Safety-Kleen Corp.  
Continued Use Program  

New Mexico  
Department of Environment  
October 8, 1999

Background

• Competitors offer a non-waste option for management of used mineral spirits from parts cleaning  
• Competition sells used mineral spirits to third parties for use as a substitute ingredient in manufacture products  
• Material is not recycled/reclaimed prior to introduction into production process

Background (cont.)

• Material removed by competitors' programs are not considered a waste under the Definition of Solid Waste because it is directly re-used as a substitute ingredient
Recycle Center Scrap Wash Program

- New Castle KY Recycle Center has a shredder used to empty drums of industrial wastes destined for fuel program
- Scrap metal has to be washed prior to selling to scrap dealer
- Large volume of material required for scrap washing operation
- Material pre-qualified via sampling

Branch Drum Wash Program - Original Design

- At branch, parts washer waste (mineral spirits) is bulked
- Parts washer waste poured into wet dumpster and pumped to waste tank or 10-day transfer tanker
- Level of fluid in wet dumpster controlled by a float switch

Branch Drum Wash Program - Original Design (cont.)

- Green and red 16 & 30-g drums are washed with waste from customers in a mechanical drum washer that is part of wet dumpster
- Drum washer spins drums against brushes with waste from pool of material at the bottom of wet dumpster being sprayed on interior of drum
Branch Drum Wash Program -
Original Design (cont.)

• Cleaning material falls back to bottom of wet dumpster with other waste from drum emptying operation
• Float switch again controls level of material in bottom of wet dumpster
• Drums are removed from drum washer unit and re-filled with fresh product

Branch Drum Wash Program -
New System Design

• SK completed engineering cleaning study to establish standardized cleaning system
• Flow rate, time, and volume established
• Second smaller vat installed next to wet dumpster
• Material from cone shaped bottomed Continued Use vat is preferentially pumped to washer

Branch Drum Wash Program -
New System Design (cont.)

• When Continued Use vat is empty, new electrical valve box allows system to be converted to former approach of pulling material off the bottom of wet dumpster
• Drums are washed with Continued Use material which falls into the bottom of wet dumpster and is co-mingled with waste from customers
Branch Drum Wash Program - Administrative Controls

- Original construction and future maintenance are P.E. certified as to standardized cleaning system
- Drum identification system established
- Material tracked with separate shipping description and code in computer system
- Separate computer designated location for logging material into facility

Branch Drum Wash Program - Administrative Controls

- Each branch given capacity for selling
- Capacity monitored electronically

Branch Drum Wash Program Operations

- Material balance - use on daily or two business day cycle
- All DOT packaging, labeling, and shipping paper requirements are met
- Spills managed same as product spills - SK generated waste
- No net change in flow of material through SK branches

Safety-Kleen Corp.
Branch Drum Wash Program
Operational Design (cont.)

- Customer acceptance criteria
  - all material must be able to go through
  Continued Use cleaning system

Regulatory Status

- RCRA Definition of Solid Waste (and state equivalent) governs what is and is not a waste
- Solvent initially used by customers, will be used or reused as an effective substitute for commercial products [40 CFR 261.2(e)(1)] for cleaning operations

Regulatory Status (cont.)

- Preamble to DSW, 1/4/85 (50 FR 619) discusses use of substitutes for commercial products,
  - When secondary materials are directly used as substitutes for commercial products, we (the Agency) also believe these materials are functioning as raw materials, and therefore are outside of RCRA jurisdiction and thus, are not waste.
Regulatory Status (cont.)

- Solvent returned from customers still have cleaning capacity for low cleaning activity such as drum washing
- Rule states that secondary materials used as ingredients or used directly as commercial products are not wastes

Regulatory Status Summary

- Material in Continued Use program is a substitute for commercial products
- Material is used directly without any reclamation prior to its use
- All material is used for cleaning
- No land storage or speculative accumulation
- Material used for washing becomes SK-generated waste

Regulatory Concurrence

- Competitors obtained letters of concurrence on regulatory determinations from state environmental departments
- S-K has obtained letters from USEPA, CA, CO, ID, IN, KY, LA, OH, OR, TX, UT, WV
- Discussions with additional states, but S-K may not seek letters from all states as rollout of branch program accelerates
Program Status

- S-K has registered name “Continued Use”
- Branch Drum Wash Program
  - program rolled out in IN, OH, and TX
  - next states WV, KY, CA, CO, IL, MI
  - Followed by: FL, UT, ID
  - Rest of continental U.S.
SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: HIGH FLASH HYDROCARBON BLEND STOCK

SYNONYMS: Parts Washer Solvent; Petroleum Distillates; Petroleum Naphtha; Naphtha, Solvent; Stoddard Solvent; Mineral Spirits.

PRODUCT PART NUMBERS: Not available.

PRODUCT USE: Cleaning and degreasing metal parts. If this product is used in combination with other chemicals, refer to the Material Safety Data Sheets for those chemicals.

24-HOUR EMERGENCY TELEPHONES

MEDICAL: 1-800-752-7869 (USA) Extension 2

TRANSPORTATION (SPILL): 1-800-468-1760 (USA)

These numbers are for emergency use only. If you desire non-emergency information about this product, please call a telephone number listed below.

