	<5.00	<0.500	**30.6**	1.66	**51**	<0.040	<0.008	<0.500
SK-2000	SC-G	9.82	0.9613	>200	<5.00	<0.500	0.662	<0.500	**113**	<0.10	<0.45	<0.500
SK-2000	SC-G	9.82	0.9613	>200	<5.00	<0.500	0.662	<0.500	**113**	<0.10	<0.45	<0.500
SK-2000	SD-SF	10.00	0.94	>200	<5.00	<0.500	**3.89**	0.871	**42.5**	<0.10	<0.45	<0.500
SK-2000	SD-SF	10.38	0.9362	153	<5.00	<0.500	**2.51**	0.584	**20.5**	<0.10	<0.45	<0.500
SK-2000	TX-D	8.52	0.986	>200	<5.00	0.735	<0.500	<0.500	**5.62**	<0.100	<0.45	<0.500
	Maximum	10.54	1.07	>200	ND	131.00	123.00	9.02	817.00	0.18	0.00	ND
	Minimum	7.37	0.85	120	ND	0.526	0.662	0.566	4.42	0.163	0	ND
	90th UCL for	9.92	0.95	148	ND	ND	**2.35**	ND	**9.03**	ND	ND	ND
	50th Percentile	9.87		160			**1.48**	<0.500	**9.03**			

WASTE IMMERSION CLEANER

Total # of Samples: 54

TCLP Semi Volatiles Analysis (ppm)

	Waste Code:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	GA-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	GA-GC	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	GA-M	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	GA-M	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	GA-N	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	KS-DC	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	KS-E	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	KS-W	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	LA-K	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	LA-P	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	MO-CO	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	ND-B	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NE-GE	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NE-GI	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NE-O	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NM-A	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	OR-C	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	SC-G	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	SD-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	SD-S	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	TX-D	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	UT-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	UT-SLC	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-2000	CA-SAL	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	CO-E	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200

WASTE IMMERSION CLEANER

Total # of Samples: 54

		TCLP Semi Volatiles Analysis (ppm)									
	Waste Code:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-2000	GA-C	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	GA-GC	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	GA-M	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	GA-M	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	GA-N	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	KS-DC	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	KS-E	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	KS-W	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	LA-P	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	MO-SC	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	ND-F	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	NE-G	<400	<110	<170	<200	<200	<200	<200	<210	<200	<200
SK-2000	NE-GI	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	NE-O	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	NM-A	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	SC-G	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	SC-G	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	SD-SF	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	SD-SF	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	TX-D	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
	Maximum	0.00	ND	ND	ND	ND	0.00	ND	ND	ND	ND
	Minimum	0	ND	ND	ND	ND	0	ND	ND	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE IMMERSION CLEANER

Total # of Samples: 54

TCLP Volatiles Analysis (ppm)

	Waste Code:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	GA-C	<2.0	<2.0	7.9	<2.0	**136.0**	<2.0	<4.0	38.6	**67.8**	**11.7**	<1.5
SK-1999	GA-GC	<5.00	<2.00	5.38	<2.00	**190.0**	<2.00	<2.00	<10.00	**14.2**	<2.00	<2.00
SK-1999	GA-M	<5.0	<2.0	6.059		**115.8**	<2.0	<2.0	<10.0	**19.82**	**5.09**	<2.0
SK-1999	GA-M	<2.0	<2.0	9.8	<2.0	**154.0**	<2.0	<4.0	7.3	**99.4**	**5.6**	<1.5
SK-1999	GA-N	**4.4**	<2.0	18.8	<2.0	**553.0**	<2.0	<4.0	9.3	**161.0**	**17.5**	<1.5
SK-1999	KS-DC	<2.0	<2.0	11.9	<2.0	**381.0**	<2.0	<4.0	<5.0	**61.9**	**7.9**	<1.5
SK-1999	KS-E	<50	<20	41.897	<20	**222.5**	<20	<20	<100	**52.881**	<20	<20
SK-1999	KS-W	<5.0	<2.0	8.43	<2.0	**143.0**	<2.0	<2.0	11.86	**67**	**3.84**	<2.0
SK-1999	LA-K	<5.0	<2.0	7.14	<2.0	**126.0**	<2.0	<2.0	38.8	**22.9**	**4.33**	<2.0
SK-1999	LA-P	**2.8**	<2.0	11.5	<2.0	**264.0**	<2.0	<4.0	<5.0	**91.5**	**5.6**	<1.5
SK-1999	MO-CO	<2.0	<2.0	15	<2.0	**267.0**	<2.0	<4.0	<5.0	**121.0**	**7.8**	<1.5
SK-1999	ND-B	<5.0	<2.0	12.41	<2.0	**139.0**	<2.00	<2.00	11.565	**151.761**	**15.122**	<2.0
SK-1999	NE-GE	<5.0	<2.0	7.441	<2.0	**86.8**	<2.0	<2.0	<10.0	**87.47**	**5.64**	<2.0
SK-1999	NE-GI	<5.0	<2.0	13.4	<2.0	**138.0**	<2.0	<2.0	99.7	**153**	**14.4**	<2.0
SK-1999	NE-O	<2.0	<2.0	22.6	<2.0	**456.0**	<2.0	<4.0	14.3	**156**	**9.2**	<1.5
SK-1999	NM-A	<5.0	<2.0	7.577	<2.0	**118.4**	<2.00	<2.00	37.584	**20.553**	**16.378**	<2.00
SK-1999	NY-C	<20	<20	57.2	<20	<500	<20	<40	82.1	<200	**38.5**	<15
SK-1999	NY-C	<20	<20	57.2	<20	<500	<20	<40	82.1	<200	**38.5**	<15
SK-1999	NY-L	<2.0	<2.0	26.2	<2.0	**351.0**	<2.0	<4.0	14.1	**223.0**	**19.2**	<1.5
SK-1999	NY-NA	<2.0	<2.0	12.3	<2.0	**134.0**	<2.0	<4.0	16.1	**112**	**17.5**	<1.5
SK-1999	NY-NA	<2.0	<2.0	11.6	<2.0	**178.0**	<2.0	<4.0	18.1	**108**	**16**	<1.5
SK-1999	NY-NA	<2.0	<2.0	11.3	<2.0	**243.0**	<2.0	<4.0	25.3	**99.4**	**16.2**	<1.5
SK-1999	NY-S	<2.0	<2.0	24.1	<2.0	**494.0**	<2.0	<4.0	15.2	**131.0**	**16.0**	<1.5
SK-1999	NY-S	<2.0	<2.0	8.6	<2.0	**307.0**	<2.0	<4.0	<5.0	**57.8**	**14.1**	<1.5
SK-1999	NY-S	<2.0	<2.0	17.7	<2.0	**372.0**	<2.0	<4.0	13.6	**90.5**	**12.0**	<1.5
SK-1999	OR-C	<2.0	<2.0	4.9	<2.0	**144.0**	<2.0	<4.0	7.3	**322.0**	**2.3**	<1.5
SK-1999	SC-G	<2.0	<2.0	13.8	<2.0	**248.0**	<2.0	<4.0	<5.0	**81.6**	**5.0**	<1.5
SK-1999	SD-S	<50	<20	45.5	<20	**278.0**	<20	<20	<100	**393**	<20	<20
SK-1999	SD-S	<2.0	<2.0	12	<2.0	**162.0**	<2.0	<4.0	17.2	**171.0**	**14.3**	<1.5
SK-1999	TX-D	<0.20	<0.20	0.28	<0.20	3.3	<0.20	<0.20	1.48	0.52	<0.20	<0.14
SK-1999	UT-S	<20	<20	<20	<20	**710.0**	<20	<40	<50	**185**	<20	<15
SK-1999	UT-SLC	<2.0	<2.0	11.5	<2.0	**290.0**	<2.0	<4.0	<5.0	**72.6**	**2.8**	<1.5
SK-2000	CA-SAL	<2.0	<2.0	<2.0	<2.0	**84.7**	<2.0	<4.0	<5.0	**193.0**	**23.4**	<1.5
SK-2000	CO-E	**2.1**	<2.0	5.3	<2.0	**168.0**	<2.0	<4.0	<5.0	**31.8**	**8.8**	<1.5

WASTE IMMERSION CLEANER

Total # of Samples: 54

TCLP Volatiles Analysis (ppm)

	Waste Code:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-2000	GA-C	<0.80	<0.80	9.2	<0.80	**131.0**	<0.80	<1.6	9.3	**393.0**	**26.9**	<0.60
SK-2000	GA-GC	<0.20	<0.20	19.1	<0.20	**224.0**	<0.20	<0.40	2	**382.0**	**7.6**	<0.15
SK-2000	GA-M	0.31	<0.20	8.6	<0.20	**298.0**	<0.20	<0.40	3.8	**304.0**	**71.6**	<0.15
SK-2000	GA-M	0.25	<0.20	8.8	<0.20	**87.3**	<0.20	<0.40	10	**370.0**	**18.3**	<0.15
SK-2000	GA-N	<2.0	<2.0	9.167	<2.0	**49.2**	<2.0	<4.0	6.994	**350.7**	**15.1**	<1.5
SK-2000	KS-DC	**5.4**	<2.0	12.7	<2.0	**209.0**	<2.0	<4.0	<5.0	**363.0**	**7.1**	<1.5
SK-2000	KS-E	<2.0	<2.0	13.3	<2.0	**206.0**	<2.0	<4.0	<5.0	**50.2**	<2.0	<1.5
SK-2000	KS-W	**3**	<2.0	4.5	<2.0	**188.0**	<2.0	<4.0	<5.0	**34.8**	**2.0**	<1.5
SK-2000	LA-P	**4.3**	<2.0	11.1	<2.0	**265.0**	<2.0	<4.0	<5.0	**60.5**	**5.6**	<1.5
SK-2000	MO-SC	<2.0	<2.0	3.6	<2.0	**264.0**	<2.0	<4.0	<5.0	**4.2**	<2.0	<1.5
SK-2000	ND-F	<2.0	<2.0	14.6	<2.0	**176.0**	<2.0	<4.0	5.3	**344.0**	**16.6**	<1.5
SK-2000	NE-G	<2.0	<2.0	14.6	<2.0	**279.0**	<2.0	<4.0	<5.0	**166.0**	**18.2**	<1.5
SK-2000	NE-GI	<2.0	<2.0	4.5	<2.0	**61.0**	<2.0	<4.0	<5.0	**82.3**	**21.5**	<1.5
SK-2000	NE-O	<2.0	<2.0	16.8	<2.0	**424.0**	<2.0	<4.0	<5.0	**1170.0**	**6.8**	<1.5
SK-2000	NM-A	**6.8**	<2.0	10.6	<2.0	**219.0**	<2.0	<4.0	<5.0	**36.0**	**3.8**	<1.5
SK-2000	SC-G	<0.20	<0.20	6.2	<0.20	**39.8**	<0.20	<0.40	5.5	**193.0**	**18.0**	<0.15
SK-2000	SC-G	<0.20	<0.20	6.2	<0.220	**39.8**	<2.0	<4.0	5.5	**193.0**	**18.0**	<0.15
SK-2000	SD-SF	**4.2**	<2.0	8.8	<2.0	**105.0**	<2.0	<4.0	5.4	**240.0**	**17.7**	<1.5
SK-2000	SD-SF	**4**	<2.0	7.3	<2.0	**137.0**	<2.0	<4.0	15	**163.0**	**35.5**	<1.5
SK-2000	TX-D	<2.0	<2.0	9.9	<2.0	**159.0**	<2.0	<4.0	<5.0	**61.1**	**3.6**	<1.5
	Maximum	6.80	ND	57.20	ND	710.00	ND	ND	99.70	1170.00	71.60	ND
	Minimum	0.25	ND	0.28	ND	3.29	ND	ND	1.48	0.52	2.00	ND
	90th UCL for	ND	ND	ND	ND	**257**	ND	ND	ND	**87.47**	**12.0**	ND
	50th Percentile					**224.0**				**153**	**15.1**	

PAINT WASTES OTHER

Total # of Samples: 52

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Code:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-199	CO-E	4.82	0.838	**<70**	<5.00	2.66	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	GA-M	6.91	0.921	160	<0.500	3.07	0.59	0.36	2.7	<0.0008	<0.75	<0.05
SK-199	GA-N	7.35	0.866	**69**	<5.00	**184**	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	KS-E	6.83	0.791	158	<5.00	4.76	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	KS-E	6.98	0.812	144	<5.00	1.38	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	KS-E	8.72	0.837	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	KS-W	5.72	0.874	**69**	<5.00	6.32	<0.50	0.73	<4.0	<0.10	<0.45	<0.50
SK-199	LA-K	7.52	0.833	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	LA-K	7.68	0.865	**69**	<5.00	13.6	<0.500	**23.60**	<4.00	<0.10	<0.45	<0.500
SK-199	LA-K	7.68	0.865	**69**	<5.00	13.6	<0.500	**23.6**	<4.00	<0.10	<0.45	<0.500
SK-199	LA-P	4.99	0.839	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	LA-P	4.51	0.905	**69**	<5.00	19.3	<0.500	3.38	**7.05**	<0.10	<0.45	<0.500
SK-199	MO-C	6.38	0.909	**69**	<5.00	26.7	<0.500	0.813	<4.00	<0.10	<0.45	<0.500
SK-199	ND-B	6.81	0.787	146	<5.00	0.61	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	NE-GI	6.67	0.867	**69**	<5.00	25.3	<0.500	1.27	<4.00	<0.100	<0.452	<0.500
SK-199	NE-O	5.68	0.882	**69**	<5.00	**371**	<0.500	**36.3**	**33.3**	<0.10	<0.45	<0.500
SK-199	NM-A	5.2	1.2328	**110**	<0.500	0.691	0.499	<0.050	0.638	<0.0008	<0.750	<0.050
SK-199	NM-A	5.09	0.8672	**<70**	<5.00	43.4	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	NY-AV	6.08	0.924	**69**	<5.00	35.6	<0.500	1.88	<4.00	<0.10	<0.45	<0.500
SK-199	NY-AV	7.82	0.883	**69**	<5.00	2.8	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-199	NY-C	4.78	1.092	**<70**	<5.00	58.8	<0.500	**7.04**	**13.3**	<0.10	<0.45	<0.500
SK-199	NY-C	6.25	0.916	**<70**	<5.00	74.4	<0.500	**41.8**	**34.5**	<0.100	<0.452	<0.500
SK-199	NY-C	6.69	0.899	**<70**	<5.00	**337**	<0.500	**89.7**	**376**	<0.100	<0.452	<0.500
SK-199	NY-L	5.8	0.878	**69**	<5.00	6.3	<0.500	2.54	<4.00	<0.10	<0.45	<0.500
SK-199	NY-L	6.9	0.815	**69**	<5.00	0.942	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-199	NY-L	6.65	0.816	**69**	<5.00	1.26	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-199	NY-NA	7.36	0.867	**69**	<5.00	5.72	<0.500	**65.3**	**162**	<0.10	<0.45	<0.500
SK-199	NY-NA	8.45	0.864	**69**	<5.00	3.61	<0.500	0.58	**6.89**	<0.10	<0.45	<0.500
SK-199	NY-NA	7.08	0.922	**69**	<5.00	52	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	NY-S	7.55	0.838	**69**	<5.00	0.561	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	NY-S	6.56	0.846	**69**	<5.00	<0.500	<0.500	**6.05**	**10.3**	<0.10	<0.45	<0.500
SK-199	NY-S	6.76	0.702	**<70**	<5.00	91.1	<0.500	**27.3**	<4.00	<0.10	<0.45	<0.500
SK-199	OR-C	5.42	0.835	**69**	<5.00	33.3	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	SC-G	5.91	0.921	**<70**	<5.00	<0.500	<0.500	0.568	<4.00	<0.100	<0.45	<0.500

PAINT WASTES OTHER

Total # of Samples: 52

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Code:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-199(	SD-SF	6.86	0.858	**69**	<5.00	14.3	<0.500	**18.2**	**76.2**	<0.10	<0.45	<0.500
SK-199(	TX-D	5.61	0.885	**<70**	<5.00	1.39	<0.500	**5.13**	**7.59**	<0.10	<0.452	<0.500
SK-199(	UT-SLC	6.19	0.851	**69**	<5.00	4.08	<0.500	3	**12.4**	<0.10	<0.45	<0.500
SK-199(	UT-SLC	5.1	0.9382	**69**	<5.00	**496**	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	GA-C	2.98	0.8341	**69**	<5.00	2.59	<0.500	0.737	<4.00	<0.10	<0.45	<0.500
SK-200(	GA-N	7.4	0.9053	**69**	<5.00	3.49	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	KS-E	4.1	0.935	**69**	<0.770	3.11	<0.077	3.97	**16.0**	<0.003	<0.705	<0.077
SK-200(	KS-W	6.62	0.853	**69**	<5.00	1.3	<0.500	2.47	<4.00	<0.040	<0.008	<0.500
SK-200(	LA-P	5.89	0.88	**69**	<5.00	3.5	**1.39**	0.514	<4.00	<0.10	<0.45	<0.500
SK-200(	LA-P	5.8	0.9369	**69**	<5.00	4.09	<0.500	2.53	**8.97**	<0.10	<0.45	0.881
SK-200(	MO-SC	6.08	0.8359	**69**	<5.00	**756**	<0.500	3.51	<4.00	<0.10	<0.45	<0.500
SK-200(	NE-GI	5.03	0.843	**69**	<5.00	9.18	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	NE-O	5.2	0.9	**69**	<5.00	18.3	<0.500	**7.28**	<4.00	<0.040	<0.008	<0.500
SK-200(	NM-A	6.00	0.87	**69**	<5.00	81.6	<0.500	1.56	<4.00	<0.10	<0.45	<0.500
SK-200(	SC-G	4.48	0.8678	**69**	<5.00	28.3	<0.500	2.04	<4.00	<0.10	<0.45	<0.500
SK-200(	TX-D	7.33	0.848	**<70**	<5.00	12.3	<0.500	**9.59**	**41.1**	<0.10	<0.45	<0.500
SK-200(	UT-SLC	7.42	0.8867	**69**	<5.00	2.07	<0.050	<0.050	<0.400	<0.002	<0.750	<0.050
SK-200(	UT-SLC	5.99	0.864	**69**	<5.00	2.23	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
	Maximum	8.72	1.2328	160	ND	756	1.39	89.7	376	ND	ND	ND
	Minimum	2.98	0.702	69	ND	0.561	0.499	0.357	0.638	ND	ND	ND
	90th UCL for	6.65	0.878	**<70**	ND	16.5	ND	2.54	**6.65**	ND	ND	ND
	50th Percentile			**69**		13.6		2.04	**7.05**			

PAINT WASTES OTHER

Total # of Samples: 52

TCLP Semi Volatiles Analysis (ppm)

	Waste Code:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-199(	CO-E	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	GA-M	<.609	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-199(	GA-N	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	KS-E	<4.9	<0.10	<0.005	<0.02	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-199(	KS-E	<4.9	<0.10	<0.005	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-199(	KS-E	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	KS-W	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	LA-K	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	LA-K	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	LA-K	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	LA-P	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	LA-P	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	MO-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	ND-B	<4.9	<0.10	<0.005	0.024	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-199(	NE-GI	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NE-O	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NM-A	0.498	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-199(	NM-A	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-AV	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-199(	NY-AV	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-199(	NY-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-199(	NY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-199(	NY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-199(	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	OR-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	SC-G	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86

PAINT WASTES OTHER

Total # of Samples: 52

		TCLP Semi Volatiles Analysis (ppm)									
	Waste Code:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-199(	SD-SF	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	TX-D	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	UT-SLC	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-199(	UT-SLC	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-200(	GA-C	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	GA-N	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	KS-E	<25.0	<2.49	<2.49	<12.5	<12.5	<12.5	<12.5	<13.1	<12.5	<12.5
SK-200(	KS-W	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-200(	LA-P	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	LA-P	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	MO-SC	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	NE-GI	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	NE-O	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	NM-A	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	SC-G	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-200(	TX-D	<400	<110	<170	<200	<200	<200	<200	<210	<200	<200
SK-200(	UT-SLC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-200(	UT-SLC	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
	Maximum	0.498	ND	ND	0.024	ND	ND	ND	ND	ND	ND
	Minimum	0.498	ND	ND	0.024	ND	ND	ND	ND	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

PAINT WASTES OTHER

Total # of Samples: 52

TCLP Volatiles Analysis (ppm)

	Waste Code:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-199	CO-E	**148**	<20	<20	<20	<50	<20	<40	**136000**	**38.1**	**40.5**	<15
SK-199	GA-M	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**0.68**	<0.20	<0.14
SK-199	GA-N	**61.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**9980**	<2.0	<2.0	<1.5
SK-199	KS-E	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**34.3**	**939**	**390**	<2.0
SK-199	KS-E	<50	<20	<20	<20	<20	<20	<20	<100	**1081**	**85.5**	<20
SK-199	KS-E	**51.42**	<2.00	<2.00	**8.755**	<2.00	<2.00	<2.00	**32060.53**	**159.029**	**162.091**	<2.0
SK-199	KS-W	**29.2**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**33706**	**8.35**	**4.79**	<2.0
SK-199	LA-K	**88.5**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**32680**	**36.3**	**21.3**	<2.0
SK-199	LA-K	**163**	<20	<20	<20	<20	<20	<20	**522**	<25	<20	<20
SK-199	LA-K	**163.337**	<20	<20	<20	<20	<20	<20	**5222.086**	<25	<20	<20
SK-199	LA-P	**193**	<2.00	<2.00	<2.00	<5.0	<2.0	<4.0	**47500**	**31.5**	**38.5**	<1.5
SK-199	LA-P	**67.3**	<2.0	<2.0	<2.0	<2.0	<2.0	<4.0	**17100**	**5.0**	<2.0	<1.5
SK-199	MO-C	**62.8**	<20	<20	<20	<50	<20	<40	**12900**	<20	<20	<15
SK-199	ND-B	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**287**	**13.1**	<2.0
SK-199	NE-GI	**18.639**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**23318.55**	**5.947**	<2.0	<2.0
SK-199	NE-O	**82**	<20	<20	<20	<50	<20	<40	**50300**	**35.6**	**62.4**	<15
SK-199	NM-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.91	**2.4**	<0.20	<0.14
SK-199	NM-A	**34.1**	<20	<20	<20	<20	<20	<20	**41400**	**35.4**	<20	<15
SK-199	NY-AV	**112**	<20	<20	<20	<50	<20	<40	**79200**	**62.6**	<20	<15
SK-199	NY-AV	**19.2**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**36600**	<2.0	<2.0	<1.5
SK-199	NY-C	**55.77**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**16172.41**	**9.052**	<2.0	<2.0
SK-199	NY-C	**13.89**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**13562.64**	**3.843**	<2.0	<2.0
SK-199	NY-C	**26.206**	<2.0	6.197	<2.0	<2.0	<2.0	<2.0	**12304.14**	**3.808**	**5.586**	<2.0
SK-199	NY-L	**10.1**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**30900**	**100**	<2.0	<1.5
SK-199	NY-L	<20	<20	<20	<20	<50	<20	<40	**15400**	<20	<20	<15
SK-199	NY-L	<20	<20	<20	<20	<50	<20	<40	**16400**	<20	<20	<15
SK-199	NY-NA	**59.7**	<20	<20	<20	<20	<20	<20	**4470**	**254**	<20	<15
SK-199	NY-NA	**212**	<20	<20	<20	<20	<20	<20	**30800**	**24.5**	**32**	<15
SK-199	NY-NA	**641**	<20	<20	<20	<20	<20	<20	**1640**	**24.5**	<20	<15
SK-199	NY-S	**40.8**	<2.00	<2.00	<2.00	<5.0	<2.0	<4.0	**28600**	<2.0	<2.0	<1.5
SK-199	NY-S	**57.6**	<2.0	35.8	<2.0	<5.0	<2.0	<4.0	**22300**	**16.4**	**2.6**	<1.5
SK-199	NY-S	**37.4**	<20	<20	<20	<50	<20	<40	**4040**	<20	<20	<15
SK-199	OR-C	**226**	<20	<20	<20	<50	<20	<40	**189000**	**74.8**	**52.6**	<15
SK-199	SC-G	**111**	<20	<20	<20	<50	<20	<40	**9400**	**156**	**47.8**	<15

PAINT WASTES OTHER

Total # of Samples: 52

TCLP Volatiles Analysis (ppm)

	Waste Code:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-199	SD-SF	**62.375**	<20	<20	<20	<20	<20	<20	**93513.63**	**124.831**	**125.77**	<20
SK-199	TX-D	**21.753**	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	**17579.73**	**4.63**	**43.368**	<2.0
SK-199	UT-SLC	**129**	<20	<20	<20	<50	<20	<40	**33800**	**62.1**	<20	<15
SK-199	UT-SLC	**384**	<20	<20	<20	<50	<20	<40	**5250**	<20	<20	<15
SK-200	GA-C	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**56700**	<2.0	<1.5	
SK-200	GA-N	**15.59**	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	**33320**	<4.0	<4.0	<2.8
SK-200	KS-E	**1.95**	<1.39	<1.39	<1.39	<3.19	<1.39	<2.59	**1720**	**4.0**	**4.0**	<1.03
SK-200	KS-W	**48**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**14900**	**19.2**	**15.0**	<1.5
SK-200	LA-P	**64.8**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**28200**	**5.6**	<2.0	<1.5
SK-200	LA-P	**78.8**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**22400**	**10.6**	<2.0	<1.5
SK-200	MO-SC	**8.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**15900**	<2.0	<2.0	<1.5
SK-200	NE-GI	**81.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**24300**	**124**	**84.1**	<1.5
SK-200	NE-O	**90.3**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**18800**	**101**	**98.6**	<1.5
SK-200	NM-A	<20	<20	<20	<20	<50	<20	<40	**13300**	**291**	<20	<15
SK-200	SC-G	**60.2**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**26300**	**77.8**	**188**	<1.5
SK-200	TX-D	**30.4**	<20	<20	<20	<50	<20	<40	**21500**	<20	<20	<15
SK-200	UT-SLC	0.465	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**4808**	<0.20	<0.20	<0.14
SK-200	UT-SLC	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	**736.1**	<4.0	<4.0	<2.8
	Maximum	641	ND	35.8	8.755	0	ND	ND	189000	1081	390	ND
	Minimum	0.465	ND	6.197	8.755	0	ND	ND	0.91	0.68	2.6	ND
	90th UCL for	**131**	ND	ND	ND	ND	ND	ND	**19100**	**11**	**2.3**	ND
	50th Percentile	**61.4**							**23318.55**	**24.5**	**2.6**	

WASTE PAINT GUN CLEANER

Total # of Samples: 47

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	CO-E	5.18	0.884	**69**	<5.00	29	<0.500	**15.9**	**45.3**	<0.10	<0.45	<0.500
SK-1999	FL-BB	4.61	0.853	**69**	<5.00	1.46	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	FL-M	5.94	0.87	**69**	<5.00	<0.500	0.588	1.87	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-C	4.00	0.846	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-C	6.2	0.906	**69**	<5.00	1.48	<0.500	**116**	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-N	4.82	0.859	**69**	<5.00	10.8	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KS-E	6.99	0.8615	**69**	<5.00	68.4	<0.500	1.77	<4.00	<0.10	<0.45	<0.500
SK-1999	KS-W	7.88	0.831	**69**	<5.00	1.59	0.52	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	MO-C	4.53	0.838	**69**	<5.00	0.643	<0.500	1.23	**5.15**	<0.10	<0.45	<0.500
SK-1999	NE-GI	4.44	0.841	**<70**	<5.00	6.09	<0.500	1.15	<4.00	<1.0	<0.452	<0.500
SK-1999	NE-O	5.02	0.839	**69**	<5.00	18.2	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NM-A	4.66	0.8268	**69**	<5.0	1.43	<0.50	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	NY-A	4.25	0.862	**69**	<5.00	1.86	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-AV	4.35	0.871	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-1999	NY-AV	4.54	0.904	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-1999	NY-C	8.39	0.823	**69**	<5.00	11.2	<0.500	2.15	**9.08**	<0.10	<0.45	<0.500
SK-1999	NY-L	7.49	0.865	**69**	<5.00	3.63	<0.500	10.7	**44.9**	<0.100	<0.452	<0.500
SK-1999	NY-L	7.58	0.89	**69**	<5.00	3.02	<0.500	**12**	**53.2**	<0.100	<0.452	<0.500
SK-1999	NY-L	3.9	0.859	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-1999	NY-NA	9.44	1.02	**69**	<5.00	1.25	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-NA	4.4	0.876	**69**	<5.00	2.86	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-NA	5.85	0.862	**69**	<5.00	9.01	<0.500	**30**	**141**	<0.10	<0.45	<0.500
SK-1999	NY-S	4.03	0.832	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.45	<0.45	<0.500
SK-1999	NY-S	4.52	0.833	**75**	<5.00	<0.500	<0.500	<0.500	4.07	<0.45	<0.45	<0.500
SK-1999	NY-S	4.00	0.84	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.45	<0.45	<0.500
SK-1999	OR-C	4.02	0.846	**69**	<5.00	1.61	<0.500	1.14	<4.00	<0.10	<0.45	<0.500
SK-1999	SC-G	5.3	0.857	**<70**	<5.00	1.55	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-1999	SD-S	6.86	0.858	**69**	<5.00	14.3	<0.500	**18.2**	**76.2**	<0.10	<0.45	<0.500
SK-1999	SD-S	4.85	0.851	**69**	<5.00	3.57	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1999	TX-D	5.19	0.8108	**<70**	<5.00	<0.500	<0.500	2.71	**10.8**	<0.100	<0.452	<0.500
SK-1999	UT-SLC	6.86	0.843	**69**	<5.00	**103**	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	UT-SLC	7.06	0.843	**69**	<5.00	6.09	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-2000	GA-C	7.51	0.8565	**69**	<5.00	1.12	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-2000	GA-N	4.6	0.8345	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500

WASTE PAINT [illegible]N CLEANER

Total # of Samples: 47

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-2000	KS-E	5.2	0.843	**69**	<5.00	0.904	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	KS-W	5.75	0.844	**69**	<5.00	8.22	<0.500	1.9	<4.00	<0.040	<0.008	<0.500
SK-2000	LA-P	6.75	0.86	**69**	<5.00	8.64	<0.500	**5.73**	**16.9**	<0.10	<0.45	<0.500
SK-2000	MO-SC	5.28	0.8119	**69**	<5.00	3.8	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-2000	NE-GI	6.5	0.869	**69**	<5.00	**846**	<0.500	**11.1**	**29.4**	<0.10	<0.45	<0.500
SK-2000	NE-O	4.7	0.87	**69**	<5.00	3.29	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-2000	SC-G	7.23	0.9015	**69**	<5.00	24.8	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	SD-SF	4.4	0.87	**69**	<5.00	5.58	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	SD-SF	4.58	0.8341	**69**	<5.00	2.36	<0.500	0.603	<4.00	<0.10	<0.45	<0.500
SK-2000	TX-D	4.33	0.868	**<70**	<5.00	0.594	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-2000	FL-BB	4.56	0.8778	**69**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	UT-SLC	6.34	1.0047	**69**	<0.500	4.25	<0.050	<0.050	<0.400	<.0008	<0.750	<0.050
SK-2000	UT-SLC	4.13	0.872	**69**	<5.00	<0.500	<0.500	3.85	<4.00	<0.10	<0.45	<0.500

WASTE PAINT GUN CLEANER

Total # of Samples: 47

	Physical Properties			TCLP Metals Analysis (ppm)							
Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
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**											
Maximum	9.44	1.02	75	ND	846	0.588	116	141	ND	ND	ND
Minimum	3.9	0.8108	69	B	0.594	0.52	0.603	4.07	ND	ND	ND
90th UCL for	5.09	0.86	**69**	ND	2.73	ND	0.509	ND	ND	ND	ND
50th Percentile	5.28		**69**		3.29		<0.500				

WASTE PAINT GUN CLEANER

Total # of Samples: 47

		TCLP Semi Volatiles Analysis (ppm)									TCLP Vc
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	CO-E	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	FL-BB	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	FL-M	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	GA-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	GA-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	GA-N	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	KS-E	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	KS-W	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	MO-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NE-GI	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NE-O	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NM-A	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-A	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	NY-AV	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	NY-AV	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	NY-C	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	NY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	NY-L	<10	<0.13	<0.0050	<0.020	0.20033	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-NA	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	NY-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	OR-C	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	SC-G	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	SD-S	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	SD-S	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	TX-D	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	UT-SLC	<460	<130	<220	<230	<200	<190	<470	<590	<200	<300
SK-1999	UT-SLC	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-2000	GA-C	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	GA-N	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200

WASTE PAINT GUN CLEANER

Total # of Samples: 47

		TCLP Semi Volatiles Analysis (ppm)									TCLP Vc
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-2000	KS-E	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	KS-W	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
SK-2000	LA-P	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	MO-SC	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	NE-GI	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	NE-O	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	SC-G	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	SD-SF	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	SD-SF	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	TX-D	<400	<110	<170	<200	<200	<200	<200	<210	<200	<200
SK-2000	FL-BB	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	UT-SLC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	UT-SLC	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200

WASTE PAINT GUN CLEANER

Total # of Samples: 47

		TCLP Semi Volatiles Analysis (ppm)									TCLP Vc
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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**										
	Maximum	0	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Minimum	0	ND	ND	ND	ND	ND	ND	ND	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE PAINT GUN CLEANER

Total # of Samples: 47

Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	CO-E	**24.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**22200**	**2.5**	**3.8**	<1.5
SK-1999	FL-BB	**62**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**34200**	**54.0**	**52.4**	<1.5
SK-1999	FL-M	**43.3**	<20	<20	<20	<50	<20	<40	**44800**	**37.5**	**32.5**	<15
SK-1999	GA-C	**85.9**	<2.0	<2.0	3	<5.0	<2.0	<4.0	**58400**	**115.0**	**131.0**	<1.5
SK-1999	GA-C	**22.5**	<20	<20	<20	<50	<20	<40	**16200**	<20	<20	<15
SK-1999	GA-N	**58.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**51000**	**67.9**	**54.8**	<1.5
SK-1999	KS-E	<50	<20	<20	<20	<20	<20	<20	**8766.214**	**33.6**	<20	<20
SK-1999	KS-W	**102**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**31905**	**70.1**	**33.1**	<2.0
SK-1999	MO-C	**71.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**33700**	**70.4**	**63.8**	<1.5
SK-1999	NE-GI	**45.945**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**35402.95**	**128.825**	**163.618**	<2.0
SK-1999	NE-O	**119**	<20	<20	<20	<50	<20	<40	**178000**	**648.0**	**352.0**	<15
SK-1999	NM-A	**91.078**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**12994.8**	**37.2**	**25.3**	<2.0
SK-1999	NY-A	**74.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**29200**	**87.0**	**73.4**	<1.5
SK-1999	NY-AV	**61.9**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**39500**	**98.5**	**107.0**	<1.5
SK-1999	NY-AV	**68.7**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**41700**	**94.4**	**95.3**	<1.5
SK-1999	NY-C	**107**	<20	<20	<20	<20	<20	<20	**115000**	**172**	**144**	<15
SK-1999	NY-L	**39.2**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**26900**	**23.4**	**20.0**	<1.5
SK-1999	NY-L	**35.8**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**26900**	**21.6**	**19.6**	<1.5
SK-1999	NY-L	**125**	<2.0	<2.0	3.1	<5.0	<2.0	<4.0	**43900**	**161.0**	**243.0**	<1.5
SK-1999	NY-NA	**2080**	<20	<20	<20	<50	**44.5**	<40	**28500**	<20	**20.5**	<15
SK-1999	NY-NA	**165**	<2.0	<2.0	3.8	<5.0	**8**	<4.0	**43000**	**161.0**	**305.0**	<1.5
SK-1999	NY-NA	**83.6**	<2.0	<2.0	<2.0	<5.0	**2.1**	<4.0	**33500**	**91.3**	**86.9**	<1.5
SK-1999	NY-S	**104**	<2.0	<2.0	4.5	<5.0	<2.0	<4.0	**58700**	**131.0**	**72.5**	<1.5
SK-1999	NY-S	**102**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**21700**	**78.8**	**92.8**	<1.5
SK-1999	NY-S	**111**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**52800**	**51.2**	**57.7**	<1.5
SK-1999	OR-C	**490**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**30600**	**57.2**	**86.8**	<1.5
SK-1999	SC-G	**46.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**25900**	**30.4**	**37.2**	<1.5
SK-1999	SD-S	**62.375**	<20	<20	<20	<20	<20	<20	**93513.63**	**124.831**	**125.77**	<20
SK-1999	SD-S	**130**	<20	<20	<20	<50	<20	<40	**148000**	**121.0**	**103.0**	<15
SK-1999	TX-D	**49.595**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**18478.57**	**15.2**	**8.6**	<2.0
SK-1999	UT-SLC	**142**	<20	<20	<20	<50	<20	<40	**71700**	**20.2**	**25.6**	<15
SK-1999	UT-SLC	**233**	<20	<20	<20	<50	<20	<40	**199000**	**425.0**	**33.3**	<15
SK-2000	GA-C	<40	<40	<40	<40	<100	<40	<80	**3180**	<40.0	<40.0	<30.0
SK-2000	GA-N	**65.21**	<8.0	<8.0	<8.0	<8.0	<8.0	<8.0	**42290**	**56.9**	**89.6**	<5.6

WASTE PAINT GUN CLEANER

Total # of Samples: 47

Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-2000	KS-E	**44.3**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**25500**	**44.6**	**39.1**	<1.5
SK-2000	KS-W	**69**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**25200**	**73.8**	**61.1**	<1.5
SK-2000	LA-P	**94.1**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**31700**	**179.0**	**84.7**	<1.5
SK-2000	MO-SC	**53.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**32300**	**45.3**	**62.5**	<1.5
SK-2000	NE-GI	**64.2**	<20	<20	<20	<50	<20	<40	**67500**	**231.0**	**53.5**	<15
SK-2000	NE-O	**75**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**22700**	**102.0**	**113.0**	<1.5
SK-2000	SC-G	**65.8**	<4.0	<4.0	<4.0	<10.0	<4.0	<8.0	**7460**	<4.0	<4.0	<3.0
SK-2000	SD-SF	**46.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**19900**	**60.8**	**53.4**	<1.5
SK-2000	SD-SF	**57.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**32900**	**72.6**	**84.8**	<1.5
SK-2000	TX-D	**145**	<20	<20	<20	<50	<20	<40	**48400**	**30.0**	**27.9**	<15
SK-2000	FL-BB	**43.1**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**22700**	**46.2**	**192.0**	<1.5
SK-2000	UT-SLC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	**958.6**	<0.20	<0.20	<0.14
SK-2000	UT-SLC	**40.1**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	**1190**	<2.0	<2.0	<1.5

WASTE PAINT GUN CLEANER

Total # of Samples: 47

	Volatiles Analysis (ppm)										
Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
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											
Maximum	2080	ND	0	4.5	ND	44.5	ND	199000	648	352	ND
Minimum	22.5	ND	0	3	ND	2.1	ND	958.6	2.5	3.8	ND
90th UCL for	**162**	ND	ND	ND	ND	ND	ND	**40300**	**52.3**	**63.8**	ND
50th Percentile	***75***							***35402.95***	***73.8***	***73.4***	

WASTE PARTS WASHER SOLVENT -105

Total # of Samples 56

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	FL-M	6.92	0.863	**91**	<5.00	1.87	<0.500	1.37	4.14	<0.10	<0.45	<0.500
SK-1999	GA-C	7.13	0.813	153	<500	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-M	7.03	0.797	157	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	GA-M	5.51	0.85	152	<5.00	<0.500	<0.500	<0.500	**6.41**	<0.10	<0.45	<0.500
SK-1999	GA-N	5.64	0.81	**95**	<5.00	0.874	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KS-D	7	0.825	**118**	<5.00	3.69	<0.500	1.04	**13.7**	<0.10	<0.45	<0.500
SK-1999	KS-E	6.83	0.7912	158	<5.00	4.76	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KS-E	6.98	0.8115	144	<5.00	1.38	<0.500	<0.500	<4.00	<0.010	<0.45	<0.500
SK-1999	KS-W	7.25	0.779	159	<5.00	3.18	0.93	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KY-A	8	0.816	**121**	<5.00	21.6	<0.500	<0.500	**9.99**	<0..10	<0.45	<0.500
SK-1999	KY-A	5.6	0.791	119	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KY-A	5.7	0.801	**139**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KY-A	6.69	0.8327	**138**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KY-A	8.34	0.8486	**133**	<5.00	0.529	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KY-A	7.02	0.8218	**117**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	KY-L	8.1	0.82	145	<5.00	10.4	0.58	0.718	**13.1**	<0.10	<0.45	<0.500
SK-1999	KY-L	6.8	0.829	145	<5.00	1.03	<0.500	<0.500	**6.5**	<0.10	<0.45	<0.500
SK-1999	LA-K	6.29	0.777	170	<5.00	0.847	<0.500	<0.500	**6.6**	<0.10	<0.45	<0.500
SK-1999	LA-P	6.96	0.784	**113**	<5.00	1.27	<0.500	0.68	**5.75**	<0.10	<0.45	<0.500
SK-1999	ND-B	6.81	0.7874	146	<5.00	0.61	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	ND-F	8.01	0.846	**138**	<5.00	1.39	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1999	NE-GER	8.09	0.8703	156	<5.00	1.29	0.627	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1999	NM-A	7.48	0.8308	155	<5.00	3.94	**1.3**	<0.500	**10.5**	<0.10	<0.45	<0.500
SK-1999	NM-F	7.65	0.798	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	OR-C	5.45	0.824	**100**	<5.00	<0.500	<0.500	<0.500	<0.500	<0.10	<0.45	<0.500
SK-1999	SC-G	6.79	0.822	153	<5.00	2.54	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	SD-S	6.25	0.789	**114**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	SD-S	7.78	0.788	158	<5.00	1.56	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	UT-S	7.42	0.774	152	<5.00	2.26	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	CA-SAL	7.44	0.81	151	<5.00	2.31	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	CO-E	6.94	0.7676	152	<5.00	1.29	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	GA-C	6.62	0.7988	148	<5.00	10.5	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	GA-GC	9.11	0.814	**112**	<5.00	<0.500	<0.500	0.53	<4.0	<0.040	<0.008	<0.500

WASTE PARTS WASHER SOLVENT -105

Total # of Samples 56

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-2000	GA-M	9.52	1.0282	166	<0.905	17.4	0.181	0.325	<0.724	0.011	<0.723	<0.091
SK-2000	GA-M	6.55	0.731	160	<5.00	1.56	0.587	<0.500	**9.16**	<0.10	<0.45	<0.500
SK-2000	KS-E	7.2	0.773	**137**	<5.00	0.706	<0.500	<0.500	**25.9**	<0.10	<0.45	<0.500
SK-2000	KS-W	6.51	0.784	143	<5.00	<0.500	0.646	<0.500	**7.45**	<0.040	<0.008	<0.500
SK-2000	KY-A	7.46	0.821	152	<5.00	8.06	0.52	<0.500	**19**	<0.10	<0.45	<0.500
SK-2000	KY-L	6.9	0.7922	**138**	<5.00	2.36	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	KY-L	7.08	0.8007	**130**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	LA-P	5.46	0.81	141	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	MO-SC	7.7	0.7819	142	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	ND-F	7.4	0.91	142	<5.00	70.3	**3.04**	**5.22**	**31.4**	<0.10	<0.45	<0.500
SK-2000	ND-F	7.4	0.79	**130**	<5.00	1.32	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-2000	NE-G	10.16	0.797	**136**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NM-A	6.3	0.79	161	<5.00	24.3	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-2000	NM-F	4.46	0.8784	153	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-L	6.3	0.7686	**136**	<5.00	2.23	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	SC-G	7.29	0.8024	**130**	<5.00	0.853	<0.500	<0.500	**11.4**	<0.100	<0.45	<0.500
SK-2000	SD-SF	7	0.84	**139**	<5.00	1.87	0.627	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	SD-SF	7.17	0.824	**128**	<5.00	2.55	<0.500	<0.500	<4.00	<0.100	<0.45	<0.500
SK-2000	TX-D	6.1	0.793	146	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	TX-L	6.92	0.852	152	<5.00	4.61	<0.500	<0.500	**10.4**	<0.10	<0.45	<0.500
SK-2000	NE-O	6.95	0.8116	**132**	<5.00	1.03	<0.500	<0.500	<4.00	**0.886**	<0.45	<0.500
SK-2000	NE-G	7.79	0.8068	146	<5.00	0.941	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	TX-O	7.3		>140	<5.00	2.18	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
	Maximum	10.16	1.03	170	ND	70.30	3.04	5.22	31.40	ND	ND	ND
	Minimum	4.46	0.73	<70	ND	0.53	0.18	0.33	4.14	ND	ND	ND
	90th UCL for	7.22	0.82	**139**	ND	ND	ND	ND	ND	ND	ND	ND
	50th Percentile	7.2		**138**		1.56						

WASTE PARTS WASHER SOLVENT -105

Total # of Samples 57

		TCLP Semi-Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	FL-M	53.716	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	GA-C	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	GA-M	7.516	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	GA-M	13.142	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	GA-N	7.036	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KS-D	6.697	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KS-E	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KS-E	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KS-W	<4.9	<0.10	<0.005	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KY-A	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	KY-A	<10	<0.13	0.010654	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-A	<10.1	<0.13	<0.0500	0.0309	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-A	<10.0	<0.13	<0.0050	0.13804	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-A	<10	<0.13	0.005159	0.30701	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-A	<10.0	<0.13	<0.0052	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-L	<10.0	<0.13	<0.00050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-L	<10.0	<0.13	<0.00050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	LA-K	<4.9	<0.10	<0.005	<0.02	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	LA-P	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	ND-B	<4.9	<0.10	<0.0050	0.02381	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	ND-F	11.631	<0.10	<0.0050	<0.020	<0.20	<0.75	<0.40	<0.30	<0.20	<0.30
SK-1999	NE-GER	<0.900	<0.100	<0.005	<0.020	<0.20	<0.75	<0.40	<0.30	<0.20	<0.30
SK-1999	NM-A	<4.9	<0.10	<0.0050	0.02381	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NM-F	<10.0	<0.13	0.008306	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	OR-C	4.301	<0.10	0.00986	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	SC-G	<10	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	SD-S	29.697	<0.10	0.00872	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	SD-S	10.33	<0.10	<0.005	<0.02	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	UT-S	5.61	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-2000	CA-SAL	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	CO-E	47.8	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	GA-C	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	GA-GC	11	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0

WASTE PARTS WASHER SOLVENT -105

Total # of Samples 57

TCLP Semi-Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-2000	GA-M	<92.0	<0.103	0.095	<0.464	<0.545	<0.491	<0.905	<0.581	<0.905	<0.635
SK-2000	GA-M	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	KS-E	<14.5	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KS-W	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.0025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	LA-P	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MO-SC	15.22	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	ND-F	9.77	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	ND-F	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NE-G	28	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NM-A	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NM-F	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	24.4	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	SC-G	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	SD-SF	7.24	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	SD-SF	<10.0	<0.13	<0.0025	0.1377	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	TX-D	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	TX-L	<10.0	<0.13	<0.0025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NE-O	<50	<0.65	<0.025	<0.10	<1.0	<2.0	<25	<5.0	<25	<10.0
SK-2000	NE-G	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	TX-O	<10.0	<0.13	<0.0025	<0.1	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
	Maximum	53.72	ND	0.10	0.31	0.00	ND	ND	ND	ND	ND
	Minimum	4.30	ND	0.01	0.02	0.00	ND	ND	ND	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE PARTS WASHER SOLVENT -105

Total # of Samples 57

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	FL-M	**569**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**18000**	**8.5**	<1.5
SK-1999	GA-C	<2.0	<2.0	<2.0	<2.0	6.6	<2.0	<4.0	<5.0	**732**	**2.1**	<1.5
SK-1999	GA-M	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**1503.077**	**42.801**	<2.0
SK-1999	GA-M	**3.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1020**	**11.2**	<1.5
SK-1999	GA-N	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**107**	<2.0	<1.5
SK-1999	KS-D	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**308**	**10.5**	<1.5
SK-1999	KS-E	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	34.253	**938.568**	**390.499**	<2.0
SK-1999	KS-E	<50	<20	<20	<20	<20	<20	<20	<100	**1081.24**	**85.466**	<20
SK-1999	KS-W	<50	<20	<20	<20	<20	<20	<20	<100	**362**	<20	<20
SK-1999	KY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**146.65**	<2.0	<1.4
SK-1999	KY-A	**296**	<0.40	<0.40	<0.40	<1.0	<0.40	<0.80	<1.0	**1.5**	<0.40	<0.30
SK-1999	KY-A	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**498**	**7.2**	<1.5
SK-1999	KY-A	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1360**	**17.4**	<1.5
SK-1999	KY-A	<20	<20	<20	<20	<50	<20	<40	<50	**866**	<20	<15
SK-1999	KY-A	**2.3**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	5.1	**1350**	**42.7**	<1.5
SK-1999	KY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**9360**	**9.9**	<1.5
SK-1999	KY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	21.1	**354**	<2.0	<1.5
SK-1999	LA-K	<50	<20	<20	<20	<20	<20	<20	<100	**461**	**28.4**	<20
SK-1999	LA-P	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**584**	**15.2**	<1.5
SK-1999	ND-B	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**287.147**	**13.063**	<2.0
SK-1999	ND-F	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**119.41**	**3.285**	<2.0
SK-1999	NE-GER	<50	<20	<20	<20	<20	<20	<20	<100	**91.09**	**228.494**	<20
SK-1999	NM-A	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**19.673**	**3.044**	<2.0
SK-1999	NM-F	**7.7**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	8.1	**1450**	**35.5**	<1.5
SK-1999	OR-C	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1880**	**17.2**	<1.5
SK-1999	SC-G	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1410**	**10.9**	<1.5
SK-1999	SD-S	<2.0	<2.0	<2.0	<2.0	**10.5**	<2.0	<4.0	<5.0	**6200**	**52.3**	<1.5
SK-1999	SD-S	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	18.4	**916**	**3.66**	<2.0
SK-1999	UT-S	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**644**	**19.4**	<1.5
SK-2000	CA-SAL	**13.8**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**284**	<2.0	<1.5
SK-2000	CO-E	**4.2**	<0.40	<0.40	<0.40	1.4	<0.40	<0.80	6.3	**916**	**51.3**	<0.30
SK-2000	GA-C	<0.20	<0.20	<0.20	<0.20	0.6	<0.20	<0.40	0.66	**514**	**2.6**	<0.15
SK-2000	GA-GC	**96.7**	<0.20	<0.20	<0.20	**<0.50**	<0.20	<0.40	77.5	**1.1**	<0.20	<0.15

WASTE PARTS WASHER SOLVENT -105

Total # of Samples 57

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-2000	GA-M	<0.214	<0.214	<0.214	<0.214	<0.256	<0.214	<0.242	<0.535	**11.6**	0.227	<0.151
SK-2000	GA-M	<0.2	<0.2	<0.2	<0.2	0.63	<0.20	<0.40	<0.50	**221**	<0.20	<0.15
SK-2000	KS-E	<2.0	<2.0	<2.0	<2.0	**9.8**	<2.0	<4.0	<5.0	**820**	**9.5**	<1.5
SK-2000	KS-W	**3.8**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	5	**430**	**34.1**	<1.5
SK-2000	KY-A	<0.20	<0.20	<0.20	<0.20	3.5	<0.20	<0.40	<0.50	**240**	<0.20	<0.15
SK-2000	KY-L	<0.40	<0.40	<0.40	<0.40	5.3	<0.40	<0.80	<1.0	**1120**	**14.8**	<0.30
SK-2000	KY-L	**76.3**	<0.20	<0.20	<0.20	5	<0.20	<0.40	<0.50	**1110**	**32.2**	<0.15
SK-2000	LA-P	6.6	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**836**	**85.9**	<1.5
SK-2000	MO-SC	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1140**	**35.5**	<1.5
SK-2000	ND-F	<20	<20	<20	<20	<50	<20	<40	<50	**46000**	**54.2**	<15
SK-2000	ND-F	**3.7**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	6.2	**2410**	**59**	<1.5
SK-2000	NE-G	**2.2**	<2.0	<2.0	<2.0	**10.4**	<2.00	<4.00	<5.0	**2430**	**78.5**	<1.5
SK-2000	NM-A	0.28	<0.20	<0.20	<0.20	0.74	<0.20	<0.40	<0.50	**40.6**	**0.71**	<0.15
SK-2000	NM-F	**0.86**	<0.40	<0.40	<0.40	<1.0	<0.40	<0.80	1.8	**308**	**16.8**	<0.30
SK-2000	NY-L	0.23	<0.20	<0.20	1.1	6.1	<0.20	<0.40	<0.50	**924**	**22.8**	<0.15
SK-2000	SC-G	**98.2**	<0.20	<0.20	<0.20	0.6	<0.20	<0.40	5.4	**1230**	**9.7**	<0.15
SK-2000	SD-SF	<2.0	<2.0	<2.0	<2.0	6.4	<2.0	<4.0	11.9	**532**	**19**	<1.5
SK-2000	SD-SF	**20.9**	<2.0	<2.0	<2.0	6.5	<2.0	<4.0	12.4	**38700**	**5.7**	<1.5
SK-2000	TX-D	**9.9**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	6.7	**877**	**117**	<1.5
SK-2000	TX-L	**3.8**	<0.20	<0.20	<0..20	0.99	<0.20	<0.40	<0.50	**735**	**17.8**	<0.15
SK-2000	NE-O	**4.6**	<0.20	<0.20	<0.20	0.62	<0.20	<0.40	2.4	**1510**	**21.3**	<0.15
SK-2000	NE-G	**4.4**	<0.40	<0.40	<0.40	2.6	<0.40	<0.80	1.8	**828**	**17.2**	<0.30
SK-2000	TX-O	**6.6**	<0.20	<0.20	<0..20	<0.50	<0.20	<0.40	6.4	**1150**	**20**	<0.15
	Maximum	569.00	ND	0.00	ND	10.50	ND	ND	77.50	46000.00	390.50	ND
	Minimum	0.23	ND	0.00	ND	0.60	ND	ND	0.66	1.10	0.23	ND
	90th UCL for	**1.00**	ND	ND	ND	2.4	ND	ND	ND	**837**	**29.416**	ND
	50th Percentile	<50								**924**	**17.8**	

