

Instructions for
updating the
Permit Application

Belk Book



Florida Department of
Environmental Regulation

RCRA PERMITTING -- ROUTING SLIP

FACILITY/ITEM: SAFETY-KLEEN / Jalee

PATS NO: H037-171747

<u>TO</u>	<u>NAME</u>	<u>INITIALS</u>	<u>DATE</u>
___	SATISH KASTURY	___	___
___	MERLIN RUSSELL	___	___
___	SHELTON GRAVES	___	___
___	AMRISAR KAHAROEEDUIN	___	___
___	JIM LADNER	___	___
___	BILL LINN	___	___
___	JOYCE PAPP	___	___
___	CAMILLE PLAUTZ	___	___
___	CINDY SMITH	___	___
___	MICHAEL HATCHER	<u>in H</u>	<u>6-25</u>
___	BHEEM KOTHUR	___	___
___	JOHN GRIFFIN	___	___
___	ALEX ON-WUTAKA	___	___
___	WANDA PARKER	___	___
___	RABIN PRUSTY	___	___
___	RAVI SHAH	___	___
___	HARBHAJAN SINGH	___	___
___	DIAHE HUNT	___	___
___	WILL WILLIAMSON	___	___
___	___	___	___
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REQUIRED ACTION & COMMENT: URGENT() ROUTINE()

File

RETURN TO: Michael Hatcher FOR FILING !

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**INSTRUCTIONS FOR UPDATING THE
PERMIT APPLICATION
SAFETY-KLEEN CORP.
TALLAHASSEE, FLORIDA**

Replace attachment I.D.2

Replace attachment I.D.3

Replace pages II.A.4(b)-1 and II.A.4(b)-2 in attachment II.A.4(b)

Add Actrel® MSDS to attachment II.A.4(b) - appendix A

Replace text only in attachment II.A.5

Replace text only in attachment II.A.6

Replace text only in attachment II.C.2

Replace text only in attachment II.C.9

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ATTACHMENT I.D.2
DESCRIPTION OF FACILITY OPERATION

DESCRIPTION OF THE BUSINESS

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

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

Basically, Safety-Kleen handles three types of parts washer solvents: Petroleum-based solvents (Parts Cleaner 105, Premium Solvent, or Actrel®) and old and new formulations of immersion cleaner. The old formulation immersion cleaner solvent is labeled under the trade name of Immersion Cleaner and Carburetor and Cold Parts Cleaner #609. It is a two-phase system consisting of an upper aqueous (water) layer and lower non-aqueous (solvent) layer. The water phase consists of water and Dresinate TX (sodium soap of tall oil). The solvent phase is composed of methylene chloride, orthodichlorobenzene, cresylic acid, and an amines additive. A new formulation immersion cleaner is being marketed under the name #699 and will eventually replace the old immersion cleaner. The new solvent is composed of heavy aromatic naphtha, N-methyl-2-pyrrolidone dipropylene glycol methyl ether, monoethanolamine and oleic acid. The waste contains a maximum of one percent total chlorinated solvents.

The solvents are distributed and collected by Safety-Kleen service representatives. Containers are transported in specially-equipped, enclosed route trucks. Clean solvents are distributed from and used solvents returned to the Operations Center where they are stored in separate tanks for the clean parts washer solvent and used parts washer solvent (Parts Cleaner 105, Premium Solvent, and Actrel®) bulk storage. Used parts washer solvent 105 is manifested from the customer as hazardous waste. Used Actrel® is manifested from the customer as hazardous waste unless a generator's hazardous waste determination indicates that it is non-hazardous, in which case the used Actrel® would only become hazardous once it is mixed in the used parts washer solvent tank. Used parts washer Premium Solvent is transported from the customer as a non-hazardous waste and only becomes hazardous once it is mixed in the used parts washer solvent tank. Warehouse space is dedicated for the storage of both clean and used immersion cleaner containers. The clean Premium Solvent and Actrel® are also stored in containers in the warehouse. Safety-Kleen leases parts washing equipment, including partially filled containers, which double as the solvent reservoir of the parts washer. During servicing, the quantity of used solvent removed from each machine ranges from 5 to 20 gallons depending on the drum that services the machine.

Periodically, a company truck is dispatched from one of Safety-Kleen's nationwide solvent recycle facilities to the branch to deliver a load of clean solvent and pick up a load of used solvent. Parts washer solvent (used and fresh) is transported in bulk tank trucks between the branch and the recycle facilities. Clean Premium Solvent and Actrel® are transported in containers and may be transported in bulk tank trucks. Used parts washer solvent is transported in containers from the customer to the branch, where they are added to the used parts washer solvent tank. The Immersion Cleaner remains in the covered containers during transfer between the service centers and the recycle facilities. Approximately 97 percent of the solvent handled in the parts washer business is petroleum-based, while the remainder is immersion cleaner.

Safety-Kleen's solvent cycle is essentially a closed loop, moving from the service center to the customer, from the customer to the service center, from the service center to the recycle center and then from the recycle center back to the service center for redistribution to customers. The small quantities of residue remaining in the storage tanks at the service

centers and after distillation of the used solvent at Safety-Kleen's solvent recycling facilities are disposed of in accordance with applicable laws and regulations.

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

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

In addition, Safety-Kleen provides a paint waste reclamation service. Wastes containing various thinners and paints are collected in containers and are stored at the service centers. These wastes are periodically shipped to a reclaimer, and the regenerated solvent is distributed to Safety-Kleen customers for use as a product.

Fluid Recovery Services (FRS) is a program managed by the Safety-Kleen Service Centers. Under this program, used products similar to the fresh products provided by Safety-Kleen are collected by the service center and processed by the recycle centers. The FRS wastes will be managed as transfer wastes. The manifest will not be terminated at the service center. These products may or may not have originally been obtained from Safety-Kleen by the industrial customer. Examples of the types of waste that may be received from FRS customers include:

1. Spent hydrocarbon distillates, such as waste fuel, oil, petroleum, naphtha, etc.
2. Lubricating, hydraulic oils, and machine oils.
3. Industrial halogenated solvents such as 1,1,1-trichloroethane, tetrachloroethylene, freon, and trichloroethane.

4. Photographic and x-ray wastes.
5. Paint and lacquer thinners and paint wastes.
6. Other hazardous and non-hazardous halogenated and non-halogenated wastes.