1-312-942-5969 (CANADA) 1-613-996-6666 (CANADA)

MANUFACTURER/SUPPLIER: Safety-Kleen Corp.
1000 North Randall Road
Elgin, IL, 60123-7857 USA
1-800-669-5740

TECHNICAL INFORMATION: 1-800-669-5740 Extension 7500

MSDS FORM NUMBER: 82705

ISSUE: Original

ORIGINAL ISSUE: April 17, 1997

SUPERSEDES: New

PREPARED BY: Product MSDS Coordinator

APPROVED BY: MSDS Task Force
SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>%</th>
<th>NAME</th>
<th>SYNONYM</th>
<th>CAS NO.</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Distillates (petroleum); hydrotreated light</td>
<td>N.Av.</td>
<td>64742-47-8</td>
<td>500&lt;sup&gt;c&lt;/sup&gt; ppm N.Av.</td>
<td>100&lt;sup&gt;c&lt;/sup&gt; ppm N.Av.</td>
</tr>
</tbody>
</table>

N.Av. = Not Available  
<sup>c</sup>Based on Sodddard Solvent.  
<sup>d</sup>Oral-Rat LD50 (mg/kg).  
<sup>e</sup>Inhalation-Rat LC50

See 29 CFR 1910.1000(d)(2) and ACGIH Threshold Limit Values for Chemical Substances and Physical Agents: Biological Exposure Indices booklet (Appendix C) for the determination of exposure limits for mixtures. Consult an industrial hygienist or similar professional to confirm that the calculated exposure limits are appropriate.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING!

APPEARANCE
Liquid, brown or black, mild hydrocarbon odor.

IMMEDIATE HAZARDS
Combustible liquid and vapor. Harmful if inhaled. Eye and skin irritant. May be harmful if swallowed.

DELAYED HAZARDS
Contains material which may cause central nervous system damage.

POTENTIAL HEALTH EFFECTS

INHALATION (BREATHING): High vapor or mist concentrations may be harmful if inhaled. High concentrations of vapor or mist may irritate the respiratory tract (nose, throat, and lungs). High concentrations of vapor or mist may cause nausea and vomiting. High concentrations of vapor or mist may cause headaches, dizziness, incoordination, numbness, irregular heartbeat, and other central nervous system effects. Massive acute overexposure may result in rapid central nervous system depression, sudden collapse, deep coma, and death.

EYES: Direct contact with materials or exposure to vapors may cause irritation.

SKIN: Direct contact with materials or exposure to vapors may cause irritation. A single, prolonged exposure is not likely to cause the material to be absorbed through the skin in harmful amounts.

INGESTION (SWALLOWING): May cause throat irritation, nausea, vomiting, and central nervous system effects as noted under INHALATION (BREATHING). Breathing material into the lungs during ingestion or vomiting may cause lung injury and possible death.
HIGH FLASH HYDROCARBON BLEND STOCK
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:
Individuals with pre-existing lung, cardiac, central nervous system, or skin disorders may have increased susceptibility to the effects of exposure.

CHRONIC: Prolonged or repeated inhalation may cause toxic effects. Prolonged or repeated eye contact may cause inflammation of the membrane lining the eyelids and covering the eyeball. Prolonged or repeated skin contact may cause drying, cracking, redness, itching, swelling, or burns.

CANCER INFORMATION: No known carcinogenicity. For more information, see SECTION 11: CARCINOGENCITY. Also see SECTION 15: CALIFORNIA.

SECTION 4: FIRST AID MEASURES

INHALATION: (BREATHING) Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Someone should stay with victim. Get medical attention if breathing difficulty persists.

EYES: For direct contact, immediately flush eyes with plenty of water, holding eyelids apart, for 15 minutes. If irritation or redness from exposure to vapor or mist develops, move away from exposure into fresh air. Get medical attention if irritation or pain persists.

SKIN: Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. Get medical attention if irritation or pain persists.

INGESTION: (SWALLOWING) Immediately get medical attention. Do NOT induce vomiting. If spontaneous vomiting occurs, keep head below hips to avoid breathing material into the lungs.

NOTE TO PHYSICIANS: No specific antidote available. Treat symptomatically and supportively. Administration of gastric lavage, if warranted, should be performed by qualified medical personnel. Call medical emergency telephone number (see SECTION 1) for additional information.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT: 140°F (60°C) Tag Closed Cup (minimum)

FLAMMABLE LIMITS IN AIR:
LOWER: 0.5 VOL% (minimum)
UPPER: 9.3 VOL% (maximum)

AUTOIGNITION TEMPERATURE: 440°F (227°C) (minimum)

HAZARDOUS COMBUSTION PRODUCTS: Burning may produce carbon monoxide.

CONDITIONS OF FLAMMABILITY: Heat, sparks, or flame.
HIGH FLASH HYDROCARBON BLEND STOCK  
MATERIAL SAFETY DATA SHEET FOR USA AND CANADA

EXTINGUISHING MEDIA: Carbon dioxide, foam, dry chemical, water spray, or water fog.

NFPA 704 HAZARD IDENTIFICATION: This information is intended solely for the use by individuals trained in this system.

EXTINGUISHING MEDIA:

NFPA 704 HAZARD IDENTIFICATION:

FIRE FIGHTING INSTRUCTIONS:

FIRE AND EXPLOSION HAZARDS:

EMERGENCY RESPONSE GUIDE NUMBER:

128  
Reference North American Emergency Response Guidebook

SECTION 6: ACCIDENTAL RELEASE MEASURES

Remove all ignition sources. Do not touch or walk through spilled material. Stop leak if you can do it without risk. Wear protective equipment specified in SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION. Ventilate area and avoid breathing vapor or mist. A vapor suppressing foam may be used to reduce vapors. Contain away from surface waters and sewers. Contain as a liquid for possible recovery or sorb with compatible sorbent material and shovel with a clean, non-sparking tool into sealable container for disposal.

Additionally, for large spills: isolate hazard area. Keep unnecessary and unprotected personnel from entering. Dike far ahead of liquid spill for collection and later disposal.
SECTION 7: HANDLING AND STORAGE

HANDLING: Keep away from heat, sparks, or flame. Where explosive mixtures may be present, equipment safe for such locations should be used. Use clean, non-sparking tools and explosion-proof equipment. When transferring material, metal containers, including trucks and tank cars, should be grounded and bonded. Avoid contact with eyes, skin, clothing, and shoes. Use in well ventilated area. Do not breathe vapor or mist.