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: ***77***

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1995	CO-E	6.67	0.792	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	CO-GJ	5.87	0.788	161	<5.00	1.11	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	CO-P	6.05	0.810	161	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	FL-B	6.80	0.809	171	<5.00	<0.500	<0.500	0.565	<4.00	<0.10	<0.45	<0.500
SK-1995	KS-DC	6.81	0.815	160	*<5.00*	*1.21*	*<0.500*	*<0.500*	*<4.00*	*<0.10*	*<0.45*	*<0.500*
SK-1995	KS-W	8.27	0.805	162	<5.00	<0.500	0.888	<0.500	<4.00	<0.1	<0.45	<0.500
SK-1995	KY-A	6.70	0.825	162	<5.00	0.62	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	KY-A	6.99	0.949	152	<5.00	2.36	<0.500	0.784	**7.11**	<0.10	<0.45	<0.500
SK-1995	KY-L	8.32	0.828	151	<5.00	29.3	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	KY-L	6.41	0.837	160	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	KY-L	8.36	0.821	165	<5.00	4.98	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	KY-L	7.30	0.850	156	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	KY-L	6.20	0.820	154	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	KY-L	5.18	0.800	162	<5.00	0.51	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	KY-L	6.40	0.850	155	<5.00	<0.500	<0.500	<0.500	<4.00	0.169	<0.45	<0.500
SK-1995	LA-K	6.09	0.773	164	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	LA-P	6.42	0.781	168	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	MO-C	7.53	0.811	164	<5.00	2.37	**1.15**	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	NM-A	8.65	0.818	159	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	NM-F	8.02	0.816	153	<5.00	1.22	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	NY-A	6.08	0.846	**99**	<5.00	4.76	<0.500	<0.500	<4.00	<0.10	0.68	<0.500
SK-1995	NY-A	7.67	0.840	160	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	NY-A	7.42	0.842	159	<5.00	2.14	**1.18**	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	NY-C	6.82	0.818	148	<5.00	1.62	**1.5**	<0.500	4.9	<0.10	<0.45	<0.500
SK-1995	NY-C	6.44	0.798	157	<5.00	0.834	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	NY-C	7.33	0.837	**136**	<5.00	1.01	**2.69**	<0.500	4.51	<0.10	<0.45	<0.500
SK-1995	NY-L	7.29	0.811	163	<5.00	<5.00	<0.500	<0.500	**24.4**	<0.10	<0.45	<0.500
SK-1995	NY-L	7.56	0.821	165	<5.00	<0.500	<0.500	<0.500	**24.7**	<0.10	<0.45	<0.500
SK-1995	NY-L	7.15	0.786	166	<5.00	<0.500	<0.500	<0.500	**22.8**	<0.10	<0.45	<0.500
SK-1995	NY-NA	5.06	0.818	162	<5.00	2.35	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1995	NY-NA	5.08	0.809	159	<5.00	4.09	0.738	<0.500	<4.00	<0.190	<0.859	<0.500
SK-1995	NY-NA	5.11	0.819	170	<5.00	2.01	<0.500	<0.500	<4.00	<0.100	<0.452	<0.500
SK-1995	NY-S	7.01	0.794	154	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1995	NY-S	7.18	0.805	165	<5.00	2.63	**4.94**	<0.500	**7.52**	<0.10	<0.45	<0.500

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-199	OR-C	6.65	0.854	151	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-199	TX-L	6.60	0.795	160	<5.00	2.06	<0.500	0.623	<4.00	<0.10	<0.45	<0.500
SK-199	TX-O	6.80	0.827	150	<5.00	<0.500	<0.500	0.687	<4.00	<0.10	<0.45	<0.500
SK-200	FL-BB	6.62	0.839	160	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	GA-M	7.38	0.722	160	<5.00	3.27	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KS-DC	4.44	0.942	146	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KS-E	7.20	0.765	160	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KS-W	4.89	0.801	153	<5.00	0.733	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-200	KY-A	6.90	0.834	158	<5.00	2.88	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-A	7.70	0.824	**135**	<5.00	7.78	<0.500	<0.500	**7.7**	<0.10	<0.45	<0.500
SK-200	KY-A	7.86	0.807	154	<5.00	4.39	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-A	7.82	0.874	152	<5.00	1.54	<0.500	<0.500	**9.2**	<0.10	<0.45	<0.500
SK-200	KY-A	7.69	0.836	**125**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-A	7.44	0.799	154	<5.00	7.5	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-A	4.54	0.808	156	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	6.99	0.778	154	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	7.30	0.787	152	<5.00	43.5	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	7.45	0.790	152	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	7.09	0.794	163	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	7.25	0.811	155	<5.00	0.539	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	7.56	0.808	158	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	7.94	0.917	154	<5.00	0.507	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	KY-L	7.70	0.792	156	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	LA-P	7.23	0.810	154	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	MO-SC	7.14	0.809	155	<5.00	<0.500	0.528	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	NM-A	6.80	0.780	153	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	NM-F	5.32	0.819	160	<5.00	3.56	0.586	<0.500	**5.25**	<0.10	<0.45	<0.500
SK-200	NY-AV	6.70	0.812	**100**	<5.00	6.13	<0.500	<0.500	**14.5**	<0.040	<0.008	<0.500
SK-200	NY-C	4.60	0.780	160	<5.00	10.1	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	NY-C	5.80	0.791	167	<5.00	1.08	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	NY-C	8.40	0.793	157	<5.00	6.32	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200	NY-L	7.00	0.792	158	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-200	NY-L	6.60	0.793	161	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-200	NY-L	6.60	0.798	159	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: ***77***

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-200(	NY-NA	7.40	0.798	160	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	NY-NA	7.40	0.781	158	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	NY-NA	7.80	0.787	161	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	NY-NA	7.80	0.782	156	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	NY-S	7.10	0.788	164	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	NY-S	7.40	0.796	158	<5.00	6.88	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	NY-S	7.50	0.787	164	<5.00	7.8	<0.500	0.549	<4.00	<0.10	<0.45	<0.500
SK-200(	TX-D	7.20	0.805	158	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-200(	TX-O	7.29		>140	<5.00	19.2	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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**											
	Maximum	8.65	0.95	171	ND	43.50	4.94	0.78	24.70	ND	0.68	ND
	Minimum	4.44	0.72	<70	ND	0.51	0.53	0.55	4.51	ND	0.68	ND
	90th UCL for	7.12		155	ND	ND	ND	ND	ND	ND	ND	ND
	50th Percentile	7.25		157								

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

		TCLP Semi Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	CO-E	7.55	<0.10	<0.005	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	CO-GJ	6.4	<0.10	<0.005	<0.020	0.202	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	CO-P	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	FL-B	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KS-DC	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KS-W	<4.9	<0.10	<0.005	<0.02	<0.2	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	KY-A	<10.0	<0.13	<0.0050	0.0208	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-A	<10.0	<0.13	<0.0050	0.0208	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-L	10.322	<0.13	0.054207	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-L	<10..0	<0.13	0.0251	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	KY-L	<10	<0.13	<0.0050	0.0208	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	KY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	KY-L	<280	<37	<34	<51	<47	<58	<89	<180	<71	<86
SK-1999	KY-L	<10.0	<0.13	<0.0050	0.0208	<0.20	0.34	<5.0	<1.0	<5.0	<2.0
SK-1999	LA-K	<4.9	<0.10	0.00745	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	LA-P	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	MO-C	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NM-A	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NM-F	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	NY-A	<4.9	<0.10	0.01797	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-A	<10.0	<0.13	<0.0050	0.0208	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	NY-A	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-1999	NY-C	6.618	<0.10	0.00782	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-C	<4.9	<0.10	0.0137	<0.020	<0.20	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1999	NY-C	8.319	<0.10	0.1525	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-L	<4.9	<0.10	0.01638	0.04305	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-L	<4.9	<0.10	0.01107	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-L	<4.9	<0.10	0.01122	<0.020	<0.2	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-NA	<4.9	<0.10	0.00877	0.06273	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-NA	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-NA	<4.9	<0.10	0.00893	0.06421	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-S	<4.9	<0.10	0.01059	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-S	<4.9	<0.10	0.00972	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	OR-C	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	TX-L	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	TX-O	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-2000	FL-BB	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	GA-M	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	KS-DC	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KS-E	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KS-W	<10.0	<0.13	<0.025	<0.030	<0.30	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.10	2.0882	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	KY-L	<10.0	<0.13	1.013648	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	LA-P	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MO-SC	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NM-A	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NM-F	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-AV	<10.0	<0.13	<0.025	<0.10	<0.10	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-C	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-C	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-C	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-L	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-200C	NY-NA	<10.0	<0.13	<0.025	<0.020	<0.2	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	NY-NA	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	NY-NA	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	NY-NA	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	NY-S	<10.0	<0.13	0.010796	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	NY-S	<10.0	<0.13	0.009367	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	NY-S	<10.0	<0.13	0.013648	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	TX-D	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-200C	TX-O	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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**										
	Maximum	10.32	0.00	1.01	0.06	2.09	ND	ND	ND	ND	ND
	Minimum	6.40	0.00	ND	0.02	0.20	ND	ND	ND	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-199	CO-E	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.4	<0.5	0.33	<0.2	<0.15
SK-199	CO-GJ	<20	<20	<20	<20	<50	<20	<40	<40	**2200**	**67.6**	<15
SK-199	CO-P	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	12.4	**32.2**	**2.4**	<1.5
SK-199	FL-B	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	0.42	<0.20	<0.15
SK-199	KS-DC	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**7.00**	<2.0	<1.5
SK-199	KS-W	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	**22.6**	**36.8**	<2.0	<2.0
SK-199	KY-A	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.80	<1.0	**27.4**	<0.40	<0.30
SK-199	KY-A	<0.2	<0.2	<0.2	<0.2	**21.2**	<0.20	<0.40	<0.50	**14.6**	<0.20	<0.15
SK-199	KY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**146**	<2.0	<1.5
SK-199	KY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	9.7	<2.0	**895**	<1.5
SK-199	KY-L	<0.2	<0.2	<0.2	<0.2	<0.50	<0.20	<0.40	<0.50	<0.20	<0.20	<0.15
SK-199	KY-L	<0.2	<0.2	<0.2	<0.2	<0.50	<0.20	<0.40	<0.50	**0.69**	<0.20	<0.15
SK-199	KY-L	<0.20	<0.20	<0.20	<0.20	1.5	<0.20	<0.40	<0.50	0.4	<0.20	<0.15
SK-199	KY-L	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.50	<0.20	<0.20	<0.14
SK-199	KY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	<2.0	<2.0	<1.5
SK-199	LA-K	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	<2.5	**6.22**	<2.0
SK-199	LA-P	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	**2.1**	<0.20	<0.15
SK-199	MO-C	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**56.8**	<2.0	<1.5
SK-199	NM-A	<0.50	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<1.0	0.289	<0.20	<0.20
SK-199	NM-F	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**16800**	<2.0	<1.5
SK-199	NY-A	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**6.2**	**77.6**	<1.5
SK-199	NY-A	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1180**	<2.0	<1.5
SK-199	NY-A	<0.2	<0.2	<0.2	<0.2	0.9	<0.2	<0.4	<0.5	**3.9**	<0.20	<0.15
SK-199	NY-C	<2.0	<2.00	<2.00	<2.00	<5.0	<2.0	<4.0	<5.0	**1750**	**2.3**	<1.5
SK-199	NY-C	**2.8**	<2.00	<2.00	<2.00	<5.0	<2.0	<4.0	14.8	**386**	<2.0	<1.5
SK-199	NY-C	**51.8**	<2.00	<2.00	<2.00	<5.0	<2.0	<4.0	<5.0	**11.8**	<2.0	<1.5
SK-199	NY-L	<0.50	<0.20	<0.20	<0.20	0.838	<0.20	<0.20	<1.0	**1.603**	<0.20	<0.20
SK-199	NY-L	<0.50	<0.20	<0.20	<0.20	<0.20	0.812	<0.20	<1.0	**1.428**	<0.20	<0.20
SK-199	NY-L	<0.50	<0.20	<0.20	<0.20	<0.20	0.842	<0.20	<0.20	**1.513**	<0.20	<0.20
SK-199	NY-NA	<0.50	<0.20	<0.20	<0.20	1.195	<0.20	<0.20	3.022	**1.073**	<0.20	<0.20
SK-199	NY-NA	<0.50	<0.20	<0.20	<0.20	0.895	<0.20	<0.20	5.566	0.337	<0.20	<0.20
SK-199	NY-NA	<0.50	<0.20	<0.20	<0.20	1.031	<0.20	<0.20	2.648	**1.231**	<0.20	<0.20
SK-199	NY-S	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**514.78**	<2.0	<2.0
SK-199	NY-S	**1.956**	<0.20	<0.20	<0.20	0.816	<0.20	<0.20	1.494	**1.474**	<0.20	<0.20

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	OR-C	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	<2.0	**31.7**	<1.5
SK-1999	TX-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**33.2**	<2.0	<1.5
SK-1999	TX-O	**7.2**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**610**	**24**	<1.5
SK-2000	FL-BB	<0.2	<0.2	<0.2	<0.2	<0.50	<0.20	<0.40	<0.50	**4920**	**9.6**	<0.15
SK-2000	GA-M	**3.1**	<0.2	<0.2	<0.2	0.8	<0.20	<0.40	<0.50	**149**	<0.20	<0.15
SK-2000	KS-DC	**133**	<0.2	<0.2	<0.2	<0.50	<0.20	<0.40	<0.50	**1250**	**128**	<0.15
SK-2000	KS-E	<0.20	<0.20	<0.20	<0.20	1.2	<0.20	<0.40	<0.50	**8.9**	**1.8**	<0.15
SK-2000	KS-W	**4.00**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1590**	**10.6**	<1.5
SK-2000	KY-A	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	0.39	<0.20	<0.15
SK-2000	KY-A	**12.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**365**	<2.0	<1.5
SK-2000	KY-A	<0.20	<0.20	<0.20	<0.20	1.1	<0.20	<0.40	<0.50	**29.2**	0.33	<0.15
SK-2000	KY-A	<0.40	**1.1**	<0.40	<0.40	3.1	<0.40	<0.80	<1.0	**23100**	**5.2**	<0.30
SK-2000	KY-A	**106**	**3.7**	<0.40	<0.40	1.2	**2.4**	<0.80	9	**5150**	**7320**	<0.30
SK-2000	KY-A	<0.20	<0.2	<0.2	<0.2	1.5	<0.20	<0.40	<0.50	0.61	<0.20	<0.15
SK-2000	KY-A	<0.40	<0.40	<0.40	<0.40	1.5	<0.40	<0.80	<1.0	**2.1**	<0.40	<0.30
SK-2000	KY-L	<0.40	<0.40	<0.40	<0.40	1.8	<0.40	<0.80	<1.0	**0.98**	<0.40	<0.30
SK-2000	KY-L	<0.2	<0.2	<0.2	<0.2	0.91	<0.20	<0.40	<0.50	**536**	<0.20	<0.15
SK-2000	KY-L	<0.20	<0.20	<0.20	<0.20	1.5	<0.20	<0.40	<0.50	**0.81**	<0.20	<0.15
SK-2000	KY-L	0.26	<0.20	<0.20	<0.20	1.5	<0.20	<0.40	<0.50	0.21	<0.20	<0.15
SK-2000	KY-L	<0.20	<0.20	<0.20	<0.20	1.2	<0.20	<0.40	<0.50	<0.20	<0.20	<0.15
SK-2000	KY-L	<0.2	<0.2	<0.2	<0.2	1	<0.20	<0.40	<0.50	0.53	**5.4**	<0.15
SK-2000	KY-L	0.22	<0.2	<0.2	<0.2	0.74	<0.20	<0.40	0.56	**1.2**	<0.20	<0.15
SK-2000	KY-L	<0.2	<0.2	<0.2	<0.2	0.78	<0.20	<0.40	<0.50	**1.8**	<0.20	<0.15
SK-2000	LA-P	**0.61**	<0.2	<0.2	<0.2	<0.50	<0.20	<0.40	<0.50	<0.20	<0.20	<0.15
SK-2000	MO-SC	<0.20	<0.20	<0.20	<0.20	0.9	<0.20	<0.40	<0.50	0.24	<0.20	<0.15
SK-2000	NM-A	0.23	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	<0.20	<2.0	<1.5
SK-2000	NM-F	<0.40	<0.40	<0.40	<0.40	<1.0	<0.40	<0.80	<1.0	**11300**	<0.40	<0.30
SK-2000	NY-AV	<2.0	<2.0	<2.0	<2.0	5.2	<2.0	<4.0	<5.0	**5160**	**57.9**	<1.5
SK-2000	NY-C	<0.20	<0.20	<0.20	<0.20	0.77	<0.20	<0.40	<0.50	**30**	**1.5**	<0.15
SK-2000	NY-C	<0.20	<0.20	<0.20	<0.20	1.4	<0.20	<0.40	<0.50	0.28	<0.20	<0.15
SK-2000	NY-C	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**2950**	**2.6**	<1.5
SK-2000	NY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**5100**	<2.0	<1.5
SK-2000	NY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**5170**	<2.0	<1.5
SK-2000	NY-L	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**5760**	<2.0	<1.5

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-200(	NY-NA	0.26	<0.2	<0.2	<0.2	<0.50	<0.20	<0.40	<0.50	**3.2**	<0.20	<0.15
SK-200(	NY-NA	0.23	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	**3.3**	<0.20	<0.15
SK-200(	NY-NA	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	**4.6**	**0.59**	<0.15
SK-200(	NY-NA	0.22	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	**3.2**	<0.20	<0.15
SK-200(	NY-S	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**2920**	<2.0	<1.5
SK-200(	NY-S	**1.4**	<0.20	<0.20	<0.20	0.81	<0.20	<0.40	<0.50	**13.2**	<0.20	<0.15
SK-200(	NY-S	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**335**	**26.5**	<1.5
SK-200(	TX-D	<0.2	<0.2	<0.2	<0.2	0.96	<0.20	<0.40	<0.50	<0.20	<0.20	<0.15
SK-200(	TX-O	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	**779**	**247**	<0.15

WASTE PREMIUM GOLD PARTS WASHER SOLVENT (150)

Total # of Samples: 77

		TCLP Volatiles Analysis (ppm)										
	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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**											
	Maximum	*133.00*	*ND*	*0.00*	*ND*	*21.20*	*2.40*	*ND*	*22.60*	*23100.00*	*7320.00*	*ND*
	Minimum	0.22	ND	0.00	ND	0.74	0.81	ND	0.56	0.21	0.33	ND
	90th UCL for	ND	ND	ND	ND	ND	ND	ND	ND	**32.2**	ND	ND
	50th Percentile	<0.20								**27.4**	<2.0	

WASTE PARTS WASHER SOLVENT (105/150)

Total # of Samples: ***50***

		Physical Properties			TCLP Metals Analysis (ppm)							
	Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1998	CO-E	6.3	0.78	**134**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.452	<0.500
SK-1998	MN-B	7.53	0.82	145	<5.00	1.18	<0.500	<0.500	**5.97**	<0.040	<0.45	<0.500
SK-1998	MN-B	7.44	0.81	141	<5.00	1.32	<0.500	<0.500	**5.74**	<0.040	<0.45	<0.500
SK-1998	MN-B	7.53	0.822	154	<5.00	0.995	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1998	MN-E	7.55	0.8	142	<5.00	1.79	0.64	<0.500	**5.79**	<0.040	<0.45	<0.500
SK-1998	MN-E	7.14	0.81	147	<5.00	1.46	0.604	<0.500	**5.27**	<0.040	<0.45	<0.500
SK-1998	MN-E	7.85	0.825	151	<5.00	1.7	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1998	NE-GI	8.31	0.79	**134**	<5.00	1.26	**1.20**	<0.500	**10.3**	<0.040	<0.45	<0.500
SK-1998	NE-O	7.69	0.85	**135**	<5.00	1.5	<0.500	<0.500	<4.00	<0.040	<0.450	<0.500
SK-1998	NY-C	6.74	1.14	**135**	<5.00	3.43	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1998	NY-C	6.74	1.14	**135**	<5.00	3.43	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1998	NY-L	6.65	0.84	146	<5.00	9.69	0.779	1.21	**31.4**	<0.040	<0.45	<0.500
SK-1998	NY-NA	6.47	0.81	**134**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1999	MN-B	7.61	0.823	160	<5.00	1.26	<0.500	<0.500	<4.01	<0.040	<0.45	<0.500
SK-1999	MN-B	7.18	0.834	159	<5.00	0.974	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1999	MN-B	10.34	0.9725	>200	<5.00	3.92	<0.500	<0.500	<4.02	<0.10	<0.45	<0.500
SK-1999	MN-B	8.09	1.1637	145	<0.635	2.04	0.547	<0.064	2.5	<0.004	<0.741	<0.064
SK-1999	MN-B	7.22	0.809	**128**	<5.00	2.11	0.574	0.854	**9.55**	<0.10	<0.45	<0.500
SK-1999	MN-E	6.65	0.839	148	<5.00	1.37	<0.500	<0.500	**5.8**	<0.040	<0.45	<0.500
SK-1999	MN-E	6.42	0.851	148	<5.00	1.74	<0.500	<0.500	**5.79**	<0.040	<0.45	<0.500
SK-1999	MN-E	6.28	0.828	**120**	<5.00	1.31	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	MN-E	5.3	0.795	**121**	<5.00	1.36	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NE-GER	7.58	0.863	**134**	<5.00	<0.500	<0.500	<0.500	<4.01	<0.040	<0.45	<0.500
SK-1999	NE-GI	7.42	0.8082	151	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NE-O	6.61	0.792	145	<5.00	0.848	0.926	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NE-O	6.04	0.822	144	<5.00	1.42	<0.500	0.665	4.54	<0.10	<0.45	<0.500
SK-1999	NE-O	6.64	0.819	**138**	<5.00	3.5	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NE-O	6.53	0.824	**93**	<5.00	3.45	<0.500	1.03	<4.00	<0.10	<0.45	<0.500
SK-1999	NE-O	6.87	0.818	**89**	<5.00	3.45	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-1999	NY-A	9.84	1	198	<5.00	5.95	0.502	0.848	**6.7**	<0.10	<0.45	<0.500
SK-1999	NY-C	6.1	0.8121	**140**	<5.00	0.823	<0.500	<0.500	<4.01	<0.10	<0.45	<0.500
SK-1999	NY-L	6.56	0.8	**89**	<5.00	2.08	<0.500	<0.500	<4.01	<0.10	<0.45	<0.500

WASTE PARTS WASHER SOLVENT (105/150)

Total # of Samples: ***50***

		Physical Properties			TCLP Metals Analysis (ppm)							
	Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1999	NY-NA	8.44	0.817	**132**	<5.00	37	<0.500	<0.500	**7.26**	<0.10	<0.45	<0.500
SK-1999	UT-SLC	7.1	0.816	155	<5.00	2.7	<0.500	<0.500	4.58	<0.10	<0.45	<0.500
SK-2000	KY-A	7.17	0.8104	**92**	<5.00	1.03	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	MN-B	7.9	0.787	**122**	<5.00	1.08	<0.500	<0.500	**12.4**	<0.10	<0.45	<0.500
SK-2000	MN-B	8.1	0.792	146	<5.00	1.1	<0.500	<0.500	**12.2**	<0.040	<0.008	<0.500
SK-2000	MN-B	6.42	0.83	**118**	<5.00	0.867	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	MN-B	7.01	0.814	**122**	<5.00	1.48	<0.500	<0.500	4.66	<0.10	<0.45	<0.500
SK-2000	MN-B	7.78	0.8008	146	<5.00	1.28	<0.500	<0.500	**12.2**	<0.10	<0.45	<0.500
SK-2000	MN-B	6.87	0.7701	**135**	<5.00	1.15	<0.500	<0.500	**12.5**	<0.10	<0.45	<0.500
SK-2000	MN-E	7.2	0.85	142	<5.00	1.27	<0.500	<0.500	**5.38**	<0.10	<0.45	<0.500
SK-2000	MN-E	7	0.85	142	<5.00	1.3	<0.500	<0.500	**5.81**	<0.10	<0.45	<0.500
SK-2000	MN-E	6.69	0.8049	145	<5.00	1.29	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NE-G	9.4	0.803	164	<5.00	<0.500	<0.500	<0.500	4.34	<0.10	<0.45	<0.500
SK-2000	NE-GI	7.2	0.802	145	<5.00	<0.500	<0.500	0.55	<4.00	<0.10	<0.45	<0.500
SK-2000	NE-O	6.1	0.788	**137**	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.008	<0.500
SK-2000	NY-NA	6.25	0.7939	148	<5.00	<0.500	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	NY-S	6.85	0.796	**130**	<5.00	1.4	<0.500	<0.500	<4.00	<0.10	<0.45	<0.500
SK-2000	UT-SLC	8.6	1.2461	172	<5.00	1.03	0.514	<0.500	0.64	<0.0008	<0.750	<0.050
	Maximum	10.34	1.25	198	ND	37.00	1.20	1.21	31.40	ND	ND	ND
	Minimum	5.30	0.77	**<70**	ND	0.82	0.50	0.55	0.64	ND	ND	ND
	90th UCL for			**138**	ND		ND	ND	4.88	ND	ND	ND
	50th Percentile	7.2		**137**		1.42			4.54			

WASTE PARTS WASHER SOLVENT (105/150)

Total # of Samples: ***50***

TCLP Semi Volatiles Analysis (ppm)

	Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1998	CO-E	54.3	<0.100	0.006	<0.020	<0.200	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	MN-B	<0.900	<0.100	0.022	<0.017	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	MN-B	11.1	<0.100	0.021	<0.017	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	MN-B	7.24	<0.100	0.009	<0.020	<0.200	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	MN-E	9.54	<0.100	0.016	<0.017	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	MN-E	8.44	<0.100	0.016	<0.017	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	MN-E	7.51	<0.100	0.034	0.036	<0.200	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	NE-GI	<0.900	<0.100	0.009	0.035	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	NE-O	<357	<105	<112	<147	<140	<133	<392	<462	<161	<273
SK-1998	NY-C	29.7	<0.100	0.083	0.065	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	NY-C	29.7	<0.100	0.083	0.065	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	NY-L	4.82	<0.100	0.006	<0.017	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1998	NY-NA	14.12	<0.100	0.009	0.033	<0.067	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1999	MN-B	<0.90	<0.10	0.01797	0.04716	<0.20	<0.75	<0.40	<0.30	<0.20	<0.30
SK-1999	MN-B	<0.090	<0.10	0.0082	0.3548	<0.20	<0.75	<0.40	<0.30	<0.20	<0.30
SK-1999	MN-B	<5.8	<0.11	<0.093	<0.31	<0.30	<0.27	<2.3	<0.13	<3.4	<1.6
SK-1999	MN-B	<14.03	<3.96	<6.71	<7.01	<6.10	<5.79	<14.3	<18.0	<6.10	<9.15
SK-1999	MN-B	9.754	<0.10	0.02025	<0.02	0.84325	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	MN-E	<0.90	<0.10	0.00867	0.02656	<0.20	<0.75	<0.40	<0.30	<0.20	<0.30
SK-1999	MN-E	<0.90	<0.10	0.00584	0.02452	<0.20	<0.75	<0.40	<0.30	<0.20	<0.30
SK-1999	MN-E	2.478	<0.10	0.00816	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	MN-E	3.026	<0.10	<0.0050	<0.02	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NE-GER	16.818	<0.10	<0.0050	<0.020	<0.20	<0.750	<0.400	<0.300	<0.200	<0.300
SK-1999	NE-GI	<4.9	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NE-O	12.122	<0.10	0.00756	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NE-O	10.591	<0.10	<0.0050	<0.02	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NE-O	15.428	<0.10	0.0069	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NE-O	15.776	<0.10	0.00691	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NE-O	11.995	<0.10	0.00684	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	NY-A	<4.6	<1.3	<2.2	<2.3	<2.0	<1.9	<4.7	<5.9	<2.0	<3.0
SK-1999	NY-C	21.219	<0.10	0.0057	<0.020	<0.20	<0.46	<8.2	<0.33	<4.8	<1.4
SK-1999	NY-L	16.407	<0.10	<0.005	<0.02	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3

WASTE PARTS WASHER SOLVENT (105/150)

Total # of Samples: ***50***

		TCLP Semi Volatiles Analysis (ppm)									
	Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1999	NY-NA	21.381	<0.10	<0.0050	0.0647	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-1999	UT-SLC	5.908	<0.10	<0.0050	<0.020	<0.20	<0.46	<8.1	<0.32	<4.7	<1.3
SK-2000	KY-A	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-B	<10.0	<0.13	**0.15903**	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-B	<10.0	<0.13	**0.16651**	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-B	<10.0	<0.13	0.064636	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-B	<10.0	<0.13	0.0645	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-B	13.38	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-B	<10.0	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-E	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-E	5.68	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	MN-E	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NE-G	<10.0	<0.13	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NE-GI	<10.0	<0.13	<0.025	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NE-O	6.95	<0.60	<0.0050	<0.020	<0.20	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-NA	14.95	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	NY-S	12.18	<0.13	<0.025	<0.10	<1.0	<0.40	<5.0	<1.0	<5.0	<2.0
SK-2000	UT-SLC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
	Maximum	54.30	ND	0.17	0.35	0.84	ND	ND	ND	ND	ND
	Minimum	2.48	ND	0.01	0.02	0.84	ND	ND	ND	ND	ND
	90th UCL for	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	50th Percentile	8.44		0.00756							

WASTE PARTS WASHER SOLVENT (105/150)

Total # of Samples: 50

		TCLP Volatiles Analysis (ppm)										
	Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1998	CO-E	**3.7**	<2.00	4.9	<2.00	**60.6**	<2.00	<4.00	<10.00	**504**	**46.5**	<2.00
SK-1998	MN-B	<2.00	<2.00	<2.00	<2.00	3.7	<2.00	<4.00	<10.00	**1710**	**72.9**	<2.00
SK-1998	MN-B	<2.00	<2.00	<2.00	<2.00	3.9	<2.00	<4.00	<10.00	**1820**	**77.2**	<2.00
SK-1998	MN-B	**6.7**	<2.00	<2.00	<2.00	4.3	<2.00	<4.00	12.2	**837**	**24.4**	<2.00
SK-1998	MN-E	**11.3**	<2.00	<2.00	<2.00	3.2	<2.00	<4.00	12.5	**788**	**462**	<2.00
SK-1998	MN-E	**10.8**	<2.00	<2.00	<2.00	3.5	<2.00	<4.00	12.5	**775**	**444**	<2.00
SK-1998	MN-E	**3.9**	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**732**	**61.4**	<2.00
SK-1998	NE-GI	**32.2**	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**1020**	**182**	<2.00
SK-1998	NE-O	**5.98**	<1.43	<1.43	<1.43	4.09	<1.43	<2.83	7.81	**625**	**35.9**	<1.44
SK-1998	NY-C	<2.00	<2.00	<2.00	<2.00	**15.6**	<2.00	<4.00	<10.00	**676**	**13.2**	<2.00
SK-1998	NY-C	<2.00	<2.00	<2.00	<2.00	**15.6**	<2.00	<4.00	<10.00	**676**	**13.2**	<2.00
SK-1998	NY-L	**4.6**	<2.00	<2.00	<2.00	3.9	<2.00	<4.00	<10.00	**775**	**22.9**	<2.00
SK-1998	NY-NA	<2.00	<2.00	<2.00	<2.00	**9.4**	<2.00	<4.00	<10.00	**306**	<2.00	<2.00
SK-1999	MN-B	<5.0	<2.0	5.045	<2.0	4.215	<2.0	<2.0	<10.0	**794.114**	**29.416**	<2.0
SK-1999	MN-B	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	10.543	**1259.356**	**23.407**	<2.0
SK-1999	MN-B	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**99.3**	<2.0	<1.4
SK-1999	MN-B	<2.09	<2.00	<2.00	<2.00	2.24	<2.00	<2.00	<5.15	**41.8**	**2.28**	<1.42
SK-1999	MN-B	**6.7**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	11.3	**1770**	**19.9**	<1.5
SK-1999	MN-E	<5.0	<2.0	<2.0	<2.0	4.359	<2.0	<2.0	<10.00	**1000.548**	**82.888**	<2.0
SK-1999	MN-E	<5.0	<2.0	<2.0	<2.0	4.684	<2.0	<2.0	<10.0	**835.451**	**66.57**	<2.0
SK-1999	MN-E	**1.7**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	6.6	**863**	**33.2**	<1.5
SK-1999	MN-E	**2.3**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	11.1	**960**	**36.2**	<1.5
SK-1999	NE-GER	**11.026**	<2.00	<0.200	<0.200	6.288	<2.0	<2.0	<10.0	**1254.016**	**39.584**	<2.0
SK-1999	NE-GI	**5.824**	<2.0	<2.0	<2.0	3.947	<2.0	<2.0	<10.0	**212.895**	**4.933**	<2.0
SK-1999	NE-O	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**454**	**2.8**	<1.5
SK-1999	NE-O	**5.7**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	13.8	**3670**	**534**	<1.5
SK-1999	NE-O	**4.1**	<2.0	<2.0	<2.0	5.1	<2.0	<4.0	<5.0	**2330**	**401**	<1.5
SK-1999	NE-O	**3.1**	<2.0	<2.0	<2.0	5.4	<2.0	<4.0	<5.0	**2310**	**363**	<1.5
SK-1999	NE-O	**3.9**	<2.0	<2.0	<2.0	6.1	<2.0	<4.0	<5.0	**2730**	**426**	<1.5
SK-1999	NY-A	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**7.31**	<2.0	<1.4
SK-1999	NY-C	<5.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<10.0	**431.908**	**341.44**	<2.0
SK-1999	NY-L	**2**	<2.0	<2.0	<2.0	6.3	<2.0	<4.0	<5.0	**1020**	**6.3**	<1.5

WASTE PARTS WASHER SOLVENT (105/150)

Total # of Samples: 50

		TCLP Volatiles Analysis (ppm)										
	Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1999	NY-NA	<2.0	<2.0	<2.0	<2.0	**10.5**	<2.0	<4.0	<5.0	**447**	**13.2**	<1.5
SK-1999	UT-SLC	**3.8**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1080**	**24**	<1.5
SK-2000	KY-A	**4.9**	<0.20	<0.20	<0.20	1.7	<0.20	<0.40	2.0	**953**	**43.7**	<0.15
SK-2000	MN-B	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1360**	**54.2**	<1.5
SK-2000	MN-B	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1330**	**52.5**	<1.5
SK-2000	MN-B	**2.8**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1770**	**57.6**	<1.5
SK-2000	MN-B	**2.9**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	6.4	**1470**	**49**	<1.5
SK-2000	MN-B	**2.6**	<0.40	8.1	<0.40	**33.7**	<0.40	<0.80	7.7	**1850**	**28.6**	<0.30
SK-2000	MN-B	**2.4**	<0.40	47.1	<0.40	**161**	<0.40	<0.80	5.4	**1890**	**34.3**	<0.30
SK-2000	MN-E	**2.6**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**894**	**86.1**	<1.5
SK-2000	MN-E	**2.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**847**	**95.2**	<1.5
SK-2000	MN-E	**3.2**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	24.3	**887**	**58.6**	<1.5
SK-2000	NE-G	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	<0.20	<0.20	<0.15
SK-2000	NE-GI	**2.2**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**917**	**46.1**	<1.5
SK-2000	NE-O	**2.4**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	5.4	**974**	**45.8**	<1.5
SK-2000	NY-NA	**2**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1310**	**23.4**	<1.5
SK-2000	NY-S	**2.3**	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	**1780**	**16.8**	<1.5
SK-2000	UT-SLC	<0.20	<0.20	<0.20	<0.20	<0.50	<0.20	<0.40	<0.50	0.243	<0.20	<0.14
	Maximum	32.20	ND	47.10	0.00	161.00	0.00	ND	24.30	3670.00	534.00	ND
	Minimum	1.70	ND	4.90	0.00	1.70	0.00	ND	2.00	0.24	2.28	ND
	90th UCL for	**3.10**	ND	ND	ND	5.6	ND	ND	ND	**960**	**66.57**	ND
	50th Percentile	**2.8**				3.9				**1020**	**49**	

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1997	CA-E	8.1	1.13	**126**	<0.500	1.29	**1.2**	0.081	2.47	0.001	<0.600	<0.050
SK-1997	CA-S	7.7	1.35	150	<0.500	0.307	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1997	CO-E	7.65	1.07	**120**	<0.500	0.335	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1997	IL-E	7.99	1.00	**134**	<0.500	0.255	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1997	LA-K	7.85	1.01	159	<0.635	0.268	<0.064	<0.064	1.09	<0.002	<0.596	<0.064
SK-1997	MO-C	9.24	1.13	>200	<0.500	1.46	0.27	<0.050	1.09	<0.0008	<0.600	<0.050
SK-1997	ND-B	8.1	1.13	**130**	<0.500	1.29	0.324	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1997	ND-F	8.08	1.22	**134**	<0.500	0.223	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1997	NE-GE	8.04	1.14	142	<0.500	1.12	0.41	<0.050	**7.04**	<0.0008	<0.600	<0.050
SK-1997	NE-GI	7.23	1.40	**124**	<0.500	0.591	<0.050	0.052	<0.400	<0.0008	<0.600	<0.050
SK-1997	NE-O	8.07	1.01	>200	<0.500	0.087	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1997	NM-A	6.91	1.19	**89**	<0.500	0.41	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1997	NY-A	6.35	1.47	**138**	0.549	0.364	<0.050	0.761	<0.400	<0.0008	<0.600	<0.050
SK-1997	NY-A	7.95	1.18		<0.500	1.76	0.894	0.055	3.73	<0.0008	<0.600	<0.050
SK-1997	NY-NA	6.35	1.47	**138**	0.549	0.364	<0.050	0.761	<0.400	<0.0008	<0.600	<0.050
SK-1997	OR-C	6.75	1.18	145	<0.500	1.12	0.911	<0.050	1.63	<0.0008	<0.600	<0.050
SK-1997	SD-S	7.82	1.25	**132**	<0.500	1.17	0.669	<0.050	0.6	<0.0008	<0.600	<0.050
SK-1997	TN-K	7.96	1.31	**138**	<0.500	0.354	<0.050	<0.050	0.688	<0.0008	<0.600	<0.050
SK-1997	TN-N	7.86	1.34	146	<0.500	1.32	0.504	<0.050	1.79	<0.0008	<0.600	<0.050
SK-1997	TX-M	7.42	1.03	153	<0.500	0.946	0.174	<0.050	1.61	0.0012	<0.600	<0.050
SK-1997	TX-M	8.36	1.23	150	<0.500	0.215	<0.050	<0.050	<0.400	<0.0008	<0.600	<0.050
SK-1998	AZ-C	7.55	1.34	>200	<0.500	1.11	**1.23**	<0.050	1.59	<0.0008	<0.750	<0.050
SK-1998	AZ-C	7.76	1.43	>200	<0.500	1.16	**2.98**	<0.050	1.02	<0.0008	<0.750	<0.050
SK-1998	CA-S	6.50	0.951	141	<0.500	1.77	<0.500	<0.500	**6.12**	<0.040	<0.45	<0.500
SK-1998	FL-BB	8.26	1.33	**136**	<0.500	1.77	**1.18**	<0.050	0.976	<0.0008	<0.750	<0.050
SK-1998	FL-PC	8.18	1.67	>200	<0.500	2.77	0.89	<0.050	0.657	<0.0008	<0.750	<0.050
SK-1998	FL-PC	8.66	0.962	158	<5.00	2.47	0.0673	0.513	4.87	<0.040	<0.4850	<0.500
SK-1998	GA-C	8.07	1.25	200	<0.500	1.37	0.311	<0.050	**16**	<0.0008	<0.750	<0.050
SK-1998	GA-C	7.87	1.15	>200	<0.500	0.98	0.295	<0.050	**20.1**	<0.0008	<0.750	<0.050
SK-1998	GA-M	7.71	1.28	>200	<0.500	1.12	**1.67**	<0.050	0.894	<0.0008	<0.750	<0.050
SK-1998	GA-M	8.05	1.24	>200	<0.500	1.11	**1.47**	<0.050	0.764	<0.0008	<0.750	<0.050
SK-1998	GA-MA	7.68	1.00	**125**	<0.500	1.96	0.302	<0.050	0.599	0.002	<0.750	<0.050
SK-1998	IL-E	8.07	1.02	>200	<0.500	0.846	**11.9**	1.83	**32**	<0.040	<0.45	<0.500
SK-1998	IL-E	7.97	1.05	156	<0.500	0.868	**8.19**	1.03	**10.6**	<0.040	<0.45	<0.500

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

		Physical Properties			TCLP Metals Analysis (ppm)							
	Waste Codes:	D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
	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-1998	IL-E	8.22	1.29	>200	<0.500	0.955	**1.46**	<0.050	1.14	<0.0008	<0.750	<0.050
SK-1998	LA-K	7.98	1.24	**128**	<0.500	1.04	0.725	<0.050	**25.6**	<0.0008	<0.750	<0.050
SK-1998	MD-GB	8.25	1.40	>200	<0.500	3.17	0.765	<0.050	1.03	<0.0008	<.750	<0.050
SK-1998	MD-GB	8.41	1.37	>200	<0.500	2.96	0.718	<0.050	0.996	<0.0008	<.750	<0.050
SK-1998	MO-CG	8.14	1.21	>200	<0.500	0.962	0.678	<0.050	0.793	<0.0008	<0.750	<0.050
SK-1998	MO-CG	8.28	1.21	>200	<0.500	0.832	0.519	<0.050	0.534	<0.0008	<0.750	<0.050
SK-1998	NC-C	9.22	1.06	>200	<0.500	2.03	**1.02**	0.051	1.56	<0.0008	<0.750	<0.050
SK-1998	NE-GI	7.23	1.38	**83**	<0.500	1.8	<0.050	0.126	<0.400	<0.0008	<0.750	<0.050
SK-1998	NE-GI	8.17	1.3	>200	<0.500	1.13	<0.050	0.107	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-A	8.58	1.48	>200	<0.500	1.83	0.576	<0.050	2.16	<0.0008	<0.750	<0.050
SK-1998	NY-NA	8.56	1.42	149	<0.500	2.9	0.959	0.08	4.23	0.00904	<0.750	<0.050
SK-1998	NY-S	9.41	1.26	**124**	<0.500	2.94	0.57	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-1998	NY-S	7.16	0.99	>200	<5.00	<0.500	<0.500	<0.500	<4.00	<0.040	<0.45	<0.500
SK-1998	SD-S	7.42	1.07	>200	<0.500	1.51	**1.31**	<0.050	1.03	<0.0008	<0.750	<0.050
SK-1998	TX-E	7.67	1.11	145	<0.500	0.901	0.089	<0.050	0.851	<0.008	<0.750	<0.050
SK-1998	VA-C	7.81	1.39	144	<0.500	1.67	0.518	0.054	1.1	<0.0008	<0.750	<0.050
SK-1998	VA-C	7.71	1.26	**96**	<0.500	1.08	0.224	<0.050	0.739	<0.0008	<0.750	<0.050
SK-1998	WI-M	7.68	1.20	>200	<0.500	0.946	0.537	0.051	2.16	<0.0008	<0.750	<0.050
SK-1998	WI-M	7.32	1.30	>200	<0.500	0.907	0.594	<0.050	1.56	<0.0008	<0.750	<0.050
SK-1999	GA-C	5.45	1.02	>200	<0.815	1.64	0.401	0.162	**52.2**	<0.008	<0.729	<0.082
SK-1999	GA-M	6.59	1.03	>200	<0.500	2.21	0.189	<0.050	0.443	<0.0008	<0.750	<0.050
SK-1999	ND-B	8.53	1.06	170	<0.500	0.937	**1.01**	<0.050	0.781	0.0009	<0.750	<0.050
SK-1999	NY-A	8.27	0.94	>200	<0.500	6.06	0.417	<0.050	1.24	<0.0008	<0.750	<0.050
SK-2000	GA-C	6.83	1.02	155	<5.00	52.5	**2.39**	**6.83**	**474**	<0.040	<0.008	<0.500
SK-2000	GA-C	5.48	0.83	152	<5.00	2.79	<0.500	0.764	**49.1**	<0.040	<0.008	<0.500
SK-2000	GA-C	5.48	0.83	152	<5.00	2.79	<0.500	0.764	**49.1**	<0.040	<0.008	<0.500
SK-2000	GA-C	6.83	1.02	155	<5.00	52.5	**2.39**	**6.83**	**474**	<0.040	<0.008	<0.500
SK-2000	GA-GC	6.02	1.34	155	<0.590	0.576	0.119	<0.059	<0.472	<0.002	<0.735	<0.059
SK-2000	NE-GI	7.3	1.41	**135**	<0.500	1.71	<0.050	<0.050	<0.400	<0.0008	<0.750	<0.050
SK-2000	NE-GI	7.06	1.49	144	<0.500	1.06	<0.050	0.109	<0.400	<0.0008	<0.750	<0.050
SK-2000	UT-SLC	8.39	1.18	154	<0.500	1.62	0.501	0.086	1.18	0.004	<0.750	<0.050
SK-2000	TX-D	7.02	0.86	>200	<5.00	53.4	**5.58**	**8.5**	**82.7**	<0.10	<0.45	<0.500
	Maximum	9.41	1.67	200	0.55	53.40	11.90	8.50	474.00	0.01	ND	ND

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

		Physical Properties			TCLP Metals Analysis (ppm)							
Waste Codes:		D002		D001	D004	D005	D006	D007	D008	D009	D010	D011
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											
	Minimum	5.45	0.83	83	0.55	0.09	0.07	0.05	ND	ND	ND	ND
	90th UCL for	8.05	1.25	146	ND	1.29	0.57	ND	1.09	ND	ND	ND
	50th Percentile			149			0.57		1.14			

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

		TCLP Semi Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1997	CA-E	2.84	<0.900	<1.00	<1.45	<1.45	<1.15	<1.55	<1.80	<0.950	<0.900
SK-1997	CA-S	<0.090	<0.090	<0.100	<0.145	<0.145	<0.115	<0.155	<0.180	<0.095	<0.090
SK-1997	CO-E	<0.900	<0.900	<1.00	<1.45	<1.45	<1.15	<1.55	<1.80	<0.950	<0.900
SK-1997	IL-E	<1.750	<0.900	<1.00	<1.45	<1.45	<1.15	<1.55	<1.80	<0.950	<0.900
SK-1997	LA-K	<6.27	<6.27	<6.97	<10.1	<10.1	<8.02	<10.8	<12.5	<6.62	<6.27
SK-1997	MO-C	3	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	ND-B	<0.090	<0.090	<0.100	<0.145	<0.145	<0.115	<0.155	<0.180	<0.095	<0.090
SK-1997	ND-F	<1.750	<0.900	<1.00	<1.45	<1.45	<1.15	<1.55	<1.80	<0.950	<0.900
SK-1997	NE-GE	1.976	<0.075	<0.080	<105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	NE-GI	0.957	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	NE-O	<0.090	<0.090	<0.100	<0.145	<0.145	<0.115	<0.155	<0.180	<0.095	<0.090
SK-1997	NM-A	<1.750	<0.900	<1.00	<1.45	<1.45	<1.15	<1.55	<1.80	<0.950	<0.900
SK-1997	NY-A	2.835	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	NY-A	0.999	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	NY-NA	2.86	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	OR-C	0.76	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	SD-S	1.62	<0.090	<0.100	<0.145	<0.145	<0.115	<0.155	<0.180	<0.095	<0.090
SK-1997	TN-K	<0.090	<0.090	<0.100	<0.145	<0.145	<0.115	<0.155	<0.180	<0.095	<0.090
SK-1997	TN-N	0.949	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	TX-M	1.285	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1997	TX-M	0.462	<0.090	<0.100	<0.145	<0.145	<0.115	<0.155	<0.180	<0.095	<0.090
SK-1998	AZ-C	0.28	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	AZ-C	1.265	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	CA-S	<510	<150	<160	<210	<200	<190	<560	<660	<230	<390
SK-1998	FL-BB	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	FL-PC	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	FL-PC	154.8	<45.5	<48.6	<63.7	<60.7	<57.7	<170	<200	<69.8	<118
SK-1998	GA-C	0.297	<0.075	<0.080		<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	GA-C	0.753	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	GA-M	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	GA-M	1.628	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	GA-MA	<2.55	<0.750	<0.800	<1.05	<1.00	<0.950	<2.80	<3.30	<1.15	<1.95
SK-1998	IL-E	<2.255	<0.665	<1.11	<1.13	<0.995	<0.965	<2.36	<2.94	<1.00	<1.48
SK-1998	IL-E	<0.345	<0.025	<0.100	<0.100	<0.075	<0.250	<0.475	<0.150	<0.125	<0.075

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

TCLP Semi Volatiles Analysis (ppm)

	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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-1998	IL-E	1.156	<0.067	<0.111	<0.113	<0.100	<0.097	<0.236	<0.294	<0.100	<0.148
SK-1998	LA-K	1.422	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	MD-GB	1.091	<0.067	<0.070	<0.094	<0.093	<0.072	<0.236	<0.294	<0.086	<0.148
SK-1998	MD-GB	1.341	<0.067	<0.070	<0.094	<0.093	<0.072	<0.236	<0.294	<0.086	<0.148
SK-1998	MO-CG	1.589	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	MO-CG	0.774	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NC-C	0.732	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NE-GI	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NE-GI	<2.55	<0.750	<0.800	<1.05	<1.00	<0.950	<2.80	<3.30	<1.15	<1.95
SK-1998	NY-A	0.818	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-NA	<2.55	<0.750	<0.800	<1.05	<1.00	<0.950	<2.80	<3.30	<1.15	<1.95
SK-1998	NY-S	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	NY-S	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1998	SD-S	1.963	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	TX-E	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	VA-C	1.035	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	VA-C	1.569	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	WI-M	<0.255	<0.075	<0.080	<0.105	<0.100	<0.095	<0.280	<0.330	<0.115	<0.195
SK-1998	WI-M	<2.55	<0.750	<0.800	<1.05	<1.00	<0.950	<2.80	<3.30	<1.15	<1.95
SK-1999	GA-C	<34.3	<9.72	<16.4	<17.1	<14.9	<14.2	<35.1	<44.0	<14.9	<22.4
SK-1999	GA-M	<2.28	<0.67	<1.1	<1.1	<1.00	<0.97	<2.4	<2.9	<1.0	<1.5
SK-1999	ND-B	<0.228	<0.067	<0.11	<0.11	<0.10	<0.097	<0.24	<0.29	<0.10	<0.15
SK-1999	NY-A	0.974	<0.067	<0.11	<0.11	<1.01	<0.98	<2.4	<2.9	<1.0	<1.5
SK-2000	GA-C	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	GA-C	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	GA-C	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	GA-C	<400	<40	<40	<200	<200	<200	<200	<210	<200	<200
SK-2000	GA-GC	<17.6	<0.820	<0.820	<4.10	<4.10	<4.10	<4.10	<4.31	<4.10	<4.10
SK-2000	NE-GI	<0.20	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	NE-GI	<20.0	<0.020	<0.020	<0.10	<0.10	<0.10	<0.10	<0.11	<0.10	<0.10
SK-2000	UT-SLC	<100	<0.10	<0.10	<0.50	<0.50	<0.50	<0.50	<0.54	<0.50	<0.50
SK-2000	TX-D	<400	<40	<40	<200	<200	<200	<200	<200	<200	<200
	Maximum	154.80	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

		TCLP Semi Volatiles Analysis (ppm)									
	Waste Codes:	D026	D030	D032	D033	D034	D036	D037	D038	D041	D042
	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										
	Minimum	0.28	ND	ND	ND	ND	ND	ND	ND	ND	ND
	90th UCL for 50th Percentile	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

		TCLP Volatiles Analysis (ppm)										
	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1997	CA-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.4	0.56	<0.100	<0.140
SK-1997	CA-S	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<1.20	0.38	<0.250	<0.350
SK-1997	CO-E	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<1.20	0.48	<0.250	<0.350
SK-1997	IL-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.24**	0.25	<0.140
SK-1997	LA-K	0.112	<0.100	0.104	<0.100	0.105	<0.100	<0.100	0.513	**2.61**	**0.925**	<0.140
SK-1997	MO-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.1	**1.1**	0.12	<0.140
SK-1997	ND-B	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.86**	0.22	<0.140
SK-1997	ND-F	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.83**	0.13	<0.140
SK-1997	NE-GE	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.37	0.18	<0.140
SK-1997	NE-GI	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.94**	<0.100	<0.140
SK-1997	NE-O	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.4	0.12	<0.140
SK-1997	NM-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.6	0.31	<0.100	<0.140
SK-1997	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.74**	<0.100	<0.140
SK-1997	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.33	<0.100	<0.140
SK-1997	NY-NA	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.74**	<0.100	<0.140
SK-1997	OR-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.966**	<0.100	<0.140
SK-1997	SD-S	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.3**	0.18	<0.140
SK-1997	TN-K	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.28	<0.100	<0.140
SK-1997	TN-N	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<1.25	0.557	<0.250	<0.250
SK-1997	TX-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	3	0.36	<0.100	<0.140
SK-1997	TX-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.12	0.19	<0.140
SK-1998	AZ-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.22	0.17	<0.140
SK-1998	AZ-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.72**	0.15	<0.140
SK-1998	CA-S	**3.9**	<2.00	<2.00	<2.00	<2.00	<2.00	<4.00	<10.00	**1930**	**75**	<2.0
SK-1998	FL-BB	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.82	**0.97**	<0.100	<0.140
SK-1998	FL-PC	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.64	<0.100	<0.140
SK-1998	FL-PC	**2.26**	<1.30	<1.30	1.81	2.14	**1.84**	<1.90	7.75	**279**	**29.4**	<1.58
SK-1998	GA-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.26	<0.100	<0.140
SK-1998	GA-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.77	<0.100	<0.100	<0.140
SK-1998	GA-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.19	0.35	0.140	<0.140
SK-1998	GA-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.38	0.130	<0.140
SK-1998	GA-MA	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**2.14**	<1.00	<1.40
SK-1998	IL-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	61.9	**1.72**	0.29	<0.140
SK-1998	IL-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	61.3	**1.27**	0.27	<0.140