In 1993, Safety-Kleen began offering an optional filtration unit for use with its Parts Cleaner 105 and Premium Solvent equipment. The filtration unit is designed to remove large particles from the solvent, thereby extending the life of the solvent. The cartridge filters are changed at least every four weeks by a Safety-Kleen representative. The used filtration cartridges are collected at the customer's site in a small pail which is located next to the equipment. This small pail functions as a satellite accumulation pail. Once the pail is full, it is manifested as hazardous waste, transported to the branch, and managed as a transfer waste under the Fluid Recovery Service (FRS) program. From the branch, the filters are transported to a recycle center for processing. The filters from the parts washer equipment contain essentially the same constituents as those found in dumpster mud.

The Actrel® systems are also equipped with a filtration system. Approximately once every four to eight weeks the service representative changes the filters. The filters are placed inside a plastic tube located inside the Actrel® solvent container, which is connected to the parts washer equipment. The filters are removed when the entire contents of the Actrel® container are replaced with fresh Actrel® approximately every 6 months. The waste Actrel® is placed in the wet dumpster. The filters are placed in the waste sludge satellite accumulation container located at the return/fill shelter wet dumpster. Once the branch's satellite accumulation container is full, it is transported to a recycle center for processing. The filters from the Actrel® system will contain approximately the same constituents as dumpster mud.

In 1990, Safety-Kleen began offering a service for the collection of spent antifreeze (ethylene glycol) from automobile service stations. These wastes are deposited into a carboy or containers by the customer, which are located on the customer's premises. The contents of carboy are pumped into a tanker truck or into containers by a Safety-Kleen sales representative. At the service center, it is then pumped into a 15,000-gallon storage tank (if

handled in bulk) or placed in the container storage warehouse (if handled in containers) for shipment to a Safety-Kleen recycle center.

Safety-Kleen also collects used oil filters and oily water. These materials are generally not hazardous wastes. The used oil and oily water may be managed in either drums or bulk tanks.

**TABLE I.D.3-1
SAFETY-KLEEN CORP.
TALLAHASSEE, FLORIDA
ESTIMATED ANNUAL QUANTITIES OF HAZARDOUS WASTE**

Waste Type	Process Code(s)	Estimated Annual Amounts (Tons)	Waste Codes
Spent Parts Washer Solvent*	S01** S02***	575	D001 and D-Codes Listed in Note Below
Dumpster Sediment	S01**	Included Above	D001 and D-Codes Listed in Note Below
Tank Bottoms	S01**	Included Above	D001 and D-Codes Listed in Note Below
Spent Ethylene Glycol	S01****	5,000	D-Codes Listed in Note Below
Spent Immersion Cleaner (Old Formula)	S01**	22	F002, F004, and D-Codes Listed in Note Below
Spent Immersion Cleaner (New Formula)	S01**	Included Above	D-Codes Listed in Note Below
Dry Cleaning Waste	S01**	50	D001 or F002 and D-Codes Listed in Note Below
Paint Waste	S01**	50	D001, F003, F005 and D-Codes Listed in Note Below
Fluid Recovery Service (FRS) Waste	S01*****	250	D001, D002, and D-Codes, F-Codes, K-Codes, and U-Codes Listed in Note Below

NOTES:

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

F-Codes: F001, F002, F003, F004, F005, F006, F019, F024, F039

K-Codes: K006, K016, K019, K022, K029, K030, K031, K048, K049, K050, K051, K052, K085, K086, K095, K096, K009, K010, K011, K013, K014, K015, K002, K003, K004, K005

U-Codes: U001, U002, U003, U009, U031, U037, U043, U044, U051, U052, U055, U056, U057, U068, U069, U070, U071, U072, U075, U077, U078, U079, U080, U083, U084, U107, U108, U110, U112, U113, U117, U118, U121, U125, U140, U154, U159, U161, U162, U165, U169, U171, U188, U191, U196, U210, U211, U213, U220, U226, U227, U228, U239, U359

* Spent parts washer premium solvent is transported from the customer to the Service Center as a non-hazardous waste. Once it reaches the Service Center, it is bulked with hazardous parts washer of a similar nature and managed as a hazardous waste. Spent Parts Washer 105 and Actrel® are transported from the customer to the Service Center as a hazardous waste unless the generator's hazardous waste determination indicates that it is non-hazardous.

** These wastes will be stored in containers in the container storage area. The maximum capacity in the container storage area for hazardous waste is 6,912 gallons.

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

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

***** FRS wastes are transfer wastes only.

ATTACHMENT II.A.4(b)

PREPAREDNESS, PREVENTION, CONTINGENCY PLAN, AND EMERGENCY PROCEDURES FOR DAILY BUSINESS OPERATIONS SAFETY-KLEEN CORP., TALLAHASSEE, FLORIDA

GENERAL INFORMATION

Purpose

The preparedness, prevention, 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 nonsudden 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 occurs that could threaten human health or the environment. All plan responses must conform with the procedures contained in this plan.

General Description of Activities

The business activities conducted at the Tallahassee Service Center 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 are returned to the Service Center, where separate aboveground storage tanks are utilized for the storage of clean and used parts washer solvent (Parts Cleaner 105, Premium Solvent, and Actrel®). There is one clean solvent storage tank at this time. This tank may store any of the clean parts washer solvent (Parts Cleaner 105, Premium Solvent, or Actrel®). Warehouse space is designated for the storage of containers of both clean and used immersion cleaner, parts washer solvent, tank bottoms, dumpster mud, antifreeze, dry cleaning wastes (chlorinated and non-chlorinated solvent) paint wastes, fluid recovery service (FRS) wastes and oil. Premium solvent may be stored in the clean parts washer solvent tank in the future. Safety-Kleen uses a container color scheme as part of its waste management system. Eighty five-gallon overpack containers are utilized for the management of containers whose integrity has been compromised.

The parts washer solvent is transported in covered containers between the Service Center and customers. Upon returning to the Service Center, the used parts washer solvent (Parts Cleaner 105, Premium Solvent, and Actrel®) is transferred from the containers into a wet dumpster/barrel washer (solvent return receptacle) in which coarse solids in the parts washer solvent are retained. Used parts washer solvent (Parts Cleaner 105, Premium Solvent, and Actrel®) in the wet dumpster flows into a 15,000-gallon aboveground tank for storage. Used parts washer solvent (Parts Cleaner 105, Premium Solvent, and Actrel®) is picked up periodically by a bulk tank truck from the Recycle Center which, upon arrival at the Service Center, delivers a load of clean parts washer solvent. The sludge in the wet dumpster is periodically cleaned out, containerized, and temporarily stored in the container storage area for later shipment to the Recycle Center for reclamation.

The immersion cleaners #609 and #699 remain in covered containers 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 Service Center. The dry cleaning wastes are picked up at commercial dry cleaning establishments in containers and stored temporarily at the Service Center. The containers are picked up periodically for recycling at the recycle facility.