SHIPPING AND STORING: Keep container tightly closed when not in use and during transport. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, static electricity, or other sources of ignition; containers may explode and cause injury or death. Empty product containers may retain product residue and can be dangerous. See SECTION 14: TRANSPORT INFORMATION for Packing Group information.

PERSONAL HYGIENE: Use good personal hygiene. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco products. Clean contaminated clothing, shoes, and protective equipment before reuse. Discard contaminated clothing, shoes, or protective equipment if they cannot be thoroughly cleaned.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide general ventilation needed to maintain concentration of vapor or mist below applicable exposure limit. Where adequate general ventilation is unavailable, use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limit. Where explosive mixtures may be present, equipment safe for such locations should be used.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY PROTECTION: Use NIOSH/MSHA-approved respiratory protective equipment when concentration of vapor or mist exceeds applicable exposure limit. A self-contained breathing apparatus (SCBA) and full protective equipment are required for large spills or fire emergencies. Selection and use of respiratory protective equipment should be in accordance in the USA with OSHA General Industry Standard 29 CFR 1910.134; or in Canada with CSA Standard Z94.4-M1982.

EYE PROTECTION: Where eye contact is likely, wear chemical goggles; contact lens use is not recommended.

SKIN PROTECTION: Where skin contact is likely, wear nitrile, Viton®, or equivalent protective gloves; use of butyl rubber, natural rubber, or equivalent gloves is not recommended.
OTHER PROTECTIVE EQUIPMENT: Where spills and splashes are likely, wear appropriate
chemical-resistant boots, apron, or other protective clothing.
Clean water should be available in work areas for flushing the eyes
and skin.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE, APPEARANCE, AND ODOR: Liquid, brown or black, mild hydrocarbon odor.

ODOR THRESHOLD: 30 ppm (based on Stoddard Solvent)

SPECIFIC GRAVITY: 0.78 to 0.82 60°F/60°F (15.6°C/15.6°C) (water = 1)

DENSITY: 6.5 to 6.8 lb/US gal (780 to 820 g/l)

VAPOR DENSITY: 5 (air = 1) approximately

VAPOR PRESSURE: 0.2 mm Hg at 68°F (20°C) (approximately)
0.6 mm Hg at 100°F (38°C) (approximately)

BOILING POINT: 350°F (177°C) (initial)

FREEZING/MELTING POINT: less than -45°F (-43°C)

pH: Not applicable.

EVAPORATION RATE: 0.1 (butyl acetate = 1)

SOLUBILITY IN WATER: Insoluble.

MOLECULAR WEIGHT: 160 (approximately)

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal temperatures and pressures. Avoid heat, sparks, or flame.

INCOMPATIBILITY: Avoid acids, alkalies, oxidizing agents, reducing agents, or reactive halogens.

REACTIVITY: Polymerization is not known to occur under normal temperatures and pressures. Not reactive with water.

HAZARDOUS DECOMPOSITION PRODUCTS: None under normal temperatures and pressures. See also SECTION 5: HAZARDOUS COMBUSTION PRODUCTS.

SECTION 11: TOXICOLOGICAL INFORMATION

SENSITIZATION: Based on best current information, there is no known human sensitization associated with these materials.
USEPA WASTE CODE(S): Not regulated.
Based on available data, this information applies to the material as supplied to the user. Processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

SECTION 14: TRANSPORT INFORMATION

DOT: COMBUSTIBLE LIQUID, N.O.S. (PETROLEUM NAPHTHA), NA1993, PGIII

TDG: Not regulated.

SECTION 15: REGULATORY INFORMATION

USA REGULATIONS

SARA SECTIONS 311 AND 312: Materials pose the following physical and health hazards as defined in 40 CFR Part 370 and are subject to the requirements of sections 311 and 312 of Title III of the Superfund Amendments and Reauthorization Act of 1986:

Immediate (Acute) Health Hazard
Delayed (Chronic) Health Hazard
Fire Hazard

SARA SECTION 313: These products do not contain toxic chemicals subject to the requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

TSCA: All the components of these products are listed on the TSCA Inventory.

CALIFORNIA: This product is not for sale or use in the State of California.

CANADIAN REGULATIONS

These products have been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS: B3, D2B

CANADIAN ENVIRONMENTAL PROTECTION ACT (CEPA): All the components of these products are listed on the Canadian Domestic Substances List.
SECTION 16: OTHER INFORMATION

REVISION INFORMATION: New format.

LABEL/OTHER INFORMATION: Not available.

User assumes all risks incident to the use of this product. To the best of our knowledge, the information contained herein is accurate. However, Safety-Kleen assumes no liability whatsoever for the accuracy or completeness of the information contained herein. No representations or warranties, either expressed or implied, or merchantability, fitness for a particular purpose or of any other nature are made hereunder with respect to information or the product to which information refers. The data contained on this sheet apply to the material as supplied to the user.
S-K Branch
Continued-Use and Waste Return & Fill Operation

Drum Washer

Wet Dumpster

15 Sept 99

Cont. Use - Used Solvent

Waste Solvent
- LQGs
- SQGs
- CESQGs
- non-haz

10-day transfer tanker
May 10, 1999

Sean McMahon
Regional Manager, Denver
Safety-Kleen Corp.
3333 Quebec Street, Penthouse A
Denver, Colorado 80207

Dear Mr. McMahon:

Gary Baughman and I appreciated the opportunity to meet you and Catherine McCord on April 22 and to discuss Safety-Kleen's Continued Use Program. We now have a much better understanding of the program and the regulatory status of the solvents used in the program. We have reviewed the August 21, 1998 letter to Catherine McCord from David Bussard of the U.S. EPA (attached) and generally concur with the regulatory interpretation in that letter. We believe that if solvents are managed in the manner you have described for the Continued Use Program that they will qualify for being excluded as an effective substitute for a commercial product in accordance with 6 CCR 1007-3, Section 261.2(e)(1).