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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-1998	IL-E	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.11	0.49	0.18	<0.140
SK-1998	LA-K	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	2.85	0.2	0.11	<0.140
SK-1998	MD-GB	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**1.13**	<0.100	<0.140
SK-1998	MD-GB	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.350	<0.100	<0.140
SK-1998	MO-CG	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	5.2	**9.44**	**1.23**	<1.40
SK-1998	MO-CG	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.47	<0.100	<0.140
SK-1998	NC-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.24	**1.09**	0.110	<0.140
SK-1998	NE-GI	<0.100	<0.100	<0.100	0.33	<0.100	<0.100	<0.100	<0.500	0.47	<0.100	<0.140
SK-1998	NE-GI	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.32	<0.100	<0.140
SK-1998	NY-A	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.79**	<0.100	<0.140
SK-1998	NY-NA	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	9.88	**1.58**	<0.100	<0.140
SK-1998	NY-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**45.6**	**1.63**	<1.40
SK-1998	NY-S	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	**65.240**	<1.0	<1.4
SK-1998	SD-S	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<5.00	**11.2**	<1.00	<1.40
SK-1998	TX-E	<1.00	<1.00	<1.00	**12**	<1.00	<1.00	<1.00	<5.00	**3.05**	<1.00	<1.40
SK-1998	VA-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.58	<0.100	<0.140
SK-1998	VA-C	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.490	<0.100	<0.140
SK-1998	WI-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	**0.81**	<0.100	<0.140
SK-1998	WI-M	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.500	0.25	<0.100	<0.140
SK-1999	GA-C	0.365	<0.290	<0.290	<0.290	<0.440	<0.290	<0.390	0.839	**26.8**	**1.73**	<0.208
SK-1999	GA-M	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	**3.73**	0.27	<0.14
SK-1999	ND-B	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<5.0	**7.7**	<2.0	<1.4
SK-1999	NY-A	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	0.48	0.33	<0.14
SK-2000	GA-C	<20	<20	<20	<20	<50	<20	<40	<50	**1030**	**70.4**	<15
SK-2000	GA-C	<20	<20	<20	<20	<50	<20	<40	<50	**1080**	**65.4**	<15
SK-2000	GA-C	<20	<20	<20	<20	<50	<20	<40	<50	**1080**	**65.4**	<15
SK-2000	GA-C	<20	<20	<20	<20	<50	<20	<40	<50	**1030**	**70.4**	<15
SK-2000	GA-GC	0.236	<0.200	<0.200	<0.200	0.215	<0.200	<0.204	0.518	**13.4**	**0.792**	<0.14
SK-2000	NE-GI	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.50	<0.649	<0.20	<0.14
SK-2000	NE-GI	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.20	0.201	<0.10	<0.10
SK-2000	UT-SLC	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	6.608	**1.571**	0.245	<0.14
SK-2000	TX-D	<2.0	<2.0	<2.0	<2.0	<5.0	<2.0	<4.0	<5.0	<2.0	<2.0	<1.5
	Maximum	3.90	ND	0.10	12.00	2.14	1.84	ND	61.90	1930.00	75.00	ND

WASTE PARTS WASHER TANK BOTTOMS

Total # of Samples: 66

TCLP Volatiles Analysis (ppm)

	Waste Codes:	D018	D019	D021	D022	D027	D028	D029	D035	D039	D040	D043
	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											
	Minimum	0.11	ND	0.10	0.33	0.11	1.84	ND	0.51	0.12	0.11	ND
	90th UCL for	ND	ND	ND	ND	ND	ND	ND	ND	**0.966**	ND	ND
	50th Percentile									**0.966**	0.12	

2001 ANNUAL WASTE STREAM RECHARACTERIZATION
SAMPLING SITE CODES

AZ-C	Chandler, AZ
AZ-T	Tuscon, AZ
CA-E	El Monte, CA
CA-F	Fresno, CA
CA-O	Oakland, CA
CA-R	Reedley, CA
CA-RP	Rohnert Park, CA
CA-S	Sylmar, CA
CA-SA	Santa Anna, CA
CA-SAL	Salida, CA
CO-E	Englewood, CO
CO-GJ	Grand Junction, CO
CO-P	Pueblo, CO
FL-BB	Boyton Beach, FL
FL-PC	Port Charlotte, FL
GA-C	Columbus, GA
GA-G	Garden City, GA
GA-M	Macon, GA
GA-MO	Morrow, GA
GA-N	Norcross, GA
ID-B	Boise, ID
IL-D	Dolton, IL
IL-E	Elgin, IL
KS-D	Dodge City, KS
KS-E	Edwardsville, KS
KS-W	Wichita, KS
KY-L	Lexington, KY
KY-A	Ashland, KY
LA-K	Kenner, LA
LA-P	Pineville, LA
MD-GB	Glen Burnie, MD
MI-P	Pontiac, MI
MN-E	Eagan, MN
MN-B	Blaine, MN
MO-SC	Saint Charles, MO
MO-CG	Cape Girardeau, MO
MS-J	Jackson, MS
NC-A	Archdale, NC
NC-C	Columbia, NC
NC-R	Raliegh, NC
ND-B	Bismark, ND
ND-F	Fargo, ND
NE-GE	Gering, NE
NE-GI	Grand Island, NE
NE-O	Omaha, NE
NM-A	Albuquerque, NM
NM-F	Farmington, NM
NY-A	Avon, NY
NY-C	Cohoes, NY
NY-L	Lackawanna, NY
NY-NA	North Amityville, NY
NY-S	Syracruse, NY
OH-H	Hebron,OH
OR-C	Clackamas, OR
PA-W	Wheeling, PA
SC-G	Garden City, SC
SD-S	Sioux Falls, SD
TECH CTR	Technical Center, IL
TN-K	Knoxville, TN
TN-N	Nashville, TX
TX-D	Denton, TX
TX-E	El Paso, TX
TX-L	Longview, TX
TX-M	McAllen, TX
TX-P	Pasadena, TX
UT-SLC	Salt Lake City, UT
VA-C	Chester, VA

2001 ANNUAL WASTE STREAM RECHARACTERIZATION
SAMPLING SITE CODES

MO-C	Columbia, MO
WA-L	Lynnwood, WA
WA-S	Spokane, WA
WI-M	Madison, WI
WV-P	Poca, WV

2001 ANNUAL RECHARACTERZATION CODE LIST

Physical Properties

pH	pH
SG	Specific Gravity
FP	Flash Point

Metals

As	Arsenic
Ba	Barium
Cd	Cadmium
Cr	Chromium
Pb	Lead
Hg	Mercury
Se	Selenium
Ag	Silver

Semi- Volatiles

Cresol	2,3 & 4 Methylphenol
2,4DNT	2,4 Dinitrotoluene
Cl6-benz	Hexachlorobenzene
C16-1,3But	Hexachloro 1,3 Butadiene
C16-eth	Hexachloroethane
Nitrobenz	Nitrobenzene
C15-phen	pentachlorophenol
pyridine	Pyridine
2,4,5 TCP	2,4,5 Trichlorophenol
2,4,6,TCP	2,4,6 Trichlorophenol

Volatiles

benzene	Benzene
CCl4	Carbon Tetrachloride
Clbenz	Chlorobenzene
CHCl3	Chloroform
1,4-DClB	1,4 Dichlorobenzene
1,2DCA	!,2 Dichloroethane
1,1-DCE	1,1 Dichloroethylene
MEK	Methyl Ethyl Ketone
PCE	Perchloroethylene
TCE	Trichloroethylene
Vchloride	Vinyl Chloride

Statistical Analysis of Annual Waste Characterization Data

Prepared by
Robert D. Gibbons Ph.D.

for

Safety Kleen
July 23, 1998

1 Introduction

Since 1990, Safety-Kleen has undertaken a major analytical study each year to document the contaminants in some of its most common waste streams to determine which TCLP waste codes should appear on the manifest for that waste. This Annual Waste Recharacterization Program is both expensive and extensive. Upon review, it appeared that regulatory agency instructions for how to interpret the data might not have been in line with current policy, as reflected in SW846. The general approach is based on development of an upper 90% confidence limit[1] for the true concentration of each constituent, which can in turn be directly compared to regulatory standards to determine if the waste code should or should not be added to a particular waste stream (e.g., Premium Gold Parts Washer Solvent 150). The regulatory basis for this type of comparison stems from U.S. EPA SW846 Chapter 9 (September 1986) guidance on determining if a waste stream is hazardous.[2] The primary complicating feature is the presence of large numbers of nondetects which raises serious question regarding the use of the parametric approach. In light of this concern, nonparametric methods are used throughout.[3] Specifically, following U.S. EPA SW846, we construct a nonparametric 90% upper confidence limit (UCL) for the 50th percentile of the distribution (i.e., median), which is equivalent to the 90% UCL for the mean in the case of a symmetric distribution such as the normal distribution.

---

[1] "Consequently, the CI employed to evaluate solid wastes is, for all practical purposes, a 90% interval." U.S. EPA SW846 (1986) chapter 9 page 6.

[2] "The upper limit of the CI for μ is compared with the applicable regulatory threshold (RT) to determine if a solid waste contains the variable (chemical contaminant) of concern at a hazardous level. The contaminant of concern is not considered to be present in the waste at a hazardous level if the upper limit of the CI is less than the applicable RT. Otherwise the opposite conclusion is reached. "U.S. EPA SW846 (1986) chapter 9 page 3

[3] "If the data do not adequately follow the normal distribution even after logarithm transformation, a nonparametric confidence interval can be constructed. This interval is for the median concentration (which equals the mean if the distribution is symmetric)." U.S. EPA Statistical Analysis of Ground-Water Monitoring Data at RCRA Facilities, April 1989, page 6-8

2 Method

Following Chapter 9 of SW846, the 90% UCL for the mean concentration obtained from a series of n representative samples is to be compared to the appropriate regulatory standard to determine if the waste stream is hazardous. If the UCL exceeds the standard, the waste stream is considered hazardous. The applicant must compute the UCL that is appropriate for the specific distributional form of the data. Given the large number of nondetects for many of the constituents, it is difficult if not impossible to clearly identify the underlying distributional form of the data. In this case, the U.S. EPA guidance indicates that a nonparametric alternative should be used.[4]

Nonparametric confidence limits are derived as follows. Given an unknown P x 100th percentile of interest (e.g. the 50th percentile or median),[5] where P is between 0 and 1, and n concentration measurements, the probability that any randomly selected concentration measurements being less than the P x 100th percentile is simply P and the probability of exceeding the P x 100th percentile is 1 - P. In light of this, the number of sample values falling below the P x 100th percentile out of a set of n measurements follows a Binomial distribution with parameters n and P.

The connection with the Binomial distribution can be used to determine an interval formed by a given pair of order statistics (i.e. ranked values) that will contain the percentile of interest, in this case the 50th percentile. Similarly, the Binomial distribution can also be used in constructing an upper limit (i.e. one-sided) for the percentile (e.g. a 90% upper confidence limit for the 50th percentile of the distribution). The computational formula for the cumulative binomial distribution $B(x;n,p)$, representing the probability of getting x or fewer successes in n trials with success probability p is given by

$$Bin(x;n,p) \equiv \sum_{i=0}^{x} \binom{n}{i} p^i (1-p)^{n-i}$$

To draw inference regarding the P = 50th percentile, we set p = .5 in the previous equation. For a one-sided UCL we compute

$$1-\alpha = 1 - Bin(U-1;n,.5)$$

beginning from the sample median. We then increase U by one until in this case 1 - α is equal to at least .90. The smallest value of U that provides 1 - $\alpha \geq .9$ is then the order statistic (i.e., ranked value) that is the nonparametric 90% UCL for the 50th percentile of the distribution.

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[4] "If the data do not adequately follow the normal distribution even after logarithm transformation, a nonparametric confidence interval can be constructed." U.S. EPA, 1989

[5] "This interval is for the median concentration (which equals the mean if the distribution is symmetric)." U.S. EPA (1989), page 6-8

3 Illustration

Consider the following most recent 50 data values for PCE (D039) obtained from Premium Gold Parts Washer Solvent-150.

Table 1
Premium Gold Parts Washer Solvent - 150
50 most recent samples in order of increasing concentration
in ppm

<50.000	<1.000	<0.100	<0.100	<0.100
<0.100	<0.100	<0.100	<0.100	<0.100
<0.100	0.110	0.200	0.200	0.220
0.230	0.260	0.510	0.870	0.880
1.000	1.300	1.500	1.800	2.000
2.700	2.700	3.300	5.400	7.000
7.100	12.000	12.300	17.200	19.700
20.000	20.000	21.200	23.600	32.300
51.100	52.500	136.000	211.000	286.000
508.000	635.000	771.000	940.000	2810.000

For n =50, p =.5 and 1 - α = .9, we find that U = 31 is the smallest order statistic that provides 90% confidence or more (1 - α = .941). As such, we select the 31st largest value in Table 1 which is 7.1 ppm as our UCL. Since 7.1 ppm is larger than the standard of 0.7 ppm, then the D039 waste code is required for this waste stream.

4 Conclusion

The data in the following package have been interpreted using the methodology described. The waste codes for each stream were determined as those parameters for which the 90% UCL for the median concentration was above the regulatory limit, based on review of the last two years of samples or the most recent 50 samples, whichever yielded the larger number of samples to consider.

Appendix C
Engineering Assessment of Tank System

Note: The facility has undergone minor modifications which no longer conform to the drawings and figures in this report. These minor modifications have not affected the tank volumes, system integrity, or secondary capacity of the tank system. For a current figure of the facility layout and tank farm, refer to Figure 9.2-1.

W. O. HEYN
256 Woodbine Place
Barrington, IL 60010
Phone 708-381-6743

July 7, 1992

Safety Kleen Corp.
129 S. Kentucky Avenue
Suite 701
Lakeland, FL 33801

Attention: Victor San Agustin

Subject: Safety-Kleen Corp.
Medley Branch Construction Certification
Part B Permit HC-13-175466

Dear Mr. San Agustin:

The attached certification report is an update of the report submitted by the writer on June 8, 1992. Also included are updated as-built prints which were prepared after the earlier submittal.

Only minor changes were made in the report such as changing some statements from *will be* to *are* and a paragraph was added to page 5 describing the outside dock pad rainwater control. No other changes were made in the report.

Sincerely,

W. O. Heyn, P.E.
Florida Cert. N. 45516

WOH: rlh

Enclosure: One set of full-size as built prints

cc: Jack Krivec - SK Atlanta Regional Office
Cindy Norton - ERM South

Professional Engineers Certification Report

of

Construction of the Safety-Kleen Medley, Florida

Branch Service Center

By W. O. Heyn P.E.
Florida Certificate
No. 45516

CERTIFICATION

Florida Dept. of Environmental Regulation

Facility Name SAFETY-KLEEN CORP., MEDLEY, FLORIDA
FDER Site Code FLD984167791
Construction Permit Requiring Certification HC-13-175466
Permit Issuance Date March 1, 1991

The Hazardous Waste Facilities have been constructed and tested in accordance with the specifications in the Part B construction permit with the exceptions noted in the attached report. Documentation that the construction was in accordance with the permit is contained in the enclosed report.

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 of 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 imprisonment for knowing violations.

Glenn Casbourne
Signature of Owner/Operator

Glenn R. Casbourne, Vice-President, Engineering
Name and Title

William O. Heyn
Signature of Registered P.E.

William O. Heyn, 45516
Name of Registered P.E. and Florida P.E. No.

7-7-92
Date

(P.E. Seal)

Construction Documentation Report for Construction of Hazardous Waste Facilities at the Safety-Kleen Corp. Branch Service Center Located at 8755 N.W. 95th Street, Medley, Florida

Introduction

Safety-Kleen Corp. constructed an office, warehouse building and tank farm with ancillary equipment in Medley, Florida in accordance with the requirements of the Part B construction permit that was issued by the Florida DER on March 1, 1991 and amended on December 9, 1991 and May 15, 1992 with deviations from the permit indicated in this report. Figure 11A.4(b)-3 indicates Sanford whereas it should be Medley. Also the tank farm as-built is in the "Future" location which is consistent with the rest of the permit.

Regulatory Requirements:

40CFR264.192(a)

The tanks for storage of hazardous waste were constructed in accordance with Underwriters Laboratories Inc., "Standard for Steel Aboveground Tanks for Flammable and Combustible Liquids." The tank shell thickness is 1/4" from 0 to 18 feet, and 3/16" from 18 to 24 feet. The tank bottom is 1/4" thick and the tank top is 3/16" thick steel. The waste ethylene glycol and waste mineral spirits tanks are identical.

All tanks are coated with white acrylic base paint. All pipes and threads are painted to protect them from corrosion. Each tank is protected by a high level alarm which will sound and activate an alarm and a strobe light when the tank level reaches 95% of capacity. The alarm on the waste solvent tank will also deactivate the waste solvent pump at the return and fill. The high level alarm system was changed from a float activated switch to a sonar based tank gauge and high level alarm system called "Level Devil" provided by Electronic Sensors, Inc. of Wichita, Kansas.

All connections to the tanks are equipped with a spring loaded safety valve held in the open position by a fusible link that will melt and allow the valve to close in the event of a fire.

40CFR 264.192(b)

Each tank was inspected after installation for weld breaks, punctures, scrapes of protective coatings, cracks, corrosion and other structural damage or inadequate construction/installation.

All discrepancies found were corrected and the tanks are suitable for use.

40CFR264.192(c) Not applicable

40CFR264.192(d)

The tanks, after installation, were filled over 95% of full with water and observed for 5 hours for leaks. No leaks were observed and the tanks are certified tight. All ancillary equipment was tested in conjunction with the tank tests and certified tight.

40CFR264.192(e)

All ancillary equipment has been properly mounted and installed. All lengths of piping are supported no less than every eight running feet.

40CFR264.192(f) Not applicable

40CFR264.192(g) See Certification Statement

40CFR264.193(a-e)

Tank secondary containment in the form of an open concrete dike vault has been constructed in accordance with prints No. 316301-5002-00 Sheet No. 8 and 316301-5015-00 Sheet No. 9. The floor and dike walls of the tank containment system contain no cracks. The slab has been sloped to drain all liquids that accumulate inside the containment system to a

stainless steel sump which can be readily pumped out to a holding tank to remove the accumulated liquids. The sump is located adjacent to the south wall of the vault per Figure II C2-1.

The interior of the dike walls and slab are coated with an epoxy material (Semstone 140) to prevent permeation through the concrete.

40CFR264.193(f)

Some piping inside the dike vault is threaded. Secondary containment for this piping is provided by the vault. All piping outside the concrete dike vault has fully welded connections. The clean solvent pump has been installed inside the concrete dike vault as is the spill container for hookup to tank trucks. Note: Although the permit specified that six tanks would be installed in the tank farm, only 3 tanks have been installed: one dirty mineral spirits tank, one clean mineral spirits tank and one waste glycol tank. The two waste oil tanks and the perchloroethylene tank were not installed but may be at a later date. Also the permit showed the tank truck connections outside the diked area and a change was made to move them inside the diked area. Refer to print No. 316301-2000-00 sheet No. 45.

With reference to Fig. II C.2-1 Tank Farm; The location of the tanks was changed to accommodate the use of one truck connection container. As-built, the used mineral spirits tank is located in the southwest corner of the vault whereas the permit shows it in the southeast corner of the vault. The fresh mineral spirits tank as-built is located in the northwest corner of the vault vs. the northeast location per the permit. The used ethylene glycol tank as-built is located in the south central position of the tank farm vs. the permit location in the northwest position. The tanks were mounted on stainless steel sheets, 13 ft. 8 in. by 13 ft. 8 in. which were bolted to the concrete housekeeping pads.

The dimensions of the vault, as-built, varies from the permit dimensions as follows; length 58 ft. 0 in. vs. 56 ft. 0 in. in the permit, width 40 ft. 0 in. vs. 40 ft. 0 in. in the permit. The height of the dike wall varies from 36-1/4 in. to 38 in. due to the sloped floor of the vault

vs. 36 in. in the permit. Three monitoring wells have been installed about 10 ft. from the north, east and west sides of the vault.

Tank Truck Loading Area

The permit application shows an 80 ft. by 25 ft. tank truck loading area constructed of 6 in. thick reinforced concrete sloping 2 inches to a 2 ft. diameter by 2 ft. deep stainless steel sump with no outlet. A change was made to increase the slope to 9 inches to increase the containment capacity of the pad to 2917 gallons. Refer to print No. 316301-5003-00 sheet No. 10. The containment volume of the truck loading area was measured by filling with water. The actual volume measured was 2432 gallons which is significantly less than the design volume.

Tank Farm Shelter

Provisions were made during construction to provide foundations for a proposed tank farm shelter which will be installed at a later date. This proposed shelter will cover the entire tank farm and tank truck loading pad with an overhang of 10 ft. at each end of the tank farm (east and west) and a 2 ft. overhang on the front and rear (south and north) of the tank farm and tank truck loading slab. This shelter will prevent a major portion of rainfall from entering the containment areas. No side walls will be installed so that access for fire fighting is not impaired. Refer to print Sheet No. ST-1 Tank Farm Canopy.

Warehouse Containment Area

The Warehouse containment area was constructed in accordance with print 316301-7005-00 Sheet No. 26. The sloped floor containment area is free of cracks and has been sealed with an epoxy sealant (Semstone 245) that is chemically resistant to the products to be stored in the warehouse. The sloped floors of the warehouse drain into a 12 ft. x 2 ft. stainless steel sump that has no outlet. Any spills collected in the sump will be pumped out and properly disposed. The containment volume of the warehouse was measured by filling with water. The actual

volumetric measure was 2996 gallons which is equal to or greater than the design volume of 2940 gallons.

With reference to Fig. II B.1-1 Container Storage Location; The rollup door and personnel door in the northeast location in the east wall of the warehouse were moved to a southeast location in the east wall. A personnel door was added to the north wall. The security fence in the warehouse was relocated and two 6 ft. wide by 8 ft. high sliding gates were added to the fence.

The truck loading dock will contain one dock leveler and provisions for a second leveler and is covered by a metal roof. Any spills that occur on the loading dock will be collected in a 24 ft. x 2 ft. stainless steel trench located at the foot of the dock. This trench, covered by a steel grating, has no outlet and any spills must be pumped out by use of a portable pump.

Rainwater which falls on the outside truck loading pad is collected in a sump which drains into the stormwater system. A small ~~brem~~ CURB separates this sump from the stainless steel spill collecting sump at the foot of the dock to prevent rainwater from entering the stainless steel sump.

Return and Fill

The return and fill containment is made up of concrete floors sloped to two 2 ft. diameter by 2 ft. deep stainless steel sumps that have no outlets. The concrete containment areas are sealed by an epoxy sealant (Semstone 140) that is compatible with and resistant to the solvents that will be handled in the facility. The steel loading dock, sized to handle 8 trucks, is covered by heavy duty grating that can support all anticipated loads including forklifts. Openings in the gratings contain two drum washers for dumping and washing solvent drums. The dock is equipped with dock plates to provide safe access to the trucks. Hose trees are located at the edge of the dock to provide valves and hose mountings for filling drums.

Two as-built, wet dumpster/barrel washers were installed adjacent to each other near the positions indicated in Fig. II C.7-3 Return and Fill Shelter.

The containment volume of the return and fill area was measured by filling with water that was used in the hydrostatic test of the tanks. The actual volume measured was 3693 gallons which compares favorably with the design volume of 3680 gallons. After the test the

water was pumped into the storm sewer.

The permit application showed a single 20 ft. by 2 ft. rectangular stainless steel sump in the return and fill. A change was made to two round sumps with changes in the floor slopes to accommodate them and to achieve the same overall containment volume. Refer to print no. 316301-7004-00 sheet No. 24.

Fire Suppression System

The fire sprinkler system for the warehouse, Return and Fill area and the office area has been designed and installed by Kannapolis Fire Sprinklers. The piping system with sprinkler heads for the warehouse and Return and Fill areas have been completed and are operational. The available water flow has been tested by the City of Medley. The available flow has been found to be inadequate as required by NFPA for a water system. Flow *is* adequate for a foam system which has been installed. The foam bladder tank has been installed in the southeast corner of the warehouse with the required controls. The foam sprinkler system has been tested by the installer and approved by the Medley Fire Department prior to issuance of the Certificate of Occupancy.

Other Emergency Equipment

Fire Extinguishers - The warehouse and Return and Fill are equipped with eight 20 lb. ABC fire extinguishers wall bracket mounted and labeled in accordance with the approved design.

Eye Washer/Showers - one eyewash/shower is located on the west wall of the warehouse adjacent to the doorway to the Return and Fill. A second eyewash/shower is located on the west side of the steel loading dock in the Return and Fill area. A third eyewash/shower is located adjacent to the tank farm.

Exit Signs - All doorways opening to the outside are identified by a lighted "Exit" sign.

Personal Protective Equipment - All employees working in the Warehouse and the Return and Fill will be required to wear safety glasses with side shields, hard hats and safety shoes.

Branch Security

The working areas of the Medley facility are enclosed by a 6 foot high chain link fence with a one foot extension containing 3 strands of barbed wire. Access and exit is through two 30 ft. sliding gates which are motor operated. Entrance is achieved by a keypunch pad located adjacent to the entrance drive. The gate opening can also be achieved by a push button located in the office. Gate closing is controlled by a timer and an electric eye. All gates are required to be kept closed at all times except for passage of vehicles.

Access into the office is controlled by a door equipped with an electrically operated lock activated from inside the office. Two doors exiting from the office area will be equipped with an emergency bar on the inside. These doors can only be opened from inside the building.

Signs designating "no smoking", "fire extinguisher", etc. have been mounted in locations shown on drawing No. 316301-9000-00 Sheet No. 28.

Site Storm Water Control

The City of Medley has no stormwater drainage system available for this site. In order to provide for stormwater control and disposal, the areas to be paved have been equipped with 6 catch basins each of which are connected to an underground collection system. The collection system consists of 15 in. diameter perforated corrugated metal pipes laid horizontally 3 ft. underground in 15 ft. deep by 36 in. wide trenches filled with pervious material. The capacity of these structures is adequate to store a rainfall of 6.7 inches over a 1 hour period. The water collected in the structure will drain by seepage into the surrounding soil.

Electrical

All electrically operated equipment was tested with a temporary electrical supply. Florida Power and Light will hook up permanent power after the Certificate of Occupancy is issued by the City of Medley.

Strategy for measuring volume of Containment Areas and Testing Tanks and Piping Systems

Since the tanks are to be tested by filling with water and observing for leaks, 20,000 gallons of water will be available for filling the various containment systems, i.e: Return and Fill (3680 gal. reqd.) and the warehouse (2940 gal. reqd.) and the tank truck loading/unloading pad (2917 gal. reqd.)

One option to determine volumes is to measure the physical dimensions of each containment area and calculate the actual volume each would contain.

A second option would be to fill each containment volume with water from the tank test and measure the amount of water used by means of the tank gauge after the tanks are tested.

The high level alarms for the tanks should be operational when the tanks are filled to provide a test of the high level alarm system for each tank.

At the completion of the tests the water will be drained into the stormwater drainage system onsite.

Procedure

1. Fill used Mineral Spirits tank with water from the domestic supply until the high level alarm sounds. Record the number of gallons indicated by the tank gauge. Continue to fill an additional 500 gal. taking care *not* to overfill the tank. Observe the tank system for 5 hours for leaks. Note any leakage that must be repaired before placing tank in service.

2. Hook up an auxiliary pump to the drain line of the used Mineral Spirits tank and connect the discharge to the fill line of the Used Glycol Tank. Transfer the water to the Used Glycol tank. Note: The residual water in the bottom of the used Mineral Spirits tank is not available for this part of the test. Add additional water to the Used Ethylene Glycol of 500 gallons over the point at which the high level alarm sounds. Record the tank gauge reading when the high level alarm sounds. After the tank is filled observe the tank system for 5 hours and note any points of leakage. Repair all leaks before terminating the tests on both tanks.

3. Fill out certification forms indicating tanks and ancillary piping are tight.

4. Drain water from the filled tank into the truck loading area. Note gauge readings on the tank gauge before filling and at the point that the loading area is completely filled. Record gallons. Pump the water from the truck loading area into the storm drain.

5. Drain water from the filled tank into the warehouse containment area. Note tank gauge readings before and at the point the containment area is completely filled. Record gallons. Pump the water from the containment area into the storm drain.

6. Repeat the above procedure for the return and fill containment area.

7. Fill out certification forms for all 3 areas.

8. Drain remaining water from the filled tank into the storm drain. Note: each tank tested will contain several hundred gallons of water in the bottom of the dish that cannot be pumped out through the discharge ports. To remove this residual water, remove one 4" plug at the bottom of the tank and siphon or pump the residual water from the bottom of the dish. After draining replace plug using approved thread sealer.

W. O. Heyn
2010 Imperial G.C. Boulevard
Naples, FL 33942
813-566-2326

TEST CERTIFICATION FORM

Date 6-6-92

Project SAFETY-KLEEN CORP

Location MEDLEY, FLORIDA

System TANK #1 WASTE MINERAL SPIRITS

Type of Test _____ (Hydrostatic)

_____ Air

_____ Other _____

Test Pressure ATMOSPHERIC

Duration of Test 5 HOURS

Test Witnessed By [signature]

Test Supervised By W.O. HEYN

RESULTS - TANK AND ANCILLARY EQUIPMENT TIGHT

By: [signature]

Title: PE FLORIDA CERT. 45516

Date: 6-6-92

W. O. Heyn
2010 Imperial G.C. Boulevard
Naples, FL 33942
813-566-2326

TEST CERTIFICATION FORM

Date 6-6-92

Project SAFETY-KLEEN CORP.

Location MEDLEY, FLORIDA

System TANK #3 WASTE ETHYLENE GLYCOL

Type of Test _____ (Hydrostatic)

_____ Air

_____ Other _____

Test Pressure ATMOSPHERIC

Duration of Test 5 HOURS

Test Witnessed By Jackie Joyce

Test Supervised By W.O. HEYN

RESULTS - TANK AND ANCILLARY EQUIPMENT TIGHT

By: W O Heyn

Title: PE FLORIDA CERT 45516

Date: 6-6-92

II.B.1-1
Container Storage Location
Safety-Kleen Corp. Facility
Medley, Florida

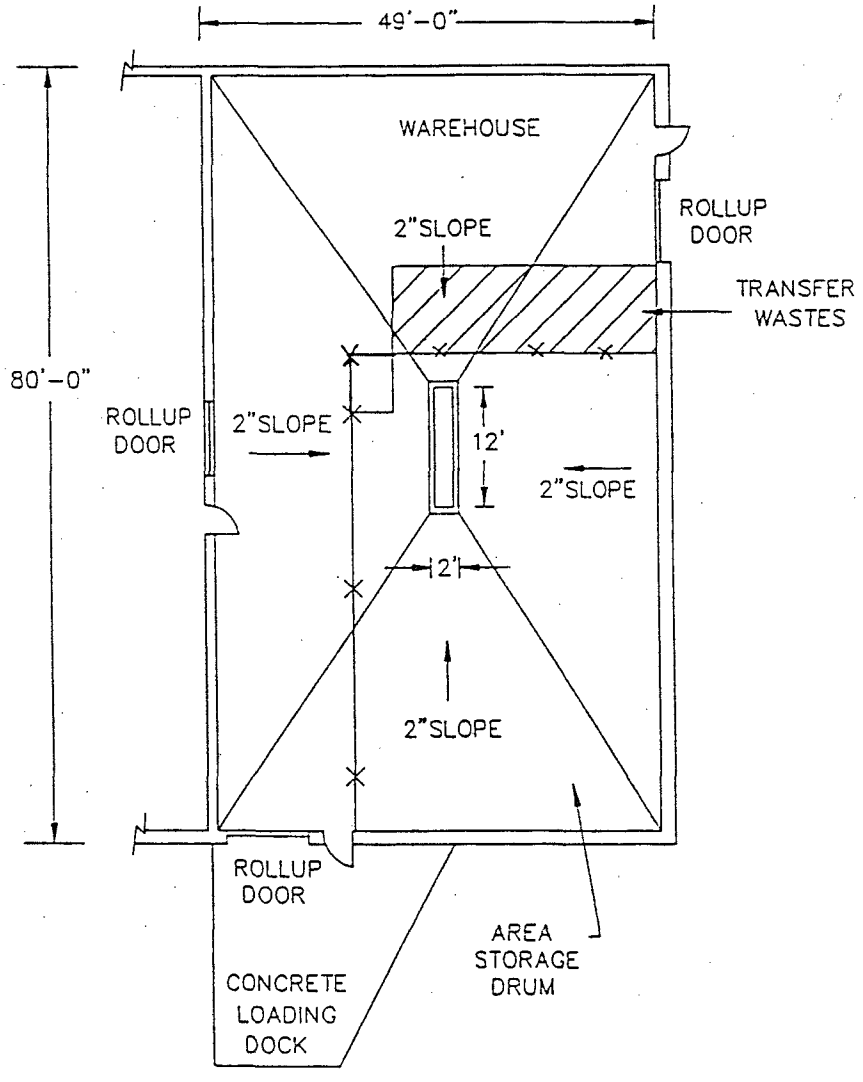
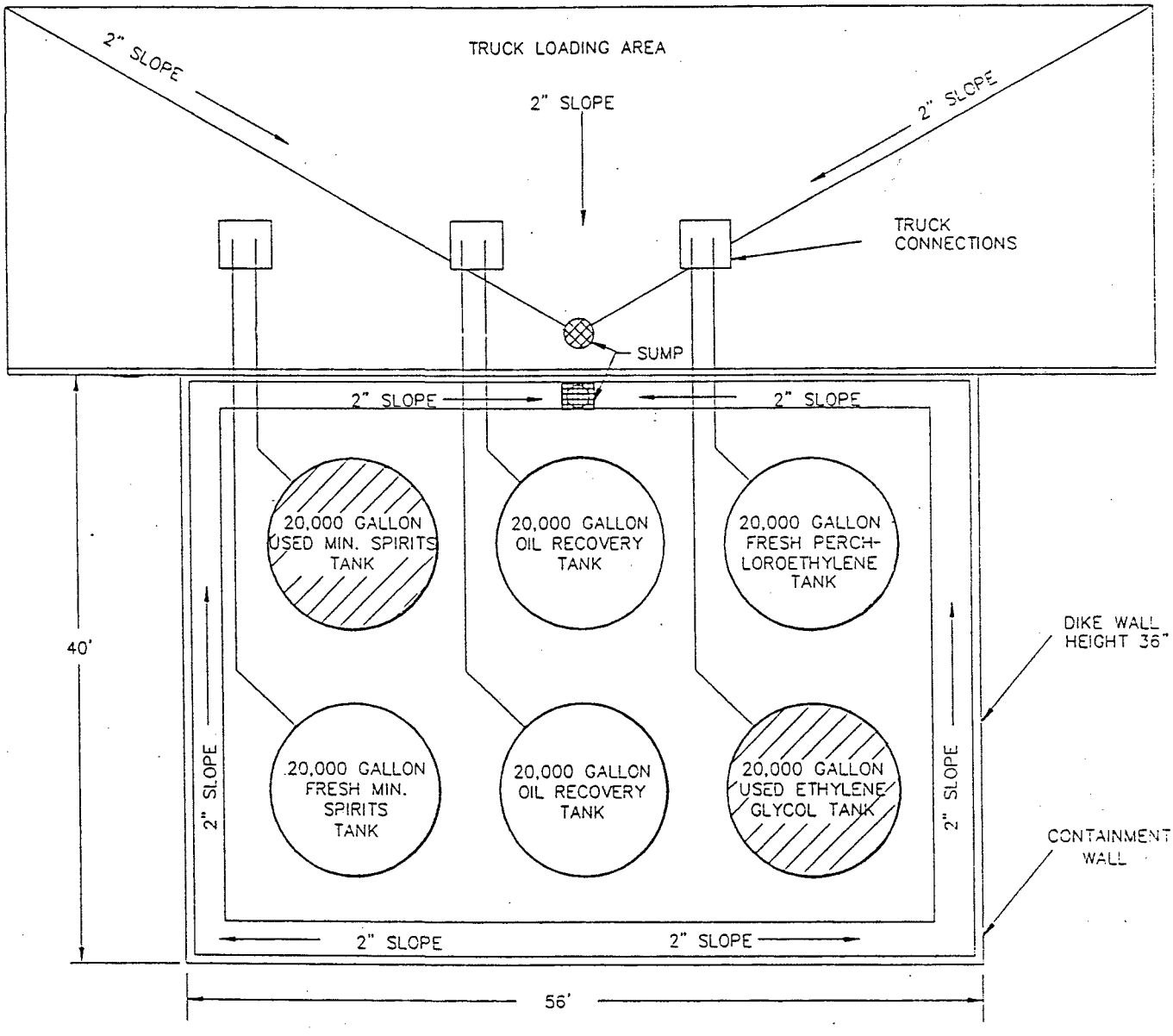


Figure II.C.2-1
Tank Farm
Safety-Kleen Corp. Facility
Medley, Florida

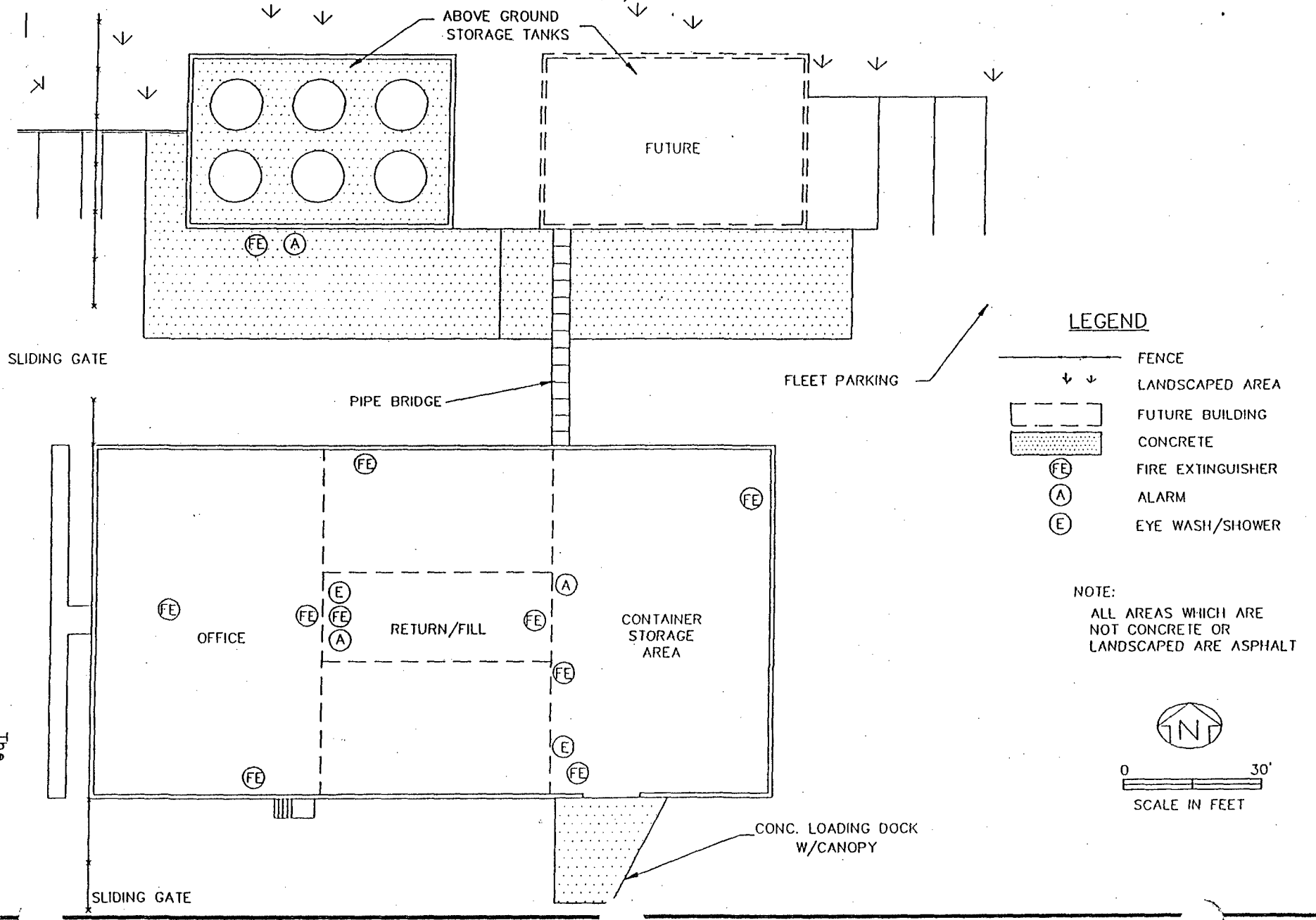


NOTE: ENTIRE AREA IS CONCRETE

13112.22/31122LEE/061491

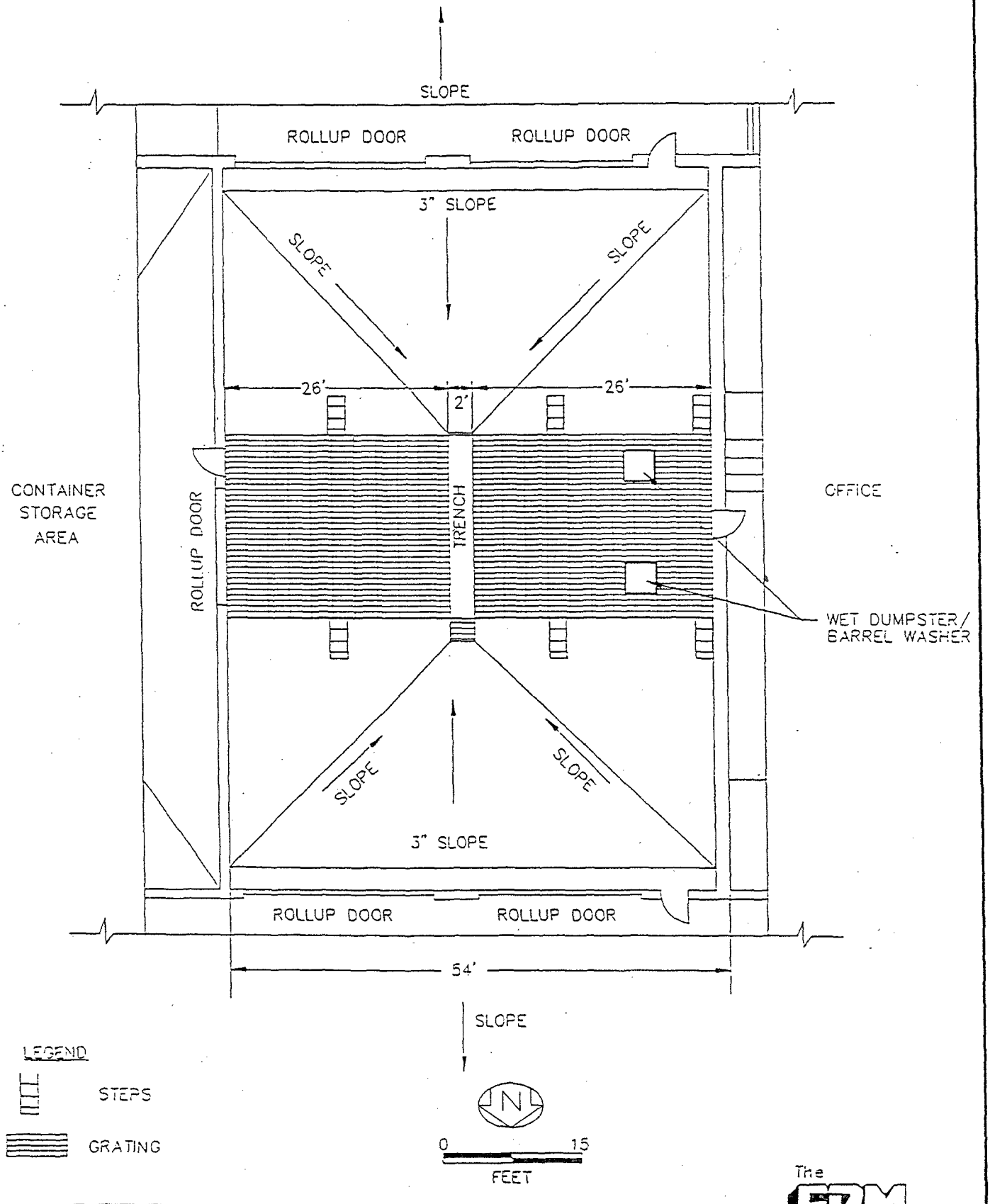
II.A.4(b)-11A

Figure II.A.4(b)-3
Location of Emergency Equipment
Safety-Kleen Corp. Facility
Sanford, Florida



The ERM Group ®

Figure II. C.7-3
Return/Fill Shelter
Safety-Kleen Corp. Facility
Medley, Florida



Appendix D
Information on Sikagard 62

Safety-Kleen®

April 30, 1991

RECD MAY 6 1991

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

Dear Knox:

Sikagard 62, from Sika Corporation, has been tested for use in Safety-Kleen's recycle center tank farms and other material-handling areas. According to our testing, described below, Sikagard 62 is compatible with mineral spirits. The test, however, does not address how long the material will withstand traffic.

COMPATIBILITY TEST
The Sikagard 62 flooring sample was scratched and immersed in mineral spirits in a jar at ambient temperature for 7 days. At the end of the test, the flooring sample was examined and scratched again to detect failure. Sikagard 62 showed no sign of deterioration.

Other variables can affect a flooring material's durability. These variables include substrate preparation, moisture, cure time and temperature, and ingredient ratios.

If you have any questions, please call John Dingess at (312) 694-2700 (ext. 7375).

John A. Dingess - Chemist
Product Development
Section Leader

cc: F. Blickle, ERM
P. Dittmar
J. Hartline
M. Hlebasko
E. Jurczak
C. Norton, ERM ✓
F. Stockbarger

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

safety-kleen

November 9, 1990
DDD 90-135

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

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

Dear Mr. Diaz,

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

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

Please forward the test information to:

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

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

Sincerely,

Daniel Dowling

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

DDD:bjr

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

777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708/697-3460 FAX 708/697-4295

MAY 18 1990

SIKA CORPORATION
products/systems/services...worldwide

Executive Offices
201 Polito Avenue
Lyndhurst, NJ 07071

April 26, 1990

Wishmeier & Assoc.
119 N. Taylor Street
South Bend, IN 46601

Attn: Martin Kleiman

Re: Sikaflex sealants, Sikagard 62
Safety - Kleen Tank Farm

Dear Sir;

Based on the information provided, it is of our opinion that our Sikaflex sealants will offer a degree of chemical resistance, based on a spillage or intermittent contact, when exposed to solvents. A prolonged working life of the sealants is dependent upon proper application procedures, good maintenance, and expeditious clean-up which will not let any aggressive materials puddle over the sealant, thus causing an accellerated degradation as to a softening of the material.

Our Sikagard 62 will offer a better degree of chemical resistance, but with the nature of the chemicals present at this site, the same limitation recommendations as previously stated will be made. In addition, all other application/limitation guidelines, as stated in the current Technical Data Sheet issued for these products should be followed accordingly.

The opinions given are offered strictly on Sika's working knowledge of the product and are based on the given application parameters. The final responsibility for the success of the application rests on actual field conditions and proper application procedures.

Any further questions should be directed to Sika's Technical Service at 800-631-7270.

Regards,

Edwin Diaz
Technical Service Dept.

Sikagard® 62

High-Build Protective Coating

Technical Data

Description:	Sikagard 62 is a 2-component, solvent-free, high-solids, moisture-insensitive epoxy resin. It produces a high-build, protective, dampproofing, and waterproofing vapor-barrier system. Sikagard 62 conforms to ASTM C-881, Type I and IV, Grade 2, epoxy resin.
Where To Use:	Use as a high-build, corrosion-resistant, protective coating, or as a seamless flooring system on dry and can't-dry substrates.
Advantages:	• Protects dry and can't-dry substrates. • Exceptional tensile strength. • Good chemical resistance for long-term protection. • Convenient B:A = 1:1 mixing ratio. • Easy, paint-like viscosity. • Durable, smooth finish permits wipe-off graffiti-removal. • Available in 3 standard colors; gray, red, and tan. Special color matches available upon request. • Excellent bonding to all common structural substrates. • Super abrasion resistance for long-term wear. • Sikagard 62, Gray, after cure, is approved for contact with potable water. • All colors are USDA-approved for use in food plants.
Coverage:	225-400 sq ft/gal (4-7 mils)
Packaging:	4-gal units; 1-qt units, 12/case.

Typical Data for Sikagard 62:
(Material and curing conditions @ 73F and 50% R.H.)

Shelf Life:	2 years in original, unopened containers.
Storage Conditions:	Store dry at 40-95F. Condition material to 65-85F before using.
Color:	Gray, red, tan.
Mixing Ratio:	Component 'A' : Component 'B' = 1:1 by volume.
Viscosity:	Approx 2,700 cps.
Pot Life:	Approx 35 min.
Application Life:	20-25 minutes.
Tack-Free Time:	Approx 4 hr.
Open Time:	Light foot traffic - 5-7 hr. Rubber-wheel traffic - 8-10 hr.
Immersion and chemical exposure:	3 days

Tensile Properties (ASTM D-638):

14 day	Tensile Strength	6,400 psi
	Elongation at Break	2.7 %

Abrasion (Taber Abrader):

7 day	Weight loss, 1,000 cycles (H-22 wheel, 1,000-gm weight)	0.61 gm

Abrasion Resistance (ASTM D-968):

14 day	Abrasion Coefficient	51 liters/mil

Adhesion (ASTM D-3359):

1 day	Adhesion Classification	4A

Water Absorption (ASTM D-570):

7 day	Total Water Absorption (2-hour boil)	0.9%

Chemical Resistance:

Specimen: Two coats- 10 mils
Cured 10 days
Substrate: asbestos cement

CHEMICAL	TEST TEMP.	STORAGE TIME AND EVALUATION				
		1 Day	1 Month	2 Months	6 Months	12 Months
Water	75F 100F 140F	A A A	A A A	A A A	A A A,D	A A A,D
Sodium Chloride Solution (Saturated)	75F 100F	A A	A A	A A	A A	A A
Sodium Hydroxide 30%	75F	A	A	A	A	A
Cement Water (Saturated)	75F	A	A	A	A	A
Detergent Solution (5% Ajax)	75F 140F	A A	A A	A A	A A,D	A A,D
Hydrochloric Acid 10%	75F	A	A	A	A	A
Sulfuric Acid 10%	75F	A	A	A	B	B
Oxalic Acid 10%	75F	A	A,D	A,D	A,D	A,D
Citric Acid 10%	75F	A	A,D	A,D	A,D	A,D
Fuel Oil (Home Heating)	75F	A	A	A	A	A,D
Gasoline (Unleaded)	75F	A	A	A	A	A,D
Iso-Octane	75F	A	A	A	A	A,D
Toluol	75F	A	A	A	A	A,D
Silage	75F	A	A	A,D	A,D	B,D
Synthetic Silage	75F	A	A	B,D	B,D	B,D
Liquid Manure	75F	A	A	A	A	A,D
Ethyl Alcohol	75F	A	C	—	—	—

A: Resistant in permanent contact
B: Temporary resistance
C: Destroyed
D: Discolored

How To Use

Surface Preparation: Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles, and disintegrated materials.

Preparation Work: **Concrete** - Sandblast or use other approved mechanical means.
Steel - Sandblast to white-metal finish.

Mixing: Pre-mix each component. Proportion equal parts by volume of Component 'A' and Component 'B' into a clean mixing container. Mix with a low-speed (400- 600-rpm) drill and Sika paddle for 3 minutes, until uniform in color.
Mix only that quantity that can be used within its application life.

Application: Apply coating using high-quality rollers or brushes, or spray. Two coats are recommended. Apply second coat as soon as the first coat is tack-free and the traffic of application will not damage the first coat. The second coat, however, **must** be applied within 48 hours since a longer delay will require additional surface preparation.
For slip-resistance, add approximately ½ lb/gal of Sikagard 62 Granules to the mixed material and apply as first coat. Saturate roller or brush with material and apply first to a disposable cardboard or other surface to distribute the granules evenly on the equipment.
Do not spray with Sikagard 62 Granules in the coating. When spraying, use the following or similar equipment: Binks Model #18 Air Atomized Spray Gun (#68 fluid nozzle, #68 PB air nozzle, #68 fluid needle, #83-5661, 2-gal pressure fluid tank).
For Sikagard 62 Flooring System information consult your Technical Data Sheet or call Technical Service.

Limitations:

- Minimum substrate temperature for application 50F.
- Do not apply over wet, glistening surface.
- Material is a vapor barrier after cure.
- Do not apply to surfaces where vapor can condense and freeze.
- Do not encapsulate saturated concrete in areas of freezing and thawing.
- Do not apply to porous surfaces exhibiting moisture-vapor transmission during application. Consult Technical Service.
- Minimum age of concrete prior to application is 21-28 days, depending on curing and drying conditions.
- Do not apply to exterior substrate on-grade. . .epoxy resin coatings will weather and chalk upon exposure to sunlight.
- For spray applications only, thin with Sika Epoxy Thinner at 5% by volume. Thin only when required.

Caution:

Component 'A'-Irritant - Contains epoxy resins. Prolonged contact with skin may cause irritation. Avoid eye contact.
Component 'B'-Corrosive - Contains amines. Contact with skin may cause severe burns. Avoid eye contact.
Product is a strong sensitizer. Use of safety goggles and chemical-resistant gloves recommended. Remove contaminated clothing. Avoid breathing vapors. Use adequate ventilation. Use of a NIOSH/MSA organic vapor respirator recommended.

First Aid:

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for at least 15 minutes; contact physician immediately. For respiratory problems, remove person to fresh air. Wash clothing before re-use.