Paint wastes are collected in containers and handled similarly to the immersion cleaners.

Dry cleaning wastes consist of spent filter cartridges, powder residue from diatomaceous or other powder filter systems and still bottoms. These wastes are packaged on the customer's premises in containers.

Spent antifreeze is accumulated in an aboveground storage tank (if handled in bulk). Wastes are transferred from tanker trucks to the storage tank (if handled in bulk) or containers (if handled in containers). Waste is removed from the tank for transport by pumping it to a tanker truck. The containers are placed in the container storage area for shipment to a Safety-Kleen Recycle Center on a third party contract reclaimer. The spent ethylene glycol may also undergo tanker-truck to tanker-truck transfer of waste. This type of transfer will only occur if the spent ethylene glycol tank system is non-operational. This transfer will occur at the return/fill station which has secondary containment, and will require less than two hours to complete.

ACTREL PC 95 CLEANER

PAGE: 1
DATE PREPARED: APR 29, 1993
MSDS NO.: 92863595**SECTION 1 PRODUCT IDENTIFICATION & EMERGENCY INFORMATION**

PRODUCT NAME: ACTREL PC 95 CLEANER

CHEMICAL NAME:

Not Applicable: Blend

CHEMICAL FAMILY:

Petroleum Hydrocarbon

PRODUCT DESCRIPTION:

Clear colorless liquid; mild hydrocarbon odor.

EMERGENCY TELEPHONE NUMBERS:	EXXON CHEMICAL AMERICAS	800-726-2015
	CHEMTREC	800-424-9300

SECTION 2 HAZARDOUS INGREDIENT INFORMATION

The composition of this mixture may be proprietary information. In the event of a medical emergency, compositional information will be provided to a physician or nurse. This product is not hazardous as defined in 29 CFR 1910.1200

SECTION 3 HEALTH INFORMATION & PROTECTION**NATURE OF HAZARD****EYE CONTACT:**

Slightly irritating but does not injure eye tissue.

SKIN CONTACT:

Occasional brief contact with the liquid will not result in significant irritation unless evaporation is impeded.

Frequent or prolonged contact may irritate and cause dermatitis.

Low order of toxicity.

Skin contact may aggravate an existing dermatitis condition.

INHALATION:

High vapor/aerosol concentrations (greater than approximately 700 ppm, attainable at elevated temperatures well above ambient) are irritating to the eyes and the respiratory tract, and may cause headaches, dizziness, anesthesia, drowsiness, unconsciousness, and other central nervous system effects, including death.

INGESTION:

Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

Low order of toxicity.

FIRST AID**EYE CONTACT:**

Flush eyes with large amounts of water until irritation subsides. If irritation persists, get medical attention.

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SKIN CONTACT:

Flush with large amounts of water; use soap if available.
Remove grossly contaminated clothing, including shoes, and launder before reuse.

INHALATION:

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

INGESTION:

If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

WORKPLACE EXPOSURE LIMITS

EXXON RECOMMENDS THE FOLLOWING OCCUPATIONAL EXPOSURE LIMITS:
300 ppm total hydrocarbon based on composition.

PRECAUTIONS

SPECIAL PRECAUTIONS:

Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

PERSONAL PROTECTION:

For open systems where contact is likely, wear safety glasses with side shields, long sleeves, and chemical resistant gloves.
Where contact may occur, wear safety glasses with side shields.
Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.

VENTILATION:

The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated.

SECTION 4 FIRE & EXPLOSION HAZARD

FLASHPOINT: 212 Deg F. METHOD: PMCC NOTE: Typical
FLAMMABLE LIMITS: LEL: 1.3 UEL: 10.3 @ 77 Deg F. NOTE: Approximate
AUTOIGNITION TEMPERATURE: 505 Deg F. NOTE: Approximate

GENERAL HAZARD:

Low Hazard, liquid can burn upon heating to temperatures at or above the flashpoint.
Static Discharge, material can accumulate static charges which can cause an incendiary electrical discharge.
"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.
Empty drums should be completely drained, properly bunged and promptly returned to a drum reconditioner, or properly disposed of.
Static Discharge, material can accumulate static charges which can cause

EXXON**CHEMICAL****MATERIAL SAFETY DATA SHEET**EXXON CHEMICAL AMERICAS, P.O. BOX 3272, HOUSTON, TEXAS 77001
A DIVISION OF EXXON CHEMICAL COMPANY, A DIVISION OF EXXON CORPORATION**ACTREL PC 95 CLEANER**PAGE: 3
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an incendiary electrical discharge .

FIRE FIGHTING:

Use water spray to cool fire exposed surfaces and to protect personnel.
Isolate "fuel" supply from fire.
Use foam, dry chemical, or water spray to extinguish fire.
Avoid spraying water directly into storage containers due to danger of
boilover.
This liquid is volatile and gives off invisible vapors. Either the liquid
or vapor may settle in low areas or travel some distance along the ground
or surface to ignition sources where they may ignite or explode.

HAZARDOUS COMBUSTION PRODUCTS:

No unusual

SECTION 5 SPILL CONTROL PROCEDURE**LAND SPILL:**

Eliminate sources of ignition. Prevent additional discharge of material,
if possible to do so without hazard. For small spills implement cleanup
procedures; for large spills implement cleanup procedures and, if in
public area, keep public away and advise authorities. Also, if this
product is subject to CERCLA reporting (see Section 7) notify the National
Response Center.
Prevent liquid from entering sewers, watercourses, or low areas. Contain
spilled liquid with sand or earth.
Recover by pumping or with a suitable absorbent.
Consult an expert on disposal of recovered material and ensure
conformity to local disposal regulations.

WATER SPILL:

Eliminate sources of ignition. Warn occupants and shipping in surrounding
and downwind areas of fire and explosion hazard and request all to stay
clear.
Remove from surface by skimming or with suitable adsorbents. If allowed
by local authorities and environmental agencies, sinking and/or
suitable dispersants may be used in non-confined waters.
Consult an expert on disposal of recovered material and ensure
conformity to local disposal regulations.

SECTION 6 NOTES

ACTREL PC 95 CLEANER

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HAZARD RATING SYSTEMS:

This information is for people trained in:
National Paint & Coatings Association's (NPCA)
Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704)
Identification of the Fire Hazards of Materials

	NPCA-HMIS	NFPA 704	KEY
HEALTH	1	1	4 = Severe
FLAMMABILITY	1	1	3 = Serious
REACTIVITY	0	0	2 = Moderate
			1 = Slight
			0 = Minimal

SECTION 7 REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):

DOT HAZARD CLASS: Not regulated
DOT IDENTIFICATION NUMBER: Not Available

FLASHPOINT: 212 Deg F. METHOD: PMCC NOTE: Typical

TSCA:

Components of this product are listed on the TSCA Inventory.