The steps that Safety-Kleen has taken to establish criteria for continued use of solvents and segregation of solvents in the continued use program from waste solvents will allow the solvents to not be considered solid wastes. The record keeping and automatic control features of the continued use program are also important for documenting the legitimate continued use of the solvent as an effective substitute for a commercial product.

If you have any questions regarding this matter, please feel free to contact me at (303) 692-3342.

Sincerely,

Frederick R. Dowsett
Compliance Coordinator

cc: Catherine A. McCord, Safety-Kleen
Attachment
June 1, 1999

By fax - original to be mailed

Clark Lloyd
Safety-Kleen Systems, Inc.
1066 S. Pioneer Road
Salt Lake City, UT 84104

Dear Mr. Lloyd:

Re: Safety-Kleen - Continued Use Program

Idaho DEQ has received your letter dated May 18, 1999, regarding the Safety-Kleen Continued Use Program. You have requested DEQ concurrence with your interpretation of the hazardous waste rules, specifically 40 CFR §261.2(e)(1)(ii). DEQ has incorporated this federal regulation by reference in IDAPA 16.01.05.005. By Idaho statute, (Hazardous Waste Management Act), DEQ must be consistent with federal hazardous waste regulations.

The Continued Use Program, as described in your letter, appears to be supported by the federal and state hazardous waste regulations cited above as well as in Federal Register preamble language, (50 FR. 619,624,637), submitted. Concerns have been raised regarding documentation and record keeping procedures, as required in IDAPA 16.01.05.005 [40 CFR §261.2(f)], to be sure only enough continued use material is collected for this drum cleaning process. Record keeping procedures and documents must be available to DEQ upon inspection.

Additionally, requesting a permit modification to accommodate this Continued Use Program at the Boise facility may be necessary for Safety-Kleen. Please review your current hazardous waste permit to determine what modifications will be necessary. Also, in accordance with the requirements of IDAPA 16.01.05.005 [40 CFR § 261.2(f)], it appears that sampling to assure that this continued use material remains uncontaminated and suitable for use as a secondary material will be necessary.

Please contact John Brueck of my staff at 208/373-0458 if you have any questions regarding this matter.

Sincerely,

Brian R. Monson
Hazardous Waste Program Manager
State Waste Program

BRM/JHB/ra SKpge (New Boise)

cc: Jeff Hunt, EPA Region 10
Joe Herrick, S-K
Boise Regional Office
July 20, 1999

Mr. Wayne Johnson  
Branch Manager  
Safety-Kleen Corporation  
1066 South Pioneer Road  
Salt Lake City, Utah 84104

Subject: Continued Use Program  
Safety-Kleen Corporation UTD9809957088

Dear Mr. Johnson:

Thank you for meeting with me and members of my staff on March 29, 1999 to further discuss the Division's concerns associated with Safety-Kleen's Continued Use Program and for your follow-up letter dated April 8, 1999.

The Division's first concern related to ensuring that the used solvent is reused directly without prior reclamation in order to qualify as a product not subject to regulation as either a solid or a hazardous waste. Of particular interest was whether the mesh screen in the Continued Use vat was filtering the solvent prior to use in drum cleaning. Safety-Kleen addressed this concern by clarifying that the sole purpose for the screen is to protect the pump and not to filter or separate. Continued Use participants will be required to not place foreign objects (e.g., rags, paper, metal parts and tools) into the solvent. Safety-Kleen service representatives will also be instructed to not "clean up" parts washers for customers by placing foreign objects into the solvent drum. In addition, it is the Division's understanding that any contaminants that are recovered from the screen will be commingled with sludge which is currently removed from the drum washer and shipped off-site and burned as hazardous waste at a cement kiln.

The Division's second concern related to the efficient reuse of the solvent. Safety-Kleen addressed this during our March 29, 1999 meeting by stating that an assessment has determined that it takes approximately 13 gallons of used solvent used in conjunction with agitating brushes to efficiently clean a 35-gallon drum in the drum washer. Once the specified volume of solvent is used to clean a drum, the solvent will be declared spent and subsequently managed as hazardous waste. You further clarified that the specific volume of used solvent needed for washing drums at your site will be calculated by multiplying the number of drums serviced by 13 gallons. Based on your current process rate of washing approximately 100 drums each day, Safety-Kleen would need approximately 1,300 gallons of used solvent each day. This figure could go up or down depending upon Safety-Kleen's future customer base and cleaning needs. The Division also understands that documentation will be maintained demonstrating site solvent needs and uses.
Based upon Safety-Kleen’s presentation and further clarifications of the Continued Use Program, the Division concurs with Safety-Kleen that if the solvent is reused in the specified manner it will qualify for being excluded as an effective substitute for a commercial product in accordance with R315-2-2(e)(1)(ii) of the Utah Administrative Code [40 CFR 261.2(e)(1)(ii)].

To maintain the exclusion, Safety-Kleen should develop and maintain records to document the quantities of drums washed and the amounts of Continued Use solvents utilized. In addition, to avoid potential confusion to Safety-Kleen employees and to state inspectors, we strongly recommend that Safety-Kleen maintain containers of Continued Use solvents separately from solvents that are not in the program until the solvents have been placed into their respective vats in the drum washer unit.

If you have any questions, please contact Brad Maulding of my staff at (801) 538-6170.