Clean Up:

Ventilate area. Confine spill. Collect with absorbent material, flush area with water. Dispose of in accordance with current, applicable local, state, and federal regulations. Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

KEEP CONTAINER TIGHTLY CLOSED **KEEP OUT OF REACH OF CHILDREN**
NOT FOR INTERNAL CONSUMPTION **FOR INDUSTRIAL USE ONLY**
CONSULT MATERIAL SAFETY DATA SHEET FOR MORE INFORMATION

Executive Office: P.O. Box 297, Lyndhurst, NJ 07071 - Tel 201-933-8800 - FAX 201-933-9379

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Export Division

NJ, Lyndhurst ..... 201-933-8800 Telefax 201-804-1020

June, 1990

SIKA CORPORATION

Sikadur® 51 NS/SL

Flexible epoxy control joint sealer/adhesive

Technical Data

Description:	Sikadur 51 is a 2-component, solvent-free, moisture-insensitive, flexible, epoxy resin material. It is available in 2 consistencies - NS (non-sagging) and SL (self-leveling).
Where to Use:	• Use to fill horizontal, vertical, and overhead non-moving saw-cut, construction, control joints, and cracks. • Use also as a flexible adhesive.
Advantages:	• Two consistencies to fit project requirements. • 2 to 1 ratio insures easy mixing, easy handling. • An adhesive with excellent flexibility. • Permanent flexibilty. . .does not age-harden. • Shock-absorbent cure. . .resists wheels and heavy loads. • Prevents deterioration of control-joint edges.
Coverage:	1 gal will yield 231 cu in. or will fill 102 ft of ⅛-in.-wide x 1½-in.-deep joint.
Packaging:	3-gal units; 12-fl-oz units, 12 per case.

Typical Data for Sikadur 51 NS/SL:
(Material and curing conditions @ 73F and 50% RH)

Shelf Life:	2 years in original, unopened container.	
Storage Conditions:	Store dry at 40-95F. Condition material to 65F -85F before using.	
Color:	Concrete gray	
Mixing Ratio:	Component 'A':Component'B'= 2:1 by volume	
Consistency:	Sikadur 51 NS Non-sag	Sikadur 51 SL Self-leveling
Pot Life:	1 to 1.5 hr	1 to 1.5 hr
Tack-free time (ASTM C-679):	7-8 hr	8-9 hr
Tensile Properties (ASTM D-638):		
Tensile strength		
14 day	600 psi	550 psi
Tensile stress at % elongation		
10%	60 psi	100 psi
25%	240 psi	230 psi
50%	480 psi	430 psi
Tensile set at % elongation		
10%	0 psi	0 psi
25%	0 psi	0 psi
Tensile set after break	1%	1%
Elongation at break	100%	100%
Modulus of Elasticity	13,000 psi	8900 psi
Tear Resistance (ASTM D-624):		
14 day Tear resistance	110 lb/in.	110 lb/in.
Shear Strength (ASTM D-732):		
14 day Shear Strength	800 psi	700 psi
Bond Strength (ASTM C-882): Hardened concrete to hardened concrete		
2 day (dry cure) Bond Strength	800 psi	700 psi
14 day (moist cure) Bond Strength	450 psi	400 psi
Hardness (ASTM D-2240):		
28 day Hardness (Shore A)	75-80	75-80

How To Use

Surface Preparation: Substrate must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compounds, impregnations, waxes, foreign particles. disintegrated materials, etc., by mechanical means, i.e. - sandblasting, high pressure waterblasting.

Mixing: Pre-mix each component. Proportion 2 parts Component 'A' and 1 part Component 'B' by volume into a clean pail. Mix thoroughly for 3 minutes with a Sika paddle on a low-speed (400-600-rpm) drill until uniform in color. Mix only that quantity you can use within its pot life.

Application: For vertical or overhead applications, gun Sikadur 51, NS, into construction/control joints and cracks with caulking gun, pressure extruder, or other suitable methods. Be sure to maintain steady pressure.

For horizontal applications, pour Sikadur 51, SL into construction/control joints or use low-pressure extrusion equipment. Again, maintain a steady flow of material.

Both applications require care to eliminate overlapping as this may cause bubbling within the material.

For use as a flexible adhesive, consult Sika Technical Service.

Limitations:

- Do not thin Sikadur 51 NS/SL. Solvents may prevent proper cure.
- Substrate temperature should be 40F minimum and rising.
- For best results, materials should be maintained between 65F and 85F.
- Do not apply through standing water.
- Minimum age of concrete 28 days.
- Materials are vapor barriers after cure.
- Concrete or masonry must be tested for water-vapor-transmission prior to application.
- Not designed for use under constant immersion.
- Do not use in expansion (moving) joints.
- For applications other than the sealing of control or construction joints, consult Sika Technical Service.
- For application in non-moving joints only.
- The ultimate performance of Sikadur 51 depends on many factors i.e. proper joint design, thermally stable areas (concrete slab) etc.

Caution: **Component 'A' - Irritant:** Prolonged contact to skin may cause irritation. Avoid eye contact. **Component 'B' - Corrosive:** Contact with skin may cause severe burns. Avoid eye contact. Product is a strong sensitizer. Use of safety goggles and chemical-resistant gloves recommended. Remove contaminated clothing. Avoid breathing vapors. Use adequate ventilation. Use of NIOSH/MSA organic vapor respirator recommended.

First Aid: In case of skin contact wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water for 15 minutes; contact physician immediately. For respiratory problems, remove person to fresh air. Wash clothing before re-use.

Clean Up: Collect with absorbent material, flush with water. Dispose of in accordance with applicable local, state, and federal regulations. Uncured material can be removed with approved solvent. Cured material can only be removed mechanically.

KEEP CONTAINER TIGHTLY CLOSED — KEEP OUT OF REACH OF CHILDREN
NOT FOR INTERNAL CONSUMPTION — FOR INDUSTRIAL USE ONLY
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CO, Denver 303-458-7452	MN, Anoka 612-427-1652	TX, Dallas 214-386-7452
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GA, Atlanta 404-761-7143	NY, Albany 518-452-7453	VT, Montpelier 802-229-4905
IL, St. Charles 312-513-0570	OH, Brooklyn Heights 216-749-7225	WA, Seattle 206-762-3829
IN, Indianapolis 317-843-0274	*OH, Columbus 614-476-3335	WI, Milwaukee 414-272-3100

Export Division

NJ, Lyndhurst ..... 201-933-8800 — Telefax 201-933-9379

September, 1989

SIKA CORPORATION

Appendix E
Information on Chem Tech One

safety-kleen.

Interoffice Memo

Date: **October 27, 1998**

To: **Phil Retallick**

cc: **Don Schwieg**
Mark Attaway

From: **Dennis Bennett**

Re: **Use of Concrete Sealer as a Coating For Hazardous Waste Tank Farms and Container Storage Areas**

I recommend we begin using Chem Tech One concrete sealer in place of conventional coatings in hazardous waste tank farms and container storage areas. Your approval is requested so we can roll out the use of this product and save up to $500,000/year.

Concrete treated with this sealer complies with the coating requirements in federal regulations for hazardous waste tank farms. We have good technical support for using the sealer to create an acceptable coating. This sealer has been used at two Safety-Kleen facilities but formal agency approvals have not been obtained.

The sealer cost is about $0.5/sq ft compared to $5-8/sq ft for conventional coatings. The potential savings are $500,000 per year based on the coating work in the budget.

As part of the product roll out, we should look at modifying any permits that specify a particular coating so Chem Tech One can be utilized.

DISCUSSION

HOW THE SEALER WORKS AS A COATING

Chem Tech One contains a reactive silicate that penetrates up to 3" into the concrete and chemically reacts with calcium hydroxide to form a gel that fills pore openings (a 50+ year old technology). The top few inches of concrete effectively becomes a coating that resists acids, bases, oils and many aggressive solvents. Surface scratches caused by equipment

operations is not a concern since the coating integrity is not affected. The treated concrete becomes stronger and much more impervious to liquid penetration. The sealer also increases the life of concrete and arrests deterioration being caused by chemical attack and water penetration.

SEALER MEETS REGULATORY RFEQUIREMENTS OF A COATING FOR HAZARDOUS WASTE TANK FARMS

1. **Coating Must be Compatible with the Waste.** Testing at the Safety-Kleen Tech Center showed that the concrete treated with the Chem Tech One sealer was compatible with two aggressive solvents in our wastes: methylene chloride and methyl ethyl ketone. Tests completed by the vendor show resistance to strong acids (hydrochloric @ 32%; sulfuric @ 50 & 90% and concentrated nitric); organic acids (acetic, glacial and 50% and citric), inorganic bases (sodium hydroxide @ 50% and potassium hydroxide @ 50%) and aggressive organic liquids including acetone, chloroform, trichloroethylene, xylene, benzene, methanol, dimethlsulfoxide, tetrahydrofurane and dimethyl acetamide. These tests indicate that sealer-treated concrete is compatible with many of our wastes. Specific tests are prudent for compounds not represented above.

2. **Coating Must Meet the Definition of Impermeability.** Concrete treated with the sealer has an acceptable permeability for coatings as indicated by the data below. Properly installed concrete already meets the maximum coating permeability that EPA has informally communicated to one coating manufacturer. The sealer greatly enhances permeability by closing up to 90% of the open pores. It is clear that concrete treated with the sealer will have a much lower permeability than untreated concrete. Test results from 1927 show that water flowed through untreated concrete and no water flowed through concrete treated with reactive silicates when both samples were subjected to a thirty foot head of water. More recent tests on concrete treated with Chem Tech One confirm these results and other improvements such as strength and abrasion resistance.

   Permeability data:

   - Portland Cement: average permeability is 1E-10 cm/s (source: Canadian Portland Cement Association).
   - Three cement core samples taken from a Safety-Kleen branch in B.C.: 4.8E-9 to 1.1E-8 (source: testing performed by AGAT Laboratories in Calgary, Alberta). These results were obtained independently to help confirm the permeability information reported by the cement association.

- Stonhard epoxy coatings used by Safety-Kleen: 1.2E-10 to 8E-11 cm/s (source: Dan Kiernan of Stonhard).
- US EPA "unwritten" maximum permeability limit for a coating: 1E-7 cm/s (source: Dan Kiernan of Stonhard. Stonhard was verbally given this limit by EPA so they could ensure their coatings would be approved).
- Quebec Hazardous Waste regulations: Maximum of 1E-7 cm/s (consistent with the EPA information from Stonhard).

Key conclusions based on the permeability data above:

- The concrete permeability range of 4.8E-9 to 1.1E-8 cm/s represents typical installations now in place at our facilities. The sealer will decrease permeability significantly by filling up pore spaces in the concrete.

- The use of treated concrete as a coating satisfies the maximum permeability acceptable to the EPA for coatings. It appears the permeability of treated concrete will be similar to Stonhard coatings. Hence, the protection afforded by the sealer against waste migration through the concrete is similar to conventional coatings.

We could arrange to perform a permeability test per ASTM E-96 with a piece of concrete treated with the sealer if required for regulatory approvals. However, this test will be expensive and time-consuming since it can take months to complete. The test is not needed for us to determine that treated concrete exhibits acceptable permeability based on the information above.

OTHER ISSUES WHEN THE PROPOSED SEALER IS USED AS A COATING

1. Treated concrete is not visible to regulators.

There is no uniform color change to visually confirm that the concrete has been treated with the sealer. Agency personnel will not like that since they like to see the coating to ensure the coating is installed and there are no cracks.

The coating is effectively several inches thick and hence surface cracks are not a problem compared to a relatively thin conventional coating. The facility should keep cracks repaired for any coating per a written program so cracking does not become a regulatory issue.

Treated concrete can be confirmed by using a dropper to apply hydrochloric acid. An observed reaction indicates no treatment. The testing can be done on floors and

containment walls. Periodic testing (say every four months) should be established to document a history of the coating to agency inspectors. The inspection program should begin right after the sealer is applied.

A dye cannot be simply added to the sealer since it may have a negative affect on reaction chemistry. More research is needed to see if another sealer product exhibits a color. We should use Chem Tech One until the dye question is resolved or a better product can be found.

2. Abrasion resistance is not an issue.

Surface abrasions and scratches are not important since the treated concrete is up to 3 inches thick. Hence, the sealer can be used in areas impacted by equipment operations such as warehouses and return and fill stations. The use of expensive coatings designed for maximum impact resistance can therefore be avoided (such as a novolac epoxy).

3. Applications for Chem Tech One should be technically reviewed like for any other coating.

Compatibility test information should be reviewed to determine if additional testing is needed at the Safety-Kleen Technical Center. Chem Tech One can be applied to floors and containment walls. Concrete condition, temperature, application technique and the number of applications are important for obtaining maximum penetration and protection. Chem Tech Int'l should be consulted for all proposed jobs to ensure the contractor or facility personnel properly install the product.

A proper sealant should be specified for expansion joints so they are compatible with the waste. As one example, the use of acrylic polysulfide has been successfully used at the East Chicago re-refinery.

4. Chem Tech One is easier to install and will wear better compared to conventional coatings.

Conventional coatings are subject to cracking and can fail due to installation problems. For example, Safety-Kleen has experienced failure problems with Corro-Shield coatings at a number of branches. Chem Tech One is easy to install and the treated concrete will be up to 3" thick. It will not be subjected to damage from equipment operations and hence will not require periodic replacements like a thin conventional coating.

Chem Tech One is applied directly to the concrete and a coating typically has multiple layers that must be carefully applied in steps. Conventional coating failures can be minimized by using a qualified contractor for installation. Chem Tech One can be applied by facility staff or a local contractor at a lower cost.

5. Chem Tech One (earlier called Suretreat) has been used as a coating at two Safety-Kleen facilities. Neither one has been formally approved by regulatory agencies.

- Installed last year in the hazardous waste tank farm at our facility in Phoenix, Arizona. The sealer has not been approved by EPA.

- Installed this last spring on the drum storage pad at our Burton facility in Michigan after the state strongly advised that a coating with an impervious surface be installed. The sealer has not been approved by the state.

APPROVAL
FROM
STATE OF MISSOURI
AND
DOE
RECOMMENDATION
TO USE THE SEALER

safety-kleen ®

November 25, 1998

Via Telecopier

Mr. Kyle Russell
Missouri Department of Natural Resources
Hazardous Waste Program, Permits Section
P.O. Box 176
Jefferson City, Mo. 65102

Dear Mr. Russell:

Safety-Kleen is considering the use of a secondary containment sealing product called Chemtec One. Our observation of the performance of the material on concrete structures (container storage floors and truck pads) has lead us to believe that this product is superior to the coating products that we are currently using. However, Safety-Kleen is requesting concurrence, from your Department, that this material is an acceptable product for our secondary containment areas, before applying the material in any of our Missouri facilities.

Attached you will find product information and specifications for your review. If you have any questions, or require any additional information, please contact me at 417/866-6412.

Sincerely,

Mark Reppond
Sr., EHS Manager
Safety-Kleen Systems Inc.

STATE OF MISSOURI
Mel Carnahan, Governor • Stephen M. Mahfood, Director
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
P.O. Box 176 Jefferson City, MO 65102-0176

December 4, 1998

Mr. Mark Reppond, EHS Manager
Safety-Kleen Corporation
West Central Region
734 Northwest Bypass 66
Springfield, MO 65802

RE: Secondary Containment Sealing Product, Safety-Kleen Corporation, Springfield, Missouri

Dear Mr. Reppond:

The Hazardous Waste Program has received your letter dated November 25, 1998, regarding the use of CHEMTEC ONE secondary containment sealing product. You requested concurrence on the acceptability of this product before actually using it at the permitted facilities in Missouri. Based on the manufacturer's information, it appears that this product applied to the existing concrete will provide a base that is sufficiently impervious to contain leaks, as required in 40 CFR 264.175(b)(1) and 264.193(c)(1), as incorporated in 10 CSR 25-7.264(1). The daily inspections will provide adequate protection while the product cures to the maximum limit.

If you have any questions regarding this letter, please contact me at (573) 751-3553.

Sincerely,

HAZARDOUS WASTE PROGRAM

Kyle Russell
Environmental Engineer
Permits Section

KR:bi

6593

FERNALD ENVIRONMENTAL MANAGEMENT PROJECT

Removal Action No. 7
Plant 1 Pad Continuing Release

FINAL REPORT

December 1994

U.S. DEPARTMENT OF ENERGY

Post-it® Fax Note 7671	Date 1/23/97	# of pages ▸ 4
To D. Robinson	From L. S. Cope	
Co./Dept.	Co.	
Phone #	Phone # 4045	
Fax # 637-5757	Fax #	

SVOCs. Groundwater monitoring data for these four wells, as well as other wells in the Plant 1 Pad vicinity are on file and available upon request.

Because of the potential chemical effects of the contaminants on the polyvinyl chloride (PVC) casing material of the wells, it was determined that the four monitoring wells should be grouted and abandoned. The well abandonment is planned after sample and analysis activities are performed. However, their abandonment does not affect completion the objectives of Removal Action No. 7. The USEPA and OEPA will be notified when abandonment of Wells 1342, 1345, 1348, and 1361 is completed.

After Removal Action No. 7 was completed on September 30, 1994, two low areas in the Plant 1 Pad surface were noted, northwest and northeast of TS-6 in the Phase D area. These low areas resulted in water ponding on the pad surface. The subcontractor installed a drain in each of the low areas. The drains connect with the Plant 1 Pad catch basins which transport rainwater to the General Sump.

2.4.2 Phase E Construction

Removal of the temporary tension support structures (TS-1, TS-2, and TS-3) began in June 1994 and was completed July 21, 1994, to allow completion of Phase E. Initially, Phase E was to be constructed in the same manner as Phases C and D. Because of refinements of the FEMP waste management plans, there was a need to expand the use of Phase E from the storage of containerized radioactive waste to also allow storage of surface decontaminated bulk material generated by the dismantling of buildings and structures. The bulk material to be stored on the Phase E are will be decontaminated in accordance with the Interim Record of Decision (IROD) for OU3 before storage.

Because of the decision to expand the use of Phase E, the coating design for sealing and coating the surface was re-evaluated to find a material sufficiently durable for the storage of bulk material. To maintain the project schedule, evaluation of coatings was completed prior to finishing the concrete work. Coatings considered for Phase E of the Plant 1 Pad were evaluated based on the following criteria:

1. imperviousness to chemicals and water resistance;
2. durability - the ability to withstand vehicle traffic and bulk load without losing coating integrity;

6593

Removal Action No. 7
Plant 1 Pad Continuing Release
Final Report

3. seam-barrier strength; and
4. ability to install coating during cool weather.

REACTIVE SILICATE SEALER

The evaluation identified Surtreat® as the preferred coating for the following reasons:

1. Other coatings reviewed were not resistant to chemicals;
2. Surtreat® had been successfully used on three other FEMP projects (Plant 9 Warehouse, Plant 6 Warehouse, and Plant 8 Southwest Annex);
3. Surtreat® specifies expansion joint material which enhances seam strength; and
4. Surtreat® can be applied at cooler temperatures than the other coatings evaluated.

It was determined during the coating evaluation that Surtreat® would provide protection from releases and permit heavy duty storage activities on the pad without destroying the integrity of the coating. Additionally, it was determined that safety would be enhanced by preventing tears in the coating which would create an uneven surface for the movement of equipment and containers.

The refinement to the intended usage of Phase E, and the use of Surtreat® coating rather than the 86 mil polyurethane coating that was used in all other phases of the removal action, constituted a change to the initial RAWP for Removal Action No. 7. USEPA was notified of this change and approved it on July 22, 1994. These changes in coating material provide more protection to human health and the environment by enhancing the integrity of seam strength and the durability of the pad coating. These changes also coincide with the objectives of Removal Action No. 7 by mitigating the continuing release of contaminants from the Plant 1 Pad until final remediation can be performed under OU5.

Concrete placement and Surtreat® coating application were conducted during September 1994, and was completed September 30, 1994, completing the objective of Removal Action No. 7 by mitigating the release of contaminants from the Plant 1 Pad until final remediation is conducted under OU5.

Upon completion of Phase E work for Removal Action No. 7, post-construction inspections revealed that the expansion joint material began to seperate from the concrete. This separation was noted in the Phase E area expansion joints only. Design criteria specified a joint material that will bond to the concrete to provide a moisture-resistant barrier and to protect the edges of the concrete. The expansion joint will be replaced with a material that will meet the requirements of the design specifications. However, the joint replacement does not affect completion of the objectives of Removal Action No. 7. The USEPA and OEPA will be notified once the repairs are completed.

2.4.3 Waste Management

Stage III work initially included the removal and disposal of contaminated soils and concrete for the purpose of installing catch basins within the pad surface. However, in December 1992, the OEPA and USEPA approved Removal Action No. 17, Improved Storage of Soil and Debris (FERMCO 1992), establishing guidelines for the management of contaminated soil and debris at the FEMP. Removal Action No. 17 resulted in numerous improvements in the management of soil and debris and since it has been approved, it is considered to be the applicable guidance for management of soils at the FEMP. In accordance with Removal Action No. 17, excess soil generated during Phases C, D, and E construction were segregated and managed as specified in Phase I of the Removal Action No. 17 Work Plan. Specifically, non-hazardous soil containing less than or equal to 100 pCi/g total uranium, 50 pCi/g total thorium, and 5 pCi/g total radium, was placed into a controlled stockpile. Non-hazardous soil that exhibited activities greater than those specified were placed into a controlled stockpile under tarpaulins. Soil containing hazardous waste was containerized and managed accordingly. However, the soil removed during Removal Action No. 7 did not contain hazardous waste.

Waste materials generated during Stage III construction included: 185 ft^3 of sweeping waste, 18,000 ft^3 of contaminated soil, 312,500 pounds of concrete rubble, 6,000 pounds of metal, 24,000 pounds of wood, 128 ft^3 of asbestos, and 500 pounds of miscellaneous plastic and paper, etc. These materials were containerized and staged on the Plant 1 Pad pending characterization. Low-level waste was shipped to the NTS. No materials were identified that caused the waste to meet any of the hazardous waste listings under OAC 3745-51-31 to -33 or exhibit any of the hazardous waste characteristics under OAC 3745-51-21 to -24.

ROBINSON International Inc. When in Cincinnati, OH - - call us @ 637 - 5368
Douglas S. Robinson Our Home Page http://home.fuse.net/robinson_international
Post Office Box 24 Fax us @ 812 - 637 - 5918 Car phone @ 513 - 403 - 8882
New Trenton , IN 47035-0024 U.S.A. E-mail: protech@fuse.net Call us Toll free @ 888 - 345 - 8887

SAFETY - KLEEN
Mr. Dennis Bennett
1301 Gervais Street , suite 300
(Post Office Box, zip code 29211)
Columbia, South Carolina 29201

1-803-933-4282 voice 4310 fax

2 March 1999

RE: US DOE documents that support the use of silicates for RCRA storage

Dear Dennis,
A contact with the Ohio EPA that is acquainted with and typically rules favorably for the use of soluble reactive silicates for sealing the concrete in RCRA facilities when it is appropriate is Mr. Phil Harris at 1-937-285-6090. He and I spoke the other day and he is expecting a call from you and/ or Mark -- he will help you where he can but he can't endorse any products.

The report I have included is for an outside RCRA and mixed nuclear waste storage pad that is about a quarter of a million square feet of surface located on the Fernald Environmental Management Project / Super Fund Site / former nuclear processing facility. I will send other reports as I receive them. This Report should provide a good start though. I am enthused about our whole line of new products. I look forward to working with you to protect your facilities this year. Please keep me in the pipe line so I can help. Do you want me to send this to Marty?

Thank you. Have a great day

Doug Robinson

Doug

Call me after you have time to look at the report.
Thanks
Doug

TESTING INFORMATION
FOR SURE TREAT
(SAME AS CHEM TECH ONE
AND
SIMILAR TO PRO-TECH)

John Dingess Safety-Kleen 07/15/98 02:46 PM

To: Bob Chopp/ELGIN/S-K
cc: Jim Breece/TECHCTR/S-K, Mike Endres/TECHCTR/S-K
Subject: CHEMTEC ONE

BACKGROUND
Two concrete blocks sealed with a "reactive silicate" sealer from ChemTec Intl were received by Product Development. According to the vendor, the smooth surfaces of the concrete blocks were treated with several applications of Chemtech One using a spray bottle. Also according to the vendor, the sealing is done within the concrete, and a surface coating will form on a smooth concrete surface. The sealed concrete was evaluated for compatibility with the following solvents common to FRS:

Methylene chloride
Methyl ethyl ketone

SUMMARY
The sealed concrete blocks were placed face (sealed surface) down in 4-liter beakers. The solvents were then poured into the beakers up to the height of the blocks. The beakers were covered with plastic film to reduce solvent evaporation. After about one week of immersion, the blocks were removed and their sealed surfaces were scratched. The blocks were immersed in the solvents for an additional week to observe any failure of the sealed concrete surface.

RESULTS
After about 24 hours, small patches of exposed concrete appeared on the sealed surface. The patches of exposed concrete did not change in size or number during the two week immersion, indicating that the sealer may have been misapplied in those small areas.

In addition, the sealed concrete surfaces were scratched so that the solvent could get under the seal if possible. No further deterioration of the scratched area was observed, indicating that the Chemtec One did seal within the concrete and not just on the concrete's surface.

CONCLUSION
It appears that the Chemtec One concrete sealer is compatible with the FRS solvents shown above. However, the sealer can be scratched easily, and we did not test the sealer in a traffic area.

RECOMMENDATION
I suggest that the concrete sealer be tested on a small area where such a sealer would be used. This would test the sealer for durability if traffic is expected.

John Dingess

ChemTec One was applied at the rate of 100 sq. ft. per gallon per application with two applications 8 hours apart. Curing time exceeded 24 hours

Complete laboratory data for the specimens tested is available upon request, and all samples are available for your examination for 60 days, photographs are also available. It has been a pleasure serving you. If we can be of further assistance to you please contact the undersigned.

Respectfully submitted,
H. C. NUTTING COMPANY

Gary D. Pfuehler, P. E.
Senior Materials Engineer

Robert L. House
Director of Laboratories

H. C. NUTTING COMPANY
GEOTECHNICAL, ENVIRONMENTAL AND TESTING ENGINEERS
SINCE 1921

CORPORATE CENTER
4120 AIRPORT ROAD
CINCINNATI, OHIO 45226
(513) 321-5816
FAX (513) 321-0294

June 15, 1998

W.O.#15744.001 dsu

Mr. James Sist
ChemTec International
7771 Woodstone Drive
Suite 100
Cincinnati, Ohio 45244-2855

RE: Scaling Performance Rating of Concrete Surfaces treated with ChemTec One per ASTM C 672

Dear Mr. Sist:

The H. C. Nutting Company is pleased to submit herewith the test results for the resistance to surface scaling of plain, non- air entrained concrete, previously treated with soluble reactive silicate, "ChemTec One". After 100 freeze/thaw cycles in the presence of a 2% solution of sodium chloride, the visual performance rating for the two specimens tested was "zero" scaling, (no scaling) when rated in accordance with the following data; per ASTM C 672:

Rating	Condition of Surface
0	no scaling
1	very slight scaling (1/8 in. (3.2 mm) depth, max. no coarse aggregate visible)
2	slight to moderate scaling
3	moderate scaling (some coarse aggregate visible)
4	moderate to severe scaling
5	severe scaling (coarse aggregate visible over entire surface)

H. C. NUTTING COMPANY
EMPLOYEE OWNED
GEOTECHNICAL, ENVIRONMENTAL AND TESTING ENGINEERS
SINCE 1921

CORPORATE CENTER
4720 AIRPORT ROAD
CINCINNATI, OHIO 45226
(513) 321-5816
FAX (513) 321-0294

WO 15744C01

513-321-5816

Mr. James Sist
Chem Tec International
7771 Woodstone Dr
Suite 100
Cincinnati, Ohio 45244-2855

June 8, 1998

Subj: Soluble Chloride Test Results from concrete surfaces treated with ChemTec One, conducted per Modified EPA Method 300

Re: Test Specimen ID 3249 and 3250

Dear Mr. Sist,

We are pleased to submit herewith the results of two soluble chloride tests conducted on two respective concrete specimens each having been treated with ChemTec One, a reactive silicate, previously applied in accordance with the manufacturer's specifications. Test samples were extracted from concrete surfaces that had been exposed to100, plus, freeze-thaw cycles, while in the presence of a 2% solution of sodium Chloride.

Test samples are identified as HCN lab samples 3249 and 3250. The soluble chloride test procedures were conducted in accordance with the Modified EPA Method 300. The test results are tabulated in the attached chart for each test.

The results are classified as "excellent" since the amount of soluble chloride is very low for both tests.

ChemTec One was applied at the rate of 100 sq. ft. per gallon per application, with two applications 8 hours apart. Curing time exceeded 24 hours.

Specimens will be available for examination for 60 days. It has been a pleasure serving you. If we can be of further assistance to you please contact the undersigned.

Respectfully Submitted,

Gary D. Pfuehler, P. E.
Senior Materials Engineer

/Robert L. House

Robert L. House, VP
Director of Laboratories

H. C. NUTTING COMPANY
GEOTECHNICAL, ENVIRONMENTAL AND TESTING ENGINEERS
SINCE 1921

CORPORATE CENTER
4120 AIRPORT ROAD
CINCINNATI, OHIO 45226
(513) 321-5816
FAX (513) 321-0294

Sample Set ID: 98-C-3094

Data Table
Chloride

Client ID	Lab ID	mg/kg (ppm)	% Chloride
3249	98-18212	810.	0.081
3250	98-18213	560.	0.056
	PQL	2.0	0.00020

ND indicates analyte was not detected above the Practical Quantitation Limit(PQL).

Hong Ngo
Analyst

Data Review

SURTREAT

Headquarters
Allegheny Building
429 Forbes Ave. Suite 1111
Pittsburgh PA 15219

Research & Development
University of Pittsburgh, Research Center
805 William Pitt Way
Pittsburgh PA 15238

SURTREAT CHEMICAL RESISTANCE PROPERTIES

Concrete surface treated according to manufactures specifications with SURTREAT formulation will resist reaction with and penetration by inorganic acids such as:

Hydrochloric - 32%
Sulfuric - 98%
Sulfuric - 50%
Nitric - Concentrated

and organic acids such as:

Acetic - Glacial
Acetic - 50%
Citric - Aqueous Solution

and inorganic bases such as:

Sodium hydroxide - 50% solution
Potassium hydroxide - 50% solution

and most aggressive organic liquids such as:

Acetone
Chloroform
Trichloroethylene
Xylene
Benzene
Methanol
Dimethylsulfoxide
Tetrahydrofurane
Dimethyl Acetamide

All resistance test were run on SURTREAT coated surfaces by applying a few drops of each chemical to the surface and observing the effect in the time frame of one hour versus similar application to an uncoated surface.

Specific resistance tests can be run on any combination of the chemicals which may be of concern. For futher information on SURTREAT chemical resistance please contact :

Sist / Robinson Int'l Inc.
7771 Woodstone Drive
Suite 100
Cincinnati Ohio 45244-2855
(513)474-2090
(812) 637-1733

H. C. NUTTING COMPANY
EMPLOYEE OWNED
GEOTECHNICAL, ENVIRONMENTAL AND TESTING ENGINEERS
SINCE 1921
WO 15744031

CORPORATE CENTER
4120 AIRPORT ROAD
CINCINNATI, OHIO 45226
(513) 321-5816
FAX (513) 321-0294

Mr James Sist
Chem Tec International
7771 Woodstone Dr.
Suite 100
Cincinnati, Ohio 45244-2855

June 9, 1998

Subj: Absorption Test Results for
Concrete Specimens treated
with ChemTec One per ASTM C 642

Re: Test 1: Absorption after 48 hours

Re: Test 2. Absorption after 50 days

Dear Mr. Sist,

We are pleased to submit herewith the results of two absorption tests conducted with ChemTec One, a reactive silicate, having been previously applied in accordance with the manufacturer's specifications. The absorption test procedures were conducted in accordance with ASTM C 642. The two test specimens were normal weight concrete, non-air entrained, manufactured per ASTM C 672.

Specimens will be available for examination for 60 days. It has been a pleasure serving you. If we can be of further assistance please contact the undersigned.

Results:

SPECIMEN # 1 0.54% absorption after 48 hours, 1.66% absorption after 50 days

SPECIMEN # 2 0.33% absorption after 48 hours, 1.04% absorption after 50 days

Water Absorption Ohio Dept. Transportation (Bridge decks)

1% 48 2% 50 days

Respectfully Submitted,

Gary D. Pfuehler, P. E.
Senior Materials engineer

Robert L. House
Director of Laboratories

CHEMTEC INTL

Better Chemistry Produces Superior Products

General Offices
7771 Woodstone Drive
Suite 100
Cincinnati Ohio 45244
(513) 474-2090 Voice 474 2054 Fax
E-mail j. sist@worldnet.att.net

CONCRETE ABRASION RESISTANCE INCREASE WITH CHEMTEC

Enclosed please find the preliminary lab test for hardness increase on my CHEMTEC product. The test is ASTM C-779. It is a rotation abrasion disk constantly running across the surface of an untreated and a treated specimen.

As you can see the results were that the treated specimen showed an increase resistance of 45% after 30 minuets as compared to the untreated specimen and an increase of 13% after 60 minuets of constant abrasive grinding as compared to the untreated specimen. This test was performed by Construction Technology Labs in Chicago IL on 10-24-97. This type of abrasion resistance will make concrete more durable, increase the useful life and eliminate dusting problems.

	Treated Specimen	Non-Treated Specimen
Test Results: WEAR - Inches @ 30 minuets	0.044	0.080
@ 60 minuets	0.097	0.111

Sincerely,
Jim Sist

TREATED

ROTATING DISK ABRASION TEST-ASTM C779

PROJECT NO 051102 METHOD A DATE 10/24/97

SPECIMEN CHEMTEC TESTED BY BRYCE AGE 28 DAYS

Reading Location	MINUTES OF WEAR						
	0	2	15	30	45	60	120
A1	169			242		272	
A2	166			240		271	
A3	169			248		271	
A4	165			237		267	
A5	163			238		267	
A6	162			234		262	
A7	157			233		263	
A8	154			228		256	
B1	134			196		228	
B2	137			195		227	
B3	138			200		231	
B4	135			197		226	
B5	138			200		233	
B6	134			198		228	
B7	135			201		237	
B8	132			198		231	
C1	121			176		203	
C2	123			182		201	
C3	121			179		191	
C4	122			180		211	
C5	124			181		210	
C6	119			178		212	
C7	113			177		211	
C8	113			173		209	
D1	142			128		251	
D2	147			131		254	
D3	144			125		249	
D4	147			133		255	
D5	143			124		249	
D6	146			126		249	
D7	140			117		242	
D8	138			119		244	
WEAR in³	0.000			0.044		0.097	

REMARKS: AIR DRY

Construction Technology Laboratories, Inc.

NON-TREATED

ROTATING DISK ABRASION TEST-ASTM C779

PROJECT NO 051002 METHOD A DATE 10/24/97

SPECIMEN CONTROL TESTED BY BRYCE AGE 28 DAYS

Reading Location	MINUTES OF WEAR						
	0	2	15	30	45	60	120
A1	191			265		319	
A2	191			268		322	
A3	191			263		316	
A4	186			285		317	
A5	180			260		314	
A6	181			281		314	
A7	176			257		309	
A8	174			257		307	
B1	182			242		301	
B2	152			238		294	
B3	157			243		299	
B4	151			234		291	
B5	158			240		297	
B6	150			235		291	
B7	153			238		294	
B8	142			232		286	
C1	173			260		222	
C2	173			260		221	
C3	176			268		228	
C4	177			265		225	
C5	181			273		234	
C6	182			271		232	
C7	186			276		241	
C8	182			272		235	
D1	127			193		247	
D2	133			199		255	
D3	131			198		253	
D4	145			205		260	
D5	133			202		256	
D6	140			208		262	
D7	136			205		260	
D8	139			212		265	
WEAR in->	0.000			0.080		0.111	

REMARKS: MOIST ROOM

Construction Technology Laboratories, Inc.

(1)

SOLUBLE SILICATES IN INDUSTRY

BY
JAMES G. VAIL
CHEMICAL DIRECTOR
PHILADELPHIA QUARTZ COMPANY

American Chemical Society
Monograph Series

TESTING OF REACTIVE SILICATES WHEN APPLIED TO CONCRETE (1928)

BOOK DEPARTMENT
The CHEMICAL CATALOG COMPANY, Inc.
419 FOURTH AVENUE, AT 29TH STREET, NEW YORK, U. S. A.
1923
1928

to meet with a varied and extensive application, in the industrial and fine arts, not only in the conversion, at a moderate cost, of common into hydraulic lime of any required degree of activity, and with a fair, or at least, encouraging degree of strength, but in the preservation of walls of whatever kind, already constructed unadvisedly of materials liable to more than ordinarily rapid decay, whether of brick, stone, pisé, or concrete; in the restoration and conservation of statuary, monuments, architectural ornaments, etc.; in transforming designs cast in ordinary plaster into hard and durable stone; in rendering wood-work; and, to a limited extent, even cloth fabrics indestructible by fire; and in a multitude of other collateral uses, some of which are even now well developed and in practical operation, while others remain still in their infancy, giving more or less encouraging promises of future utility and value."

Water and Oil-Resistant Concrete. Portland cement concrete differs from sandstone or even marble in two important respects. It is chemically more reactive toward the silicate solutions, and the silicate treatments which are applied to its surface are directed to decrease its permeability and to increase its resistance to abrasion, rather than to alter the erosion effects of the elements. Its pore structure is often such that a silicate solution will penetrate for several inches.[183]

Most cement bodies are more or less porous. This is particularly true of Portland cement concretes which set by a process of crystallization or hydration of insoluble silicates. One method of closing the pores consists in applying a silicate solution sufficiently dilute to penetrate and sufficiently unstable to deposit a gel in the capillary openings. If the concrete is fresh enough to contain some free calcium hydroxide a satisfactory reaction may be had with a 10 per cent solution of $Na_2O, 3.25SiO_2$. The preferred method of treatment is to saturate the cement with the silicate on three successive days, which is usually sufficient to seal the cement so that it will absorb no more. If this is not the case, other saturating treatments may follow. A gel, being a permeable substance, can never produce water-resistance such as may be expected from oily or asphaltic layers, and aside from its essential permeability there is probably some separation from the cell walls by syneresis. Nevertheless, substantial improvements in water-resistance can be made by silicate as indicated in the following graph, from which it may be seen that the treated test piece absorbed about half as much water as the untreated when both were subject to a thirty-foot head

[183] "Stone Preservation Committee Report, Dept. of Sci. & Ind. Research," London: His Majesty's Stationery Office, 1927, p. 22.

and that while water flowed steadily through the untreated piece there was no flow through that which had been treated.

If the cement is so old that all the free calcium oxide has been converted to calcium carbonate, the silicate will require longer to develop maximum resistance to water and may not become entirely insoluble until it has absorbed enough carbon dioxide from the air to cause the gelation of the silica.

When the substance in the pores is only a dried silicate solution the resistance to oils is very high, for dried silicates are glass-like bodies and resist admirably liquids which do not dissolve them. Free fatty acids may be partly saponified if the silicate in the pores has not been sufficiently dried, but no reaction

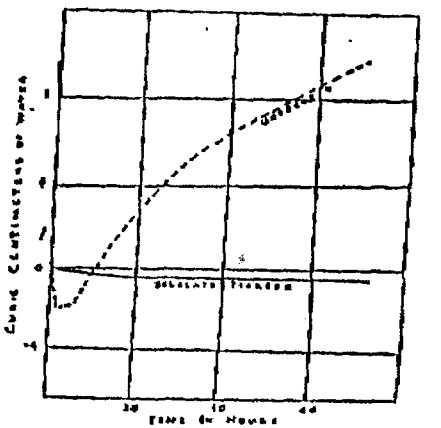


FIG. 87.—Penetration of Water into Concrete with and without Silicate Treatment. (Courtesy Brunner, Mond & Co.)

TABLE 77. *Tensile Tests on 1:3 Mortar Briquets.*
(Brunner Mond and Company)

Ultimate Strengths in lbs. per square inch.
(Average of four briquets.)

	A	B	C	D	E	F	G	H	I
Days	Untreated			Standard briquets immersed for 7 days in 5% sod. sil. soln. Stored in damp sand when not immersed.			Standard briquets dipped 3 times at 24-hour intervals in 20% sod. sil. soln. and stored in damp sand.		
7	202	120	270						
21	301	190	419	323	368	350	321	342	359

takes place in the absence of water. Silicate-impregnated concrete is thus an excellent container material for mineral and vegetable oils.[184–188]

[184] Moyer, Albert, *Concrete*, 4, 49 (1910); *Can. Eng.*, 19, 707 (1910); *Concrete*, 16, 279 (1920); *Concrete Cement Age*, 4, 135 (1914); *Eng. Record*, 62, 624 (1910); *Proc. Am. Soc. Testing Materials*, 10, 351-355 (1910).
[185] "Report of Service Tests on Concrete Floor Treatments," Bur. of Standards (Oct. 28, 1920).
[186] "Silicate of Soda and Concrete," Philadelphia Quartz Company, Bulletin No. 34 (1925).
[187] Proc. Am. Road Builders' Assoc., 24th Annual Conv. (Jan. 11-15, 1927).
[188] Huth, F., *Farbe und Lack*, 606 (1925).

Protection against oil penetration is also desirable in factory floors and garages. The application is the same as for water-resistance, but

Fig. 88.—Abrasion Test Showing Effect of Silicate Treatment on Concrete.

the contrast in oil absorption before and after treatment is more striking than the results shown above for water.[100]

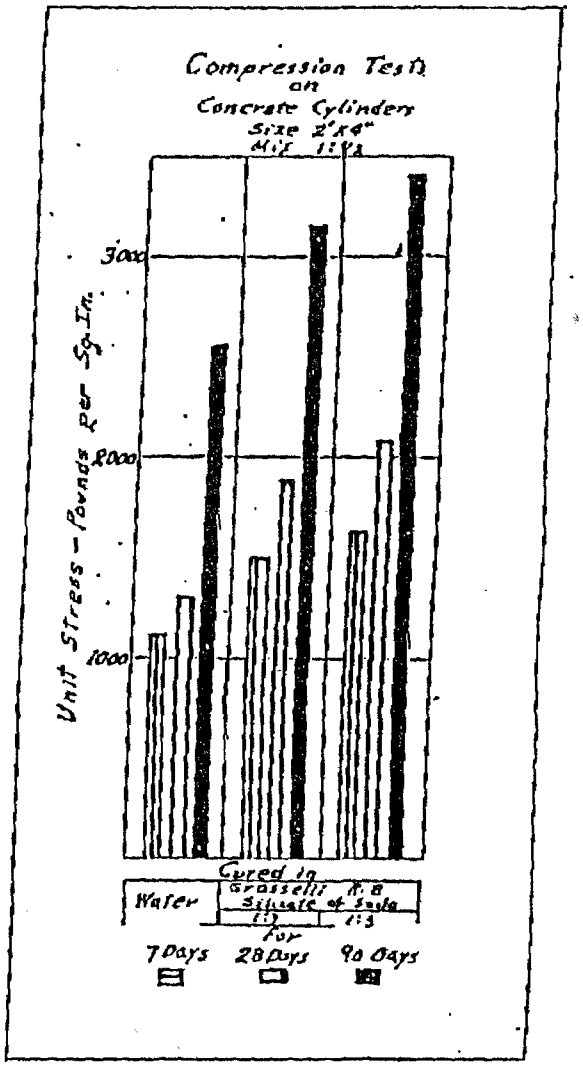
Concrete Hardening. Silicate treatment of concrete gives it a greatly increased resistance to abrasion. This may be shown by rubbing the test piece with sanded blocks under standardized conditions. The piece shown in the picture was made in this way. The 2:1 sand-cement mortar block was silicated for half its length and each end subjected to the same amount of rubbing. The narrow fin indicates the original thickness of the piece where no abrasion was applied, the next step is the silicated part, and the thinnest portion is the original untreated concrete.

Wear on a concrete floor or roadway means a corresponding amount of dust which is inimical to the satisfactory performance of many industrial processes.[100, 101, 102] Saturation with silicate solutions is inexpensive and for many conditions affords a complete solution of the problem.

Curing Concrete.[103] Further use of silicate solutions in connection with Portland cement concrete is in connection with the curing process. If a coating of silicate be applied to the cement as soon as possible after the initial set, that is, when it is hard enough to bear the weight of a man without marking, the water escapes less readily than it would without the silicate treatment and there is some evidence that the final strength of the concrete is improved.

Advantages claimed for this method of curing are the ease and cheapness at which it may be applied, the fact that no labor is required for removing the curing medium, as in the case of earth or straw, and its

[100] Dulac, A., Brit. Pat. 250,439 (July 14, 1925); *C. A.*, 21, 1174.
[101] Stubbs, Robert C., U. S. Pat. 1,315,749 (Sept. 9, 1919).
[102] Brimmer, Mond & Co., *Dyer, Calico Printer* (Aug. 15, 1924).
[103] Remler, R. F., *Fibre Containers*, 11, No. 2, 16 (1926).
[104] Leighliter, Robert S., *Eng. News Record*, 100, 316 (1928).



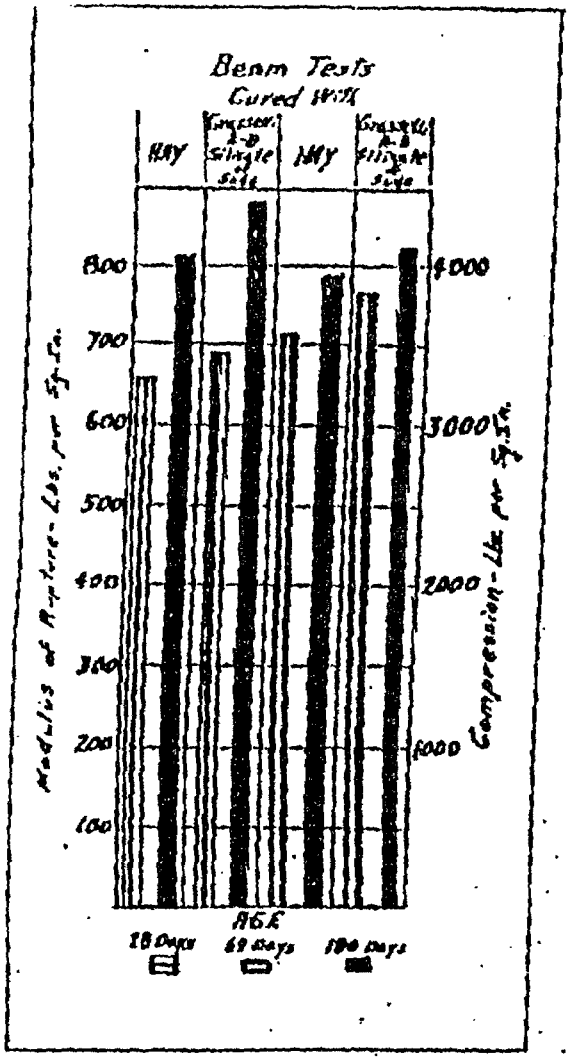
Compression Tests on Concrete Cylinders

Fig. 89.

adaptability to localities where water is not plentiful. Ball indentation tests and compression and loading tests of beams indicate that at least under optimum conditions the silicate curing treatment will increase the strength of concrete.[104]

Another means of indicating the effect of silicate treatment on wear

[104] Remler, *loc. cit.*



Modulus of Rupture and Compression Tests on Concrete Beams

FIG. 90.

is to apply the Continental method of observing the depth of penetration of a sand blast applied to the surface. The following graph from Otzen [101] indicates that whether the silicating is done early or late there is always a striking contrast between the raw and treated pieces.

[101] Otzen, Robert, personal communication, Tech. Hochschule, Hannover (Nov. 19, 1924).

SEALER PRODUCT INFORMATION CHEM TECH ONE

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January 9, 1998

Mr. Lon Stewart
Regulatory Compliance Manager
LAIDLAW ENVIRONMENTAL SERVICES INC.
1340 West Lincoln Street
Phoenix AZ 85007

Dear Lon,

I am faxing two lab test results. The first is the ASTM C-779 Rotating Disk Abrasion Resistance Test, and the second is the ASTM C-672 Scaling Performance Rating of Concrete Surfaces. The specimens treated with CHEMTEC were extremely abrasion resistant compared to the non-treated specimen. The treated specimen in the ASTM C-672 showed a NO SCALING rafting after 50 cycles of freeze thaw using a 2% solution of sodium chloride. The changes I have made in this product has made it a far superior performing product as compared to the competition.

I would like to bring several items to your attention:

A) All reactive silicates are NOT equal. All of these types of products are made up of the same basic chemistry, the main difference is the solid content and the application procedure. The proper solid content is extremely important. Too much and the product does not get in the concrete to a sufficient depth to protect it. Too little and it will not form enough by-product to protect the concrete from the depth of penetration back up to the surface.

B) Application Procedure: My product specification states to use multiple applications (generally 2) and the average coverage rate is approximately 50 to 60 square feet per gallon per project, depending on the porosity and temperature of the concrete being treated. The object is to get the proper amount of material into the concrete. Using my product with the proper application procedure, the concrete will have NO reaction to 28% hydrochloric acid immediately after the last application has dried.

If you decide to continue to use this type of product to protect your concrete you should establish some standard so you are comparing like products. The state of Ohio has written a specification requiring these products meet ASTM C-672, show reduction in chloride ion penetration and show the ability to keep water from penetrating into the surface.

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My product will meet these requirements. The final lab test should be complete later this year. The uniqueness of this process is that is permanent, IT WORKS and it is extremely cost effective, with an average square foot material cost at approximately $0.10 to $0.14.

Should you have any questions or need anything else, please call me toll free at 1-888-889-7779. I will be looking forward to working with you in the future.

Sincerely,

James W. Sist
Director

TECHNICAL DATA
CHEMTEC INT'L

1. PRODUCT NAME
CHEMTEC ONE™
High Performance Water Based Non-Toxic Chemical Treatment that hardens, strengthens, stabilizes, protects and extends the useful life of concrete structures.

2. MANUFACTURE
CHEMTEC INTL
7771 Woodstone Drive, Suite 100
Cincinnati Ohio 45244-2855
Phone (513) 474-2090
Fax (513) 474-2054

3. PRODUCT DESCRIPTION
A colorless non-toxic chemical that penetrates the concrete permeable zones producing a insoluble by-product that directly encapsulates the cementous properties of concrete, thereby greatly reducing the porosity, increasing the surface hardness and compression strength. Protecting the concrete form attack by liquids acids, salts and other contaminants

PROTECTING CONCRETE
This process actually produces a reactive by-product that fills the gel pours, shrinkage cracks and alligator cracks of the concrete. The by-product can in some cases reach depths of over 3 inches into the concrete, making the concrete extremely resistant to water and contaminant penetration. The process allows the concrete to breathe while still giving excellent protection. This process keeps the alkaline content (pH) high, and in cases where deteriorated concrete is being treated, actually raise the pH of the concrete thereby stabilizing and some cases reversing the deterioration. This process should be used prior to concrete repair, because of its ability to raise the pH of existing deteriorated concrete.

HARDENING
Because this process produces a reactive and solid by-product in the concrete, it increases the mass and density thereby making the surface harder and increase the compression strength. Lab test have shown up to 45% increase in hardness of treated samples with *CHEMTEC ONE* vs non-treated samples. Reactive product have been used for years as commercial floor protectors / hardeners. We now have the proper formula for deep penetrating protection for all fully cured concrete

USES
CHEMTEC ONE'S primary use is for protecting fully cured existing dense concrete structures such as Commercial Floors, Parking Facilities, Bridges, Loading Ramps, Driveways, Walkways, Roads, Runways, Taxiways and any concrete structure. This process can increase the useful life of normal concrete up to 40%. This process is designed for normal dense high strength concrete and should not be used on porus concrete blocks or similar type concrete.

4. TECHNICAL DATA

TEMPERATURE LIMITS: *CHEMTEC ONE* can be applied in temperatures as low as 35° F and as high as 90° F . Do not allow the surface to freeze for at least 12 hours after the final application.

DRYING TIME: Normal drying time is about 2 to 4 hours depending on the temperature and humidity. The surface must be completely dry prior to applying *CHEMTEC ONE*.

PAINTING: The surface can be painted on 24 hours after the surface has completely dried. However, it is recommendation that you wash off the surface with fresh water and let thoroughly dry before painting lines or anything else on the surface.

INTERNAL MAKEUP: A proprietary blend of reactive silicates and surface active agents. Non-Toxic, Non-flammable, Non-Hazardous. NO special handling requirements under environmental regulations.

CAUTIONS: *CHEMTEC ONE* is high in alkaline content. Wear protective clothing, gloves, breathing apparats an so on. Make sure there is adequate ventilation. See MSDS, product label or installation instruction booklet for complete safety details.
DO NO apply or splash on glass or painted surfaces, protect decorative door fronts as this product may stain them. If you do splash on these surfaces, clean with fresh water immediately. DO NO store in aluminum, containers or use aluminum spraying equipment. CLEAN UP equipment with soap and water as soon as possible after use. CAUTION, leaving residue in spraying equipment may damage equipment.

COLOR: *CHEMTEC ONE* is a clear liquid and comes pre mixed. DO NOT dilute. A slight brown tint may appear on the surface of the concrete after the final application. This is a sign that iron is present in the concrete. This will wash / wear off in of time.

PACKAGING 55-Gallon drums and 5-Gallon buckets / bulk shipments available.

COVERAGE: the average coverage for fully cured brushed finished concrete will range between 100 to 150 square feet per application. Two applications are necessary on these types of concrete surfaces. The coverage for commercial steel troweled concrete floors should be between 175 and 250 square feet per gallon. and generally only one application is necessary.

ANTICIPATED TREATMENT RESULTS: The *CHEMTEC ONE* treatment can produce the following results.
- Reduce the porosity of existing concrete by up to 90%.
- Increase the surface hardness in existing concrete by up to 45% as results of ASTM C-779
- Increase the compression strength in deteriorated concrete.
- Reduce chloride penetration.
- Inhibit chemical attack of treated concrete.
- Form a gelling to a solid by-product in the micro-cracks, gel pours and alligator cracks in the concrete to the depth of penetration.
- Retard scaling of high strength concrete. Meets ASTM C-672
- Raise the pH of deteriorated concrete

5. INSTALLATION

METHOD OF APPLICATION: Simply pour, pump, or spray the formula from the container or pumping system.