CERCLA:

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:

Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories:
Not Hazardous.
This product does not contain Section 313 Reportable Ingredients.

SECTION 8 TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SPECIFIC GRAVITY:

0.78 at 60

SOLUBILITY IN WATER, WT. % AT °F:

Less than 0.01 at 77

SP. GRAV. OF VAPOR, at 1 atm (Air=1):

6.20 Calculated

EVAPORATION RATE, n-Bu Acetate=1:

Less than .01

VAPOR PRESSURE, mmHg at °F:

Approx. .02 mmHg at 68F

VISCOSITY OF LIQUID, CST AT °F:

2.6 at 77F

FREEZING/MELTING POINT, °F:

14

BOILING POINT, °F:

441 to 506



MATERIAL SAFETY DATA SHEET

EXXON CHEMICAL AMERICAS, P.O. BOX 3272, HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

ACTREL PC 95 CLEANER

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SECTION 9 REACTIVITY DATA

STABILITY:

Stable

CONDITIONS TO AVOID INSTABILITY:

Not Applicable

HAZARDOUS POLYMERIZATION:

Will not occur

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:

Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS:

None

SECTION 10 STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD:

Yes, use proper grounding procedure

STORAGE TEMPERATURE, °F:

Ambient

STORAGE/TRANSPORT PRESSURE, mmHg:

Atmospheric

LOADING/UNLOADING TEMPERATURE, °F:

Ambient

VISC. AT LOADING/UNLOADING TEMP., cST:

3 Approximately

REFERENCE NUMBER:

HDHA-C-25155

DATE PREPARED:

April 29, 1993

SUPERSEDES ISSUE DATE:

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR TECHNICAL SALES REPRESENTATIVE
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 713-870-6884

THIS INFORMATION RELATES TO THE SPECIFIC MATERIAL DESIGNATED AND MAY NOT BE VALID FOR SUCH MATERIAL USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. SUCH INFORMATION IS TO THE BEST OF OUR KNOWLEDGE AND BELIEF, ACCURATE AND ABLE AS OF THE DATE COMPILED. HOWEVER, NO REPRESENTATION, WARRANTY OR GUARANTEE IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF INFORMATION FOR HIS OWN PARTICULAR USE. WE DO NOT ACCEPT LIABILITY FOR ANY LOSS OR DAMAGE THAT MAY OCCUR FROM THE USE OF THIS INFORMATION NOR DO WE OFFER WARRANTY AGAINST PATENT INFRINGEMENT.

ATTACHMENT II.A.5 WASTE ANALYSIS REPORT

In accordance with U.S. EPA Hazardous Waste Regulations, eight types of hazardous waste have been identified for collection either as permitted or transfer wastes at the service center:

1. The used Parts Cleaner 105 returned from customers in separate containers, transferred, and stored in the aboveground tank awaiting shipment to the recycle facility, is considered to be an Ignitable Waste (D001). Used Actrel® and used Premium Solvent are considered non-ignitable. The used Parts Cleaner 105 and used Actrel® are considered a characteristic waste by toxicity characteristic leaching procedure (TCLP) (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, and D043). Used parts washer solvent 105 is manifested from the customer as a hazardous waste. Used parts washer premium solvent is transported from the customer as a non-hazardous waste and only becomes hazardous once it is mixed in the used parts washer solvent tank. Used Actrel® is manifested from the customer as a hazardous waste unless a generator's hazardous waste determination indicates that it is non-hazardous, in which case it will be managed as a non-hazardous waste until it is placed in the used parts washer solvent tank, at which time it will be a hazardous waste.
2. The used chlorinated solvent #609 (old), returned from customers in separate containers and remaining in the same container for shipment to the recycle facility, is considered to be a Listed Waste from Non-Specific sources (F002 and F004); and a characteristic waste by TCLP (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, and D043).
3. The used immersion cleaner #699 (new), returned from customers in separate containers and remaining in the same container for shipment to the recycle facility, is

considered a characteristic waste by TCLP (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, and D043).

4. Parts washer solvent dumpster mud and tank bottom sludge, which will accumulate in the solvent return receptacles (wet dumpsters) and in the sludge tank, are considered to be an Ignitable Waste (D001) and a characteristic waste by TCLP (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, and D043). Other parts washer solid debris, such as metal parts and Actrel® filters, are considered a characteristic waste only by TCLP.
5. Dry cleaning wastes will consist of spent filter cartridges, powder residue from diatomaceous or other powder filter systems and still bottoms. While approximately 80 percent of the dry cleaning solvent returned by Safety-Kleen customers will be perchloroethylene (F002) and a characteristic waste by TCLP (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, and D043), approximately 17 percent is mineral spirits (D001), and a characteristic waste by TCLP (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, and D043), and the remaining 3 percent is trichloro-trifluoroethane (F002) and a characteristic waste by TCLP (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, and D043).
6. Antifreeze waste is approximately one-third water with the remaining third being antifreeze (ethylene glycol) and contaminants. As a protective measure, the container storage areas for spent antifreeze will be permitted to store wastes with the following TCLP waste 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, and D043.

7. Paint wastes will consist of various lacquer thinners such as acetone, isopropyl alcohol, methyl ethyl ketone, methyl isobutyl ketone, toluene, xylenes, and acetate compounds (D001, F003, and F005) and is a characteristic waste by TCLP (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, and D043). The waste will be collected in containers at the customer's place of business and the containers will then be palletized whenever possible and stored in the paint waste storage area of the accumulation center.
8. Due to the great variability in the composition of Fluid Recovery Service (FRS) wastes, their application or use, and the source industry, Safety-Kleen characterizes each stream from each generator separately. FRS wastes received at the facility are classified as characteristic wastes (D-waste codes), non-specific source wastes (F-waste codes), listed wastes from specific sources (K-wastes), commercial chemical products, manufacturing intermediates or off-specification chemical commercial products (U-waste codes). Most of the time, a waste stream will be some combination of specific components, and be categorized as a D- or F- waste. Table II.A.5-1 provides a list of the EPA waste codes managed at the facility under the FRS program. These wastes, except characteristic waste oil, are shipped in containers and are stored on pallets. The FRS wastes are handled as transfer wastes only.