Sincerely,

Dennis R. Downs, Executive Secretary
Utah Solid and Hazardous Waste Control Board

DRD/BCM/kg

c: Kathryn N. Vedder M.D. MPH Health Officer/Dept Director Salt Lake County Hlth Dept. Catherine A. McCord, Safety-Kleen, 1000 North Randall Road, Elgin, Illinois 60123-7857
June 28, 1999

Ms. Catherine McCord, Director
Business and Environmental Management
Safety-Kleen
One Brinckman Way
Elgin, IL 60123-7857

Dear Ms. McCord:

This letter is in response to your May 28, 1999 letter requesting written confirmation that some used parts-cleaning solvents collected by Safety-Kleen from Oregon generators and continued to be used for drum washing at Safety-Kleen facilities are not classified as wastes and are not subject to hazardous waste requirements.

The Department has a statutory and regulatory commitment to see materials of value, that would normally be hazardous wastes, recycled. Although unlike some other States, the Department does not provide formal approval of specific recycling programs at this time. In most instances, hazardous waste recycling decisions are made by the hazardous waste generator or management facility without Department concurrence.

However, to assist you in determining how the used solvent management practices that Safety-Kleen implements at its facility in Oregon is regulated, attached is an EPA letter that addresses the issues you raise. The Department adopts the federal regulations by reference and uses federal preamble language and other federal guidance, including EPA letters, as a basis for regulatory decision making. The key RCRA regulations you requested concurrence on are discussed by EPA in the letter. The Department agrees with EPA's regulatory clarification in the letter.

Please be aware that, generally, generators claiming that their material is not a solid waste must support that claim with documentation on the legitimate use of the material. Therefore, it is recommended that Safety-Kleen contract with its customers and provide them the necessary documentation on the use of their material.

We hope that this information is helpful. Please contact me at (503) 229-6585 or Gary Calaba at (503) 229-6534, if you have additional questions regarding this matter.
Sincerely,

Anne R. Price, Manager
Hazardous Waste Policy and Program Development

Attachments

Cc: Hazardous Waste Managers, DEQ
    Larry Edelman, DOJ
Ms. Catherine A. McCord
Manager, Environment and Business Integration
Safety-Kleen
1000 North Randall Road
Elgin, Illinois 60123-7857

Dear Ms. McCord:

Thank you for your April 23, 1997 letter to Michele Anders requesting a written confirmation of the regulatory status of used parts washing solvent that is to be used for drum wash at Safety-Kleen's facilities without first being reclaimed. You asked whether the used parts washing solvent would be excluded from the definition of solid waste pursuant to 40 CFR §261.2(e), when it is used as an effective substitute for a commercial product. Based on the information that you provided, it is the Agency's understanding that Safety-Kleen intends to collect used parts washing solvents from its customers. Some of the used parts washing solvents from designated customers would be used for drum washing at Safety-Kleen facilities. This used solvent designated for drum washing would be consolidated, but would not be reclaimed, prior to its use for drum washing. The solvents designated for drum washing would also be segregated (i.e., always in separate containers or tanks) from the other used solvents collected from Safety-Kleen's customers.

Because the material (i.e., used solvent continuing to be employed in solvent uses) remains a product, your question about the applicability of 40 CFR §261.2(e) is moot. That regulatory section is intended to apply to secondary materials, which is not the case for used solvents that are not yet "spent."

The Agency has previously stated that when a used solvent is employed for another solvent use, this continued use indicates that the solvent remains a product. The used solvent in this case is a material continuing to be used as a solvent, the purpose for which it is intended, rather than a spent material being reused. Consequently, the used solvent to be employed for drum washing would not be considered a solid waste and would not be subject to the Resource Conservation and Recovery Act ("RCRA") Subtitle C hazardous waste regulations when generated, transported, or used. 50 Fed. Reg. 614, 624 (1985). Accordingly, used parts washing solvents that are collected and consolidated by Safety-Kleen and then used for drum washing without first being reclaimed would not be a RCRA solid waste.

In the case of shipments of used solvents in tanker trucks, if any part of a shipment of solvent is reclaimed, burned for energy recovery, or otherwise defined as solid or hazardous waste (as opposed to being directly used only for drum wash), the entire shipment must be managed according to the

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applicable RCRA Subtitle C regulations. In situations in which used solvents collected from multiple sources are handled in separate drums or containers on the same truck, each container must be handled according to the applicable regulations (depending on how the solvent is to be used or managed), including hazardous waste manifest requirements. After the solvents have been used for drum washing, any residual solvents would be subject to a hazardous waste determination and must be managed according to the applicable RCRA Subtitle C requirements.

Furthermore, the Agency is aware of the potential for the "continued use" policy to be abused, and thus, notes that the continued use must be legitimate for the used solvents to be excluded from regulation as a solid waste. The Agency would consider the continued use of the used solvents for drum washing to be legitimate in situations in which: 1) the used solvents are effective for the drum-washing operation, especially if the used solvents substitute for solvents that would otherwise have to be purchased (if the used solvents would not be an effective washing agent for the drums, using the used solvents in lieu of other effective drum-washing agents would not be considered legitimate), 2) the used solvents are used only for washing drums that actually need it (if the used solvents are used as drum-washing agent when the drums do not need washing, using the used solvents would not be considered legitimate), and 3) the used solvents are not used in excess of what would normally be required to wash drums (if the used solvents are being used in excess of the amount of solvents needed for the drum-washing operation, e.g., more than would be necessary to wash the drums effectively, using the used solvents would not be considered legitimate).

The regulatory interpretation provided above is based on the U.S. EPA's interpretation of federal regulations. Some states in which the continued use of the used parts washing solvent occurs may have different regulatory requirements or interpretations. For case-specific determinations on the status of the continued use of the parts washing solvent for drum wash, please contact the appropriate state regulatory agency or EPA Regional Office.

If you have any questions or would like additional information, please contact Jeff Hannapel at 703-308-8926.