TOOL NEEDED: Low pressure sprayers, squeegees, brooms, safety equipment and protective gear.

SURFACE PREPARATION: The surface of the concrete must be clean and free of foreign material such as grease and coatings that would prevent the CHEMTEC formula from penetrating into the concrete . Thoroughly clean dirty areas. Concrete must be completely dry before application of the formula can begin.

IMPLEMENTATION: Pre-determine the amount of formula (gallons) that will be needed to complete the project. *CHEMTEC ONE* is applied in TWO applications at the same rate per square foot. Simply pour, pump or spray the formula on the surface thoroughly saturating the surface. Areas puddling should be squeezed to dryer areas. Areas that seem to dry too quickly should have more formula pushed to it or be re-sprayed. When the majority of the formulation has been adsorbed..the whole concrete is damp, then the first application is complete. WAIT a minimum of six (6 hrs) hours between applications. The second application is a repeat of the first application. The objective is to get the proper amount of formulation to penetrate into the concrete as uniformly as possible. CAUTION!. There must be at least twelve hours (12 hrs) with NO WATER being allowed on the surface after the last application has dried.

6. AVAILABILITY AND COST

CHEMTEC ONE is available in 5-gallon (20-liter) buckets and 55-gallon (205-liter) drums. Bulk shipments are available upon request. Cost varies with volume of purchase. The product is only available through CHEMTEC INTL and it's selected distributors.

7. WARRANTY

CHEMTEC INTL warrants that *CHEMTEC ONE* in it's original sealed containers will be free of defects and when used as instructed will retard deterioration of concrete surfaces.

8. MAINTENANCE

Should you want to clean the concrete, wash with mild detergent and flush with water.

9. TECHNICAL SERVICES

Technical information and assistance may be obtained from CHEMTEC INTL Cincinnati Ohio.

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October 21, 1998

Mr. Tom Grove
Environmental Manager
SAFETY-KLEEN
700 Zimmerman Road
Mason MI 48854

Dear Tom:

Tom White of you company asked me to give you a brief synopsis of how my CHEMTEC ONE product works, and its benefits. The Product CHEMTEC ONE is a soluble reactive silicate penetrating densifier sealer and protector of concrete.

CHEMTEC ONE actually changes from a liquid state to a solid state by chemically reacting with the calcium and or free lime when present to form a hard dense calcium silicate crystal. It effectively closes the porosity, keeping contaminants from penetrating past the surface. This process actually increases the mass, density, surface abrasion resistance and compression strength of the concrete. The only variable in how well the product performs would be, if the applicator would vary from the manufactures application procedure (attached). The key element is to get the proper amount of CHEMTEC ONE to absorb as uniform as possible. On brushed finished surface the recommended application is to apply two application at a coverage rate of 100 to 150 square feet per gallon, with a minimum of six hours between applications and no water being allowed on the surface for ten to twelve hours after the final application.
Because the porosity of concrete can vary greatly, I use the following testing method to see if the proper saturation level has been achieved. Take an eyedropper with muriatic acid with a 28% hydrochloric acid content and randomly test the concrete with a drop of acid immediately after the second application has completely dried. Put a drop of acid on the treated surface and observe it for a few seconds then wipe it up. Properly treated surfaces will have NO reaction to the 28% HCL. You can see if CHEMTEC ONE makes concrete impervious to attack by concentrated hydrochloric acid, it will be completed protected from solvents, fuels and salts. As for performance of CHEMTEC ONE, I am enclosing copies of lab test performed. ASTM C-672, 100 cycles of freeze thaw with NO SCALING. ASTM C-642, water absorption for both 48 hours and 50 days. The test results were less than 50% of what OHIO DOT allows when used for treating bridge decks. Chloride Penetration test rated as excellent since vary little chlorides entered the concrete, and finally ASTM C-779 Surface abrasion resistance, which shows up to 45% increase in abrasion resistance when using CHEMTEC ONE. This particular test is definitive proof that the mass and density of the concrete is increased.

I am sending a four page excerpt from a study done by the American chemical society in 1928 entitled Soluble Silicates in Industry. Even then there was acceptance that reactive silicates protected and enhanced the strength of concrete.

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Reactive silicates have been used as commercial floor hardeners for over 50 years and are widely accepted and specified in many projects each year. The reason these products have not been used to protect outside concrete infrastructures is, they did not work. CHEMTEC ONE is unique in the fact it is one of the only reactive silicates that can be used to harden industrial and warehouse steel troweled concrete surfaces and meet the requirements to protect, strengthen and seal concrete from the harsh effects of contaminants and weather in outside infrastructures.

I hope I have given you sufficient information to evaluate the benefits that CHEMTEC ONE can offer you. If you need anything else please call me.

Sincerely,

James W. Sist
President
CC: Tom White
Dennis Bennit

CHEMTEC ONE

Installation instruction for CHEMTEC ONE concrete protector.

CHEMTEC ONE is a proprietary blend of water diluted and carried reactive silicates and surface active agents... concrete treatment that penetrates the concrete's permeable zones producing a solid, insoluble, irreversible reaction products residing in the gel pores.. dramatically reducing porosity of the concrete...increasing adhesion qualities...maintaining the concrete's ability to breathe...chemically protecting, stabilizing and strengthening concrete.
CHEMTEC ONE WILL PROTECT, HARDEN, DENSIFY, STRENGTHEN, & INCREASE THE USEFUL LIFE OF YOUR CONCRETE

"THE ULTIMATE CONCRETE PROTECTION"
CHEMTEC INT'L **(513) 474-2090**
7771 WOODSTONE DRIVE, SUITE 100, CINCINNATI OHIO 45244-2855

WARNING AND STATEMENT OF HAZARD: IRRITATING TO SKIN, EYES, MUCOUS MEMBRANES OF THE RESPIRATORY AND DIGESTIVE TRACTS.

MODERATE HEALTH HAZARD...1,
MINIMAL REACTIVITY HAZARD ...0,
MINIMAL FIRE HAZARD...0,

WEAR PERSONAL PROTECTION WHEN USING CHEMTEC ONE: PROTECT YOUR EYES AND SKIN BY WEARING RUBBER GLOVES, SAFETY GOGGLES, FACE SHIELDS, STURDY WORK BOOTS, LONG SLEEVE SHIRTS AND LONG PANTS. IF MISTING OR SPRAYING WEAR MIST RATED BREATHING PROTECTION.

WARNING AND STATEMENT OF HAZARD CONTINUED:

- DO NOT INGEST BUT IF SWALLOWED DO NOT INDUCE VOMITING - SEEK IMMEDIATE MEDICAL HELP.
- IF SKIN CONTACT OCCURS, PROMPTLY WASH WITH WATER. IF EYE CONTACT OCCURS, IMMEDIATELY FLUSH WITH A DIRECT STREAM OF WATER FOR 15 MINUETS.
- IF IRRITATION OR ILL EFFECTS DEVELOP OR PERSIST SEEK IMMEDIATE MEDICAL HELP.
- TREAT ACCORDING TO THE INDIVIDUAL'S CONDITION AND SPECIFICS OF THE EXPOSURE.
- THIS FORMULA IS NOT SUBJECT TO RESTRICTIVE OR SPECIAL HANDLING DEFINED UNDER ENVIRONMENTAL REGULATIONS.
- KEEP CONTAINER CLOSED WHEN NOT IN USE. WHEN CONTAINER IS EMPTY, CONTINUE TO OBSERVE ALL SAFETY PRECAUTIONS.
- DO NOT REUSE CONTAINER UNLESS COMMERCIALLY CLEANED.
- REFER TO THE MSDS FOR ADDITIONAL HANDLING AND SAFETY INFORMATION.

WARNING: Wear personal protective clothing that will shield you from contact with this formulation. Avoid contact with skin. Avoid contact with eyes. Do not ingest. Ventilate the work area well. If a runny noise begins and persist go to fresh air until symptoms stop. If asthmatic symptom begin go to fresh air until they stop. Vapor rated respirators are recommended in closed areas if good ventilation can not be achieved. There are however no special handling requirements defined in environmental regulations. Preparation prior to working with **CHEMTEC ONE**... an alkaline soluble formulation that is likely to irritate on contact with the body. Wear face shields and safety glasses. Wear tough standard work boots. Wear long pants. Wear long sleeve shirts. Wear long gloves Wear other protective gear that is mandated by the environment.

HOW TO APPLY THE CHEMTEC ONE FORMULATIONS

PREPARATION: Prior to implementing the project. Remove debris from the concrete to be treated. Be sure to clean the concrete to a state which is water permeable and porus, use **CHEMTEC CONCRETE CLEANER** to prepare soiled concrete. Cover drains to prevent loss and waste of material. Install temporary fan or ventilation in enclosed areas. Bring opened container of the material or pumping system into the area to be treated. Bring tools for all members of the implementation team for the distribution of the material in the project area like squeegees, brooms, sprayers and so on. New floors do not need any preparation.

APPLICATION: Pre-determine the amount of formula (Gallons) that will be needed to complete the project.

A) Application on Steel troweled Surfaces: CHEMTEC ONE is applied in **ONE** application at a rate of 175 to 250 square feet per gallon. On new floors, you can install the formula as soon as possible after the finish troweling operation. After the surface is hard enough to walk on with out marking. Simply saturate the surface with the formula, keeping the entire surface wet for 30 to 45 minuets. Areas that puddle should be pushed to dryer areas with a bristle broom. Areas that dry prematurely, should have more formula pushed to it or be re-sprayed. After the floor has been keep wet for the proper amount of time, then, squeegee the formula off the surface and allow the floor to dry. On existing floors, thoroughly clean the floors so that they are water permeable. (Use CHEMTEC CONCRETE CLEANER to clean and degrease the floors). The existing floor must be completely dry. Use the same application as above except, brush the formula in with bristle brooms for 30 to 45 minuets to aid in penetration, then squeegee the formula off the surface and allow the floor to dry. A sheen will normally develop over time. **CAUTION: DO NOT** allow areas to puddle and dry as they will leave a hard white crystal on the surface. **B) Application on brushed finished fully cured surfaces such as bridge decks, roads, loading ramps, parking facilities, driveways and so on.** CHEMTEC ONE is applied in **TWO** applications at a rate of 100 to 150 square feet per-gallon for each application. Simply saturate the surface and let it dry using the following method. Puddling areas should be pushed over to dryer areas. Areas that dry prematurely should have more formula pushed to it or be re-sprayed. Brush the formula around the surface until it is absorbed in, then just let it dry. The goal is to get the proper amount of formula to penetrate as uniformly as possible. The second application is a repeat of the first application. **WAIT** a minimum of **6 hours** between applications. **CAUTION:** There must be a minimum of **12 hours** with **NO** water being allowed on the surface. **A quality control step to make sure you have reached proper saturation levels is to, take an eye dropper with muriatic acid with 28% HCL level and randomly test the concrete with a drop of acid immediately after the second application has dried. Put a drop of acid on the treated surface and observe it for a few seconds, then wipe it up. If you get very little to no reaction to the acid you have reached the proper saturation level. If it reacts you need to put more material on those areas until the acid does not react. C) Application on Vertical or underneath bridge decks or parking facility ceiling surfaces.** Because you are working against the force of gravity and using the wicking acting of the concrete to draw the formula in on these surfaces, you will need to apply CHEMTEC ONE at a slower rate with a minimum of two to three applications. Use a paint roller or a mist sprayer to apply the formula. The surface must be completely dry before proceeding. On vertical surfaces apply the formula starting at the top of the surface, working you way down. Apply the formula by saturation the surface, but not creating excessive run off. Wait until the surface is dry approximately 2 to 3 hours before applying the second and third applications. Use thee same procedure on each application. **When applying the formula on the underneath of bridge decks or parking facilities ceilings,** saturate the surface until the formula starts to drip back out. Wait until the surface is dry, approximately 2 to 3 hours and perform the second and third applications the same as the first application. This particular type surface application will take 3 application. Coverage will vary with particular concrete being treated, the temperature and the amount of wast generated by the applicator. Normal coverage rate for this type of application should bee 175 to 200 square feet per gallon for each application.

☛ It is likely that the treated concrete will have a brown tint when the project is complete that will not remain, but it is an indication that iron is present in the concrete. After the last application has dried traffic can return to the area. Roughly three hours after the completion of the project.

CHEMTEC ONE

"THE ULTIMATE CONCRETE PROTECTION"

Manufactured by

CHEMTEC INT'L **Cincinnati Ohio**

(513) 474-2090 Toll Free 1-888-889-7779 E-mail j. sist@worldnet.att.net

☛ **Please watch the weather reports,** it is crucial that the surface of the concrete not get wet for at least 10 to 12 hours after the final application of the product. Avoid applying or splashing on glass, painted surfaces, or aluminum. Product may stain these surfaces. Protect decorative fronts from contact. Keep out of traffic pattern when treating roadways or bridges . **DO NOT STORE IN ALUMINUM OR METAL CONTAINERS.**

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CONTENTS

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INTRODUCTION

CHEMTEC ONE is a chemical process that dramatically prolongs the useful life of your concrete, at the same time producing a striking reduction in capital projects normally associated with maintaining the viability of concrete structures. CHEMTEC ONE will save you money.

Concrete breaks down chemically before the physical evidence is manifested. Signs of deterioration are the first and strongest indication CHEMTEC ONE is appropriate for your concrete structures. The CHEMTEC ONE benefits . . . derived from the polymerization in the gel pores and micro cracks of concrete . . . include the chemical stabilization and strengthening of the concrete, inhibition of rebar corrosion by the raising of the alkalinity, direct encapsulation of the rebar, and the dramatic reduction of porosity. Our engineered process enhances the useful life of bridges, roadways, parking facilities , loading docks, ramps, runways, hazardous material containment facilities, floors, stadiums and other structures.

CHEMTEC FORMULATIONS SAVE YOU MONEY.

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AN ILLUSTRATION OF SOME COST SAVINGS BASED ON STATED ASSUMPTIONS FOR HIGHWAY BRIDGE DECK REHABILITATION. OTHER EXAMPLES ARE SIMILAR IN MAGNITUDE.

- Average highway bridge deck caps have a useable life span of 18 years.
- Bridge engineers have calculated that the average cost to rehab a bridge deck driving surface cap (roughly two inches) is about $45.00 per square foot.
- The average cost of protecting a deck in good condition with CHEMTEC ONE is but $0.75 per square foot or less, including the human resources to implement. Material cost runs an average of $0.30 to $0.35 per square foot.

An illustration . . .1,000,000 square feet of bridge deck caps will be rehabilitated during a 54- year- period, at a cost in today's money of $45.00 per square foot. Three rehabilitations will be completed over that period of time (every 18 years) with an expected total cost (in today's money) of $135 million. The extrapolation of the expected savings when CHEMTEC ONE is used assuming that we increase the useable life of the bridge deck surface by 10%, 20% and 30% follows:

- If only a 10% increase is achieved the useable life would be 19.8 years. From that we could expect only 2.72 rehabilitation projects in 54 years. The reduced total cost in today's dollars over that period of time may be roughly $126 million including the cost of CHEMTEC ONE yielding a savings of $9,000,000
- Similarly a 20% increase of useable life we can expect only 2.5 rehabilitation projects in 54 years yielding a savings of $20,000,000
- Finally a 30% increase of useable life we can expect only 2.31 rehabilitation projects in 54 years yielding a savings of $29,000,000

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QUESTIONS & ANSWERS
That may be helpful

References used were printed for Monograph Series Seminars sponsored by the American Chemical Society by James G.Vail, "Soluble Silicates in Industry" presented in 1928 and "Soluble Silicates Their Properties and Uses" presented in 1952.

How long have reactive silicates been used to protect and strengthen concrete?

Since the late 1800's.

What chemistry occurs when soluble silicates are applied to concrete?

An insoluble gel is formed in the gel pores and cracks that increases wear resistance, strength, reduces porosity, increases resistance to chemical attack (pp319, 1952)
It is fully established that portland cements after being fully set are improved by impregnating them with silicate solutions sufficiently dilute to penetrate deeply into the porous structure. Thus reducing permeability, increasing resistance to wear , reducing dusting, and reducing penetration by oil and aqueous solutions(pp447, 1952).

Is there a best time to impregnate the concrete with silicates?

Silicate treatment of concrete always gives it dramatic increases in resistance to abrasion and compression strength no matter when it is applied but the deepest penetration and quickest beneficial chemical reactions occur when the concrete has completed it's initial cure and is within the first decade of life (pp206, pp208, 1928.

Can the dusting of the concrete surface be stopped?

By increasing the hardness of the surface with silicates the dusting will be essentially stopped(pp206, 1928 , pp318, 1952).

Can one application achieve the desired saturation levels?

Repeated treatments with dilute soluble silicates are much more effective than a single treatment that may only achieve ½" penetration (pp 318, 1952).

Will the treatment of concrete protect it from organic acids?

Concrete silos for storing ensilage are protected from organic acids by treatments with soluble silicates (pp320, & fig 7.39)

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Q & A continued
Can soluble silicates be used as curing agents?

Soluble silicates used as curing agents with or without pigments have given good service on busy roads (pp315, & fig 7.35, 1952)
The use of silicates as a curing agent is also attractive because no expense is incurred to remove it before other coatings can be applied. The State of Ohio in it's summary of a field investigation (1934) states that after two years of service soluble silicate curing agents compared favorably with water curing as shown by core compression strength and very little evidence of scaling (pp449,450, & fig 4.44,4.45, 1952).

Can the concrete be tested to determine the depth of penetration?
The testing for depth of penetration is always a destructive test. One method is the removal of a core, cut wafers and doing compression tests. There will be increased compression strength to the depth of penetration. Half cell tests can be taken to test the passage of current at different levels. The treated area will allow less current to pass, which also is an indication that oxidation has been inhibited.
Another method is to apply the Continental method of observing the depth of penetration by sand blasting the core sample and observing the depth of the cut (pp208, 1928).
A core sample can be taken and broken. On the broken surface apply dilute HCl and then phenolphthalein indicator. Where the silicates have reacted the concrete will not change color (pp 315 & fig 7.36, 1952).

Are equal levels of penetration achievable in all concrete? Do old sealants have to be removed?
The denser the concrete the more dilute the silicate solution must be to achieve deep penetration (pp 318, 1952). The old sealants will block some of the passage of the silicates into the concrete and make the treatment somewhat less effective.

Will concrete treatment with Soluble Silicates prevent the flow of water?

Yes, concrete treated with soluble silicates prevented the flow of water with a 30 foot head while a steady flow penetrated the untreated control (pp317, & fig 3.37, 1952).

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GOOD... NOT SO GOOD CONCRETE... SAVING MONEY

Concrete is the most widely used construction material in the world. It is versatile, inexpensive and it can be cast in a variety of shapes. Yet, in time, any untreated concrete decomposes. Fortunately, new protective formulations, properly applied, offer cost effective, long-term protection extending a concrete structure's usable life.

You can avoid the deterioration of your concrete structures with the right protection. If you already have concrete that is deteriorated you can stabilize it with the right treatment, making repairing the structure a viable option.

Some of the elements that have an adverse effect on concrete are: The slump, for example--concrete's "mud" resistance to movement under its own weight--should be three inches or less to achieve a compression strength greater than 4000 psi. A greater slump indicates the presence of more water and porosity. This increases cracking caused by shrinkage during the curing process. Careful checking at each stage dramatically reduces this problem. Concrete when curing usually shows shrinkage cracks. These cracks worsen rapidly at higher elevations and latitudes as they go through the freeze-thaw cycle of winter. Surfaces pop and scale. Salts applied to de-ice surfaces will accelerate this freeze-thaw deterioration. Air entrainment can be the first line of defense against this deterioration -- the lose of air entrainment due to long mixing before delivery will dramatically reduce the concrete's flexibility.

Rotary-troweling to bring the Portland cement to the surface and produce a smooth appearance can cause delamination when done improperly -- by pulling excessive water up between the aggregate and the cement causing shallow potholes (from ¼" to ½"). A similar symptom is exhibited when water is added to the cement in the truck when delivery is delayed. Tapping the surface, producing a hollow sound, demonstrates the delamination's presence. The size and shape of

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the aggregate also play important roles in concrete's strength. Uniform formulation is critical to the strength of the concrete.

Internal steel reinforcement brings on other problems: Rust occupies three times the space of steel and exerts tremendous pressures on the concrete. The concrete will eventually spall and break away. The formation of deep potholes is the first outward symptom of rebar corrosion and the cause of most reinforced concrete failure. These delamination and spalling actions, combined with the rebar's rusting, can reduce a concrete structure's strength and usable life. Corrective action must be initiated at an early stage, if the structure's life potential and stability are to be fully exploited.

Acidic aggregates can cause (SAR) popping and cracking (looking much like shrinkage cracks but larger). Acids attack Portland cement, causing it to break down chemically and weaken. Concrete exposed to acidic environments should be protected. The longer corrective action is delayed, the more deterioration takes place, and the larger both the expensive repair costs and the reduction of the structure's potential usefulness.

Repair media like coatings and crack sealants fail, if applied incorrectly or to weak surfaces. Especially aged deteriorated concrete surfaces must be stabilized before repairs will be a viable option. They must first be treated, chemically, with materials that harden and stabilize the basic physical structure.

In short, age and the environment are concrete's enemies, inevitably causing its deterioration. The best way to delay this is to make certain that, during construction, only top quality materials and workmanship are used in each concrete structure. Today, contractors and structure owners can dramatically lengthen a concrete structure's life with treatment materials that will decrease the concrete's surface porosity, while hardening and strengthening it.

TREATMENT OF CONCRETE WITH THE CHEMTEC ONE PROCESS WILL PROLONG THE USEFUL LIFE OF THE STRUCTURE AND SAVE YOU MONEY

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CHEMTEC ONE Materials, Process, and Performance

Your project scope will be based on the specific degree of failure and service exposure. CHEMTEC INT'L Will provide CHEMTEC ONE to protect that will stabilize your concrete structures. CHEMTEC ONE is a reactive chemical penetrant which reverses and inhibits specific modes of deterioration, and chemically stabilizes concrete and inhibits rebar corrosion. Corrosion is a major cause of value loss in infrastructure investments. The oxidation process requires oxygen and water and is promoted by acid environments like acid rain, even the carbon dioxide in the air or chloride reaction products. It is inhibited by the absence of water and oxygen and the presence of an alkaline environments, cations, and barrier coatings that CHEMTEC ONE provides. CHEMTEC ONE formulations, applied properly, will resist penetration and reaction by organic and inorganic acids, bases and solvents. Experience has taught us that it is best to chemically stabilize the substrate before repairs are made and treating the repairs afterward will extend the useful life of the structure overall.

CHEMTEC ONE is a mixture of soluble reactive silicates and surface active agents. A water diluted formulation which penetrates into the concrete, reacting with free calcium containing materials and the acid in the environment, to form reaction products which reduce porosity and modifies chemical and physical properties of the concrete.

TECHNICAL DATA: 1) pH - 11.2 2) Solubility - Complete in water 3) Density - 9.75 lbs./gal.

CHEMTEC ONE is applied by flooding horizontal surfaces and by spray application for vertical and overhead surfaces gaining maximum penetration and minimum surface build up to the concrete surface, within a few hours measurable results are achieved . Projects in the past with reactive silicates have yielded results such as:

- Reduces porosity and liquid penetration by up to 90% short term exposure
- Increases hardness of new concrete by as much as 10%
- Increases hardness of deteriorated soft concrete by up to 50%.
- Increases compression strength of new concrete by up to 10%
- Increases compression strength of deteriorated concrete by up to 50%.
- Newly treated concrete will have minimal to no reaction with concentrated HCl.
- Reduces soluble chloride content as much as 50% at level of penetration in old concrete.
- Functions as surface contact corrosion inhibitor for steel
- Reduces rate of rebar corrosion by a factor of 2 determined by electrical measurements.
- Reduces chloride penetration into new concrete by 30% at level of penetration.
- Treated concrete's reactivity to chemical attack is dramatically inhibited.

NOTE: CHEMTEC ONE reacts with iron oxide which inhibits rust and for that same reason many times there is enough iron in the concrete itself that iron is purged to the surface leaving a brown tint on the concrete surface that will wash away in time.

PROJECTS EXHIBITING TOTAL QUALITY ARE THE ONLY PROJECTS WE ARE WILLING TO BE INVOLVED IN . . . ALWAYS HELPING YOU REDUCE THE IMPACT ON YOUR STRUCTURES NORMAL OPERATIONS.

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Concrete Stabilization and Protection with CHEMTEC ONE

Extend the useful life of your concrete structures and facilities by using our chemical treatments. We can help you treat: Horizontal -- Vertical -- Overhead -- Poured in Place -- Steel Reinforced -- Precast -- Parking Garage Decks -- Floors, Walls -- Bridge Decks -- Roadways -- Piers, Bents, Beams, Parapets -- Airport Taxi Runways and Loading Aprons -- Tunnels, Walls and Dams -- New and Aged Concrete facilities and structures.

Our concrete protection and rejuvenation process effectively inhibits and in many cases reverses specific modes of concrete surface and structural deterioration such as: Corrosion of Steel -- Surface Delamination and Spalling -- Surface Scaling -- Carbonation and Sulfonation -- Aggregate Popping (Silica Alkali Reaction) -- Water Penetration -- Cracking -- Abrasion -- Acid and Alkali Attack -- Joint and Seal Failure

This chemical concrete structure protection and stabilization process achieves significant measurable results by: Reducing water soluble chlorides -- Reducing porosity -- Sealing micro cracks -- Inhibiting reinforcing steel corrosion -- Inhibiting water and salt penetration -- Hardening and strengthening surface -- Increasing compression strength -- Minimizing water vapor transmission -- Resisting attack by acids and alkalies -- Neutralizing chemical decomposition.

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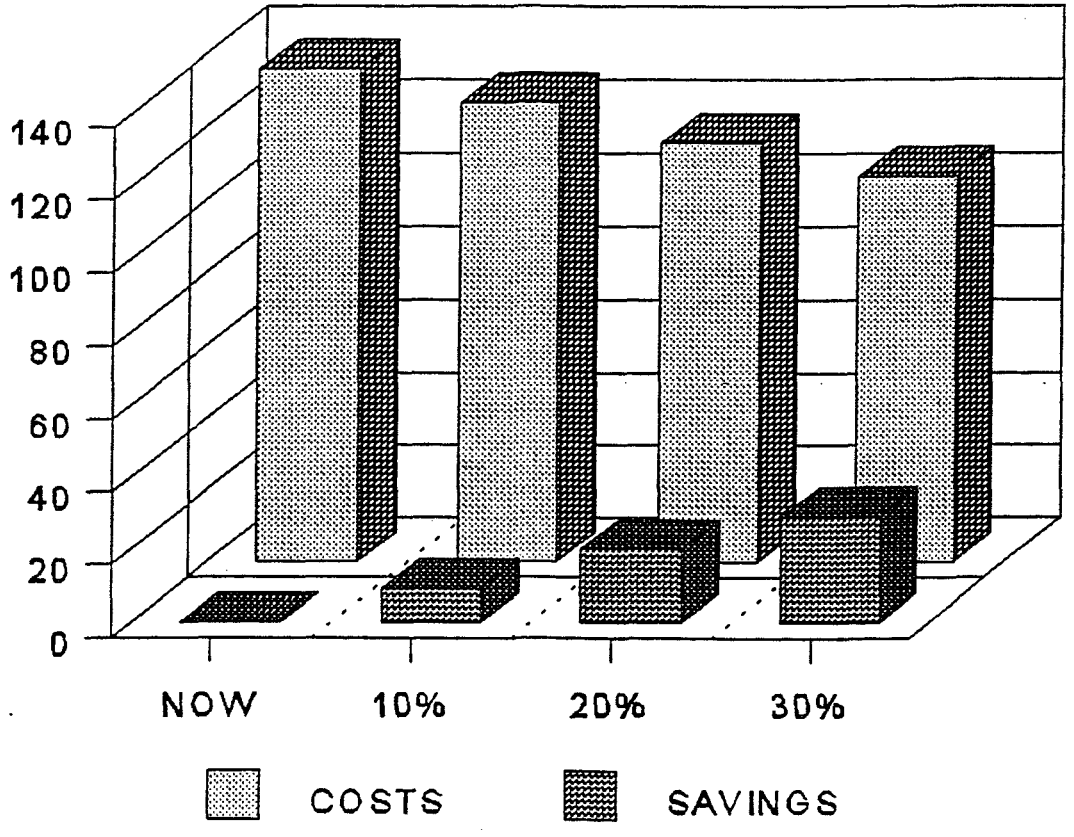
CHEMTEC ONE will increase the useful life of your concrete and can save you millions. This chart illustrates the savings from increased life expectancies for bridge decks over a 54 year period. It has been suggested that highway departments will spend $135 million to rehabilitate a million square feet of bridge deck caps in that time frame.



The savings and reduced costs are illustrated in millions of dollars, and are based on the prolonged life achieved in 10% increments when using the CHEMTEC ONE treatment process. Similar savings can be yours.

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AN ILLUSTRATION OF SOME COST SAVINGS BASED ON STATED ASSUMPTIONS FOR HIGHWAY BRIDGE DECK REHABILITATION. OTHER EXAMPLES ARE SIMILAR IN MAGNITUDE.

- Average highway bridge deck caps have a useable life span of 18 years.
- Bridge engineers have calculated that the average cost to rehab a bridge deck driving surface cap (roughly two inches) is about $45.00 per square foot.
- The average cost of protecting a deck in good condition with CHEMTEC ONE is but $0.75 per square foot or less, including the human resources to implement. Material cost runs an average of $0.30 to $0.35 per square foot.

An illustration . . .1,000,000 square feet of bridge deck caps will be rehabilitated during a 54- year- period, at a cost in today's money of $45.00 per square foot. Three rehabilitations will be completed over that period of time (every 18 years) with an expected total cost (in today's money) of $135 million. The extrapolation of the expected savings when CHEMTEC ONE is used assuming that we increase the useable life of the bridge deck surface by 10%, 20% and 30% follows:

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WHAT THE CHEMTEC ONE PROCESS CAN DO.

1) Reduce the porosity of existing concrete.

2) Increase the Hardness of new and deteriorated concrete.

3) Increase Compression Strength of new and deteriorated concrete.

4) Reduce Chloride Penetration.

5) Inhibit chemical attack of treated concrete.

6) Form a gelling to a solid polymer in the micro cracks and gel pores.

7) Retard scaling of high strength concrete

8) Raise the pH of deteriorated concrete

WHAT THE CHEMTEC ONE PROCESS WILL NOT DO.

1) Make good concrete out of bad concrete.

2) Correct structural deficiencies .

3) Correct substrate or erosion problems.

4) Seal large cracks (Designed to fill allegator and shrinkage cracks)

5) Stop scaling of high slump or non air entrained concrete.

6) Fill large voids in concrete do to high water content prior to curing.

SEALER PRODUCT INFORMATION PRO-TECH

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LAIDLAW Environmental Services Inc,
Dennis Bennett, Director
1301 Gervais Street , suite 300
(Post Office Box, zip code 29211)
Columbia, South Carolina 29201 803-933-4282 voice 4310 fax 16 December 1998

RE: Chemical treatments for enhancing the physical and chemical properties of concrete and a none solvent based oil and grease build-up emulsifier / cleaner.

Dear Dennis,

I expect I will be in Columbia in mid February perhaps we can arrange a meeting of the minds at that time. I wanted to introduce myself before then. Mark Attaway thought it would be a good idea if we talked. I think our products that will be most useful for you will be our original PRO*TECH and our new PRO*TECH SIL but I think you should look at this corrosion protection that we have just brought on line from CORTEC, you may have some applications for it that may be a fit. The concrete industry has learned a lot about repairing concrete and keeping it in good condition in recent decades.

PRO*TECH™ is designed to be impregnated into existing concrete and calcium containing masonry any time from just after finishing to decades old -- to make it harder, stronger, increase chemical resistance, increase abrasion resistance, dramatically reducing porosity, and stabilize the concrete electro chemically. With our **PRO*TECH SIL** you can additionally repel water in the conventional sense. We can eliminate sodium blooming with our **PRO*TECH RB**. Due to the simplicity of our application methods unskilled human resources can safely apply PRO*TECH™ and achieve the desired end for much less cost than would be expected. PRO*TECH™ is flooded on the surface. One person can apply material on 5,000 to 10,000 square feet per hour. The PRO*TECH™ treatment will yield an easier to clean surface that is chemically resistant so that even acids, solvents and salts will have little impact as compared to nontreated contrete.

You have a great deal of surface that if it were abrasion resistant, chemically resistant and water repellent and had a corrosion inhibition system in place the cleaning and maintenance could be reduced which would leave your human resources to do more pressing work that is directly related to the profitability of your company. Application of the PRO*TECH treatments for most of your concrete will likely absorb at a rate from 100 to 150 square foot per gallon. Your investment to protect that concrete, that may cost you 2 or 4 dollars a square foot or more, with our standard **PRO*TECH™** can be as low as 4 cents per square foot.

The primary loss of infrastructure capital loss in the world is caused by corrosion of reinforcement steel, you may be experiencing the same. With migrating corrosion inhibitors from CORTEC -- our **PRO*TECH MCI** can give your infrastructure year---s more useable life. Through a licensee agreement with **CORTEC Corp**, ROBINSON International can help you get much longer life out of your concrete. We can also provide you with the CORTEC Admixtures for your new construction. I have included the cut sheet for the **MCI 2000** Admix by **CORTEC** that is for that new construction, which utilizes the same technology that you can have with our **PRO*TECH MCI** surface impregnating treatment that is for existing infrastructure and surfaces. We can help.

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I am sure you will agree that with material costs that start well under a nickel a square foot, **ROBINSON International** offers you an opportunity to maintain longer lasting concrete surfaces very cost effectively, that look better and require less maintenance. I would like to suggest that your international volume would justify a pricing category similar to a high volume contractor and we can enter into an agreement where by your cost per 55 drum could be as low as 20% less than the truck load pricing identified below plus freight and taxes FOB, x-works Cincinnati, OH. We could ship the PRO*TECH products to the sites as you need it so that you wouldn't have to warehouse it.

OUR CURRENT PRICING STRUCTURE

TRUCK LOAD & Contractor Pricing	10 COUNT 55 Gallon Drums	Single Drum End User Pricing	
$987.75	$1,234.69	$1,382.85	PRO*TECH RB MCI SIL
$802.92	$1,003.65	$1,124.09	PRO*TECH RB MCI
$615.48	$769.35	$861.67	PRO*TECH RB SIL
$430.65	$538.31	$602.91	PRO*TECH RB
$356.40	$445.50	$498.96	PRO*TECH
$541.23	$676.54	$757.72	PRO*TECH SIL
$728.67	$910.84	$1,020.14	PRO*TECH MCI
$913.50	$1,141.88	$1,278.90	PRO*TECH MCI SIL

USE THIS (20% DISCOUNT- BASED ON VOLUME)

Thank you for your time. I am enthused about whole line of new products. The products that you have been waiting for, are here now. I look forward to doing business with you in 1999.

Doug Robinson

Doug Robinson

ROBINSON International Inc.

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PROPER DESIGN, MIX, PLACEMENT AND CURING PROCESSES YIELD A FAR SUPERIOR CONCRETE. IF IT IS PROTECTED ITS USEFUL LIFE WILL BE EXTENDED. PRO*TECH™ YOUR CONCRETE ASSETS. SAFEGUARD YOUR BOTTOM LINE.

ELIMINATE SODIUM BLOOMING, ADD MIGRATING CORROSION INHIBITORS AND WATER REPELLENCY AND YOUR CONCRETE ASSETS WILL BE SAFE.

UPGRADE TO OUR NEW "PRO*TECH RB" "PRO*TECH RB, SIL" "PRO*TECH RB, MCI" "PRO*TECH RB, MCI, SIL" NOW.

All of our PRO*TECH™ line of treatments begin with our safe, water soluble, alkaline, reactive silicate solution. PRO*TECH™ reacts with the water soluble salt and metals in the capillaries, gel pores, and micro cracks of the concrete to form insoluble, irreversible stable reaction products. The new compounds modify the concrete's chemical and physical properties, increasing abrasion and chemical resistance, hardness and strength, reducing surface tension, and dramatically reducing permeability.

PRO*TECH™ is applied to clean, physically stable, water-permeable concrete -- flooding surfaces, ensuring maximum penetration then rinsing and brooming off ponded excess material. Coarser profile surfaces will absorb much more material to achieve saturation and in that scenario there is no need to rinse the surface. Surface buildup or glaze is your indication that optimal performance is at hand.

APPLYING a silicate concrete enhancer to achieve a shiny hard surface on a burnished slab can be very cost effective. Application rates exceeding 10,000 sq/ ft/ hr and 250sq/ft/gal can be expected.

PRO*TECH RB was developed specifically for use on a burnished floors to eliminate the blooming that most other silicate products including our original treatment suffer from. The application of **PRO*TECH RB** is much less labor intensive than the majority of other silicate products. It is accepted practice to impregnate the concrete with silicates before the bond release agents for the tilt-ups are applied but it is imperative to rinse off the silicate treatment before the bond release agent is applied.

CURING CONCRETE WITH PRO*TECH™ yields numerous additional benefits when compared to water curing defined in the ASTM C309 standard. At the June 1998 ASTM meeting it was confirmed that a concrete placer will be in complete compliance with the C309 concrete curing standard when PRO*TECH is applied and then covered with an impermeable layer such as 4 mil plastic for the term defined in the standard for water curing.

An excerpt from the 1952 American Chemical Society, Monograph Series Seminar by James G. Vail, "Soluble Silicates Their Properties and Uses": *Soluble silicates used as curing agents with or without pigments have given good service on busy roads (pp 315, & fig 7.35).* Also he reports from the 1934 ODOT field investigation summary that, *after two years of service, soluble silicate-curing agents compared favorably with water-curing as shown by favorable core compression strength (pp, 450, fig 4.44, 4.45).*

An article in the Feb '97 JPCL The author reports that -- Impregnating an on grade concrete slab with soluble reactive silicates is the first line of defense against moisture vapor transmission.

USE PRO*TECH™ ON ANY CONCRETE ANYTIME FROM FINISH TO DECADES OLD. CONCRETE BREAKS DOWN ELECTRO-CHEMICALLY BEFORE PHYSICAL DETERIORATION IS EXHIBITED. VISIBLE SIGNS OF DETERIORATION ARE YOUR FIRST CLUE THAT PRO*TECH™ TREATMENTS ARE NEEDED AT ONCE.

Corrosion of the reinforcement steel is a major cause of value loss in infrastructure investments. It is promoted by the presence of oxygen and water in an acidic environment. The acidic environment is likely to be caused by acid rain, carbon dioxide, and chloride reactions in concrete all of which lower the pH exacerbating the problem. This destructive chemical process is inhibited by the presence of positively charged compounds and the alkaline environment that is provided by PRO*TECH™. PRO*TECH™ also reacts with iron oxides on the rebar forming barrier compounds that help to inhibit oxygen and water passage which tends to diminish the problem and now with the addition of CORTEC's Migrating Corrosion Inhibitor (MCI®)that reacts directly with the ferrous rebar to inhibit its reactivity corrosion can be history. **PRO*TECH with MCI will inhibit that corrosion, extending the useful life of your concrete, putting off those capital replacement projects.**

This protection can be enhanced to the next level by adding water repellency to the treatment. Our water repellency designation is SIL. The result is with one application of our **PRO*TECH RB, MCI, SIL** you will increase abrasion resistance and chemical resistance, increase hardness and strength, reduce porosity, inhibit corrosion deep in the concrete, and increase surface tension thus increasing water repellency

YOU HAVE A CHOICE NOW

ROBINSON International Inc.

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PRO*TECH™ YOUR CONCRETE ASSETS. SAFEGUARD YOUR BOTTOM LINE.

PROPER DESIGN, MIX, INSTALLATION AND CURING PROCESSES YIELD A FAR SUPERIOR CONCRETE.

CLEAN IT FIRST WITH METSO 66

THE FIRST STEP TO APPLY PRO*TECH OR ANY COATING IS TO CLEAN THE SURFACE.

METSO 66 is an alkaline metasilicate cleaning compound that will effectively remove mineral oils and greases from concrete, masonry, metals, and rubbers by emulsifying them and floating the embedded soils and oils to the surface to be removed. METSO 66 is manufactured by PQ Corp and ROBINSON International Inc. will ship it to your facility.

METSO 66 cleaner is fresh smelling, complete, safe and easy to use.

METSO 66 is a strong alkaline, containing sodium metasilicate pentahydrate, sodium carbonate , and a sodium salt of rosin fatty acid mixture. It is not flammable, or toxic. It does not contain any solvents.

APPLICATION:

- Wet the surface with warm or cold water.
- Broadcast the METSO 66 on to the wet surface at an average rate of about 2 pounds per 100 square feet or less.
- Allow at least 10 minutes to lapse while chemical reactions occur.
- Scrub with hand or power equipment.
- Rinse with water.

WE CAN HELP.

*NOTE: PRO*TECH™concrete treatment is a safe, water soluble, alkaline, reactive silicate, heavier-than-water solution. PRO*TECH™ is applied to* ***clean****, physically stable, water-permeable concrete by flooding horizontal surfaces, assuring maximum penetration exhibited by surface buildup. PRO*TECH™ reacts with the free calcium in the capillaries, gel pores, and micro cracks of the concrete to form insoluble, irreversible stable reaction products. The new compounds modify the concrete's chemical and physical properties, increasing abrasion and chemical resistance, hardness and strength, and reducing porosity. By treating your concrete with PRO*TECH™ you can expect that the concrete will be easier to clean, dusting will be reduced to a minimum. The bottom line is that you will get a longer usable life from the concrete with much less maintenance.*

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*PRO*TECH™ ENHANCES THE PHYSICAL AND CHEMICAL PROPERTIES OF CONCRETE:*

- *Reduces staining and the labor and materials required to clean the concrete by dramatic reduction of porosity.*
- *Reduces dusting and loss of surface by increasing abrasion resistance.*
- *Reduces impact damage by increasing hardness .*
- *Reduces scaling and other damage caused by chemical attack by increasing chemical resistance, reduces porosity, and maintaining alkalinity.*
- *Reduces frequency of damage caused by moisture vapor transmission by dramatic reduction of porosity.*
- *Reduces corrosion of steel re-enforcement by reducing porosity, maintaining alkalinity, reducing chemical reactivity in the concrete, and chemically reacting and complexing existing oxidation.*
- *Reduces cost of application of penetrating sealants and increases its durability and longevity by reducing porosity, and increasing abrasion resistance.*
- *Increases adhesion --after the removal of the application surface build up -- of coatings by chemically stabilizing the surface and reducing surface tension.*
- *Increases the shine and reduces the maintenance of burnished steel troweled warehouse floors by reducing porosity, increasing hardness, increasing abrasion resistance. PRO*TECH RB will leave no sodium carbonate bloom*

Limited Warranty Summary:
During the certification process a warranty time period is defined -- at least two years. If a significant amount of deterioration is exhibited on a certified application project, ROBINSON International Inc. will be happy to provide sufficient quantities of PRO*TECH to retreat the specific areas of the certified project that are exhibiting deterioration. Certification, warranty documents and definitions are available on request.

A few of the major companies that have used soluble reactive silicates successfully from Douglas Robinson since 1992:

Flour Daniel and Westinghouse Environmental at Fernald, Ohio, RCRA warehouses and storage pads. Strengthen concrete, resist attack and penetration from organic and corrosive liquid 1992 to '95 totaling over 250,000 square feet.

USPCI / LAIDLAW Environmental Services. At several sites -- protect concrete in hazardous materials handling enclosures. '95, '96, '97 and '98.

IMC Agribusiness Inc. At several sites -- protect concrete in secondary containment, chemical processing '95, '96, '97, and '98.

Cincinnati United Contractors. At several sites - chemically protect, stabilize, strengthen and harden walk areas, loading docks, parking lots, warehouses, '95, '96, '97, and '98 totaling over 400,000 square feet.

HELPFUL QUESTIONS and ANSWERS

Excerpts from the American Chemical Society, Monograph Series Seminars by James G. Vail, "Soluble Silicates in Industry" presented in 1928 and "Soluble Silicates Their Properties and Uses" presented in 1952.

What occurs when silicates are applied to concrete?

An insoluble gel is formed in the gel pores and cracks that increases wear resistance, strength, reduces porosity, increases resistance to chemical attack (pp 319, 1952).

It is fully established that Portland cements are improved by impregnating them with silicate solutions sufficiently dilute to penetrate deeply into the porous structure. Thus reducing permeability, increasing resistance to wear , reducing dusting, and reducing penetration by oil and aqueous solutions. (pp 447, 1952).

Can one application achieve the desired saturation levels?

Yes, but many finish profiles require multiple applications to achieve the desired results. (pp 318, 1952).

How often does this treatment have to be repeated?

Typically this treatment does not have to be repeated ever because the reaction products that produce these desirable benefits are not soluble and are not reversible.

Can the dusting of the concrete surface be stopped?

For all practical purposes, yes, by increasing the hardness of the surface by impregnating it with soluble reactive silicates the dusting will be stopped (pp 206, 1928 , pp 318, 1952).

Will concrete treated with soluble silicates prevent the flow of water?

It can. In one test, concrete treated with soluble silicates prevented the flow of water with a 30 foot head while a steady flow penetrated the untreated control (pp 317, & fig 3.37, 1952).

NOTE: Add mixes or treatments with silanes or siloxanes or crystalline silicates or colloidal silicates are typically required to achieve water proof concrete.

Is there a best time to impregnate the concrete with silicates?

Silicate impregnating treatment of concrete always gives it dramatic increases in resistance to abrasion and compression strength no matter when it is applied but the deepest penetration and quickest beneficial chemical reactions occur when the concrete has completed it's initial cure and within the first decade of life. (pp 206, 208, 1928).

Will the treatment of concrete protect it from organic acids?

Concrete silos for storing ensilage are protected from organic acids by treatments with soluble silicates. (pp 320, & fig 7.39, 1952).

Are equal levels of penetration achievable in all concrete?

No. The process is self adjusting, denser concrete needs less protection and less silicate solution will be absorbed (pp 318, 1952).

ROBINSON International Inc. When in Cincinnati, OH - - call us @ 637 - 5368
Douglas S. Robinson Our Home Page http://home.fuse.net/robinson_international
Post Office Box 24 Fax us @ 812 - 637 - 5918, Car phone @ 513 - 403 - 8882
New Trenton , IN 47035-0024 U.S.A. E-mail: protech@fuse.net Call us Toll free @ 888 - 345 - 8887

PRO*TECH™ general specification

An alkaline soluble reactive silicate impregnating concrete treatment that reacts with the free calcium in the concrete and acids in the environment to form insoluble non-reversible reaction products in the capillaries, micro-cracks and gel-pores in the concrete anytime from immediately following finishing to decades old.

Used to harden, strengthen, increase abrasion resistance, increase chemical resistance, reduce porosity, and chemically stabilize existing concrete as a stand alone protection system or as a primer for other coatings or sealants to enhance the durability of the concrete and the coating or sealant.

The viscosity is such that on a brush finished cured concrete surface it will require at least two flooding applications to saturate the concrete to the point that surface build-up is exhibited.

When PRO*TECH™ is used to cure concrete when following the ASTM C-309 standard precisely, you will be required to flood the surface and then cover the surface with an impermeable layer such as clear 4 mil plastic which is a similar process as water curing except it is less costly and the curing process will be extended yielding better concrete

Total application rates will vary on aged porous surfaces to new tight burnished surfaces and will be between 50 and 300 square feet per gallon depending on concrete specifications and porosity. For applications on burnished steel troweled smooth surfaces it is imperative that you use of our PRO*TECH RB to eliminate the sodium carbonate blooming. Typically a single application will achieve the desired results at 250 plus square feet per gallon and better, and at 10,000 square feet per hour.

On more porous surfaces, standard PRO*TECH should be used, because blooming is not an issue, a quality assurance step should be performed after the expected final application when the surface is dry (2 to 4 hours at 70° F) -- a drop of 30% hydrochloric acid applied to the surface will not react with the concrete because of the glaze on the surface. The drop will appear like a drop of water. If tested after only the first application some reaction will likely still occur which indicates that another application of PRO*TECH is required to reach optimal saturation levels.

*Limited Warranty summary: During the certification process a warranty time period is defined -- at least two years. For a maximum period of twenty years from the original invoice date if significant deterioration is exhibited on a certified application project, ROBINSON International Inc. will be happy to provide sufficient quantities of PRO*TECH to retreat the specific areas of the certified project that are exhibiting deterioration. The ROBINSON International Inc. liability shall be limited in all events to supplying sufficient product to retreat the specific area to which a defective product has been applied. Certification questionnaire, warranty documents and definitions are available on request.*

All calcium containing materials, concrete to lime stone, are always enhanced in some way by impregnating them with a soluble reactive silicate solutions making the concrete harder, stronger, dramatically increasing abrasion resistance, dramatically reducing chemical reactivity, and dramatically reducing porosity thus reducing , dusting, erosion, corrosion, and staining.

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TYPICAL TEST RESULTS FOR CONCRETE IMPREGNATED WITH GENERIC SOLUBLE REACTIVE SILICATES:

Virtually all alkaline soluble reactive silicate compounds impregnated into concrete will achieve similar results when application standards are met. These test results were extracted from many sources and should only be used as a guide. We caution that test results are generally not consistent because application methods will differ and concrete is not consistent. For example a concrete mix of .20 water to Portland cement ratio will have different results then a concrete mix with a .60 water to Portland cement ratio. Concrete with only large aggregate will have different results then concrete made with mixed size or small aggregate. Application rates vary depending on the porosity of the concrete or masonry.

The proper application is critical to achieve excellent optimal results. Standards required -- the concrete must be porous and water permeable before treatment begins and the concrete must be saturated with the silicates to finish. ***Burnished power steel troweled floors typically achieve required saturation levels with one application.***

- Compression Strength: ASTM C-42 increased by 300 to 2000 psi depending on original strength and number of applications. Flexural Strength: increased by greater than 25%.
- Increased Hardness: ASTM C-418 -- to 15% increase in hardness in new concrete. ASTM C-414 -- to 65% increase in hardness of deteriorated concrete. ASTM C-501-- 1000 cycles - as much as 40 % increase in wear index.
- Increased Surface Adhesion: No failure of epoxy bonded to treated surface.
- Reduced water penetration: As high as 100% resistance - 14 days exposure to a 6" head. 75% resistance - 28 days exposure to a 6" head. 90% resistance - 24 hours at 100 psi.
- Freeze thaw cycle damage resistance: ASTM C-672 -- 50 cycles no surface loss. ASTM T-161 -- as high as 140 cycles no scaling.
- Reduced Rebar Corrosion Potential: ASTM 876 -- Half cell potential - reduced by as much as 70%.
- Chloride Penetration Resistance: AASHTO T-250 -- as much as 30% Decrease at 1". ASTM C-672 -- as much as 40% decrease at 2". Soluble Chloride Reductions: Reduced by as much as 55% at 1" and reduced by 65% at 2".

NOTE: The major point that must be made is that Chlorides no longer react with the soluble components of the concrete up to the depth of penetration thus the pH remains high eliminating a major environmental factor required for oxidation .

- Reduced Chemical Reactivity: We have listed some chemicals that have had relatively little impact on silicate treated concrete in the field, solvents, bases, acids and salts.

  Inorganic acids, Hydrochloric - 32%, Sulfuric - 98%, Sulfuric - 50%, Concentrated Nitric.
  Organic acids, Acetic - Glacial, Acetic - 50%, Citric - Aqueous Solution, Amino Acids.
  Inorganic bases, Sodium hydroxide - 50% solution, Potassium hydroxide - 50% solution.
  Aggressive organics, Acetone, Chloroform, Trichloroethylene, Xylene, Benzene, Methanol, Dimethyl sulfoxide, Tetrahydrofurane, Dimethyl Acetamide. ***We suggest that many other chemicals will likely have little impact on PRO*TECH treated concrete.***

Quality Control -- After the expected finish application and the surface is dry (2 or 3 hours), a drop of Hydrochloric Acid or equal is applied. If the Hydrochloric Acid still reacts (exhibiting foaming) with the concrete then you will have to apply additional material if no reaction occurs the concrete has been saturated by evidence of surface build up and you are done.
NOTE: ***This Quality Control test is to determine saturation levels only, it is not a test of performance.***

When soluble reactive silicates are used to cure concrete when following the ASTM C-309 standard precisely, you will be required to flood the surface and then cover the surface with an impermeable layer such as 4 mil plastic which is a similar process as water curing except it is less costly and the curing process will be extended yielding better concrete.

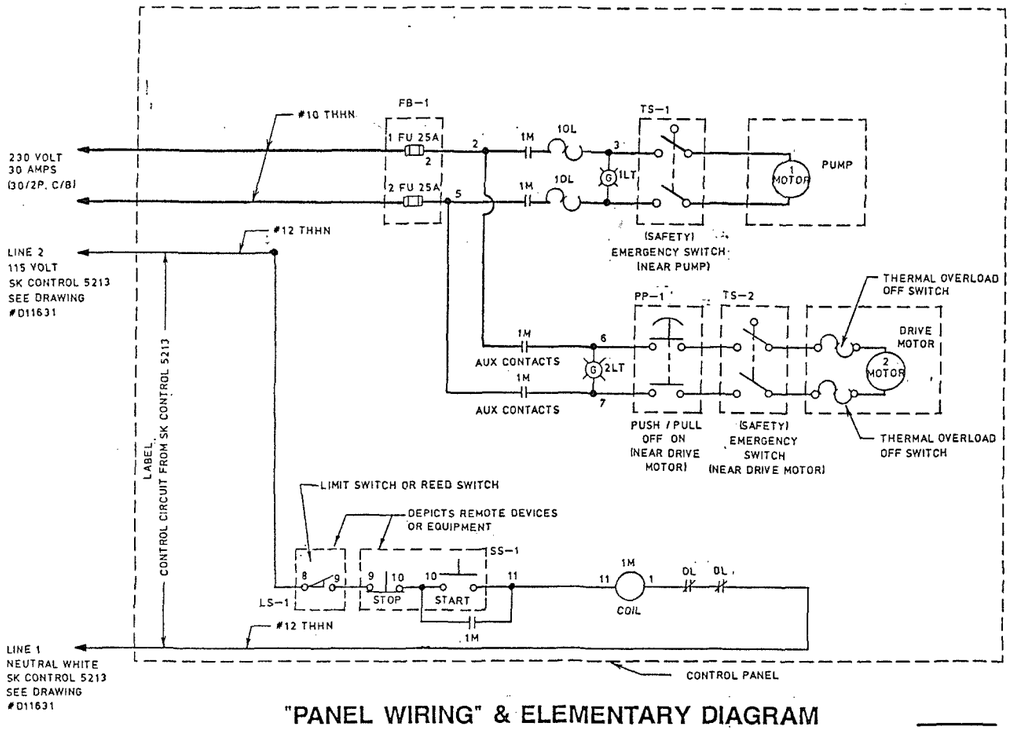
We Purchase Our Silicate Raw Materials from PQ Corporation, Valley Forge, Pennsylvania, U.S.A.