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

USED PARTS WASHER SOLVENT

The clean parts washer solvent is labeled under the trade name of "Safety-Kleen 105 Solvent," so-named because of the flash point of the solvent being 105°F (minimum). Premium solvent has a flash point of 148°F or higher. Actrel® has a flash point of 212°F. Chemically, the solvent primarily consists of petroleum hydrocarbon fractions with a boiling point range between 310°F and 400°F. Impurities, such as light aromatic hydrocarbons (LAHC) and chlorinated hydrocarbons, usually constitute less than one percent of the total volume. The mineral spirits constituted at least 95% of the total volume of the Parts Cleaner 105 and Premium Solvent. The Actrel® solvent consists primarily of a paraffinic compound with C₁₂ - C₁₄ chains.

The used parts washer solvent consists primarily of mineral spirits or paraffinic compound solvent plus water (parts cleaner 105, premium solvent, and Actrel®), insoluble solids, oil, and grease picked up in the various degreasing operations that Safety-Kleen's customers use. 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 tank bottoms may range from 2 percent to 10 percent, by volume, in the used solvent. These tank bottoms are generated when the bulk tank is cleaned out. The used parts washer premium solvent is non-hazardous as received from the customers and prior to being placed in the used parts washer solvent tank.

The premium solvent and Safety-Kleen's existing parts washing solvent 105 are very similar in nature, both being predominantly mineral spirits. The Actrel® solvent is a paraffinic compound with C₁₂ - C₁₄ chains. However, the premium solvent has a flash point of 148°F, and Actrel® has a flash point of 212°F; they are therefore not ignitable. Our preliminary data from other facilities indicates that the used premium solvent is not TCLP hazardous. The Actrel® solvent is presumed to be TCLP hazardous unless a generator's hazardous waste determination indicates otherwise.

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.

USED IMMERSION CLEANER

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

A new "Immersion Cleaner and Carburetor and Cold Parts Cleaner #699" is also being leased and will eventually replace the #609 immersion cleaner. It is a heavy aromatic naphtha, N-methyl-2-pyrrolidone dipropylene glycol methyl ether, monoethanolamine and oleic acid, and the waste contains a maximum of 1 percent total chlorinated solvents.

Both the new and old used immersion cleaner is basically unchanged from its clean state, except oils, greases, and insoluble solids may be picked up during the various degreasing operations used by Safety-Kleen's customers. The spent solvent is non-flammable. It is regarded as toxic because it contains various toxic chemicals (see MSDSs in Attachment II.A.4(b)).

USED PARTS WASHER SOLVENT BOTTOM SLUDGE

This is material settled from used parts washer solvent in the aboveground tanks. It contains insoluble solids, oils and greases, and some water picked up in the degreasing operations, together with a small amount of mineral spirits. Analyses have shown that the sludge is an ignitable waste and some TCLP analyses have shown it to be toxic using TCLP standards while others have not. The same analyses apply to tank bottoms as apply to dumpster mud.

The sludge is removed from the aboveground tank periodically and shipped to Safety-Kleen's facility for reclamation. The estimated annual quantity is included in the estimate of used parts washer solvent.

USED PARTS WASHER SOLVENT DUMPSTER MUD

This waste material 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 Actrel® may also be added. The nature of this waste is similar to the used parts

washer solvent bottom sludge, except with some small metal parts and less parts washer solvent. It is regarded as an ignitable waste and often is also considered a characteristic waste using TCLP standards.

The sludge in the dumpsters is cleaned out frequently. The waste is containerized and shipped to Safety-Kleen's facility for recycling.

DRY CLEANING WASTES

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

1. Cartridge Filter: In addition to the construction materials consisting of steel, paper, clay, and carbon, the used cartridge retains solvent, oil and grease, and undissolved elements such as lint and soil. Solvent retained in the filter cartridge generally amounts to less than 50 percent of the total cartridge weight.
2. Muck: At some dry cleaning facilities, a mixture of powdered materials is used as the filter medium for the dry cleaning solvent, in lieu of the cartridge filter. This filter medium normally consists of diatomaceous earth and carbon. In addition to lint, soil, oil, and grease retained by this medium, between 40 and 50 percent by weight of the "muck" is 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.

ANTIFREEZE COLLECTION SERVICE

The spent antifreeze (ethylene glycol) is collected from automobile service states. These wastes are deposited into a carboy or containers by the customer, on the customer's premises,

and the carboy is pumped into a tanker truck or containers by the sales representative. The containerized waste is placed in the container storage area prior to shipment to a reclamation facility.

PAINT WASTES

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 palletized and stored in the container storage area of the warehouse.

FLUID RECOVERY SERVICE WASTES

Fluid Recovery Services (FRS) is a program managed by the Safety-Kleen Service Centers. Under this program, waste types similar to the FRS wastes provided by Safety-Kleen are collected by the service center and processed by the recycle centers. These wastes may or may not have been originally obtained from Safety-Kleen by the industrial customer. These wastes are handled as transfer wastes at the service center. 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, hydraulic oils, and machine oils.
3. Industrial halogenated solvents such as 1,1,1-trichloroethane, tetrachloroethylene, freon, and trichloroethane.
4. Photographic and x-ray related wastes.
5. Paint and lacquer thinners and paint wastes.
6. Other hazardous and non-hazardous halogenated and non-halogenated wastes.

FRS wastes received at the facility are classified as characteristic wastes (D-waste codes), non-specific source wastes (F-waste codes), listed wastes from specific sources (K-wastes,

commercial chemical products, manufacturing intermediates or off-specification chemical commercial products (U-waste codes). Most of the time, a waste stream will be some combination of specific components, and be categorized as a D- or F- waste. Table II.A.5-1 provides a list of the EPA waste codes managed at the facility under the FRS program.

Certain other wastes that result from the use of organic solvents are also managed through the service centers. These include the solids and sludges that settle out of the used solvent during handling and processing. Lint, paper, oils, greases, carbons, and metals are examples of materials which may settle or separate out of used solvent. In addition to the listed waste codes, these wastes may also exhibit a characteristic under the toxicity characteristic leaching procedure.

Certain solvents are not economically recoverable in their primary form. These are typically solvents of low intrinsic value (e.g., methanol), those where the user's specifications are unattainable or where the mixture cannot be efficiently separated because of the formation of azeotropes, overlapping or close boiling ranges. However, when properly blended and processed, these solvents can be a beneficial source of energy. The Safety-Kleen recycle centers are equipped to process non-recoverable solvent mixtures with still bottoms from recovery of their solvent to produce valuable solvent based fuels.

In each of these end use applications at facilities classified as Industrial Furnaces, the combustion conditions are orders of magnitude more destructive than those specified for incinerators. For each industrial furnace emission controls are in place and covered by existing regulations. Specifications are restrictive for polychlorinated biphenyls (PCBs), herbicides, pesticides, etc., and for other wastes that might adversely affect the operation of the unit or the properties of the finished product.