Sincerely,

Michael Minnihan
Director, Hazardous Waste Identification Division
Office of Solid Waste
February 1, 1999

Mr. Timothy F. Kent
District EHS Manager
Safety-Kleen
One Brinckman Way
Elgin, IL 60123-7857

Re: Safety-Kleen's Continued Use Program
Technical Analysis File Number 1-99

Dear Mr. Kent:

This is in response to your December 18, 1998 letter regarding Safety-Kleen's recycling of solvents through its "Continued Use Program".

According to the information in your letter, the information provided by Ms. Catherine McCord and the information provided in a December 8, 1998 meeting between representatives from Safety-Kleen and the Texas Natural Resource Conservation Commission (TNRCC):

- Safety-Kleen has historically used waste parts washer solvent (mineral spirits) to washout and clean drums in which parts washer solvents arrive at Safety-Kleen sites. Based upon the experience gained in doing so, the results of an engineering study conducted by Safety-Kleen, customer requests and a thorough researching of RCRA rules, Safety-Kleen has developing what it calls the "Continued Use Program";

- The dual objectives of the Continued Use Program are: (1) to provide qualified Safety-Kleen customers with a means by which they can recycle their parts washer solvent and at the same time legitimately exempt the solvent from the definition of a solid waste (thus realizing relief from most regulatory requirements) and (2) to allow Safety-Kleen a legitimate means of meeting the challenge posed by some of its competitors who offer their customers the option of exempting their parts washer solvent from the definition of a solid waste (thus giving them a potential marketing advantage over Safety-Kleen);

- Upon its arrival at a Safety-Kleen site, the first step in the actual physical processing of parts washer solvent in the Continued Use Program occurs when the solvent is emptied from drums which have a capacity from 16 to 30 gallons into a vat that is physically separated from the entry point for solvent which is not from the Continued Use Program:
Re: Safety-Kleen's Continued Use Program
Technical Analysis File Number 1-99

By contractual agreement with its customers, Safety-Kleen allows only parts washer solvent to enter the Continued Use Program and all customers who wish to participate in it are required to avoid allowing any foreign materials (e.g., paper, rags, metal parts etc.) to contaminate the Continued Use Program solvent. Customers who do not agree to these terms are not allowed to participate in the Continued Use Program. Customers already participating in the Continued Use Program who fail to abide by these terms are removed from the Continued Use Program by Safety-Kleen;

The solvents from the Continued Use Program and those which are not part of the Continued Use Program sources enter the drum cleaning operation at two physically separate points. Solvents which are not part of the Continued Use Program enter the "wet dumpster" portion of the "drum washer/wet dumpster" unit shown in the diagram entitled, "Proposed Alternative Operations" that accompanied your letter.

Solvent from the Continued Use Program vat is pumped into the drum washer portion of the aforementioned unit and is sprayed by a nozzle into the drum washer to clean the aforementioned drums. The drum washer portion is located prior to the wet dumpster portion of the unit. The reusable solvent is transferred from the reuse vat by a submersible pump.

The vat contains a "gross mesh" screen. Its sole purpose of the screen is to protect the pump. The screen does not function as a separation mechanism. The fact that participants in the Continued Use Program are required to keep foreign materials such as paper, rags, metal parts etc. from entering Continued Use Program solvent combined with the fact that the aforementioned screen is essential to the protection of the pump system means that no reclamation occurs at any point in the Continued Use Program until after the cleaning of the aforementioned drums;

When the quantity of solvent in the Continued Use Program vat falls below a preset level, an electronic sensor automatically shuts off the flow of Continued Use Program solvent to the nozzle and non-Continued Use Program solvent is then pumped from the non-Continued Use Program vat into the nozzle to clean the drums. The segregation of the Continued Use Program solvent and the solvent from the non-Continued Use Program insure that only after the drums have been cleaned does the solvent from the Continued Use Program and solvent that is not part of the Continued Use Program come into contact;
Re: Safety-Kleen's Continued Use Program
Technical Analysis File Number 1-99

Once the solvent has been used to clean the drums, Safety-Kleen acknowledges that all of it meets the definition of a spent material as defined in 40 Code of Federal Regulations (CFR) Section § 261.1(e)(1)/30 Texas Administrative Code (TAC) § 335.17(a)(1). Furthermore, Safety-Kleen acknowledges that it will be the generator of the spent solvent and all wastes associated with it (e.g., sludges from the reclamation of the spent solvent):

From the results of its engineering study, Safety-Kleen has determined the volume of parts washer solvent necessary to clean a given size drum. This volume multiplied by the number of drums to be cleaned provides each Safety-Kleen site with the maximum volume of solvent that the site can accept into its Continued Use Program. As an added measure of control, each site's maximum capacity is monitored by Safety-Kleen's Branch Automation Program which tracks the amount of Continued Use Program solvent coming into a given site. This plus the site's own monitoring efforts will insure that the site does not accept more solvent than it can legitimately use to clean the drums that arrive at that site:

Safety-Kleen wishes for the TNRCC to confirm that the portion of parts washer solvent in the Continued Use Program is exempt from being a solid waste pursuant to 40 CFR §261.1(e)(1)/30 TAC §335.1(F)(i).