PQ Corporation Raw Materials Meet These Standards and Have These Approvals:

- US Military Specification MIL-W-15117B (drinking, canned, and emergency water)
- FDA GRAS status (generally recognized as safe)
- FDA #21CRF-182.90 approval for food contact
- ANSI / NSF schedule 60, water treatment
- AWWA / ANSI B404-87

YOU HAVE A CHOICE NOW

Appendix F
Engineering Drawings of Barrel Washers

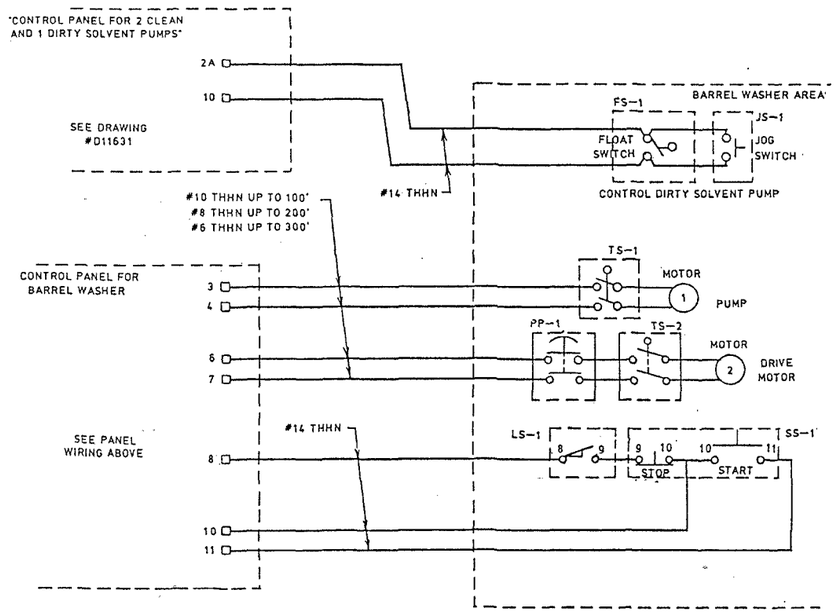


"PANEL WIRING" & ELEMENTARY DIAGRAM

N.T.S. (ONE BARREL WASHER)

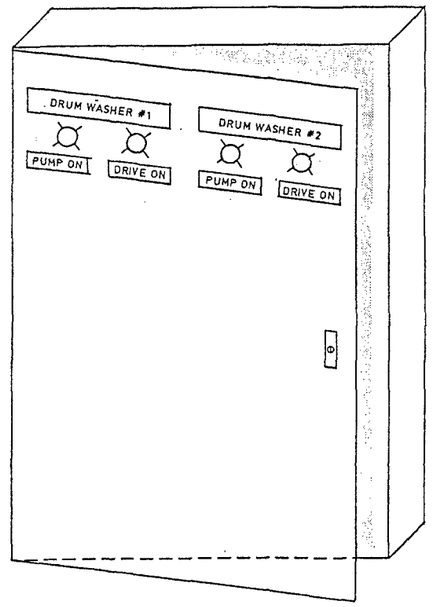
POWER WIRING

CONTROL WIRING

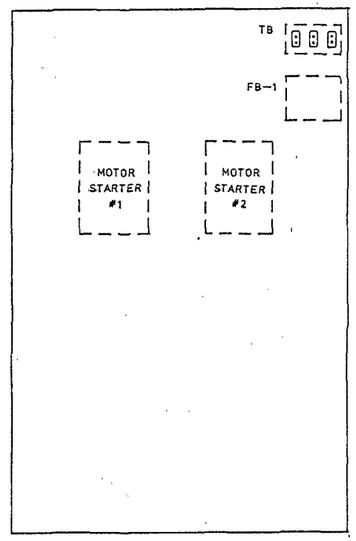


WIRING DIAGRAM

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 ELUSES 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 BR205
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				

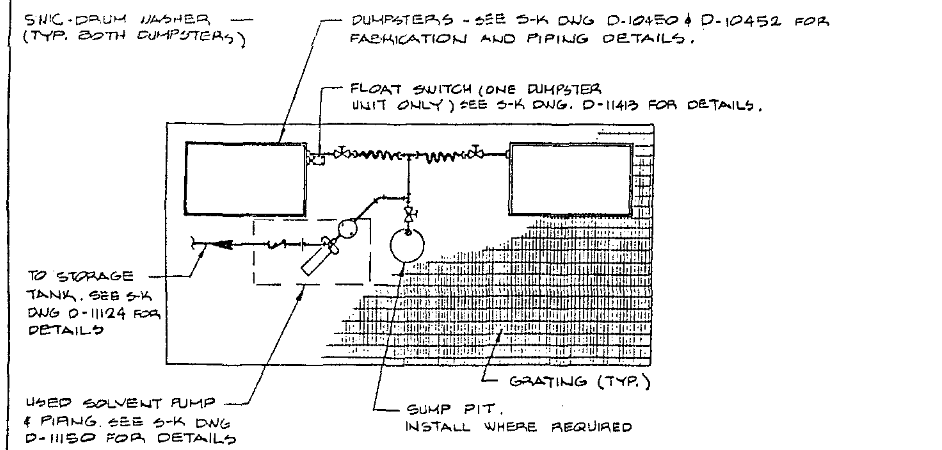
TITLE

ELECTRICAL CONTROL PANEL FOR DRUM WASHER "90"

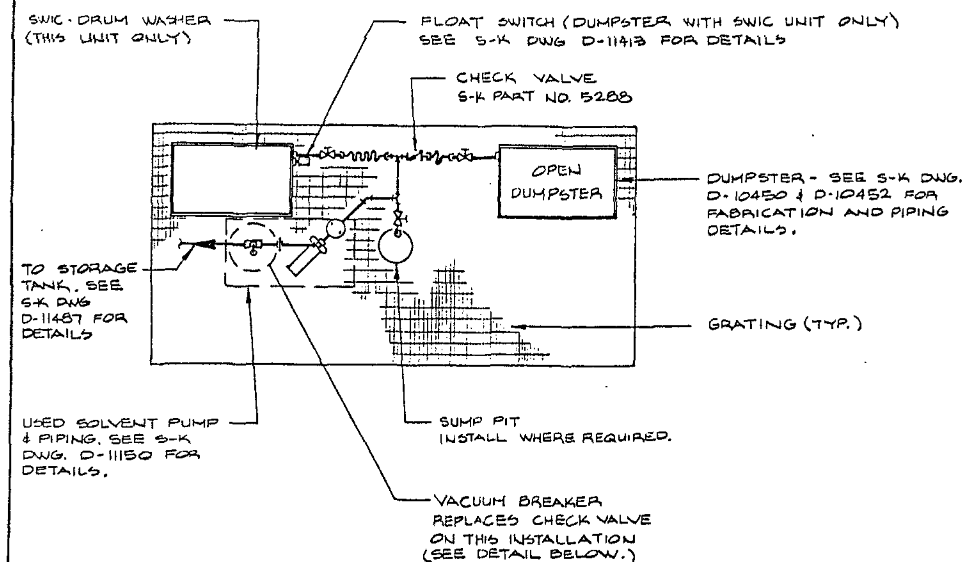
SAFETY-KLEEN CORP.

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

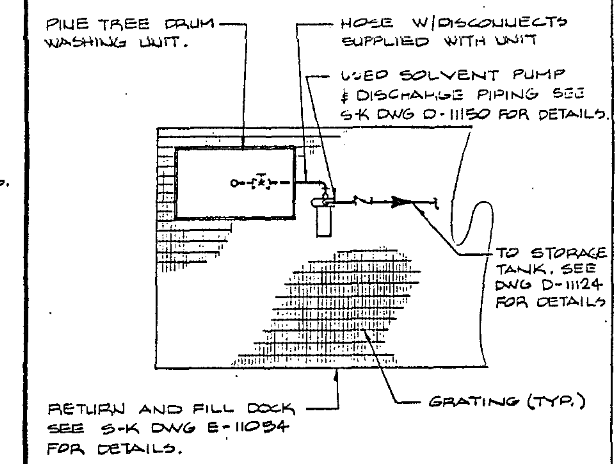
PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		NONE	DK	
BRANCH		DRAWING NO. D-14289		REV.



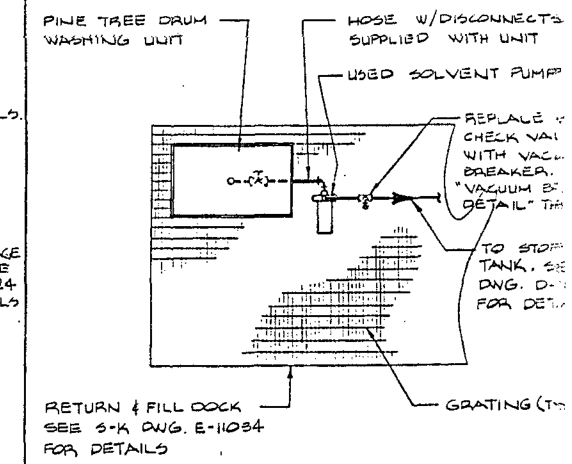
DOUBLE SWIC INSTALLATION
W/ ABOVE GROUND STORAGE



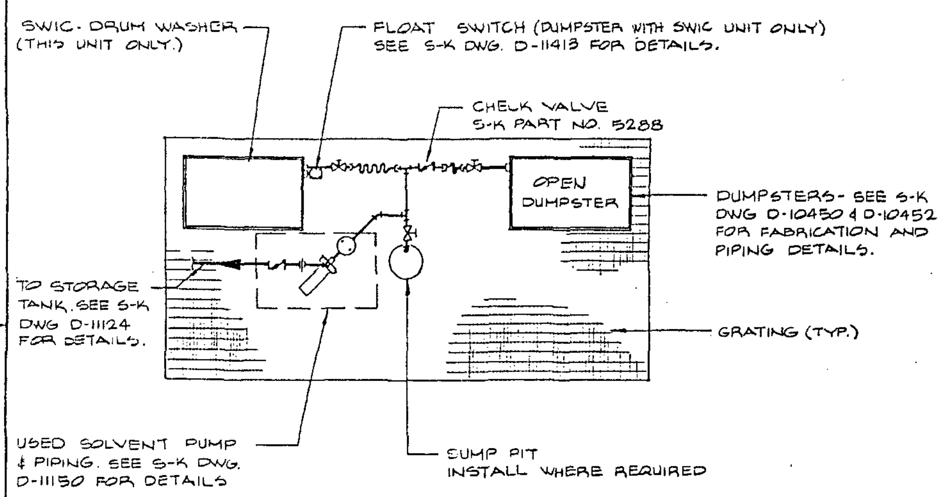
SINGLE SWIC INSTALLATION
W/ UNDERGROUND STORAGE



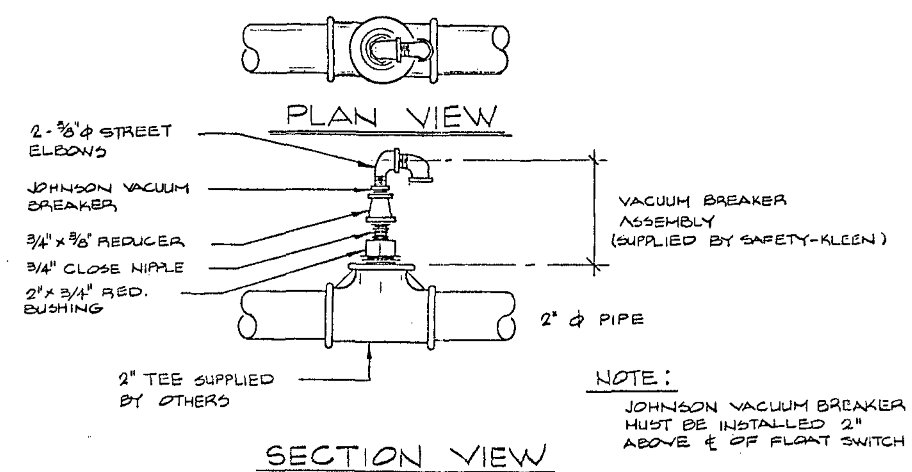
PINE TREE INSTALLATION
W/ ABOVE GROUND STORAGE



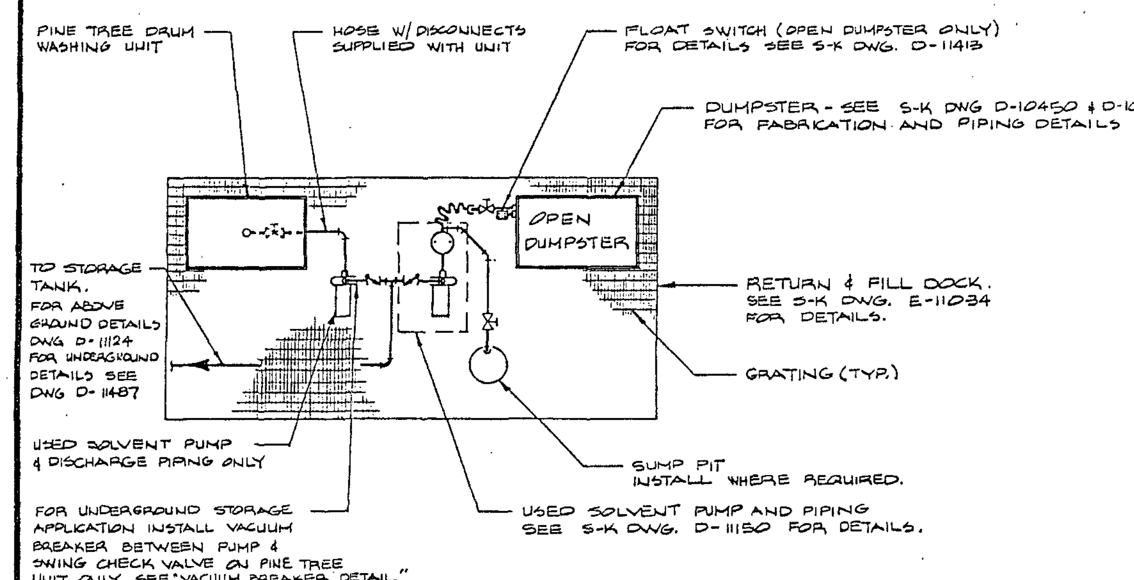
PINE TREE INSTALLATION
W/ UNDERGROUND STORAGE



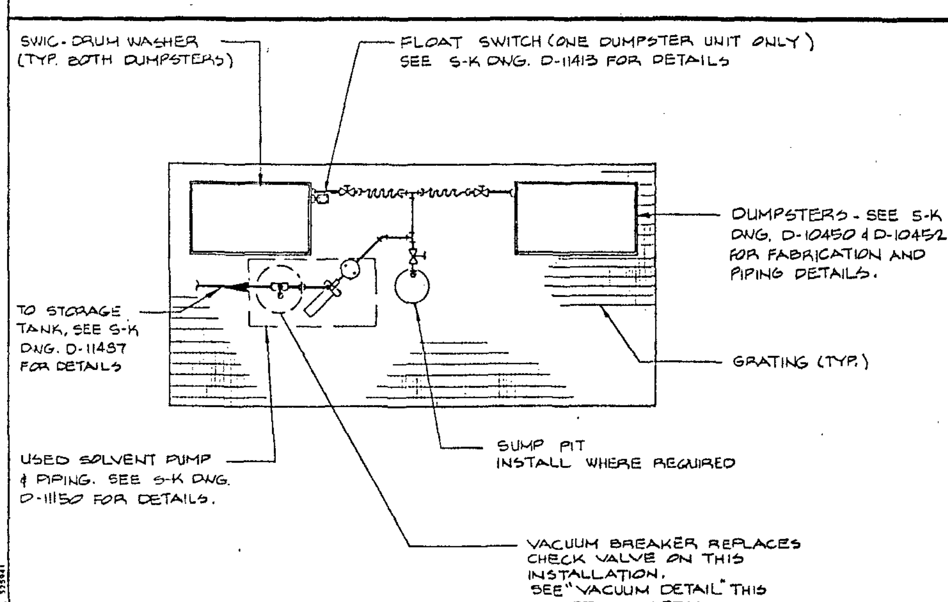
SINGLE SWIC INSTALLATION
W/ ABOVE GROUND STORAGE



VACUUM BREAKER DETAIL



PINE TREE AND OPEN DUMPSTER INSTALLATION
FOR ABOVE GROUND & UNDERGROUND STORAGE



DOUBLE SWIC INSTALLATION
W/ UNDERGROUND STORAGE

NO	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

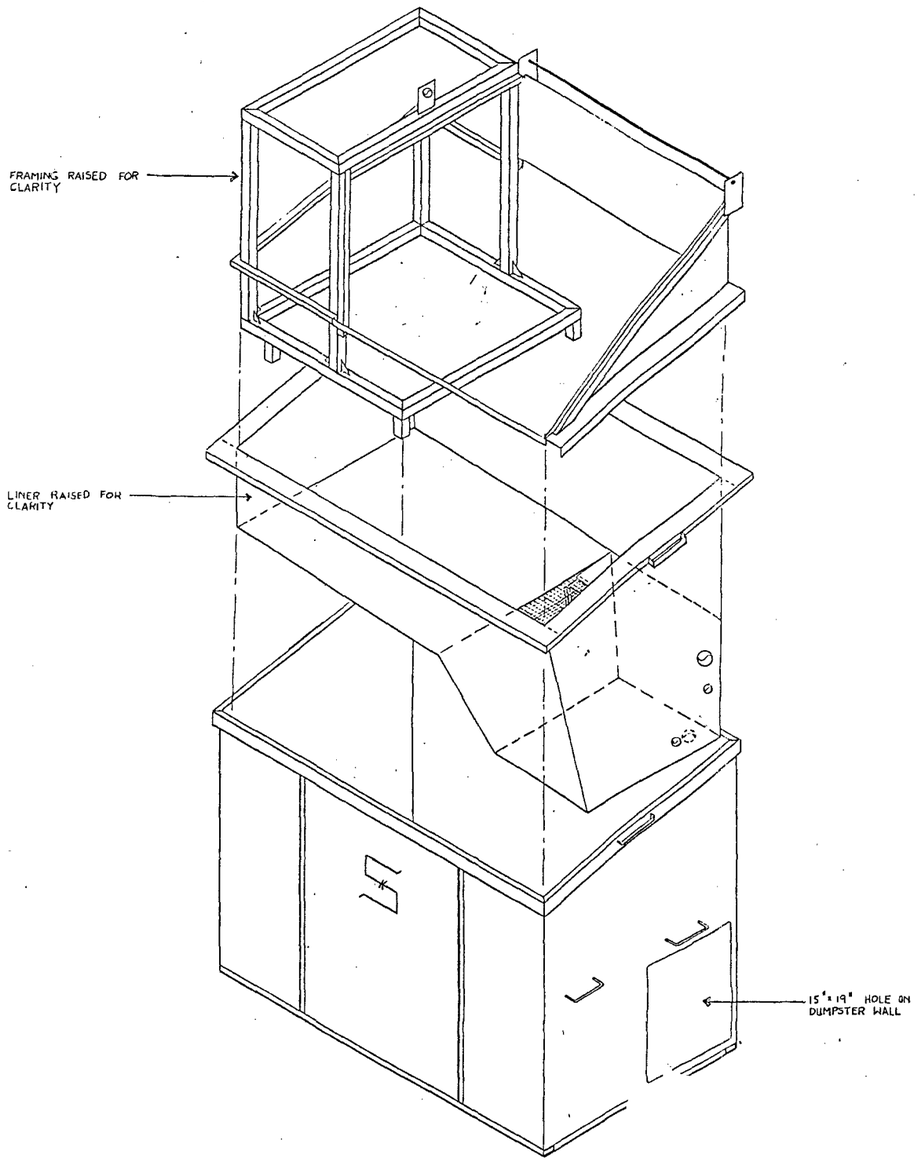
TITLE
TYPICAL DRUM WASHER SCHEMATICS

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

SCALE	DRAWN	CHECKED	ENGINEERING APPR	OPERATION APPR	DATE
NONE	DLS				12-

FOR SERVICE CENTER BRANCH :

DRAWING NO. D-14288



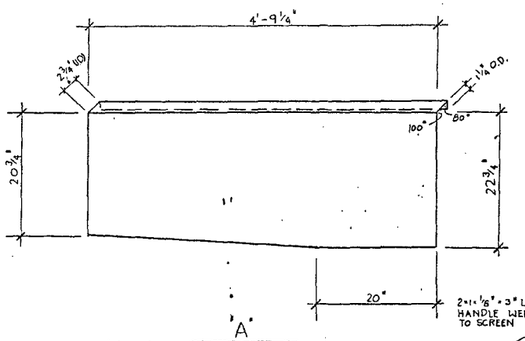
SOUTHWEST INDUSTRIAL CONSTRUCTORS INC.

DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY - KLEEN DRUM WASHER

SHEET NO. 1 OF

ILLUSTRATION



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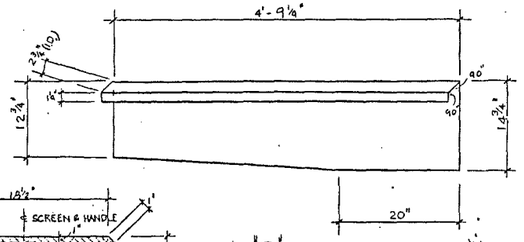

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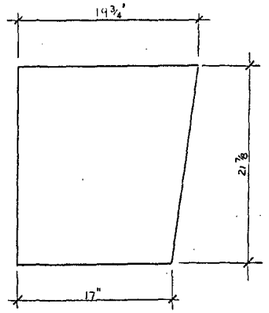

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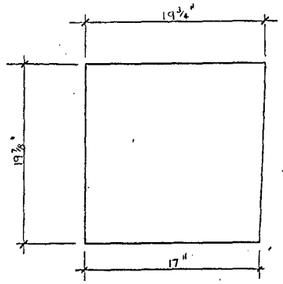

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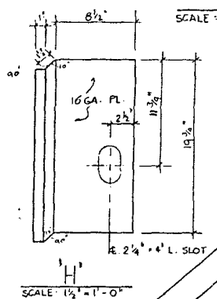

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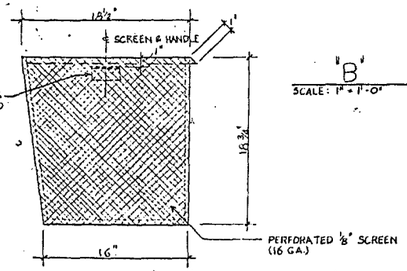

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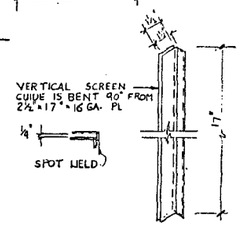

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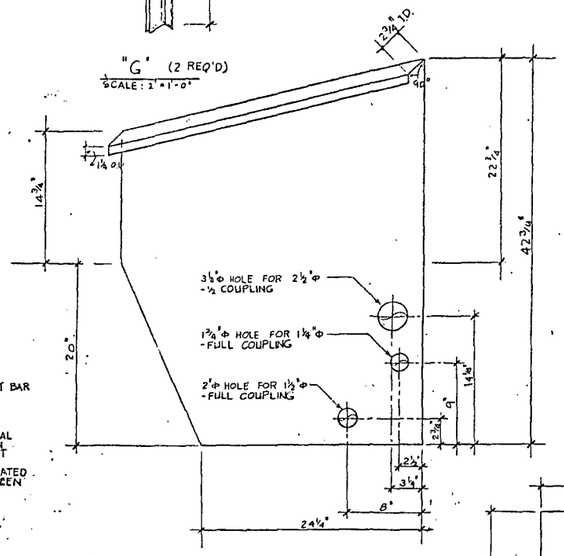

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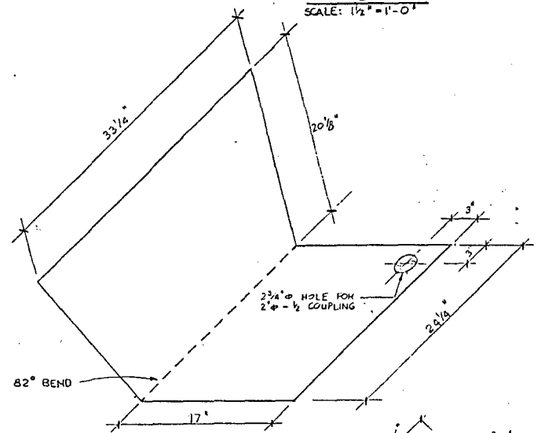

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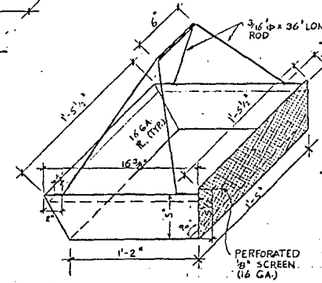

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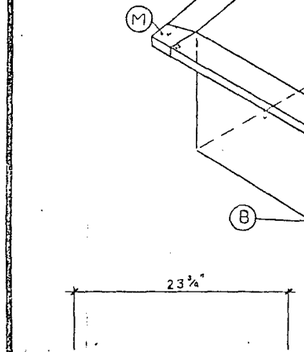

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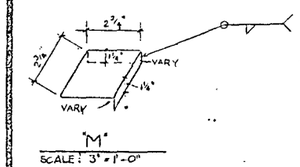

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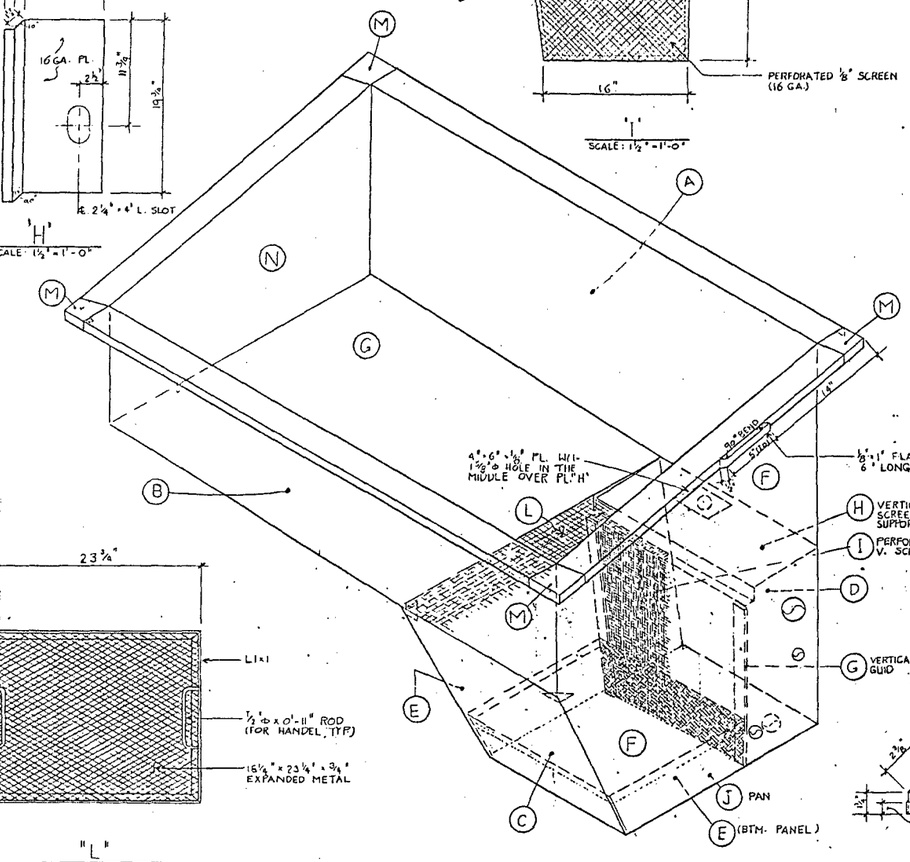

PICTORIAL - DUMPSTER LINER
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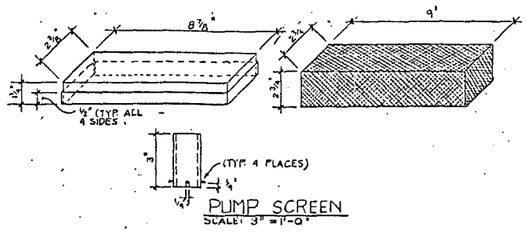

PUMP SCREEN
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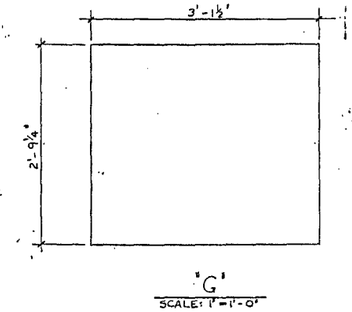

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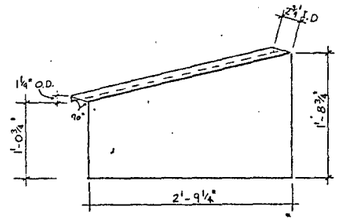


"N"
SCALE: 1" = 1'-0"

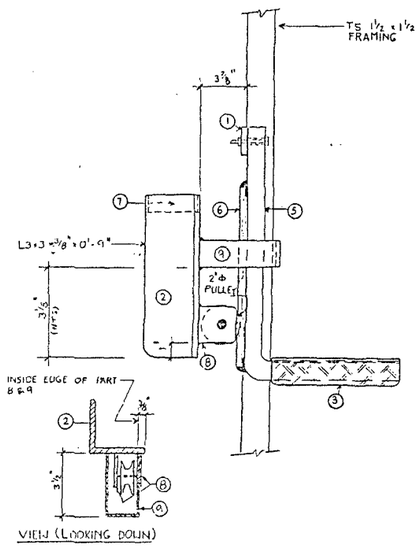
NOTE: ALL MATERIALS ARE ⅛" THK. H.R. STEEL PL.

SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

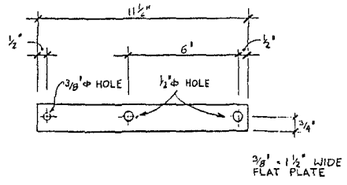
SAFETY - KLEEN DRUM WASHER

SHEET NO. 2 OF



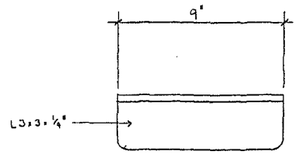
VIEW (LOOKING DOWN)

FRONT VIEW
SCALE 3" = 1'-0"

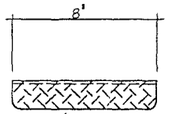


⅜" x 1½" WIDE FLAT PLATE

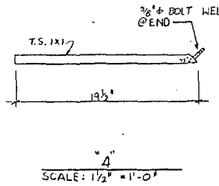
"1"
SCALE: 3" = 1'-0"



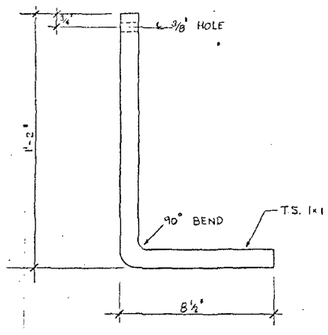
"2"
SCALE: 3" = 1'-0"



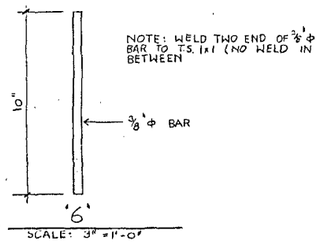
"3"
SCALE: 3" = 1'-0"



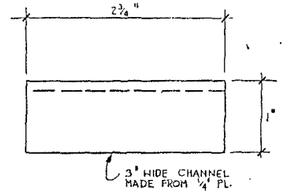
"4"
SCALE: 1½" = 1'-0"



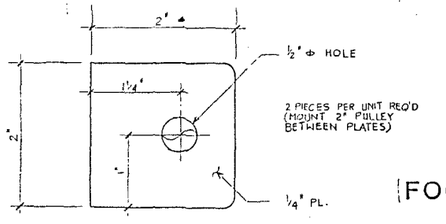
"5"
SCALE: 3" = 1'-0"



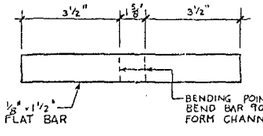
"6"
SCALE: 3" = 1'-0"



"7"
SCALE: 12" = 1'-0"



"8"
SCALE: 12" = 1'-0"

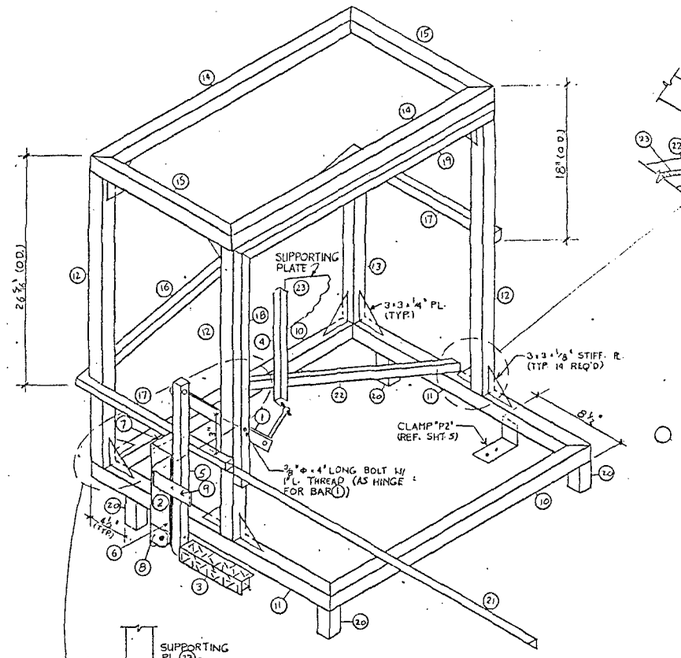


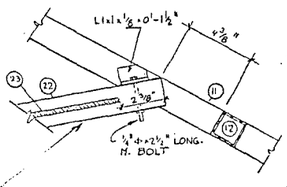
NOTE: TO FABRICATE THIS PART FIRST BEND ⅛" x 1½" x 12" LONG FLAT BAR. THEN THEN TRIM LEGS TO 3½"

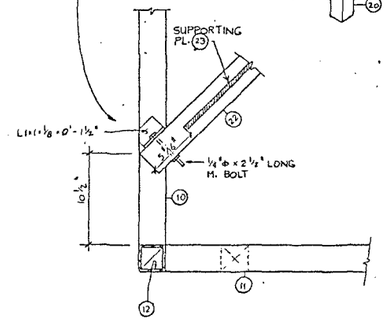
"9"
SCALE: 3" = 1'-0"

FOOT PEDAL ASSEMBLY & DETAILS

MEMBER	NO'S 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°
④	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. 1½ x 1½	3"	90°	90°
㉑	1	L 1x1	39½"	90°	90°
㉒	1	T.S. 1x1	24"	90°	90°





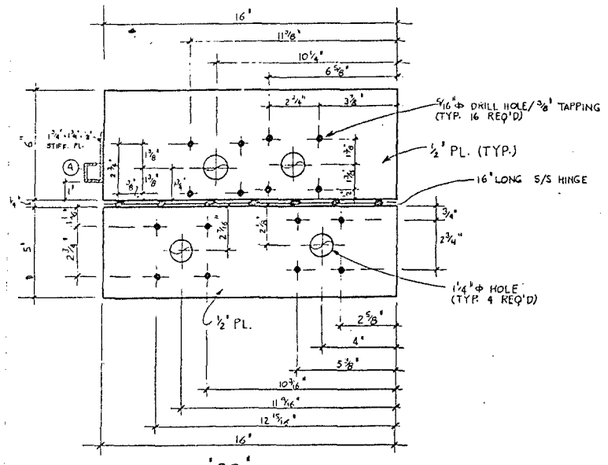


SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

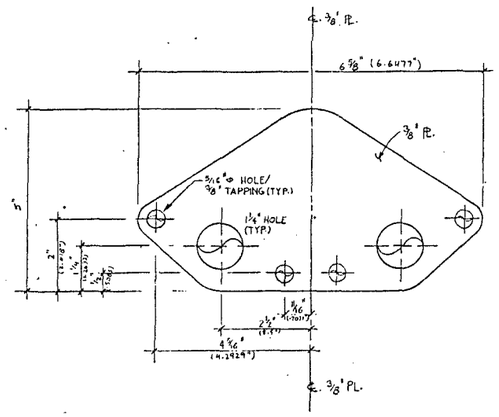
DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY - KLEEN DRUM WASHER

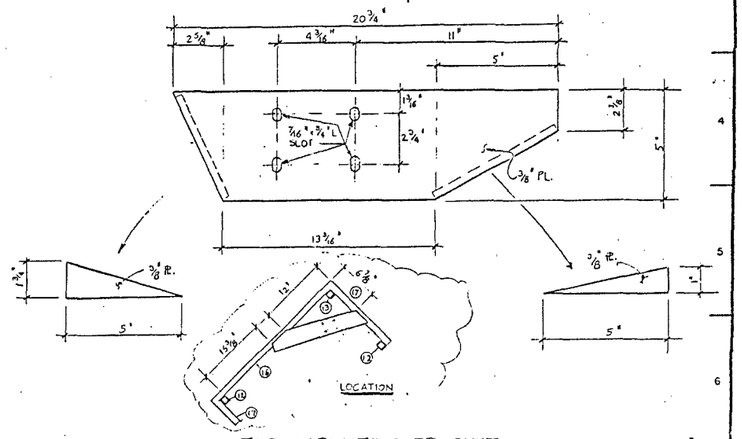
SHEET NO. 3 OF



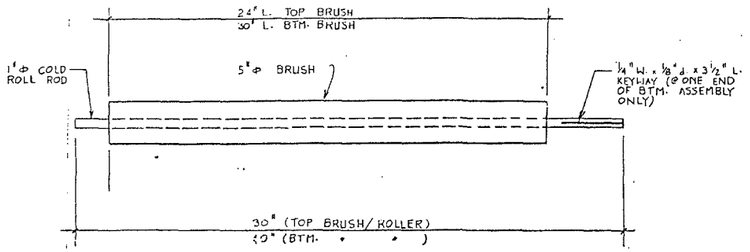
"23"
SCALE: 3" = 1'-0"

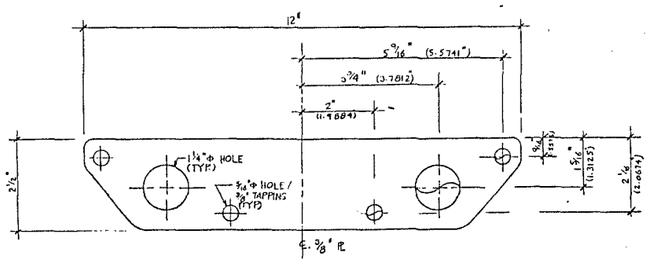


"26"
SCALE: 6" = 1'-0"

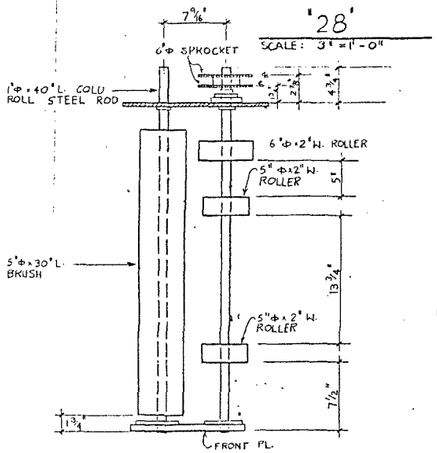


MOTOR MOUNTING BRACKET
N.T.S.



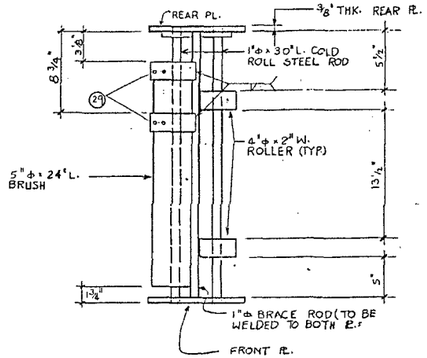


"27"
SCALE: 6" = 1'-0"

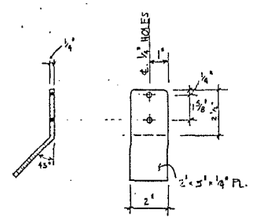


BTM. ASSEMBLY

"28"
SCALE: 3" = 1'-0"



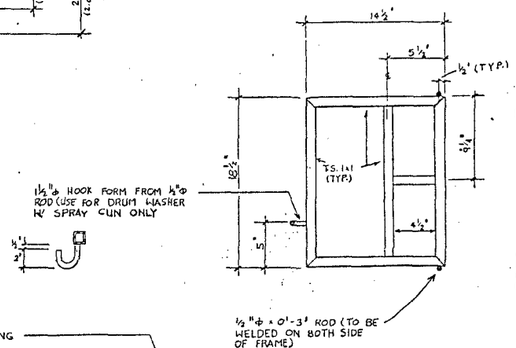
TOP ASSEMBLY



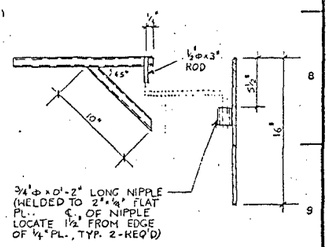
SIDE VIEW PLAN VIEW

"29" BRACKET
SCALE: 3" = 1'-0"

ROLLER/BRUSH ASSEMBLY
SCALE: 1½" = 1'-0"



PLAN VIEW



ELEVATION

ROLLER/BRUSH GREASE LINE

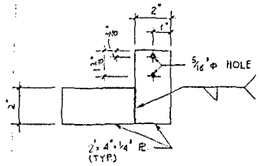
BARREL WASHER RACK
SCALE: 1½" = 1'-0"

SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

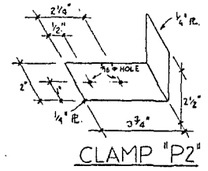
DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY KLEEN
DRUM WASHER

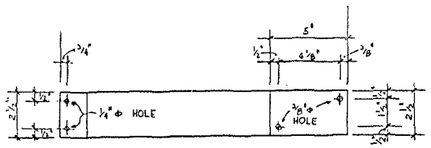
SHEET NO. 4 OF



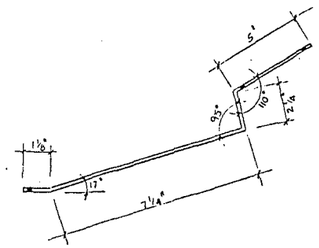
CLAMP "P1"
SCALE: 3" = 1'-0"



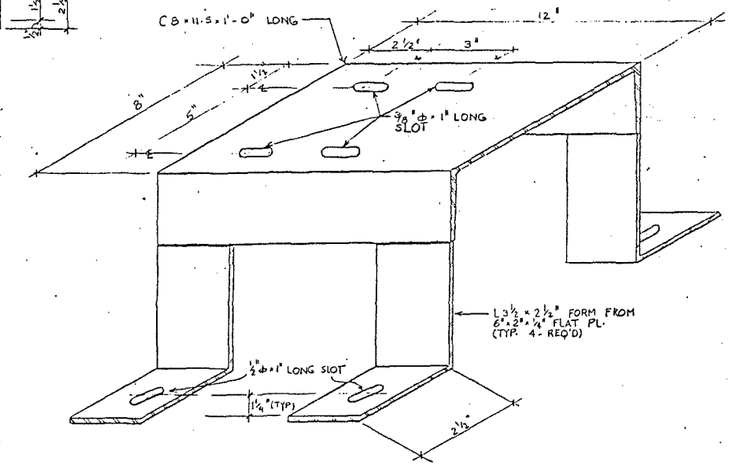
CLAMP "P2"

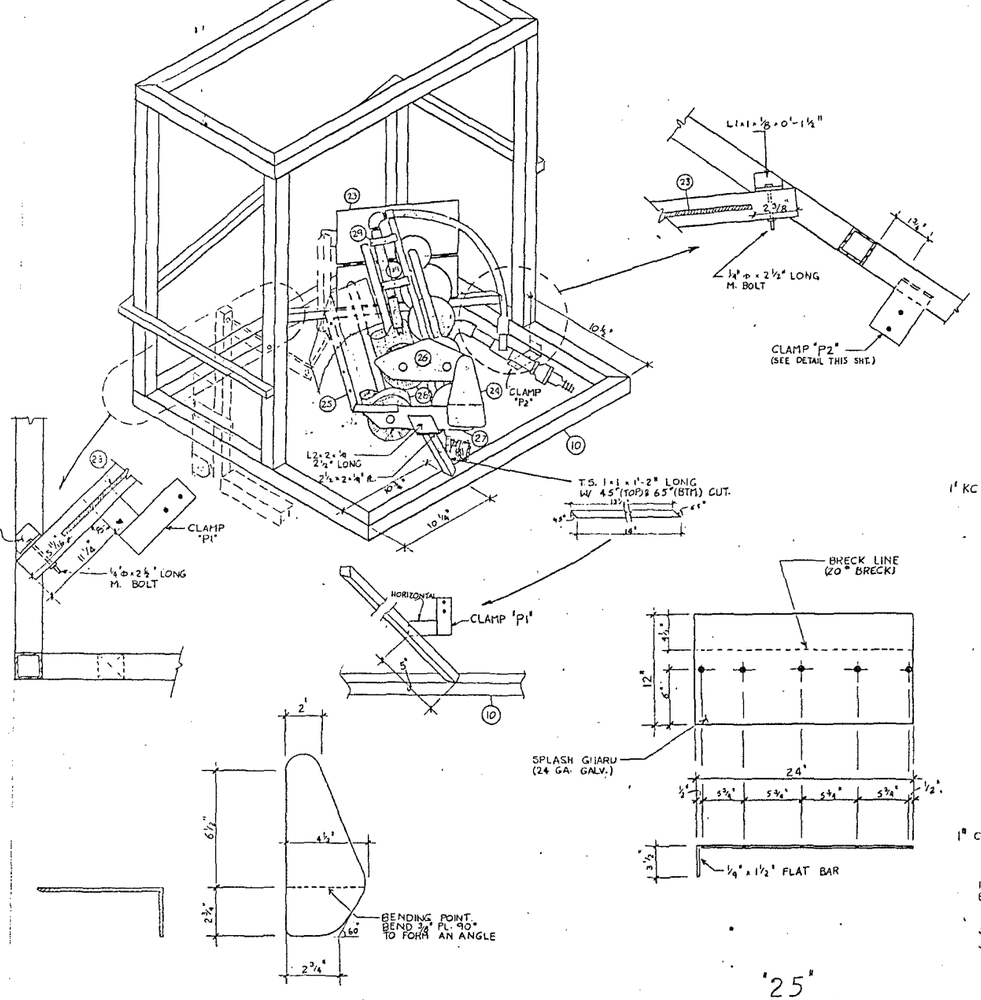


2 1/2" x 5/16" x 1'-3 3/8" LONG
H.R. FLAT PL.



LIMIT SWITCH BRACKET
SCALE: 3" = 1'-0"

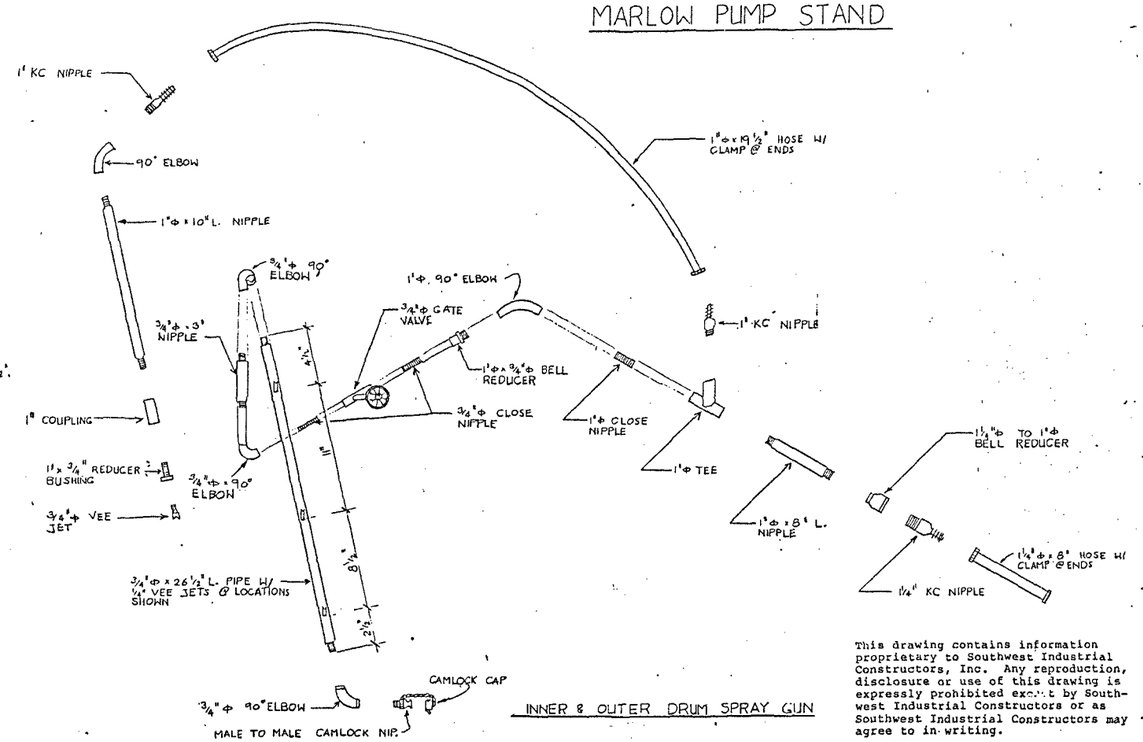




"24"
SCALE: 3" = 1'-0"

"25"
SCALE: 1 1/2" = 1'-0"

MARLOW PUMP STAND



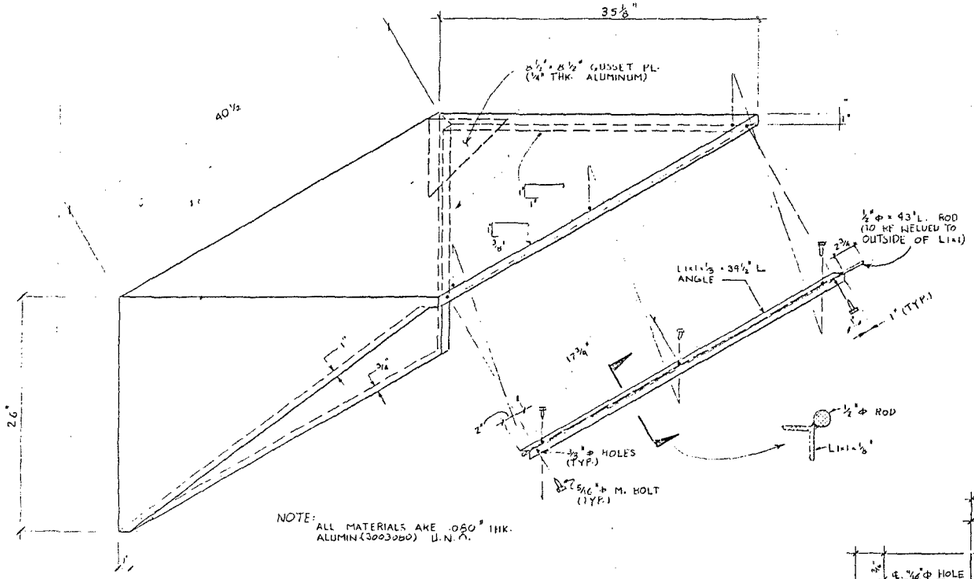
INNER & OUTER DRUM SPRAY GUN

SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

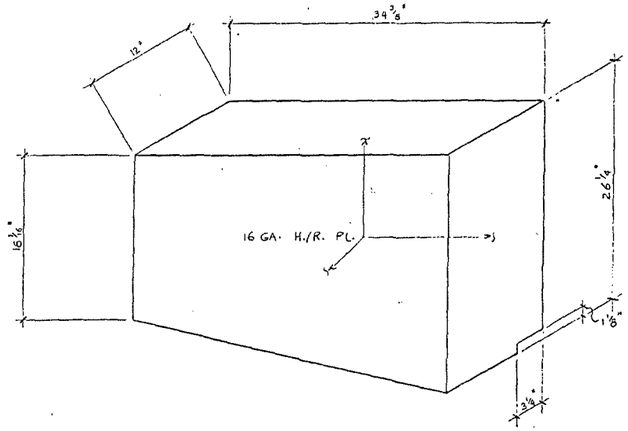
DATE: 1/19/90
JOB NO:
DWN: ALI
CHK:

SAFETY KLEEN DRUM WASHER

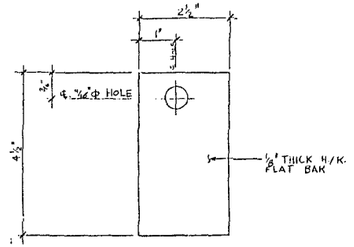
SHEET NO. 5 OF



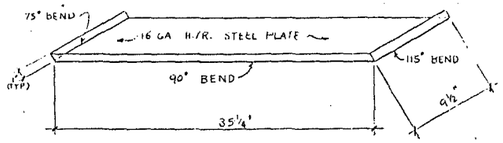
DRUM WASHER LID
SCALE: 1½"=1'-0"



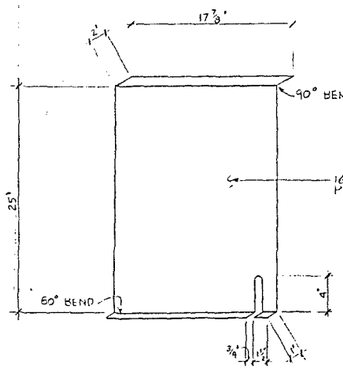
MOTOR COVER
SCALE: 1½" = 1'-0"



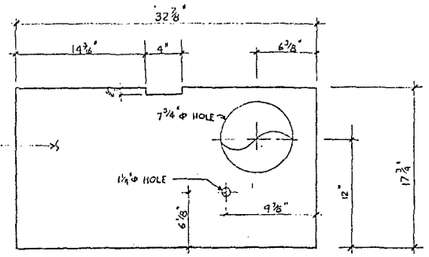
HINGE BRACKET
SCALE: 6" = 1'-0"



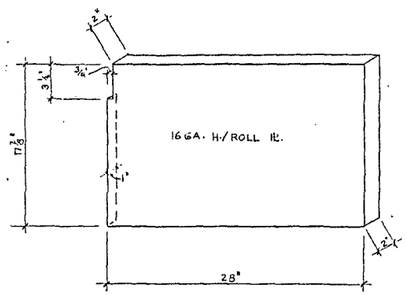
BOTTOM PAN FOR MOTOR COVER
SCALE: 1½" = 1'-0"



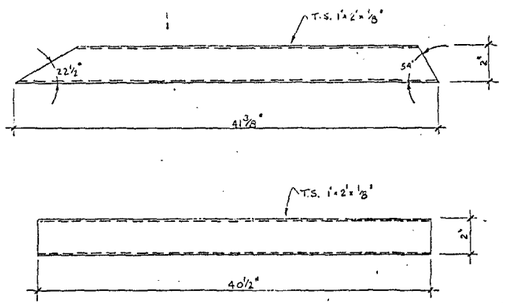
CABINET FRONT
SCALE: 1½" = 1'-0"



CABINET TOP
SCALE: 1½"=1'-0"



CABINET BACK
SCALE: 1½" = 1'-0"



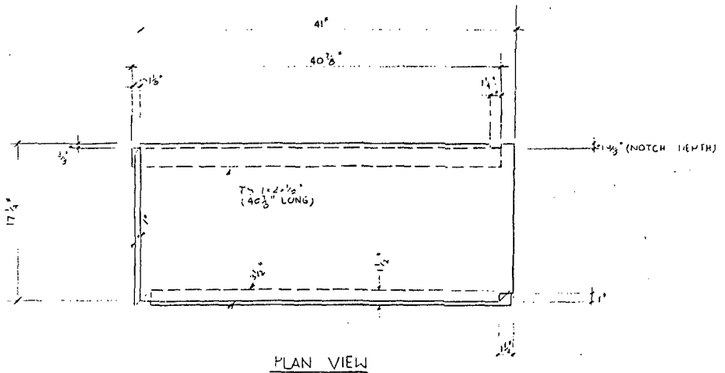
1100D STIFFENER
N.T.S.

SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

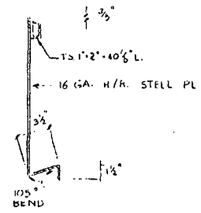
DATE: 1/ /90
JOB NO:
DWN: ALI
CHK:

SAFETY-KLEEN DRUM WASHER

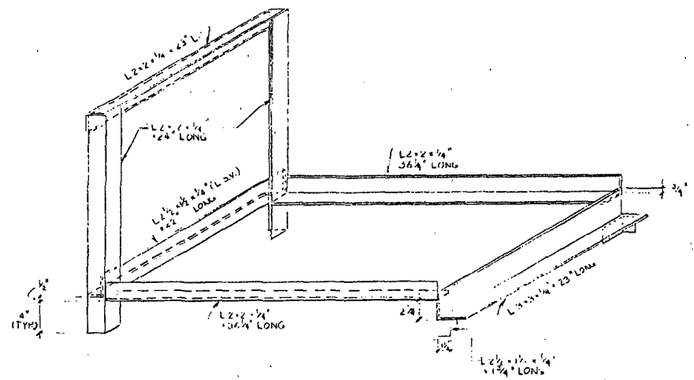
SHEET NO. 7 OF



PLAN VIEW

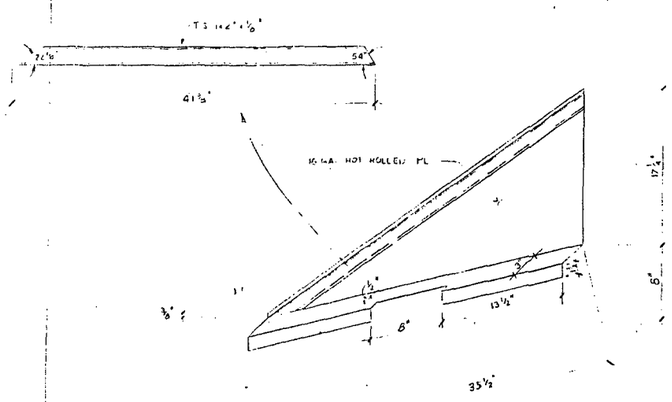


SIDE VIEW

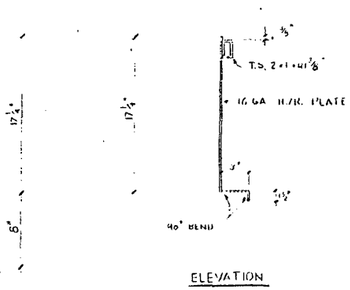


FRONT HOOD SUPPORT

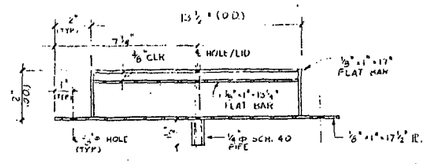
SCALE: 1½" = 1'-0"



PLAN VIEW



ELEVATION

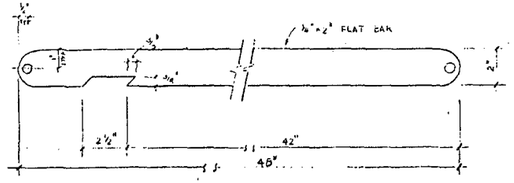


SAFETY LATCH

SCALE: 3" = 1'-0"

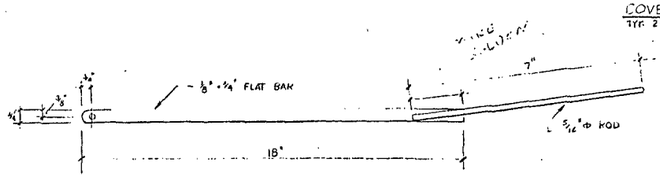
TEMP. SUPPORTING FRAME FOR LINER

SCALE: 1½" = 1'-0"



COVER BRACE STEEL

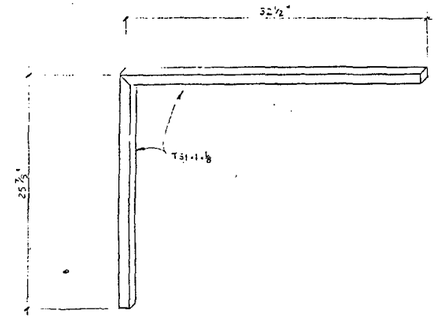
TYP. 2-REQ'D PER DRUM WASHER



SCALE: 3" = 1'-0"

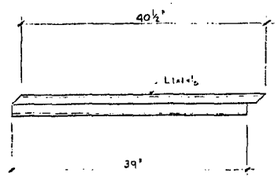
SIDE HOOD SUPPORT

SCALE: 1½" = 1'-0"



INSIDE HOOD SUPPORT

SCALE: 1" = 1'-0"



FRONT HOOD BRACE

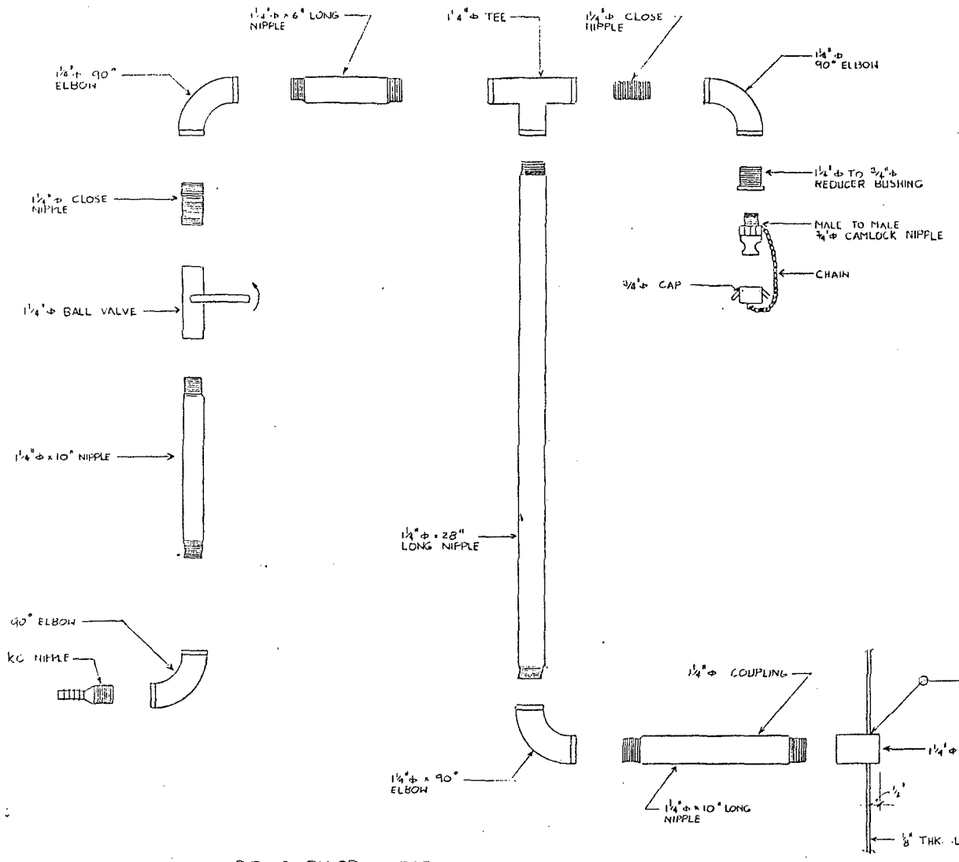
N.T.S.

SOUTHWEST INDUSTRIAL CONSTRUCTORS, INC.

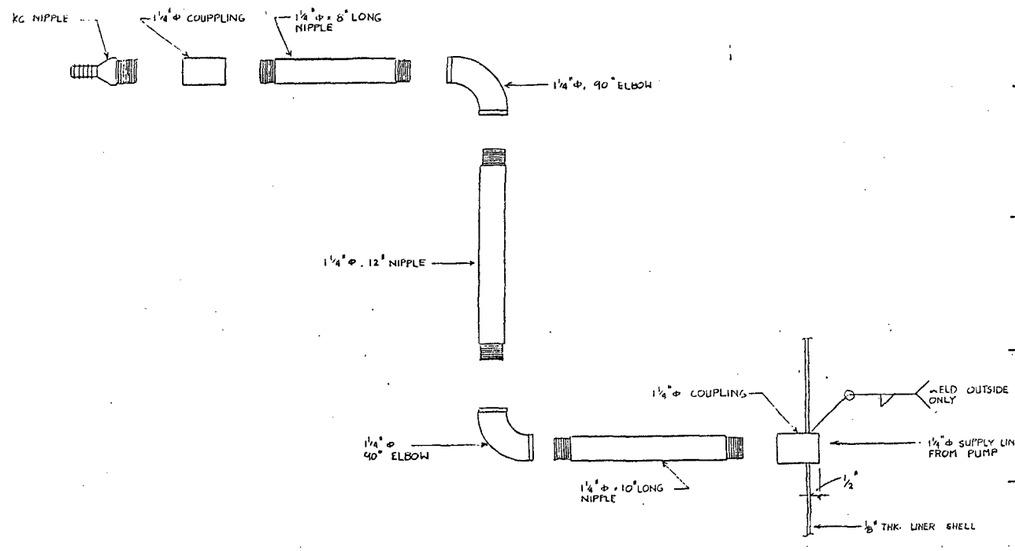
DATE: 1/15/90
JOB NO:
DWN: ALI
CHK:

SAFETY - KLEEN
DRUM WASHER

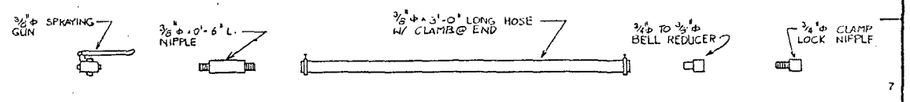
SHEET NO. 8 OF



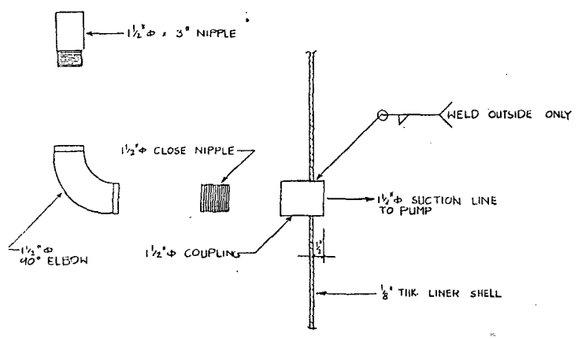
PIPING DIAGRAM FOR:
DRUM WASHER WITH
SELF SERVICE PART WASHER



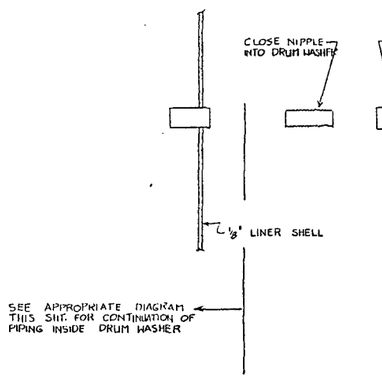
PIPING DIAGRAM FOR:
DRUM WASHER WITHOUT
SELF SERVICE PART WASHER

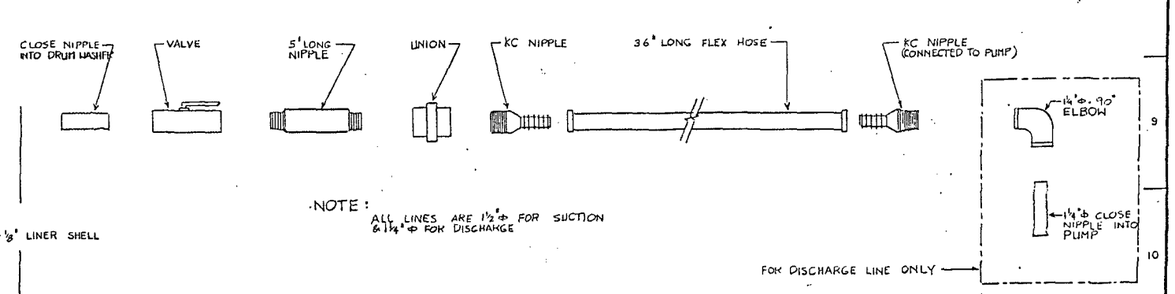


SPRY GUN FOR:
DRUM WASHER W/ S.S.P.H.



1½"Φ SUCTION LINE

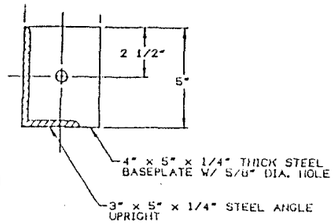




NOTE:
ALL LINES ARE 1½"Φ FOR SUCTION
& 1¼"Φ FOR DISCHARGE

PIPING DIAGRAM OUTSIDE
DRUM WASHER
(TO & FROM MARLOW PUMP)

Appendix G
Engineering Specification Drawings for Tank System

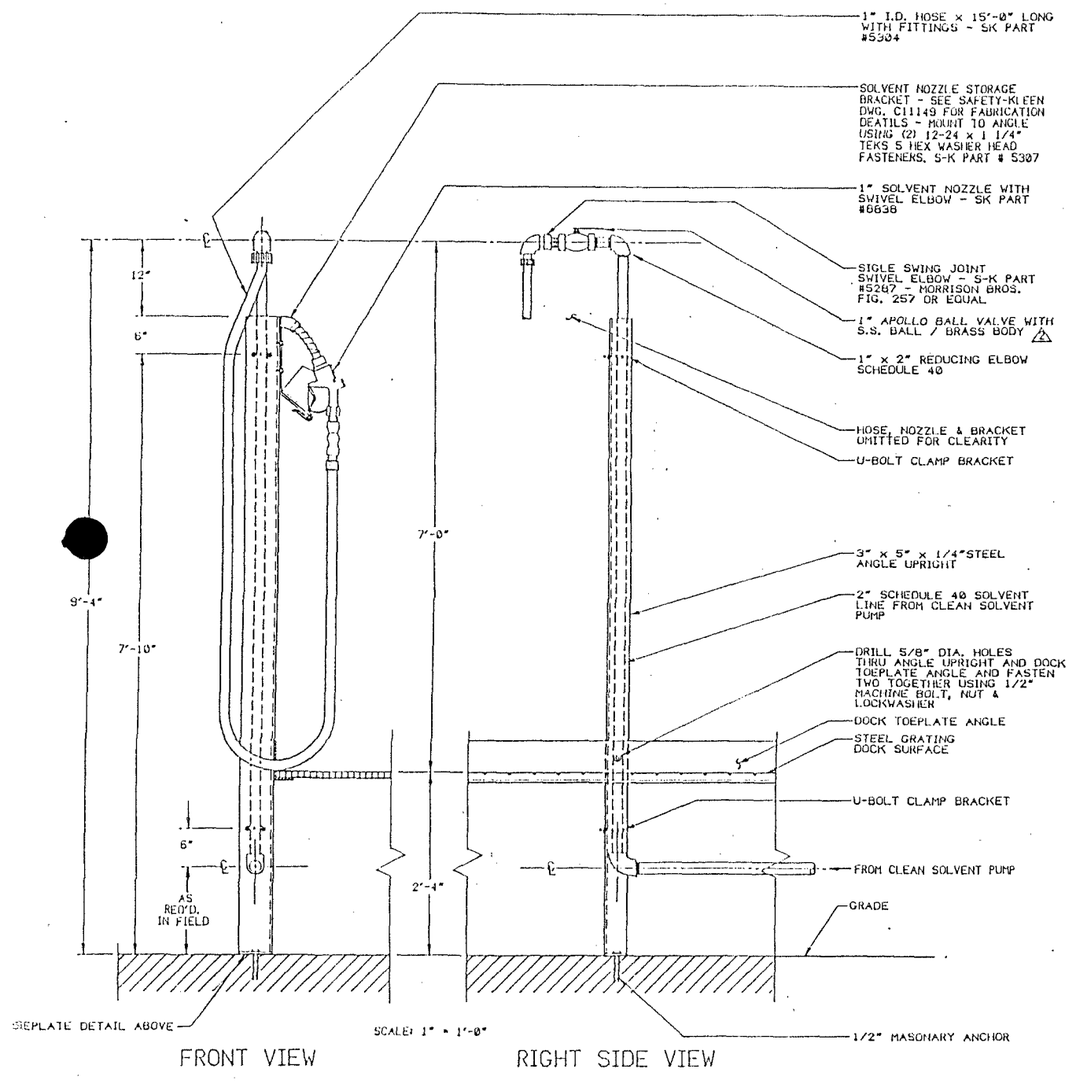


BASEPLATE DETAIL

SCALE: 3" = 1'-0"

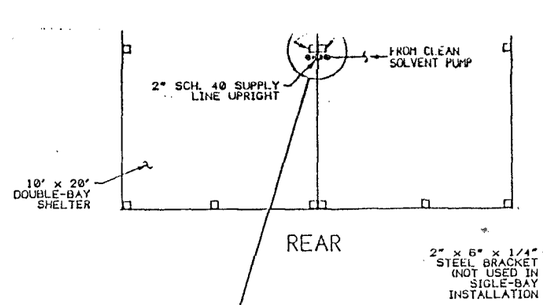
NOTE:

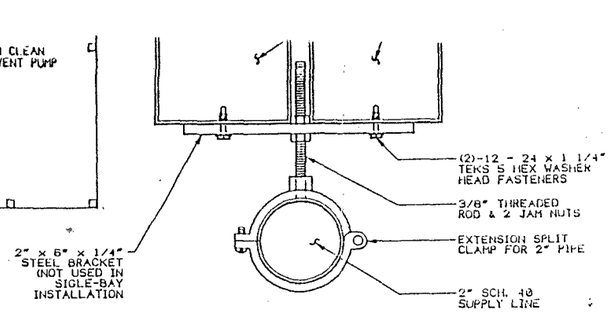
SURPLUS HOSE LENGTH CAN BE COILED & STORED ON ARM PROVIDED AT SIDE OF NOZZLE STORAGE BRACKET.



FRONT VIEW RIGHT SIDE VIEW

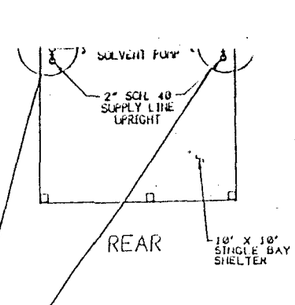
INSTALLATION FOR STANDARD BUILDING PLAN

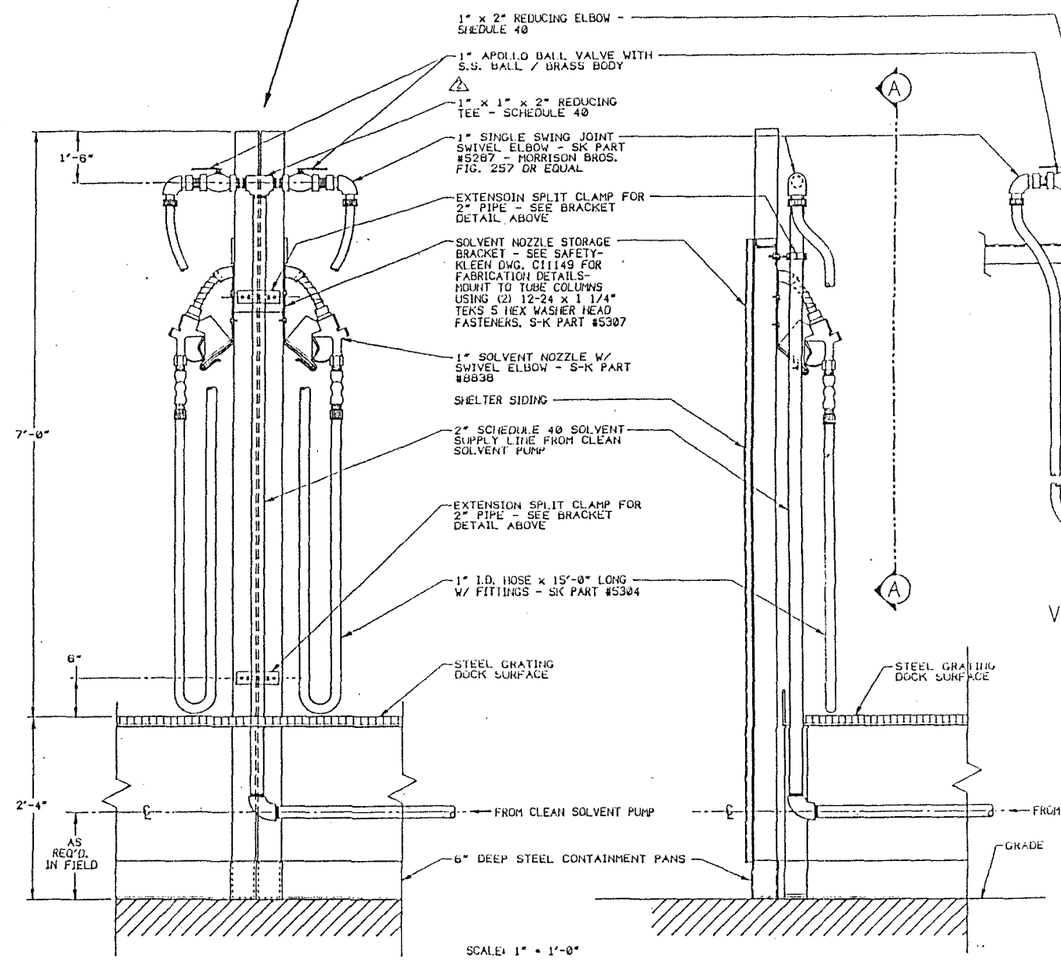




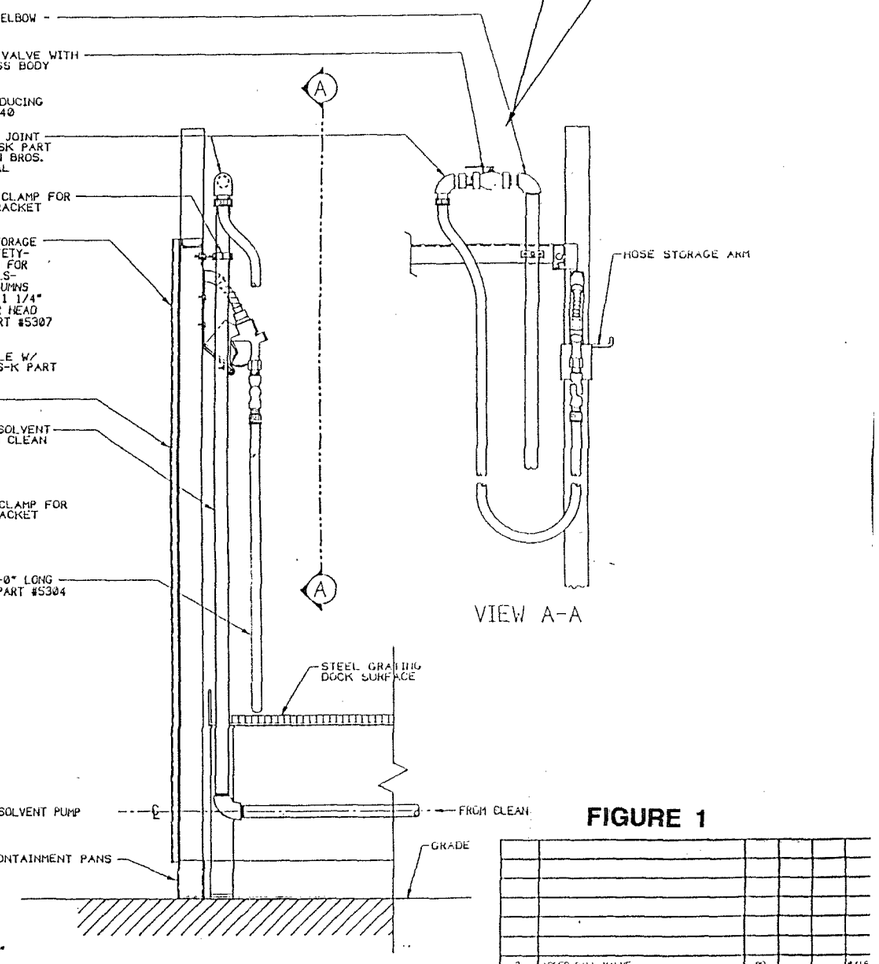
BRACKET DETAIL

HALF SCALE





DOUBLE OR MULTIPLE BAY INSTALLATION



VIEW A-A

SINGLE BAY INSTALLATION

FIGURE 1

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.

BJS
2/20/09-GD

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
	REVISED:				
2	ADDED BALL VALVE	RD			8/15
1	ADDED NOTE 1 & RENUMBERED NOTES	WLJ			8/2

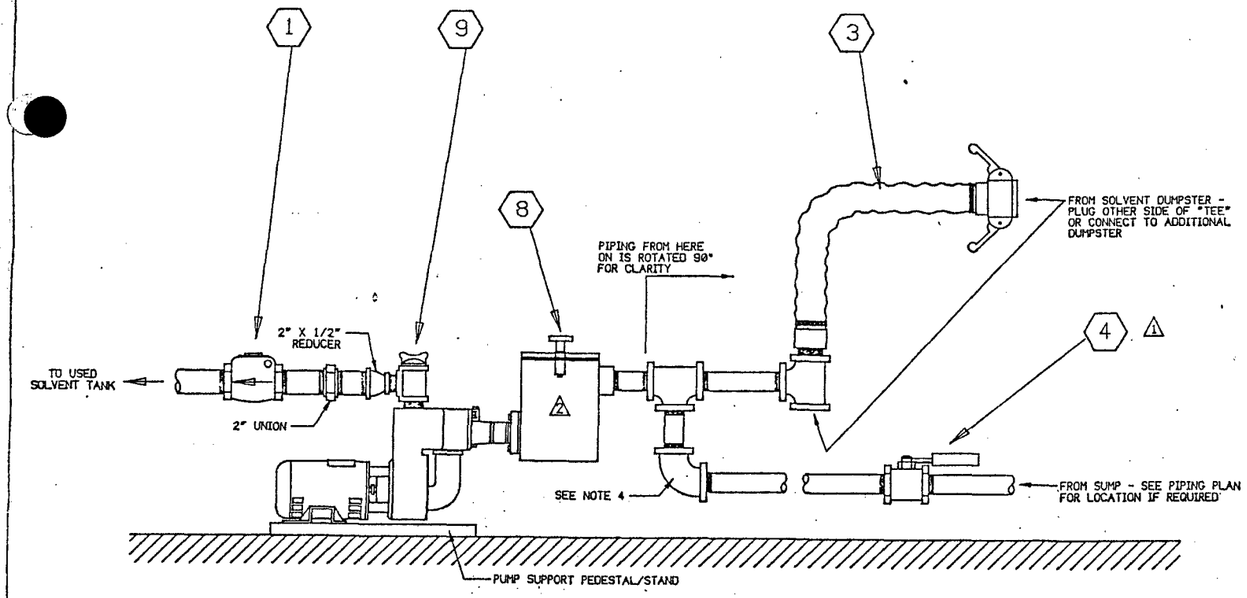
TITLE

SOLVENT DISPENSER TREE INSTALLATION DETAILS

SAFETY-KLEEN CORP.

777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60123 PHONE 847/697-8460

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		AS SHOWN	HWD-GD	2/23/1
BRANCH		DRAWING NO.		REV.
FOR SERVICE CENTER BRANCH		D11223		4

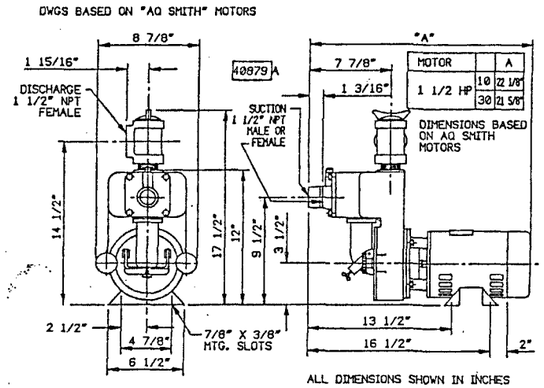


USED SOLVENT PUMP INSTALLATION

EQUIPMENT / FIXTURE SCHEDULE				
MARK	SIZE	DESCRIPTION	SK PART NO.	REMARKS
1	2"	2" BRONZE CHECK VALVE - MORRISON BROS. FIG. 246-A	5288	
2	2"	2" MARLOW PUMP - 20 EVP 10A 1 HP EXPLOSION PROOF MOTOR W/JUNCTION BOX - VITON FITTED	5240	SEE SPECIFICATION DETAILS ON SAFETY-KLEEN DWG. A11118 BELOW
3	2"	2" DUMPSTER HOSE ASSEMBLY	5234	SEE SAFETY-KLEEN DWG. D10452 FOR DETAILED INFORMATION
⚠1 4	2"	2" APOLLO BALL VALVE, BRONZE BODY W/STAINLESS STEEL BALL & TRIM. TEFLON SEALS & CONBRACO SPRING LOADED SELF CLOSING DEADMAN HANDLE	5272	
5	2"	2" BACK PRESSURE VALVE VERTICAL TYPE WITH 6 PSI SPRING SETTING - MORRISON BROS. FIG. 158-B/PR (15 P.S.I. OPEN)	5268	FOR ABOVEGROUND TANK INSTALLATION ONLY
6	2"	2" LINE STRAINER W/TOP CLEAN-OUT W/#20 MESH MORRISON BROS. FIG. 286	5269	
7	2"	2" BRONZE GATE VALVE MORRISON BROS. FIG. 235	5236	
⚠2 8	2"	2" MARLOW SUCTION STRAINER ASSEMBLY MODEL 2B10X W/STAINLESS STEEL BASKET W/#10 PERFORATIONS	5313	FLANGED DISCHARGE PORT OF STRAINER SERVES AS UNION ON SUCTION SIDE OF PUMP
9	1 1/2"	1 1/2" MARLOW PUMP - 1 1/2HR49EC, SINGLE PHASE, EXPLOSION PROOF, BUNA FITTED, SELF PRIMING CENTRIFUGAL	5330	SEE DETAIL BELOW LEFT

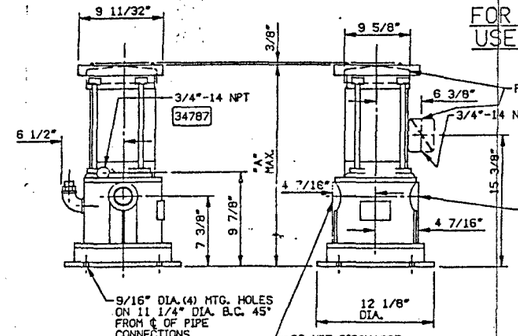
PUMP UNITS WITH OPEN MOTORS
1 1/2HR49EC

DWGS BASED ON "AO SMITH" MOTORS



ALL DIMENSIONS SHOWN IN INCHES

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



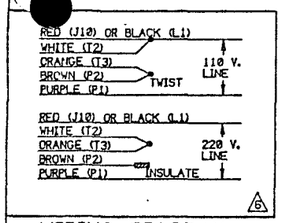
FOR FIELD USE ONLY

GENERAL NOTES

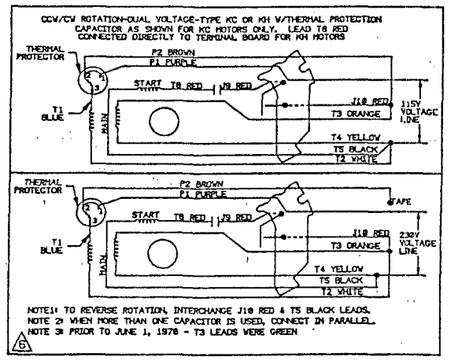
1 MODEL TO BE USED BY SAFETY-KLEEN CORP. - MODEL 20 EVP-10A, 1 HP - 2" WITH EXPLOSION PROOF MOTOR W/JUNCTION BOX & VITON FITTED, SINGLE PHASE 60 CYCLE 115/230V.

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

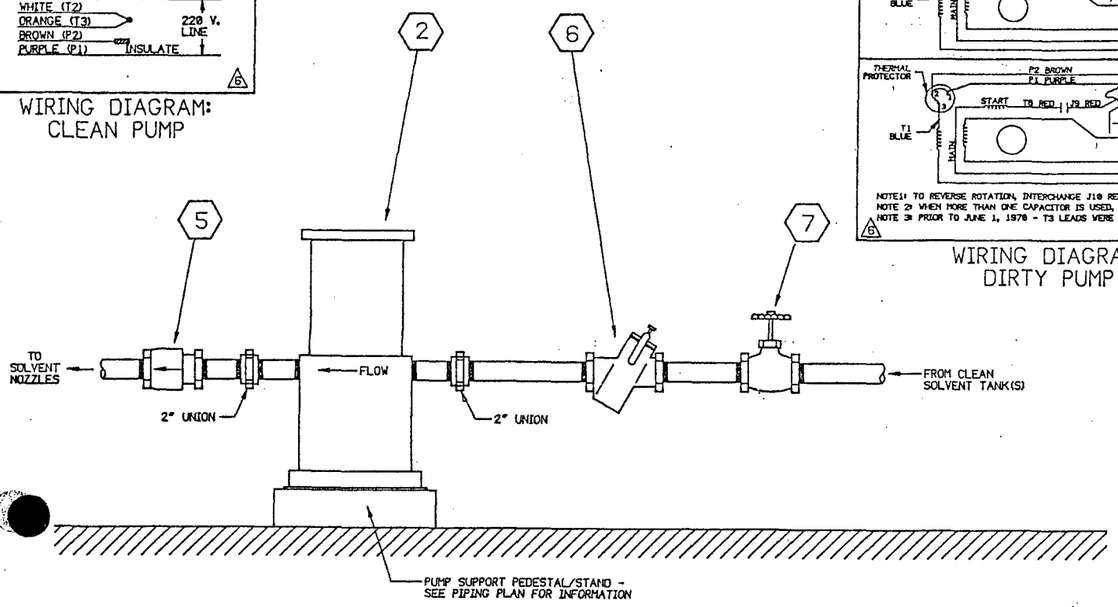
S-K PART NO.	G.E. EXPL. PROOF MOTORS				
	HP	PHASE	CYCLE	A	
5240		1	60	20 13/32"	115/230



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
	REVISIONS		
⚠5	ADDED W.D.'S FOR CLEAN & USED PUMPS	RD	
⚠5	ADDED NEW PUMP FOR DIRTY SOLVENT TO VIEW & TABLES, 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	

TITLE: SOLVENT PUMP PIPING INSTALLATION DETAILS

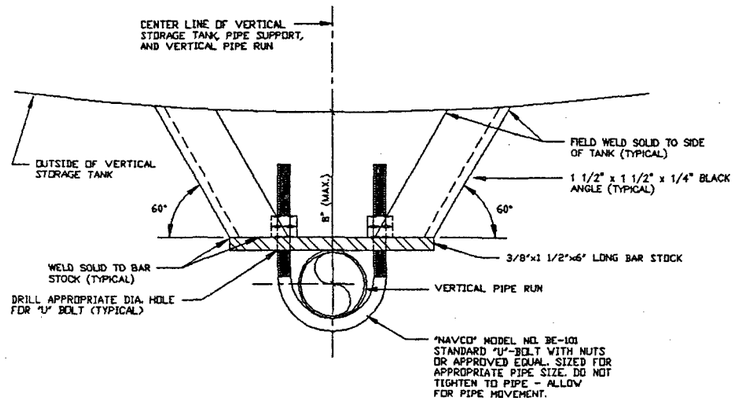
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/6

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN
		NTS	NWO-PB

BRANCH: FOR SERVICE CENTER BRANCH

DRAWING NO. D11150

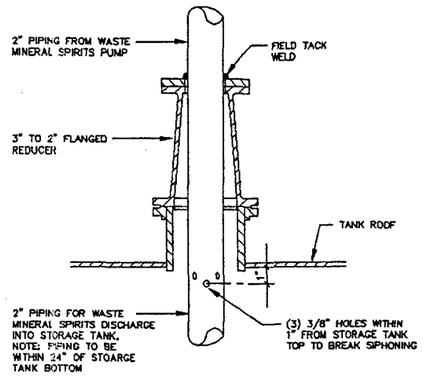
BJS 2/24/89 PBG



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

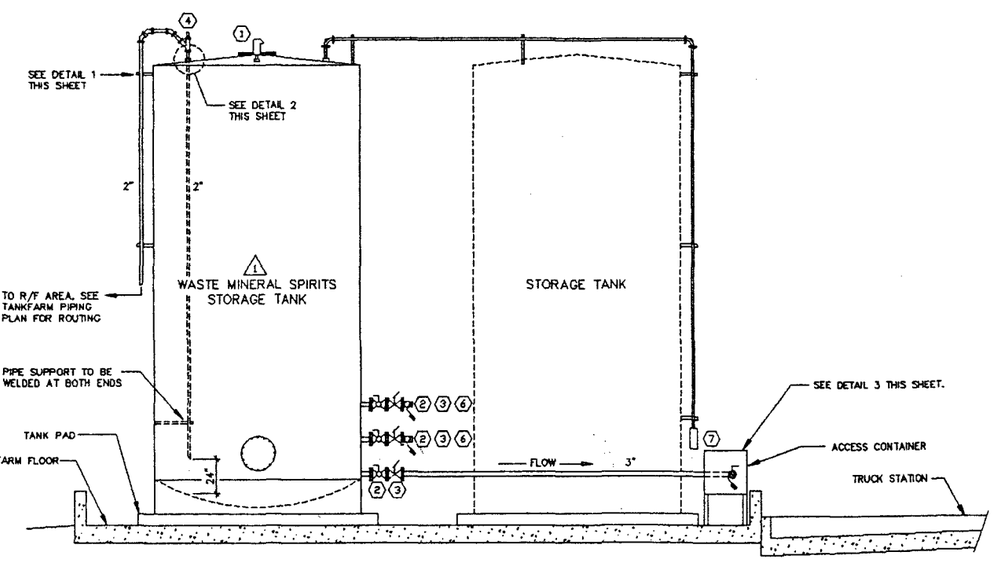


2 TANK DOME PIPING PENETRATION DETAIL

SCALE: NONE

EQUIPMENT SCHEDULE

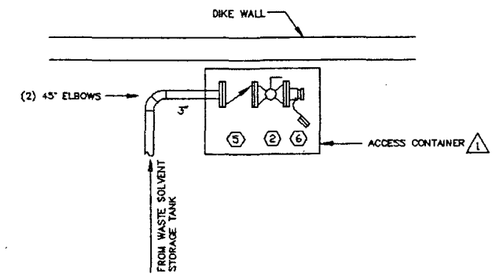
MARK	PART DESCRIPTION	SK PART	REMARKS
①	3" THREADED BRASS PRESSURE/VACUUM VENT. (2oz. pressure/1oz. vacuum)	5339	⚠1
②	3" FLANGED DUCTILE IRON BALL VALVE	-	LOCKING TYPE ⚠1
③	3" FLANGED DUCTILE IRON EXTERNAL EMERGENCY VALVE WITH FUSIBLE LINK (160° F)	-	⚠1
④	3/8" THREADED BRASS AUTOMATIC VACUUM BREAKER	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
4913 Stations Circle • Columbia • MO 65203 • (314) 875-0850

NO.	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

TITLE

TANK FARM / WASTE MINERAL SPIRITS PIPING PLAN

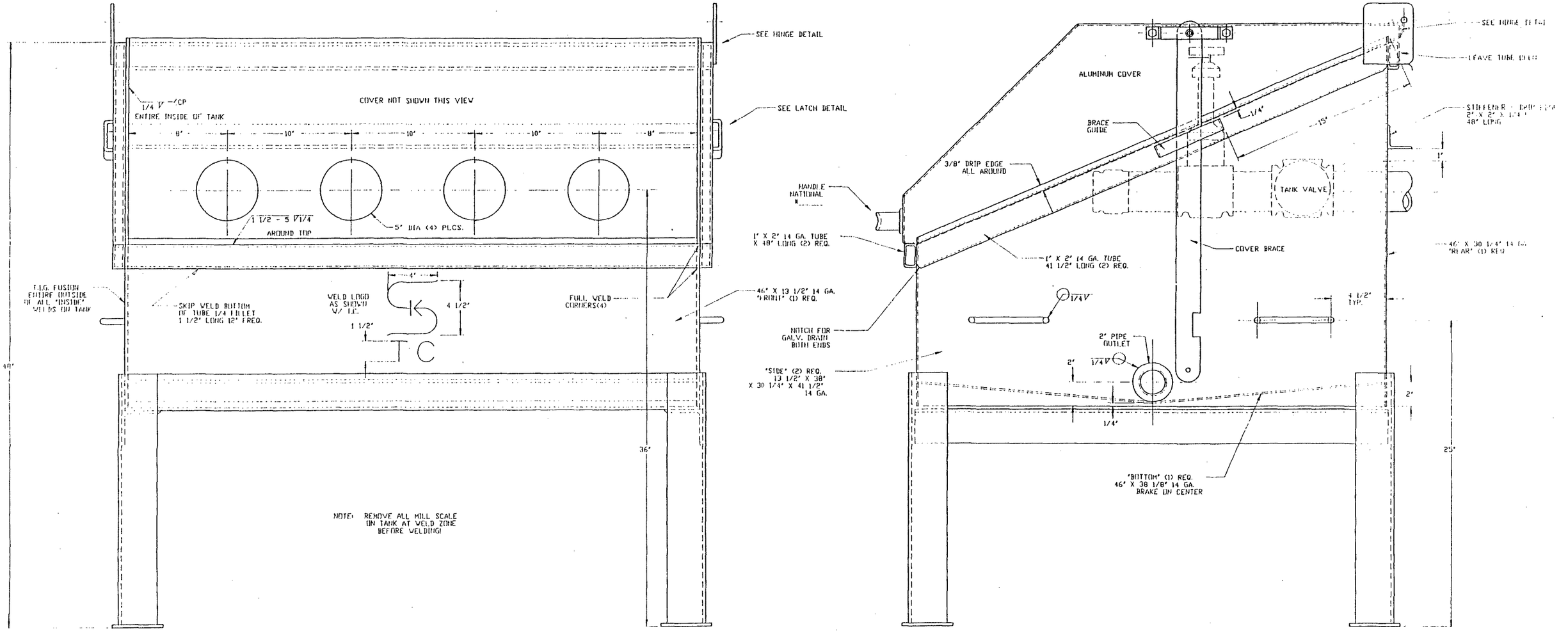
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708-697-8460

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-Q.DWG



NOTE: REMOVE ALL MILL SCALE ON TANK AT WELD ZONE BEFORE WELDING!

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

NO.	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

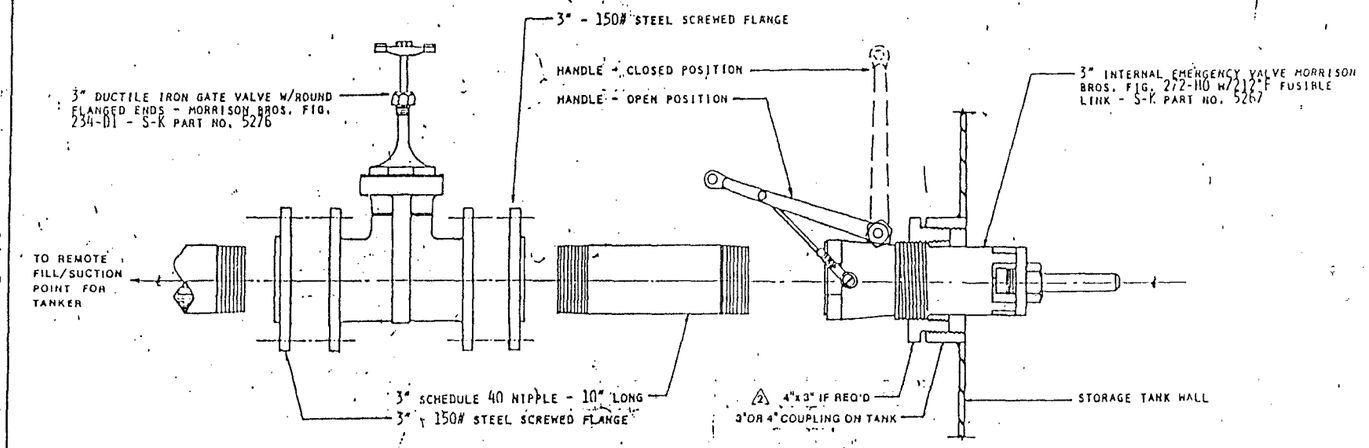
TITLE: TANK ACCESS CONTAINER (GALV.)

SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708 [illegible]

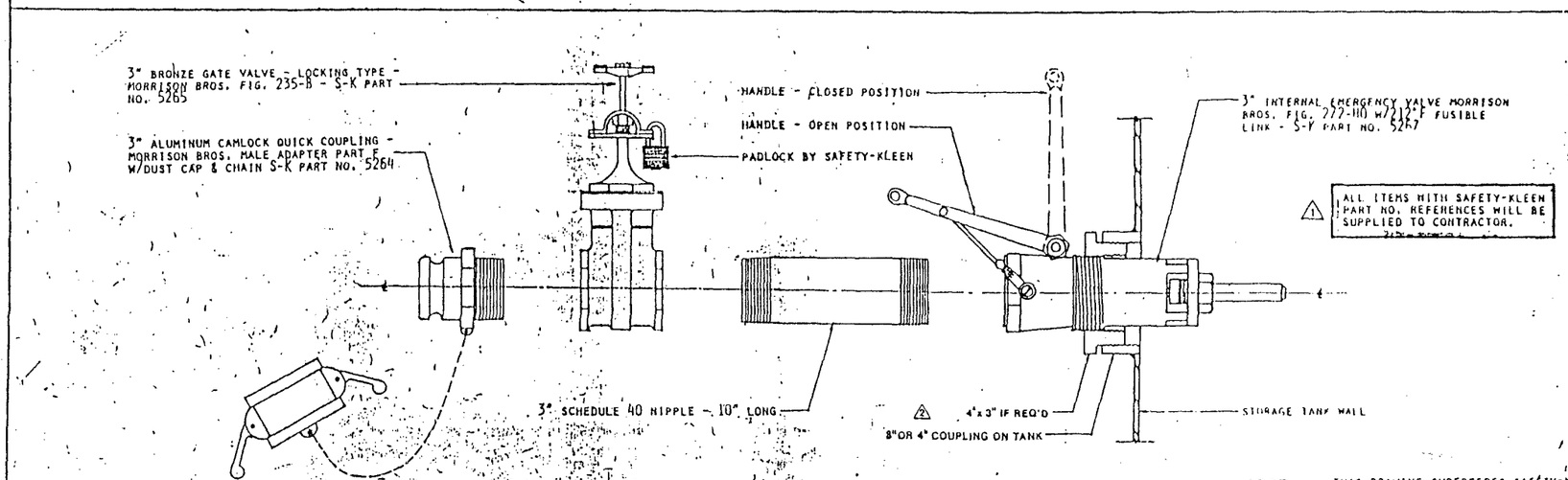
SCALE	BY	CHKD	P.E. APPR	SVC. APPR	DWG
1/4"=1'-0"	K.D.				

SERVICE CENTER STANDARDS — STD. DWG. NUMBER: D13479 — 0

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

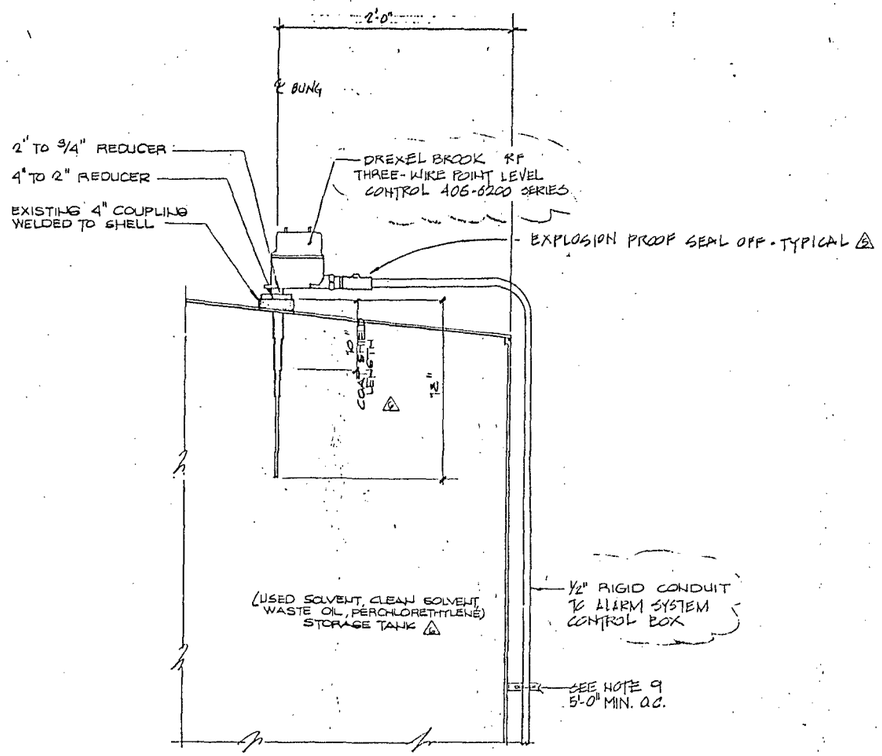
FIGURE 5

REV	DESCRIPTION	BY	
⚠2	ADDED CLARIFICATION	RD	8/24/90
⚠1	ADDED NOTE	WJ	12/13/89

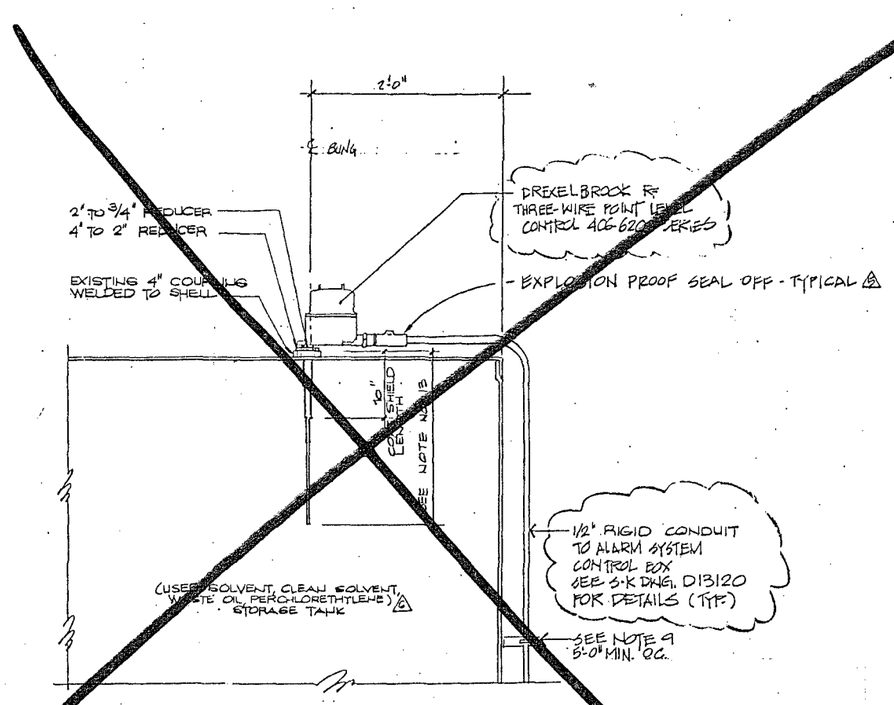
safety-kleen corp.