ATTACHMENT II.A.6 WASTE ANALYSIS PLAN

GENERAL

Safety-Kleen provides solvent distribution, collection, and reclamation services to companies that are primarily engaged in automobile repair, industrial maintenance and dry cleaning services. Safety-Kleen operates a "closed loop" waste recovery service for the parts cleaning machines used by customers at their facilities. When the cleaning fluids become dirty and can no longer be used effectively, Safety-Kleen picks up the dirty fluids and replaces them with clean, recycled fluids. The dirty fluids are returned to Safety-Kleen where they are recycled and subsequently reused by their customers. Approximately two-thirds of the cleaning fluids provided as product by Safety-Kleen has been used before and subsequently reclaimed.

Safety-Kleen's customers are typically 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, as discussed earlier in the Facility Description (Attachment I.D.2), the materials collected at the Service Center 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 all materials before returning them to the service centers. 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 non-conforming 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 Standard Industrial Classification (SIC) code is recorded) and the purpose for which he will use the machine;
3. Training customers to use the machines properly;
4. Training employees to inspect spent solvent and determine whether it is acceptable;
5. Indicating on the service document, every time waste is collected, whether the spent solvent meets Safety-Kleen's acceptance criteria;
6. Marking each container with the customer's name, address, and EPA I.D. number (if required). This information remains on containerized waste until it is accepted at the reclamation facility;
7. Keeping a record of each incoming and outgoing shipment in the operating log at each facility;
8. Demonstrating the chemical and physical homogeneity of the wastes by sampling and analyzing a representative portion of individual generator waste streams on an ongoing annual basis; and
9. Routine analysis of the wastes received at the Recycle Centers.

Safety-Kleen's customers sign a service document containing the following information:

1. The name, address, and EPA I.D. number of the facility to which the waste is being shipped;

2. The customer's name, address, and EPA I.D. number (if required); and
3. The description and amount of Safety-Kleen solvent waste generated.

Each incoming and outgoing shipment is recorded in the facility's operating log. In addition, each sales representative must complete an acceptance criteria checklist each time a waste is picked up. Finally, environmental activity 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 he will dispose of the waste himself or will require Safety-Kleen's assistance. If he 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, polychlorinated biphenyls (PCBs), flash point, etc.). If the waste is acceptable at the branch, it will be relabeled and manifested appropriate 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.

QUALITATIVE WASTE ANALYSES

General Inspection Procedures

Safety-Kleen visually inspects each container of waste when it is collected 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 at the Florida facilities as described in Attachment II.A.5. 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 wastes 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 generator will be responsible for securing an alternate means of disposal and Safety-Kleen will attempt to reconcile the discrepancy with the generator (e.g., telephone conversations). If the discrepancy is not resolved within 15 days after receiving the waste, Safety-Kleen will immediately submit to the department a letter describing the discrepancy and attempts to reconcile it, and it will submit a copy of the manifest or shipping paper at issue, in accordance with 40 Code of Federal Regulations (CFR) 264.72.

Waste Specific Criteria

The following is a description of the specific acceptance criteria for each waste stream.

Spent Parts Washer Solvent (Parts Cleaner 105, Premium Solvent, and Actrel®)

The acceptance criteria for determining by visual inspection whether spent parts washer solvent has been contaminated are volume and color, the most significant of which is 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 are equal to the respective product amounts in the containers. If the volume of

waste in a given container exceeds the specified level, the Safety-Kleen service representative will sample the waste for laboratory testing as described above, or 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. The Actrel® parts cleaner is colorless. As the solvent (Parts Cleaner 105, Premium Solvent, and Actrel®) is used, it turns color. The specific color which the solvent turns is dependent upon the type of equipment being cleaned. For example, solvent used at automotive shops turns brown or black, while solvent used by silk screeners will turn 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 will sample the waste for possible contamination as described above, or 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 will 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, if the spent immersion cleaner does not appear to be amber, brown, or black, the service representative will either sample the waste for possible contamination as described above, or reject the container of waste.

Dry Cleaner Wastes

Dry cleaner wastes consist of spent filter cartridges, powder residue, and still bottoms:

Spent Filter Cartridges

Spent filter cartridges are placed in either a 15-gallon ("split 30") container which holds three cartridges or a 16-gallon container which holds either one jumbo filter cartridge or two smaller filter cartridges. It is obvious to the 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 will sample the waste for contamination in accordance with the procedures described above, or will reject the waste.

Powder Residue

The criteria for the acceptance of powder residue are consistency and color, the former being the more significant criterion of the two. A container of powder residue should not contain more than one inch of liquid. The waste should be slightly wet, with the consistency of a paste. If there is too much liquid in the container, the waste will 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 sample the waste for contamination in accordance with the procedures described above, or 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 will be sampled for contamination in accordance with the procedures described above, or 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 will sample the waste for contamination in accordance with the procedures described above, or will reject the waste.

Paint Wastes

Safety-Kleen handles both lacquer thinner waste generated from the paint gun cleaning process and paint waste:

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 pails. The paint gun cleaning machine operates as a closed system whereby there should never be a combined volume of more than 7.5 gallons of solvent in the two collection pails. The solvent is pumped from a tube in a left hand pail (facing the machine) through the machine into a right hand pail. The tube in the left hand pail extends exactly half way into the pail (i.e., to the 2.5 gallon mark). The left hand pail starts with five gallons of clean solvent which will be pumped out as the machine is used to clean the spray guns. This process will continue until the left hand pail contains 7.5 gallons of solvent. Any solvent above 7.5 gallons remaining in the left hand pail at the time of servicing will be pumped through the machine into the right hand pail by the Safety-Kleen service representative. Therefore, when the machine is serviced, the right hand pail 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 pails or there is an overfill from the right hand pail, the waste will be sampled for contamination in accordance with the procedures described above, or the waste will be rejected.

Paint Waste

The significant criterion for the inspection of paint waste is consistency. The waste should contain no more than 30 percent solids. The service representative will insert a three-foot-long glass tube into the container. The tube should glide easily down to the bottom of the container. If there is resistance to the insertion of the glass tube, it is assumed that the level of solids is in excess of 30 percent and the service representative will reject the waste.

The contents of the glass tube are also visually examined for consistency and water content. The material should be a "free flowing" liquid, but should not contain a significant amount of water. If there is more than approximately 10 inches of water in the three-foot tube (the water and paint will separate in the tube and thus can be measured), the waste will be rejected.