Based upon the aforementioned information, the TNRCC has concluded that there is no reason at this time to object to Safety-Kleen or its customers exempting from the definition of a solid waste parts washer solvent participating in Safety-Kleen's Continued Use Program provided that the following points (many of which are discussed in an August 21, 1998 letter from Mr. David Bussard of the Environmental Protection Agency (EPA) to Ms. Catherine McCord of regarding Safety-Kleen's Continued Use Program) about Safety-Kleen's Continued Use Program are taken into consideration:

The solvent in the Continued Use Program would be considered by the TNRCC to be exempt from being a solid waste only if it has the capacity to function effectively as a solvent in the aforementioned drum cleaning operation. The TNRCC would not consider solvent used in the Continued Use Program which had lost all or the great majority of its solvent properties (e.g., through contamination) to be exempt from being a solid waste:

The solvent in the Continued Use Program must be used only for washing drums that actually need it and only in quantities sufficient to wash the aforementioned drums. The TNRCC would not consider solvent used in excess of that which would normally be required to wash the drums to be exempt from being a solid waste.
Re: Safety-Kleen’s Continued Use Program
Technical Analysis File Number 1-99

Solvent in the Continued Use Program and solvent which is not in the Continued Use Program must be kept physically separated until they exit the drum washer portion of the aforementioned unit. Each container of the two types of solvents must be handled according to the applicable state and federal rules. If any portion of the Continued Use Program solvent is reclaimed, burned for energy recovery or used in a manner which would otherwise cause it to be a solid waste (as opposed to being directly used only for drum wash), then it is a solid waste and must be managed accordingly; and

The TNRCC wishes to especially emphasize to Safety-Kleen the importance of properly creating and maintaining the documentation to show that it is complying with all applicable state and federal regulations (including those implied in the aforementioned points) at all times and at all of its sites.

On behalf of the TNRCC, I wish to thank you, the other representatives of Safety-Kleen (most notably Ms. McCord who met and communicated on several occasions with Mr. Boultinghouse of the Technical Analysis Team) and Safety-Kleen for your efforts to promote and encourage legitimate recycling of parts washer solvents in Texas.

If you have any questions regarding this matter, please contact Mr. Jesse Boultinghouse of the Technical Analysis Team at (512) 239-6832.

Sincerely,

Dorca Zaragoza, Leader
Technical Analysis Team
Waste Evaluation Section
Registration and Evaluation Division

DZ/JKB/tgk

cc: Ms. Catherine McCord, Director, Business and Environmental Management, Safety-Kleen Corporation, 1000 North Randall Road, Elgin, IL 60123
July 26, 1999

Mr. Lin Longshore, Director
EH&S, Southern Division
Safety-Kleen
1301 Gervais Street, Suite 300
Columbia, SC 29201

RE: Re-Used Solvent Is Not Solid Waste
Safety-Kleen (LAD985171024 and LAD981057441)

Dear Mr. Longshore:

Your letter of June 14, 1999, requested a waste classification decision for a naphtha product that, after an initial use by Safety-Kleen customers, is returned to Safety Kleen for direct secondary use as a drum washing solvent. Based on information you provided, the Permits Division agrees with the interpretation expressed in your letter: The used naphtha, when returned to Safety-Kleen for drum washing, is not a solid waste and therefore not a hazardous waste.

The definition of solid waste provides exclusions for materials which substitute directly (that is, without prior reclamation) for commercial products. The re-use scenario you describe bears perfect resemblance to "continued use of a solvent", about which the Environmental Protection Agency wrote at some length and in very plain language (preamble to the January 4, 1985, definition of solid waste). We respect this interpretation.

If you have any questions about this, you may contact Michael Beck of the Permits Division at (225) 765-0272.

Sincerely,

Michael D. Vince
Administrator

attachment

mb
Dear Ms. McCord:

Re: Continued Use Program

This is in response to your letter of June 2, 1997, in which you were seeking confirmation of your interpretation of the hazardous waste rules, specifically 40 CFR 261.2(e)(1)(ii). Indiana has incorporated this federal provision in our rules at 329 IAC 3.1-6. Our understanding is that your company intends to directly reuse solvents which have been used by your customers for drum washing prior to filling them with product.

Your review of the applicable regulations and principals as they apply to this situation are consistent with the interpretation of these provisions as applied by this office. Information provided in your letter indicates that these used solvents will be used consistent with their original intended purpose as a cleaning solvent without prior reclamation. These solvents would not be a solid waste and therefore not subject to regulation as a hazardous waste.

Staff consider the documentation of claims that the materials are not solid waste as required by 40 CFR 261.2(f) as an important component of this exemption. Only those solvents which are legitimately reused are exempt. If the quantity of solvents collected from your customers under the exemption exceed that which is necessary for your use this office would consider this a sham situation. Excess solvents collected would be subject to regulation as a hazardous waste.

If you should have a question regarding this matter please contact Mr. Dave Berrey of this Department at 317-232-4417.

Sincerely,

Bruce Palin,
Acting Assistant Commissioner
Solid and Hazardous Waste Management

DWB
March 23, 1998

Mr. Scott E. Davies, P. G.
Regional Environmental Manager
Safety-Kleen Corporation
8795 Folsom Boulevard, Suite 108
Sacramento, California 95826

"CONTINUED USE PROGRAM" FOR CONTINUING SOLVENT USE AS A SUBSTITUTE FOR A PRODUCT

Dear Mr. Davies:

This letter is to confirm your understanding that solvents employed in Safety-Kleen's proposed "Continued Use Program," may be excluded from the definition of waste pursuant to Health and Safety Code Section (HSC) 25143.2(b)(2). I met with you on February 17, 1998 for a discussion of this subject. The discussion is summarized below.

The "Continued Use Program" will involve a limited number of customers within a Safety-Kleen service center area. These particular customers will relinquish designated solvent to their Safety-Kleen representative who will transport it to the Safety-Kleen service center and add it to the drum-cleaning solvent reservoir. Drum cleaning solvent, whether new solvent or "continued use" solvent used as a safe and effective substitute for a product, is used only once to clean drums before it becomes a regulated hazardous waste.

When used as drum cleaner the "continued use" solvent is used as a safe and effective substitute for a commercial product and is therefore conditionally excluded from classification as waste pursuant to HSC Section 25143.2(b)(2). In Safety-Kleen's proposed "Continued Use Program" the commercial product substituted for is clean drum-washing grade solvent.