EMERGENCY & GATE VALVE INSTALLATION DETAILS — FOR SERVICE CENTER BRANCH CONSTRUCTION & OR IMPROVEMENTS

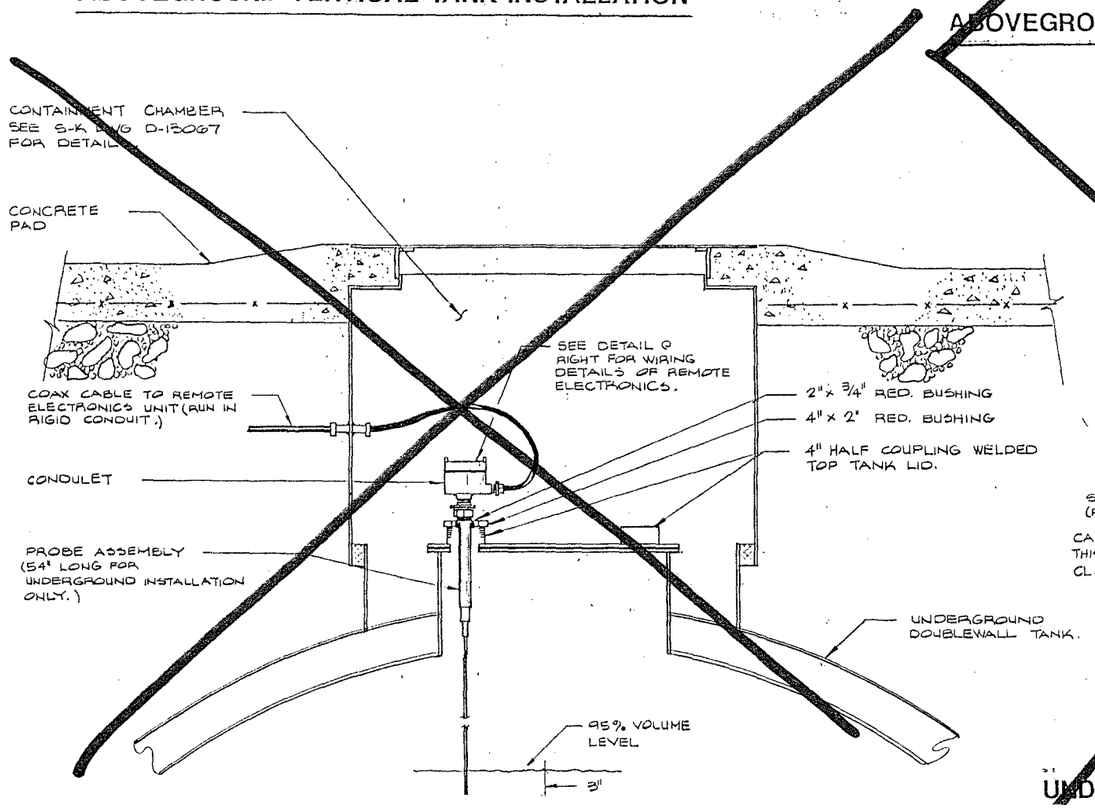
SCALE: NO SCALE
DRAWN: WJ
DATE: 11-5-
CHKD:
APP'D:
DWG NO: C1130



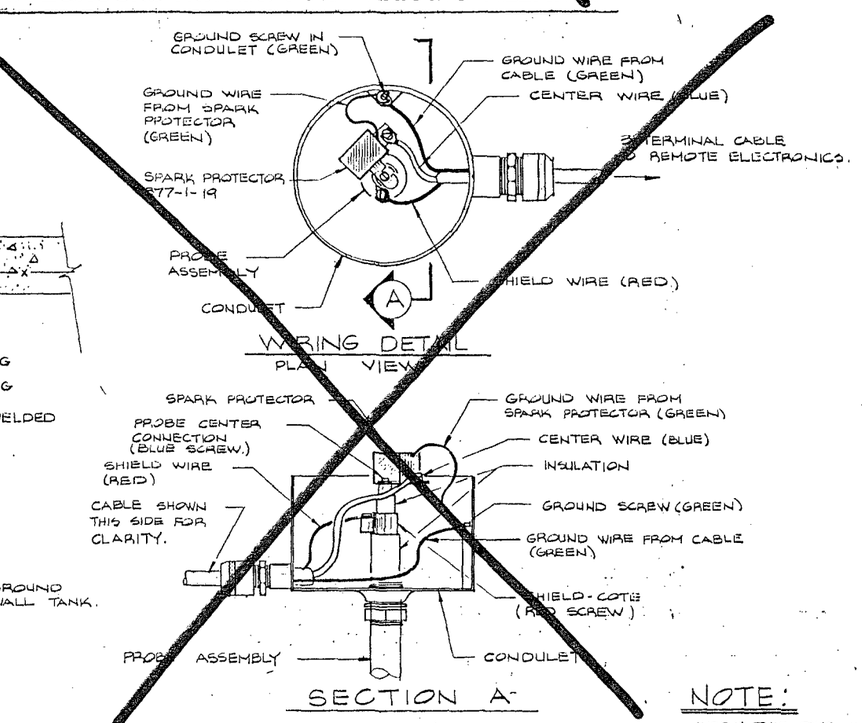
ABOVEGROUND VERTICAL TANK INSTALLATION



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. SK- - - - -)
12. IF INDIVIDUAL SERVICE CENTER CONDITIONS ARE NOT COVERED BY DETAILS SHOWN HERE, PLEASE CONTACT TECHNICAL SERVICES AT THE CORPORATE OFFICE FOR ASSISTANCE.
13. 4 CALCULATIONS FOR LENGTH OF PROBE INSIDE OF TANK ARE SET TO ACTIVATE THE ALARM AT THE 95% VOLUME LEVEL.
14. 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. 4
15. ALL TANKS SHALL BE GROUNDED PRIOR TO INSTALLATION OF ALARM SYSTEM.

FIGURE 6A

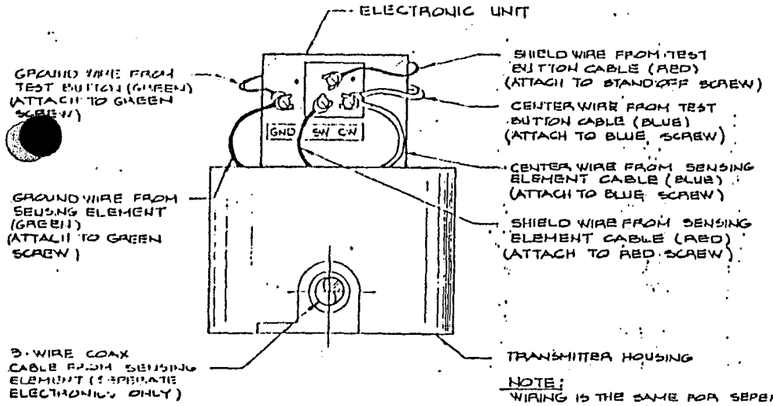
1 REDRAW UNDERGROUND INSTALLATION ADDED DETAILS & CHANGED CONDUIT TO RIGID	RD	1-4-90
2 ADD NOTES AND MODIFY TITLE DWG. 3 ON VERT & HOR. TANK INSTALLATION.	MA	7-20-0
5 ADD "EXPLOSION PROOF SEAL OFF" NOTE	RLB	12-15-9
4 CHANGED: PROBE DEPTH, NOTE 13	RLB	11-23-89

safety-kleen corp.
777 BIG TIMBER ROAD • ELGIN, ILLINOIS 60123 PHONE 312/697-8460

HIGH LEVEL ALARM SYSTEM TRANSMITTER TO TANK INSTALLATION DETAILS

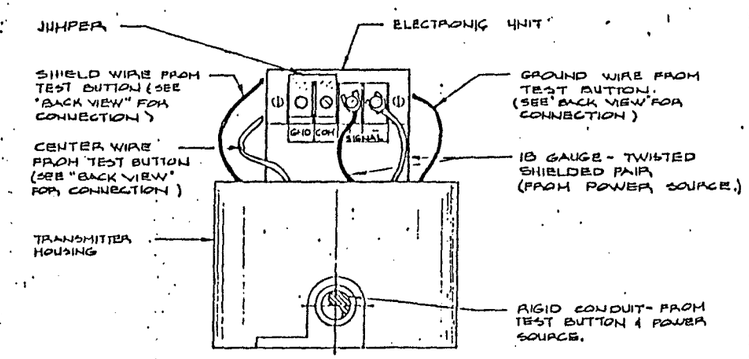
SCALE NONE	REVISIONS	BY	DATE
DATE 6-22-88	1 ADDED CHART & MISC. INFO.	RD	7/5/88
DRWN. RD CHKD.	2 4" Ø WAS 18"; 24" WAS 18"	RD	7/6/88
APVD.	3 ADDED SEAL OFF	RD	7/7/88

TITLE for: SERVICE CENTER BRANCH NO.



NOTE:
WIRING IS THE SAME FOR SEPERATE AND INTEGRAL ELECTRONICS @ THIS POINT.

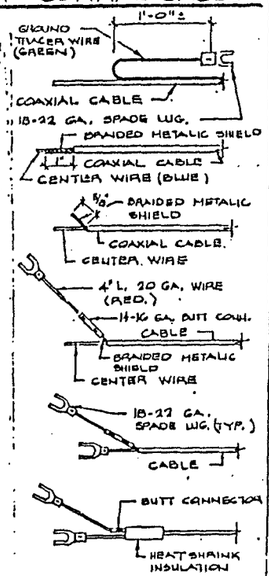
ELECTRONIC UNIT
BACK VIEW
(SENSING ELEMENT CONNECTIONS)



ELECTRONIC UNIT
FRONT VIEW
(SIGNAL WIRING)

TERMINATIONS OF COAXIAL CABLE

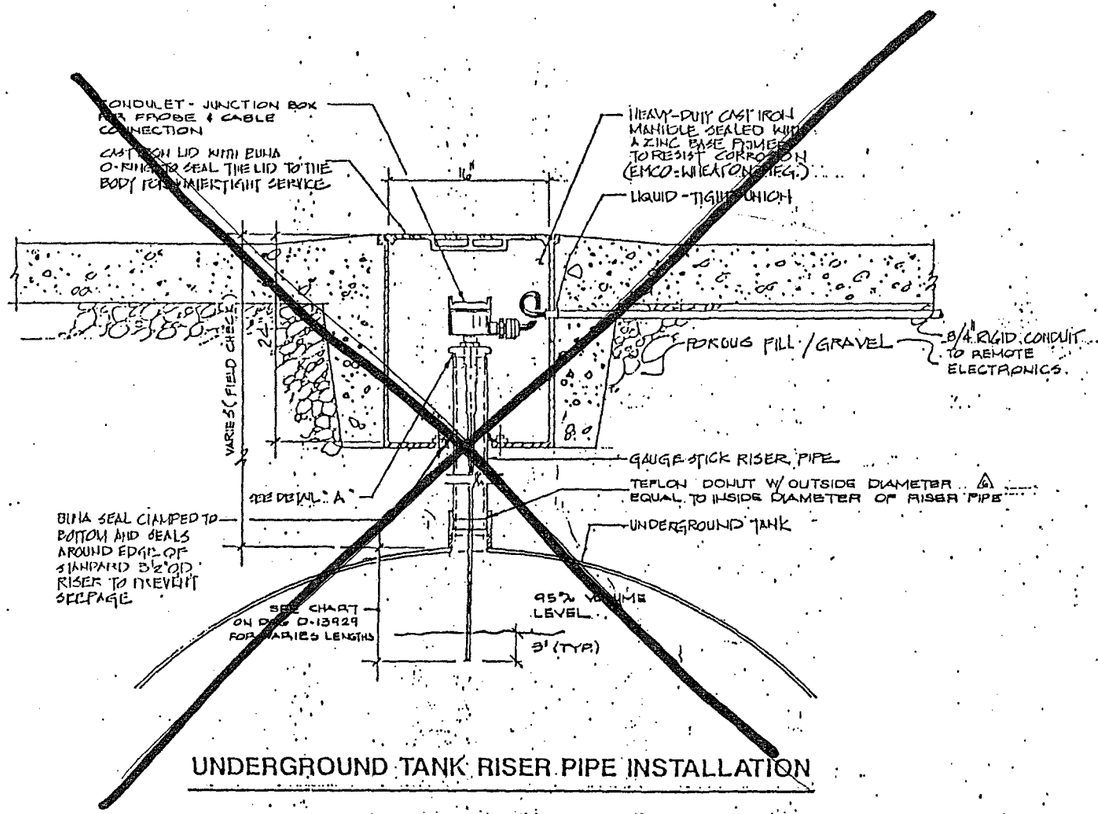
1. Cut cable to required length plus 3". Strip the ground drawer wire away from the core to a length of about 1". Strip about 5/16" of insulation from the end of the wire. Crimp an 18-22 ga. spade terminal lug onto the ground wire. If possible, this wire should be color-coded green to match the color 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 an 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 coax-shield connections.
5. Trim about 1/4" 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 tip 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 3" of 1/2" diameter heat-shrink 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 sources of 200-250 degrees needed. A propane torch with a low level flame is recommended.)



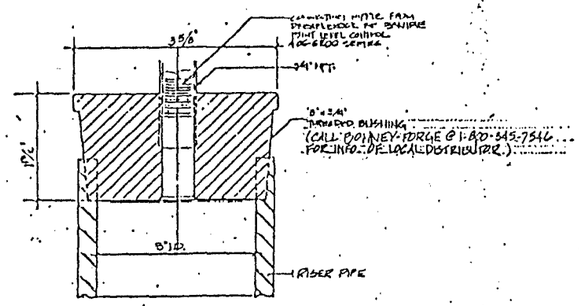
GENERAL NOTES

1. POWER REQUIREMENT 13 TO 28 VDC
2. OUTPUT 4 - 10 m (ALARM STATE)
   13 - 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 MV FIELD @ 27, 130, OR 450 mHz, 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 OPERATION MANUAL 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 ENVIRONMENTAL PERMIT APPLICATIONS ONLY. IT IS NEITHER APPROVED NOR IS IT TO BE USED FOR EQUIPMENT OR MATERIAL PROCUREMENT, CONSTRUCTION, OR ANY OTHER PURPOSE.

FIGURE 6B

A	ADDED WIRING DETAILS AND NOTES FOR CABLE TERMINATIONS.	DS
B	ADD NOTES AND MODIFY THE DWG. ON VERT. & HOR. TANK INSTALLATION.	MA
A	ADD EXPLOSION PROOF SEAL OFF NOTE	JLB
A	STANDARD PROBE DEPTH, NOTE 13	JLB

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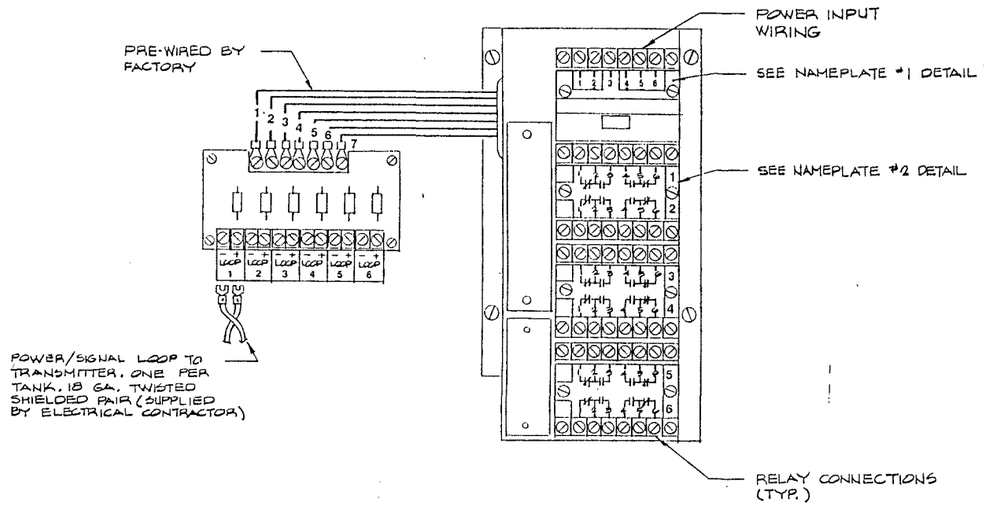
HIGH LEVEL ALARM REMOTE TRANSMI
TO TANK INSTALLATION DETAILS

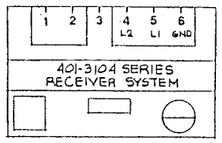
SCALE NONE		
DATE 6-22-88	A ADDED CHART / MISC. INFO	C
DRN RD	B 14"Ø WAS 16"; 24" WAS 18"	D
	A ADDED SEAL-OFF	A

for: SERVICE CENTER BRANCH

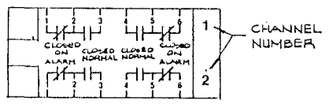
D-14



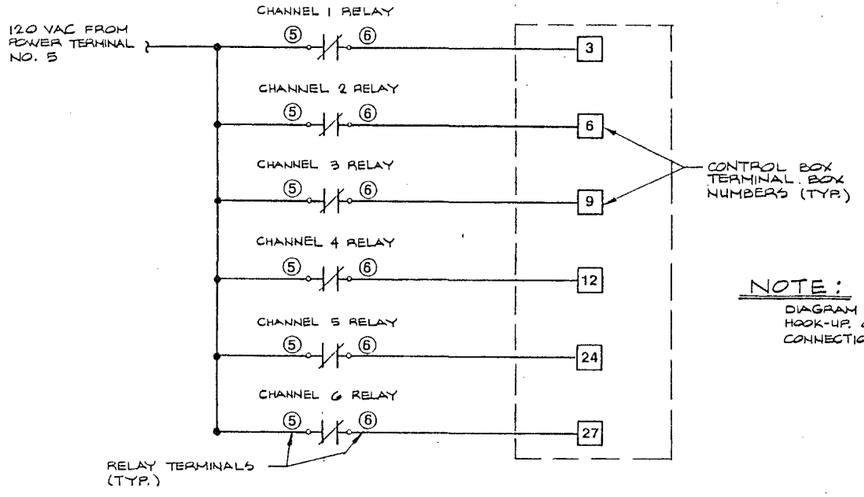
EXISTING TANK PROBE LENGTH		
TANK DIAMETER	DISTANCE FROM TOP OF TANK TO 95% VOL. LEVEL.	MINIMUM LENGTH OF PROBE INSIDE TANK
8' = 96"	9"	12"
10' - 120"	11"	14"
12' -. 144"	14"	17"



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

NO	DESCRIPTION	BY	CHK	APPR	DATE
	REVISIONS				

TITLE: L.C.T. HIGH LEVEL ALARM RECIEVER SYSTEM DETAILS

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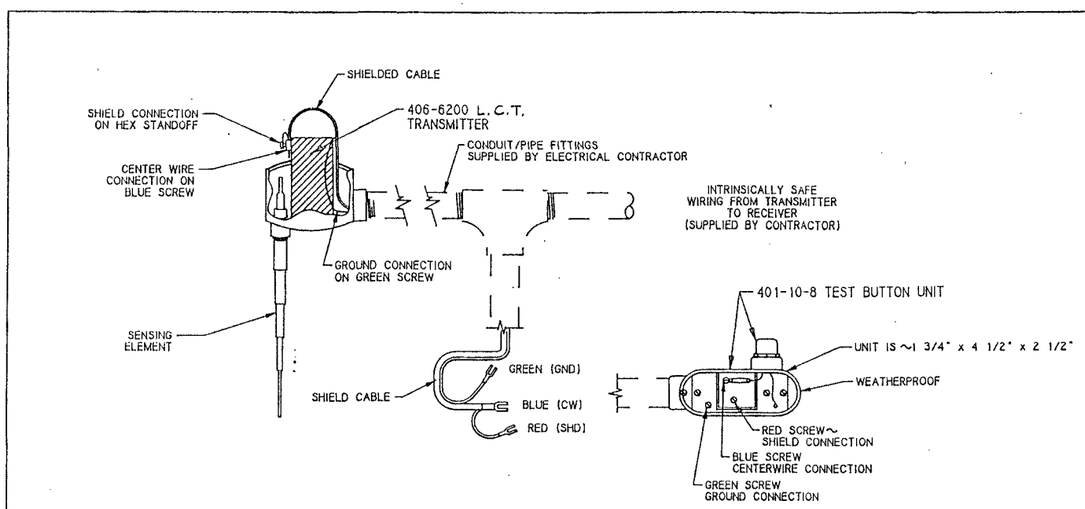
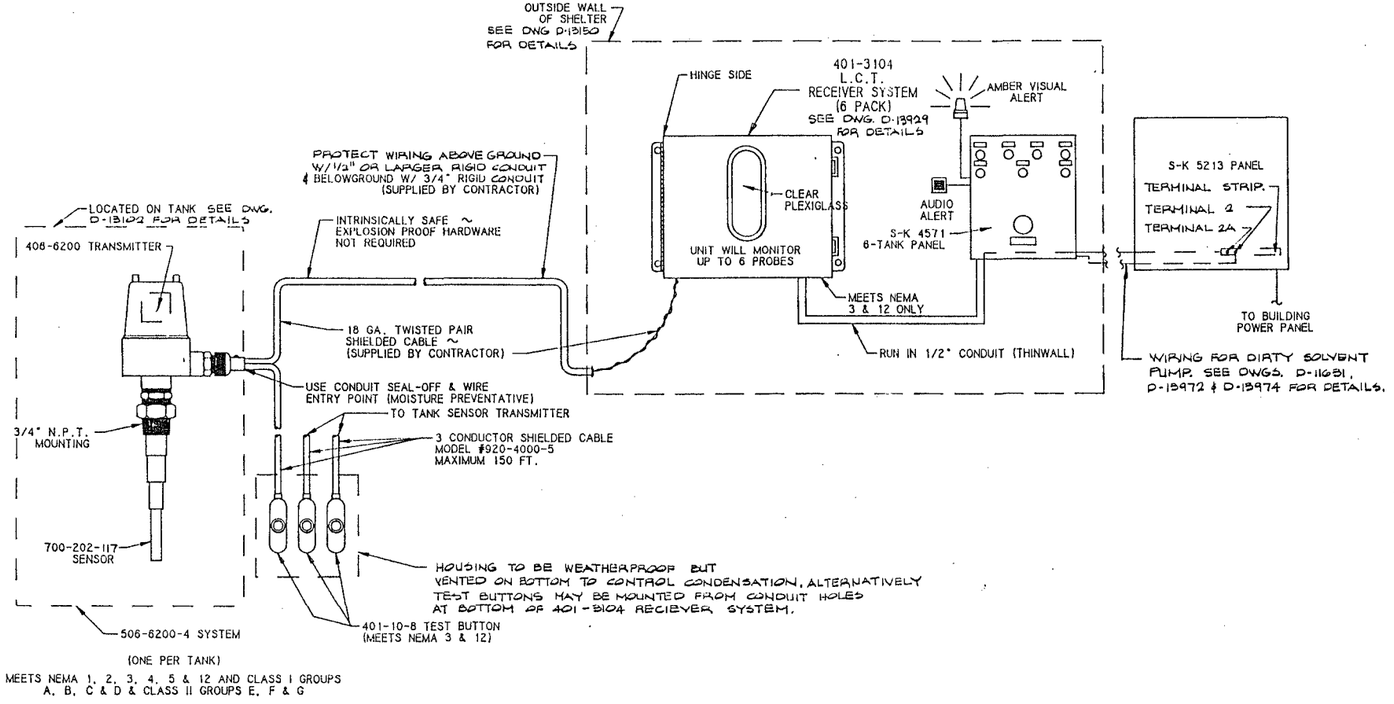
SCALE	DRAWN	CHECKED	ENGINEERING APPR.	OPERATION APPR.	DATE
NONE	RLS				1-10-89

DRAWING NO. D-13929 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
E	ADDED VARIOUS NOTATIONS	DS			1-10-0
D	REV'D. & REDRAWN ON COMP'TR.	NWD			6/18/9
C	ADDED TEST BUTTON UNIT	MA			7/31/9
B	ADDED SEALOFF FITTING	RD			10/17/
A	REVISED & REDRAWN	RD			5/31/9

REVISIONS

TITLE

L.C.T. HIGH LEVEL ALARM ELECTRICAL DIAGRAM

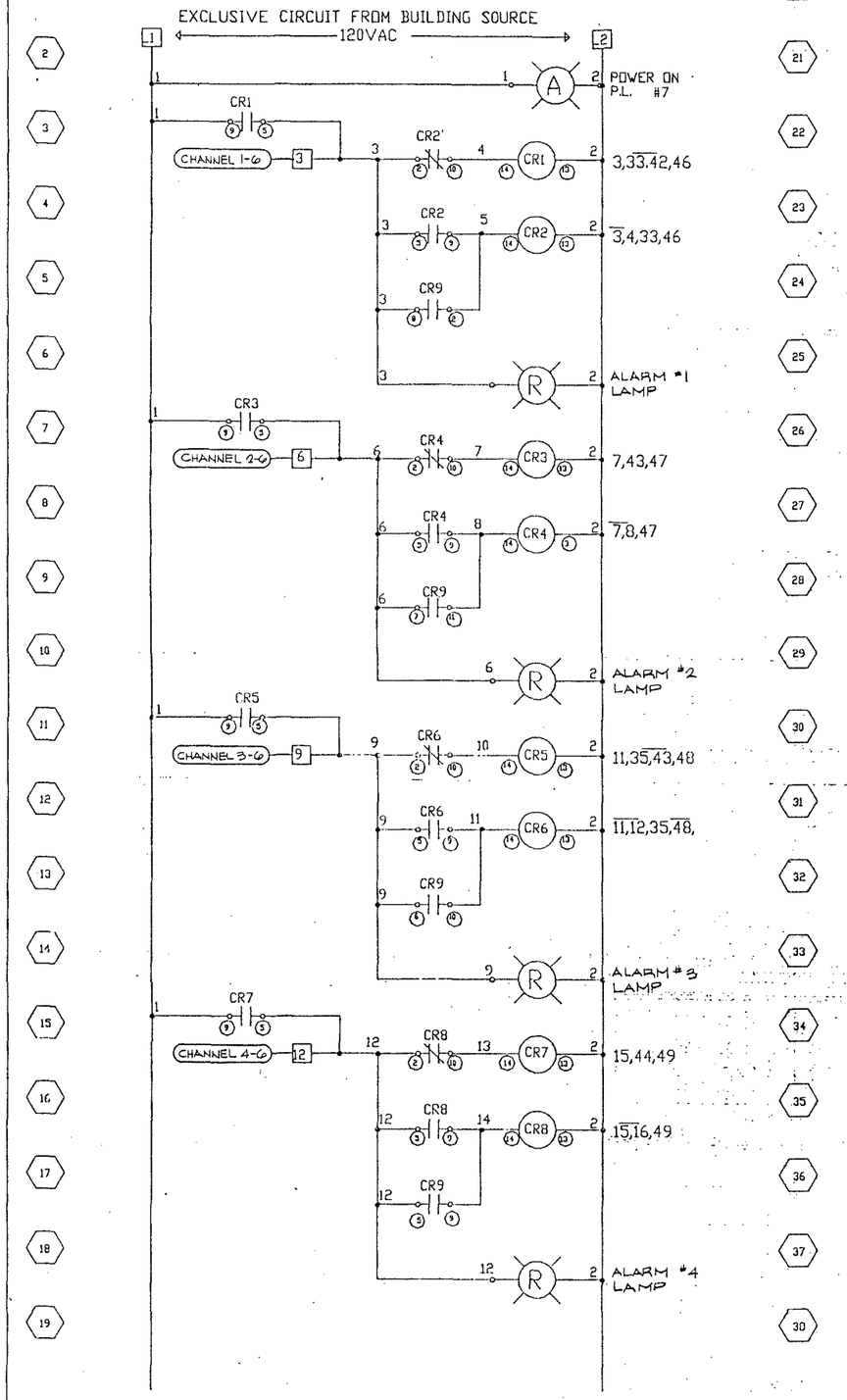
SAFETY-KLEEN CORP.
777 BIG TIMBER ROAD, ELGIN, ILLINOIS 60120 PHONE 312/697-8460

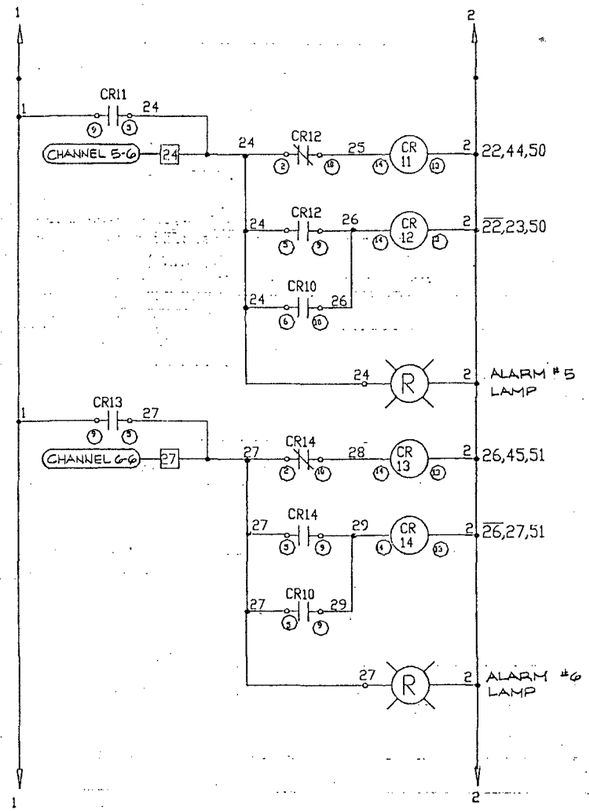
PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		NONE	RD	5/12/8

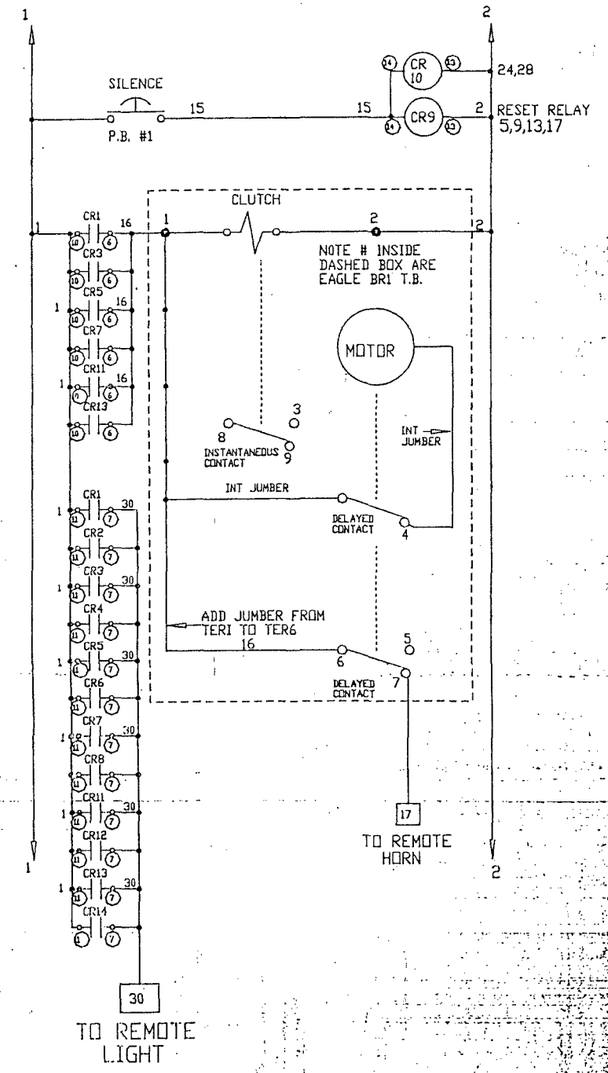
BRANCH

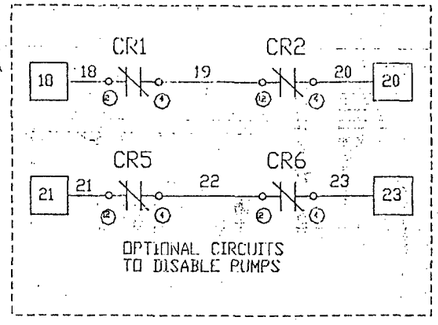
DRAWING NO. D13120 REV. E

B07









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 PREVELBROOK RECIEVER PANEL, SEE DWG D-13929 FOR DETAILS.

FIGURE 6E

NO.	REVISION	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

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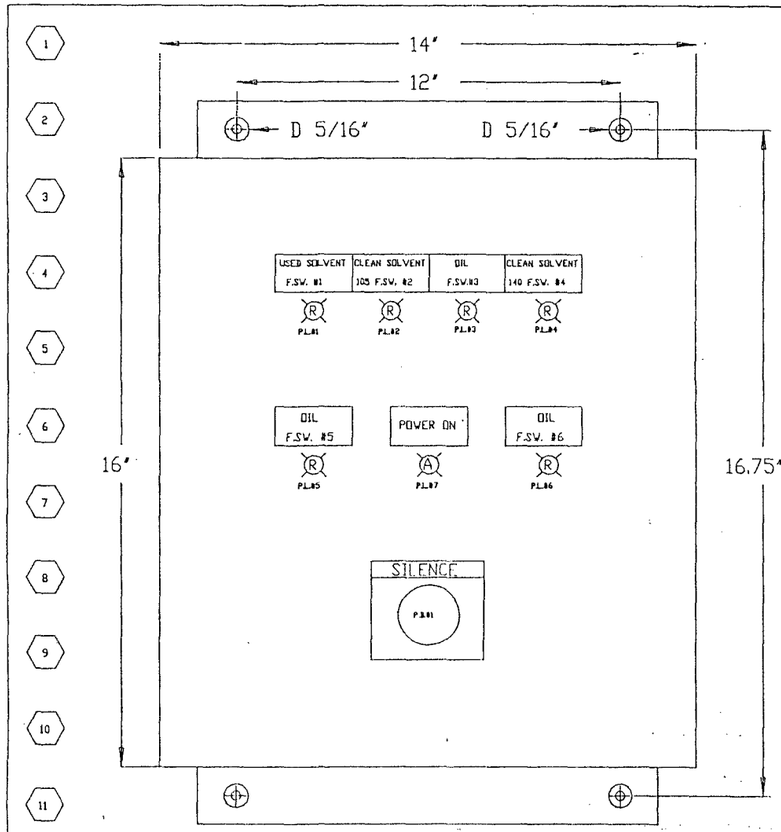
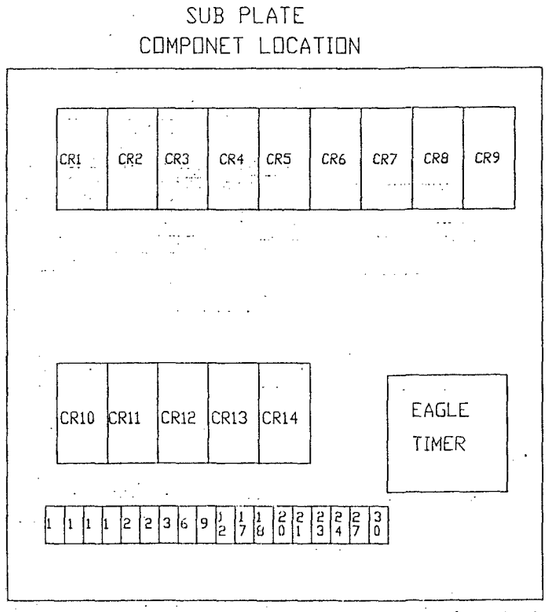
SCALE	DRAWN	CHECKED	ENGINEERING APPR	OPERATIONS APPR	
NONE	MCU				10-10-89

#5347

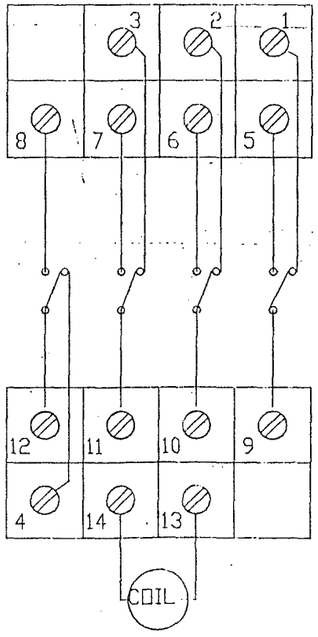
DRAWING NO. D-13974 REV. 1





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

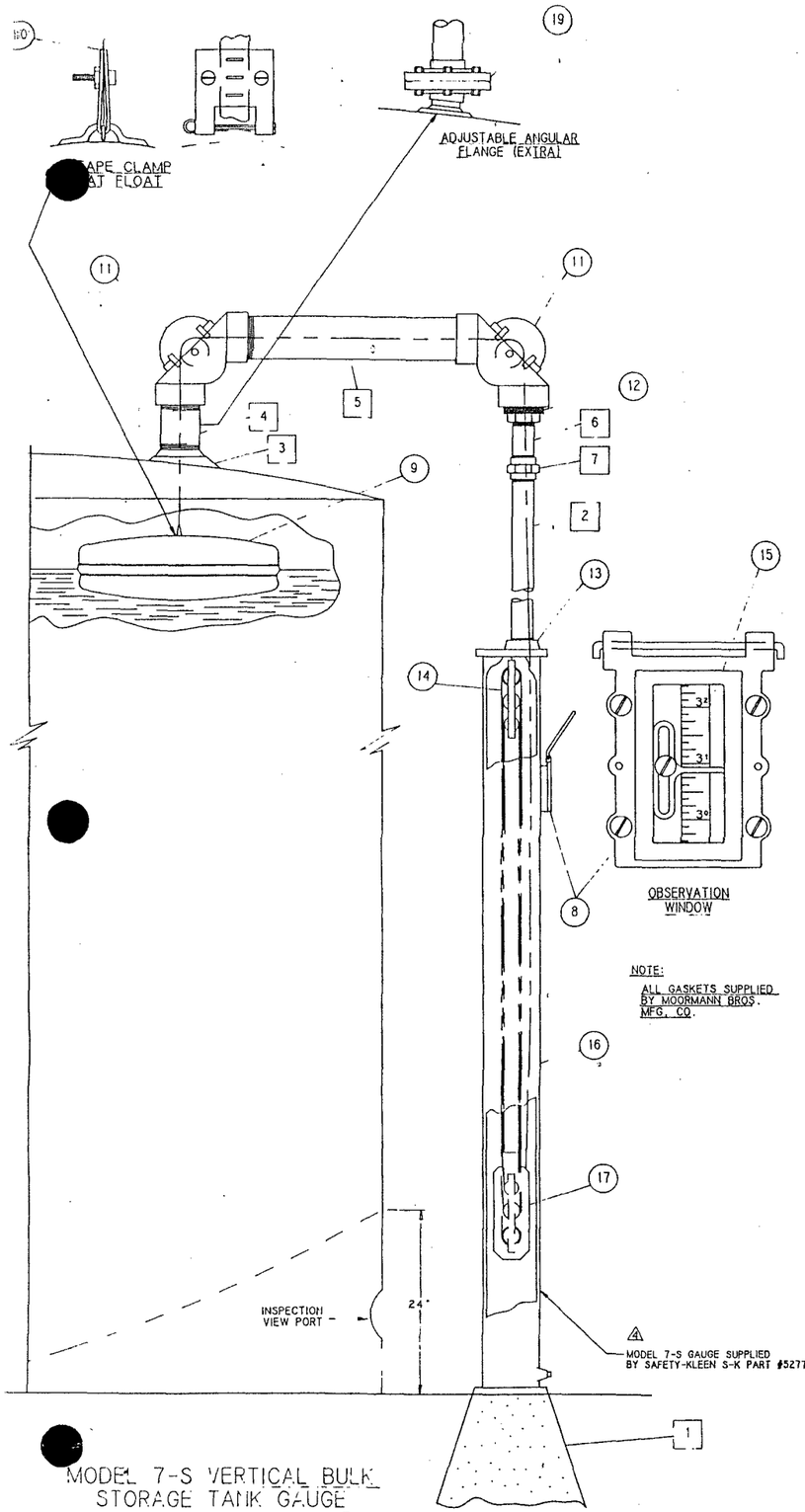
NO.		BY	CHK	APPR	DATE
1	CHANGED PART NO. FOR EAGLE 5 MIN. TIMER	DS			1-8-90

TITLE: 6 TANK ALARM CONTROL BOX WITH AUTO SILENCE
SHEET 2 OF 2

SAFETY-KLEEN CORP.

SCALE	DRAWN	CHECKED	ENGINEERING APPR	OPERATIONS APPR	
NONE.	MCU				10.10.89

N 5317 — DRAWING NO. D-13975 — REV. 1



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

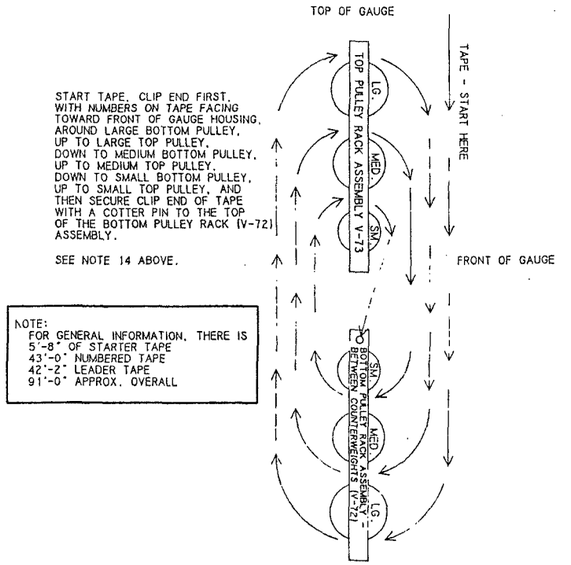
FOR ALL VERTICAL TANKS UP TO & INCLUDING 35'

[ ] 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
B	ASSIGN LEVEL #, ECO # 9206	LHD			9-5-90
A	DRG. # WAS A10243	RD			2/8/90
5.	REV'D NOTES 19-23 AND ADDITIONAL CALIBRATION INFORMATION	RD			1/12/89
6.	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			6/21/84
1.	ADDED NOTE 5	WLJ			2/13/84

REVISIONS

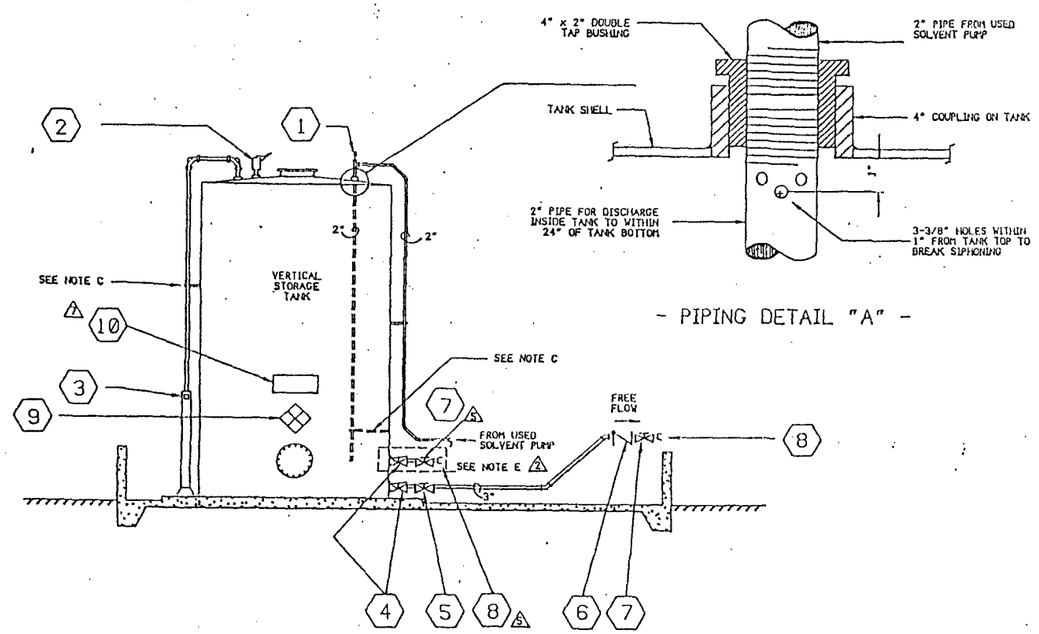
TITLE: MOORMANN BROS. TANK GAUGE INSTALLATION (DISHED BOTTOM TANKS ONLY)

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

PROJ. ENG. APPR.	OPERATIONS APPR.	SCALE	DRAWN	DATE
		NONE	WLJ	10/7/83

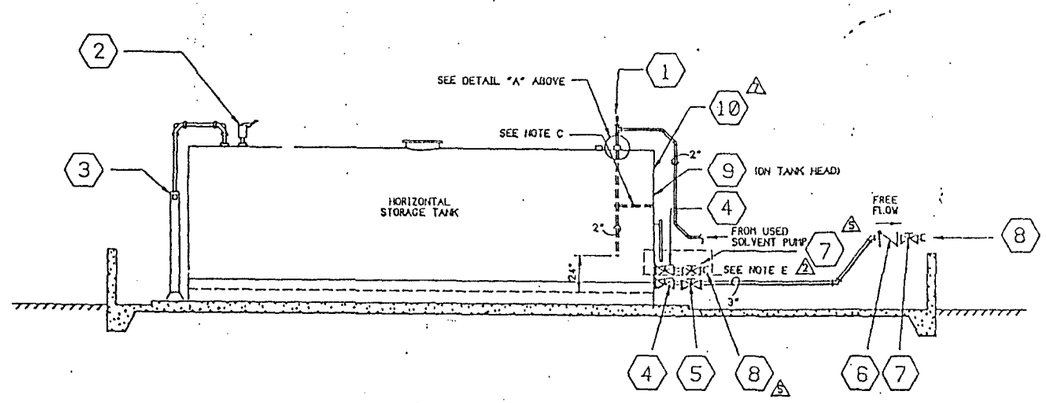
BRANCH: FOR SERVICE CENTER BRANCH — DRAWING NO.: STD-2015 — REV.: 08

BJ4



- PIPING DETAIL "A" -

VERTICAL INSTALLATION



- HORIZONTAL INSTALLATION -

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

- EQUIPMENT/FIXTURE SCHEDULE -

MARK	SIZE	DESCRIPTION	SK PART NO.	REMARKS
1	3/8"	3/8" AUTOMATIC VACUUM BREAKERS MORRISON BROS. FIG. 134-A	5274	—
2	3"	3" SCREWED PRESSURE/VACUUM VENT MORRISON BROS. FIG. 548 (2 OZ. PRESSURE - 1 OZ. VACUUM)	5339	—
3		TANK GAUGE - MOORMAN BROS. MODEL NO. 7-S	5277	SEE INSTALLATION DETAILS ON SAFETY-KLEEN DWG. A10243
⬡				
4	3"	3" INTERNAL EMERGENCY VALVE MORRISON BROS. FIG. 272-HO W/212°F FUSIBLE LINK	5267	SEE INSTALLATION DETAILS ON SAFETY-KLEEN DWG. C11302 ⚠5
5	3"	3" DUCTILE IRON GATE VALVE W/ROUND FLANGED ENDS - MORRISON BROS. FIG. 234-DI	5276	SEE INSTALLATION DETAILS ON SAFETY-KLEEN DWG. C11302 ⚠5
6	3"	3" BRONZE CHECK VALVE - MORRISON BROS. FIG. 246-A	5266	—
7	3"	3" BRONZE GATE VALVE - MORRISON BROS. FIG. 235-B LOCKING TYPE	5265	—
8	3"	3" ALUMINUM CAMLOCK QUICK COUPLING - MORRISON BROS. MALE ADAPTOR PART F W/DUST CAP & CHAIN	5264	COUPLING TO BE INSTALLED SIX (6) INCHES ABOVE DIKE WALL
⚠4 9	—	NFPA MATERIAL IDENTIFICATION PLACARD	2452	DISPLAY IN PLAIN SIGHT ABOVE DIKE WALL
⚠4 10	—	"COMBUSTIBLE-KEEP FIRE AWAY" SIGN	81207	DISPLAY IN PLAIN SIGHT ABOVE DIKE WALL

- GENERAL NOTES -

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

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

(C) ALL PIPING TO BE SCHEDULE 40 GALVANIZED AND BE SUPPORTED EVERY (8) RUNNING FEET - CONTRACTOR TO SUPPLY ALL BRACKETS, CLAMPS, ETC. AS REQUIRED FOR SUPPORTING PIPE - ALL EXPOSED THREADS AT JOINTS TO BE PAINTED WITH A RUST RESISTANT EXTERIOR GRADE PAINT. PIPING SUPPORT HARDWARE TO BE UNISTRUT BRAND OR APPROVED EQUIVALENT.

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

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

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

Figure 8

NO.	DESCRIPTION	BY	CHKD	APPR	DATE
⚠1	ADDED NOTE	C.S.			6/13/90
⚠2	CHANGED PART NO. 5273 TO 5339	J.S.H.			5/4/89
⚠3	ADDED "COMBUSTIBLE" SIGN	R.D.			1/27/88
⚠4	REV. GEN. NOTES NO. SYSTEM TO LETTERS	C.S.			3/30/87
⚠5	REVISED 3" PLUG-ADDED VALVE/CAMLOCK	V.L.J.			3/22/85
⚠6	ADDED ITEM 9 TO SCHEDULE 1 DWG.	V.L.J.			11/5/84
⚠7	ADDED NOTE F	V.L.J.			10/23/84
⚠8	REVISED DETAIL IN NOTE E SHOWN ON DWG.	V.L.J.			11/5/83

REVISIONS

TITLE: USED SOLVENT STORAGE TANK INSTALLATION DETAILS

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

PROCESS APPR. | OPERATIONS APPR. | SCALE: NTS | DRAWN: R.S. | DATE: 11/22/8[illegible]

FOR BRANCH SERVICE CENTER | DRAWING NO. D11124 | REV.

PG2
8-24-89 PDC

Appendix H
Containment Calculations for Tank Containment Area

ERM-South, Inc.
Environmental Resources Management

Project EK - Hooker | W.O. No. 13112.21 | Sheet 1 of 2
Subject Available Storage Capacity | By DS | Date 7-16-92
Chkd by VH | Date 7/16/92

TANK FARM (Figure II. C.7-1):

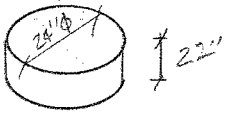
$$\text{Total Vol} = \text{Vol}_{\text{CONT.}} + \text{Vol}_{\text{Sump}} - \text{Vol}_{\text{TANK}} - \text{Vol}_{\text{PAD}} - \text{Vol}_{\text{RAINFALL}}$$

1. Containment Area:

$$V_c = (58'-16")(40'-16")\left(\frac{36+38"}{2}\right)$$
$$= (56.67')(38.67')(3.08')$$
$$= 6749.60\ ft^3\ (7.48\ gal/ft^3)$$
$$= 50,487.0\ gal$$

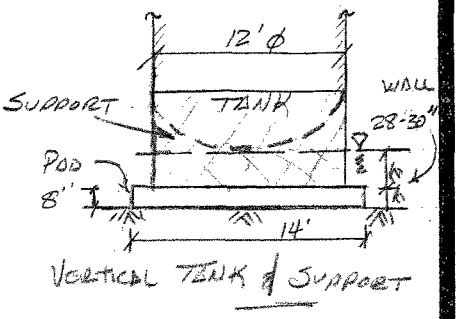
2. Sump (Qty = 1):

$$V_s = \left(\pi\ \frac{d^2}{4}\right)(h)$$
$$= \pi\ \frac{(2)^2}{4}\left(\frac{22"}{12}\right) = 5.76\ ft^3$$
$$= 5.76\ ft^3\ (7.48\ gal/ft^3)$$
$$= 43.1\ gal$$



Circular Sump

3. Tank (qty = 6, w/ 1 ruptured & 5 intact)



VERTICAL TANK & SUPPORT

(a) $V_T = 5\left(\pi \frac{(12)^2}{4}\right)\left(\frac{28+30"}{2(12)}\right)$

$= 1366.59\ ft^3 (7.483\ gal/ft^3)$

$= 10,222.1\ gal$

(b) $V_P = 6(14)(14)(8"/12)$

$= 784\ ft^3 (7.48\ gal/ft^3) = 5864.3\ gal$

4. Rainfall:

Based on 25yr - 24 Hr rainfall of 10 inches

V_R = (Containment Area)(Rainfall)

$= (56.67' \times 38.67')(10"/12)$

$= 1826.2\ ft^3 (7.48\ gal/ft^3) = 13,659.9\ gal$

Total Available Storage Vol. = $V_C + V_S - V_T - V_P - V_R$

Vol = (50,487.0 + 43.1 − 10,222.1 − 5864.3 − 13,659.9) gal

Vol = 20,783.8 gal

∴ Total available storage volume (20,783.8 gal) exceeds single tank volume (20,000 gal).

Appendix I
Subpart BB and CC Information

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.

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.

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 0F
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

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).

SUBPART CC COMPLIANCE PLAN
Tampa, FL

The Safety-Kleen Tampa, 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.

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.

Appendix J
Information Regarding Solid Waste Management Units – Appendix A from USEPA's RCRA Facility Assessment

APPENDIX A

SOLID WASTE MANAGEMENT UNIT SUMMARY

APPENDIX A-1

At this time there are no Solid Waste Management Units which require an RFI.

APPENDIX A-2

List of Solid Waste Management Units that require no further action at this time:

SWMU No.	Description
*1	Container Storage/Transfer Waste Area
*2	Aboveground Storage Tank Area
*3	Return/Fill Area

* - Solid Waste Management Unit regulated by the State's portion of the RCRA permit.

APPENDIX A-3

There are no Solid Waste Management Units that require confirmatory sampling at this time.