Antifreeze Waste

Spent antifreeze is collected in carboys or containers at a customer's place of business until it is picked up by Safety-Kleen and pumped into a tanker truck. Prior to transferring the spent antifreeze into the tanker truck, the Safety-Kleen service representative is responsible for visually inspecting the waste. Spent antifreeze is typically yellowish green to blue in color with traces of orange, red, or black discoloration due to ferric oxide (i.e., rust). A slight sheen may be present on the surface of the spent antifreeze due to the presence of oils or other petroleum products. Sediment (brownish or black) may collect in the carboy due to particulate matter from vehicle engines, rust, dirt, or other matter.

If the spent antifreeze does not meet the criteria described above, the Safety-Kleen service representative may collect a sample of the waste for analysis or request that the customer analyze the waste.

ONSITE ENVIRONMENTAL ACTIVITY REVIEW PROGRAM

Based on historical operating and analytical records, Safety-Kleen has determined that the characteristics of its customer's wastes (particularly the last 10 years) reflect that there has, in fact, been a continuing reduction in the trace levels of characteristically toxic constituents in these wastes. Therefore, in concert with the sampling described in this waste analysis plan, Safety-Kleen may conduct reviews of customer's waste streams. This review, in addition to the analytical baseline of information, will confirm that the hazardous waste streams managed at the Service Centers under conditions of the Part B Permit do not change from year to year. Annual process descriptions may be performed for Large Quantity Generators (LQGs) and Small Quantity Generators (SQGs) that generate these wastes.

If a review occurs, it will be performed at the customer's site by the Safety-Kleen sales representative during their regular service calls. The Safety-Kleen representative will meet with a customer representative who is knowledgeable of the Safety-Kleen services used at the facility. The Safety-Kleen representative will conduct an inspection of the facility and interview the customer. The inspection and interview will be used to generate: a description of the customer's processes, an inventory of waste streams, the principal product(s) or service(s), and the purpose for which Safety-Kleen solvents are used. This information will be used to complete a review document which will be certified and signed by the customer's

representative and the Safety-Kleen representative. A copy of the completed review document will be kept on file at the Service Center and copy will be provided to the customer.

WASTE ANALYSES AT THE RECYCLE FACILITY

Analyses performed at the recycle facilities are undertaken to safeguard the recycling process and to assure the product quality. In addition, each waste stream 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 service center:

Table II.A.6-1 Parameters and Rationale for Hazardous Waste Identification

Table II.A.6-2 Parameters and Test Methods

Table II.A.6-3 Methods Used to Sample Hazardous Wastes

Table II.A.6-4 Frequency of Analysis

In addition to the aforementioned analyses, TCLP analyses for all compounds, except pesticides, will be conducted every five years on all characteristic hazardous waste streams (example; used parts washer solvent and 699 IC). Any compounds which are positively detected in the waste stream will be added to the parameter list for that waste stream in Table II.A.6-1.

ATTACHMENT II.C.2 TANK SYSTEM SPECIFICATIONS

The facility consists of three aboveground steel tanks (Figure II.C.2-1). Used parts washer solvent (Parts Washer 105, Premium Solvent, and Actrel®) contained in returned drums from the customers are transferred via the wet dumpster into a 15,000-gallon tank, awaiting bulk shipment to the recycle center. The other 15,000-gallon tank is used to store fresh parts washer solvent (parts cleaner 105 or premium solvent). The 15,000-gallon tank will be used for spent antifreeze. The spent antifreeze will be transferred from a tanker truck into a 15,000-gallon tank.

MATERIAL COMPATIBILITY

The materials stored in the tanks at this facility are parts washer solvent and spent antifreeze. The material is compatible with the mild steel tank structure. In fact, petroleum products are often used as a light hydrocarbon coating to prevent rusting of metal parts. Parts Washer 105 and Premium Solvent consist primarily of mineral spirits (petroleum naphtha). The Actrel® solvent consists primarily of a paraffinic compound with $C_{12} - C_{14}$ chains. As with all petroleum storage vessels, water will accumulate over time due to condensation. The parts washer solvent has a specific gravity less than water and the water will accumulate in the bottom of the tank. There is the potential for corrosion of the tank at the parts washer solvent/water interface. Experience, however, has shown that the corrosion potential at the interface is minimal when compared to the potential for corrosion from soil conditions. Antifreeze and water are soluble in all proportions, and no separate water plume will form in this tank.

OPERATION PROCEDURES

Parts Washer Solvent

Spent parts washer solvent from parts washers is accumulated in the 15,000-gallon aboveground storage tank by transfer through the return and fill station. Containers of spent solvent are poured into the dumpsters (barrel washers) in the return and fill station, and material in the dumpster are pumped into the storage tank for spent solvent. The return and fill station has secondary containment.

The barrel washer is located within the parts washer solvent return and fill area in the warehouse. The drawings (Figures II.C.2-2(a) through II.C.2-2(j)) provide detailed information on the barrel washers.

Used solvent is returned from customers via containers and poured into the barrel washers. The container is then be placed on roller brushes contained within the barrel washer. As the machine is turned on, the container rotates on the brush and the outside of the container is cleaned. There is also a nozzle that sprays a stream of solvent into the bottom of the container to clean the inside of the barrel. The machine is turned off and the container removed. The procedure takes approximately five seconds per container. The container will then be refilled using a pump and nozzle (Figure II.C.2-3(a)) similar to a gasoline pump. The waste parts washer solvent is pumped to the tank (Figure II.C.2-3(b)).

The used solvent goes to a sump in the bottom of the barrel washer and is automatically pumped to the used parts washer solvent storage tank. There is a basket in the sump that collects sludge. At least once each working day this basket is removed, the sludge removed, and placed into a sludge container. Each dumpster has four satellite accumulation containers. These containers are labeled as "Waste Sludge," "Glass/Metal," and "Rags/Absorbents." The Actrel® filters may be added tot he "Waste Sludge" container. The containers remain covered except when wastes are being added. Once full the containers are moved into the container storage area for later shipment to a Safety-Kleen recycle center for disposal or recycling. In addition to the sludge containers there is also one satellite accumulation container (approximately five gallons) connected to the drain pan which is in front of each barrel washer. This container collects any spillage which falls into the drain pans. These containers are periodically emptied into the barrel washers in order to add the waste parts washer solvent to the bulk waste parts washer solvent tank.

Ethylene Glycol

Spent ethylene glycol is collected from customers in either containers or in tanker trucks. If the spent ethylene glycol arrives at the service center in containers, then it is placed into the container storage area. If the spent ethylene glycol arrives at the service center via tanker truck, then it is pumped directly into the spent ethylene glycol tank. The tanker truck

containing the spent ethylene glycol connects to the fill ports located on the south side of the tank farm.

TANK DESIGN

The tanks are designed and constructed to be compatible with the materials stored in them. Typical construction and installation standards for the aboveground tanks are shown in Figures II.C.2-4(a) through II.C.2-4(d). While these figures show both a 15,000- and 20,000-gallon parts washer solvent tank, the same design and installation specifications apply to the 15,000-gallon spent ethylene glycol tank and the 15,000-gallon used parts washer solvent tank. All tanks are vented in accordance with National Fire Protection Association (NFPA) standards, and the tanks are equipped with high-level alarms. A sample design and installation of the tank alarm system is shown in Figures II.C.2-5(a) through II.C.2-5(d). The exact brand of tank alarm equipment used is equivalent to those shown. The tank seams are lapped with full fillet welds. The weld is done with an E70 electrode and can withstand a 4-psi air pressure test (which is performed by the manufacturer) in accordance with Underwriters Laboratories standards. All tanks will be new and unused.

All tanks are aboveground, underlain by a 25' x 59.5" concrete slab and surrounded by a 3' high concrete dike. The tank farm is fully enclosed. Therefore, no surface run-on or precipitation will be in contact with the wastes stored in the tank farm and no run-off collection and management system will be deemed necessary. The dike is sealed with a chemical resistant coating. Level gauges (Figure II.C.2-5(a)) are used to measure liquid levels in tanks and float switch-activated automatic high level alarms (which consist of a strobe light and siren) will signal the tank's being 95 percent full. The exact brand of level gauges in use are at least equivalent to those shown in Figure II.C.2-6. This alarm allows an operator more than two minutes to stop operations and avoid overfilling the tank. In addition, the gauges of the tank must be read before filling and before and during the filling of a tanker truck (the available volume of which must be noted prior to emptying the tank) to prevent overfilling of the truck or tank. A tank truck pump equipped with a suction pump is used to withdraw used parts washer solvent and spent ethylene glycol from the tank. No other equipment or standby equipment is used in the operation of the aboveground tanks. The secondary containment under the tanks and return/fill station must be cleaned within 24 hours of a spill.

"No smoking" signs will be posted on the entrances to the tank farm and return/fill station.

ATTACHMENT II.C.9 CONTROLS AND SPILL PREVENTION

The facility consists of three aboveground steel tanks (Figure II.C.2-1). Used parts washer solvent contained in returned drums from the customers is transferred via the wet dumpster into a 15,000-gallon tank, awaiting bulk shipment to the recycle center. Another 15,000-gallon tank is used to store fresh parts washer solvent. The remaining 15,000-gallon tank is used for spent antifreeze storage.

Parts washer solvent and spent ethylene glycol are compatible with the mild steel tank structure. In fact, petroleum products are often used as a light hydrocarbon coating to prevent rusting of metal parts. Parts Cleaner 105 and Premium Solvent consist primarily of mineral spirits (petroleum naphtha). The Actrel® solvent consists primarily of a paraffinic compound with C₁₂ - C₁₄ chains. As with all petroleum storage vessels, water will accumulate over time due to condensation. The parts washer solvent has a specific gravity less than water and the water will accumulate in the bottom of the tank. There is the potential for corrosion of the tank at the parts washer solvent/water interface. Ethylene glycol and water are soluble in all proportions and no separate water plume will form in this tank.

Parts Washer Solvent

Spent parts washer solvent from parts washers is accumulated in the 15,000-gallon aboveground storage tank by transfer through the return and fill station. Containers of spent solvent are poured into the dumpster (barrel washer) in the return and fill station, and material in the dumpster is pumped into the storage tank for spent solvent. The return and fill station has secondary containment.

The barrel washer is located within the parts washer solvent return and fill shelters. The drawings (Figures II.C.2-2(a) through II.C.2-2(j)) provide detail information on the barrel washer.

The sludge containers are satellite accumulation containers. These containers are labeled as "Waste Sludge," "Glass/Metal," and "Rags/Absorbents." The Actrel® filters may be added to the "Waste Sludge" container. The containers remain covered except when wastes are being

added. Once full the containers are moved into the container storage area for later shipment to a Safety-Kleen recycle center for disposal or recycling. In addition to the sludge containers there is also one satellite accumulation container (approximately five gallons) connected to the drain pan which is in front of each barrel washer. This container collects any spillage which falls into the drain pans. These containers are periodically emptied into the barrel washers in order to add the waste parts washer solvent to the bulk waste parts washer solvent tank.

Ethylene Glycol

Spent ethylene glycol is collected from customers in either containers or in tanker trucks. If the spent ethylene glycol arrives at the service center in containers, then it is placed into the container storage area. If the spent ethylene glycol arrives at the service center via tanker truck, then it is pumped directly into the spent ethylene glycol tank. The tanker truck containing the spent ethylene glycol connects to the fill ports located on the south side of the tank farm.

Tank Design

The tanks are designed and constructed to be compatible with the materials stored in them. Typical construction and installation standards for the aboveground tanks are discussed in Attachment II.C.2. All tanks are vented in accordance with National Fire Protection Association (NFPA) standards, and the tanks are equipped with high level-alarms.

Attachment II.C.1 provides for an independent assessment of the tank system to be performed upon completion of construction. The following is a concise description of the main features of the tank system.

All tanks are aboveground and underlain by a 25' x 59.5" concrete slab and surrounded by a 3' high concrete dike and covered by a canvas roof. Therefore, no surface run-on or precipitation would be in contact with the washes stored in the tank farm, and no run-off collection and management system will be deemed necessary. The exact dimensions of the tank farm may vary slightly during actual construction; however, any containment requirements will be adjusted accordingly. The dike is sealed with a chemical resistant coating compatible with the materials stored. Level gauges (Figure II.C.2-5(b)) are used to measure liquid levels in tanks and float switch-activated automatic high level alarms (which

consist of a strobe light and siren) signal the tank's being 95 percent full. The exact brand of level gauges in use is at least equivalent to those shown in Figure II.C.2-5(b). This alarm allows an operator more than two minutes to stop operations and avoid overfilling the tank. In addition, the gauges of the tank are read before filling and before and during the filling of a tanker truck (the available volume of which must be noted prior to emptying the tank) to prevent overfilling of the truck or tank. A tanker truck equipped with a suction pump is used to withdraw used parts washer solvent or spent ethylene glycol from the tank. No other equipment or standby equipment is used in the operation of the aboveground tanks. The secondary containment under the tanks and return/fill station are cleaned within 24 hours of a spill.