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1. You indicated that the "continued use" solvent would be handled separately from other materials in order to be shipped using a bill of lading; therefore the "Continued Use" solvent must be in separate containers from waste solvent.

2. Although the drum cleaning operations at a service center will fluctuate, the quantity of solvent needed will have been anticipated. We would view excessive accumulations in the drum cleaning reservoir as an indication of sham recycling.

3. You have stated that the "continued use" solvent will be used to clean drums only once. Because the "continued use" solvent must be a safe and effective substitute for a product, I have assumed that the product for which it substitutes is also only used once. If the "continued use" solvent does not perform as well as new product for drum cleaning, it is not an effective substitute.
Mr. Scott E. Davies, P. G.
March 23, 1998
Page 2

Please note that HSC Sections 25143.9 and 25143.10 apply to the "continued use" operation which qualifies this particular reused solvent to be excluded from the definition of waste.

It was a pleasure meeting with you and Ms. Marty White. If I can be of further assistance to you, please contact me at (916) 324-1806 or write to me at the letterhead address.

Sincerely,

[Signature]
Norman C. Alley, Chief
Resource Recovery Section

cc: Ms. Paula Rasmussen, Chief
State Regulatory Program Division
Department of Toxic Substances Control
245 West Broadway, Suite 425
Long Beach, California 90802

Mr. Larry Matz, Chief
Statewide Compliance Division
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806

Mr. Donald A. Johnson, Chief
State Regulatory Branch
Department of Toxic Substances Control
P.O. Box 806
Sacramento, California 95812-0806
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Dear Ms. McCord:

I have received your letter of April 2, 1999 in which you address a number of concerns regarding Safety-Kleen's Continued Use Program that I raised in our telephone conversation of April 2, 1999. This letter is to grant provisional approval to that program.

Your responses to my questions eased my concerns about the structure of the program and its ability to limit the amount of reused solvent to the quantity necessary to clean the drums. This office will monitor the program for approximately one year, however, to insure that safeguards are indeed working before granting unconditional approval.

Please notify me when Safety Kleen begins the program in West Virginia so that we can begin observing the process.

I hope that this information is helpful to you. If I can be of any further assistance, please contact me at (304) 558-5989.

Sincerely,

H. Michael Dorsey, Assistant Chief
Compliance Assurance and Emergency Response

cc: Tom Fisher
    Stan Moskal
    Mike Stratton

"To use all available resources to protect and restore West Virginia's environment in concert with the needs of present and future generations."
Ms. Catherine A. McCord  
Manager, Environment and Business Integration  
Safety-Kleen Corp.  
One Brinckman Way  
Elgin, Illinois 60123-7857  

Re: Branch-Based Continued Use Program  
Request for Additional Information  

Dear Ms. McCord:  

Thank you for your letter requesting our formal regulatory interpretation regarding the management of spent cleaning solutions, removed from Safety-Kleen’s Kentucky customers, as cleaning solutions to clean drums within the Safety-Kleen system.  

We appreciate the information you presented to us in the December meeting, but before we could finalize our decision, additional information is needed regarding the following:  

1. A demonstration of compliance with 401 KAR 31:010, Section 2 (5) (b). This may include information such as the quantities and percentages of this waste/material used for this purpose, and corresponding record keeping to ensure the compliance with the speculative accumulation requirements.  

2. A demonstration of the effectiveness of this substitute material. Provide a detailed comparison of the minimum quantities consumed by the redesigned drum washer using the spent mineral spirit versus that of the virgin product. To further demonstrate the effectiveness of this spent mineral spirit, wipe sample test results of a drum cleaned by a virgin product versus that of a drum washed with the spent material may prove necessary.  

3. Spill prevention that is protective of the human health and the environment (KAR 31:010, Section 10 (d)). Provide detailed plans and discussion concerning measures to be taken while the material is being managed at the site. This may include information regarding any secondary containment, precaution taken during the handling of the material, and other relevant information required in the contingency plan.  

4. Flow diagram(s) indicating the type of facilities envisioned to manage this material/waste. In this, please clarify if Safety-Kleen will manage this material/waste at its non-permitted storage/treatment facility where the material may commingle with other wastes (hazardous wastes) in the hazardous waste management unit(s), i.e., at the Louisville Eiler Avenue transfer facility.
5. A demonstration of how the unmanifested waste issues should be addressed pursuant to 401 KAR 34:050, Section 7. How would Safety-Kleen ensure that the waste/material it receives is of the same characteristics of the material required to clean the drums. and if not, how would Safety-Kleen manage this waste/material?

6. It is our understanding that the hazardous waste generated by the receiving installation(s) will increase substantially. Please demonstrate how this may or may not conflict with the waste minimization program(s) that receiving branches/facility(s) may have in-place.

7. Is all the hazardous waste generated at the branches/facilities, as a result of this activity, destined for distillation?

8. Please demonstrate how Safety-Kleen intends to be in compliance with applicable air emission standards while managing this material/waste.

This determination may not apply if this above mentioned secondary material is mismanaged contrary to intention of this submittal and may cause it to become a waste that is subject to a hazardous waste determination. In addition, this determination shall not relieve the applicant from obtaining any other permits from any other agency within the Commonwealth.

If you have any questions regarding this correspondence, please do not hesitate to contact George W. Wakim at (502) 564-6716 ext. 674.

Sincerely,

Michael V. Welch, P.E., Manager
Hazardous Waste Branch
Division of Waste Management

MVW/GW

c: Caron Falconer, US EPA Region IV
   Abbie Meyer, Hazardous Waste Branch
   Ron Gruzesky, Hazardous Waste Branch
   Dale Burton, Hazardous Waste Branch
   Massoud Shoa, Hazardous Waste Branch
   Hannah Helm, Field Operations Branch
   Keith Crabtree, Florence Regional Office
   Patrick Keely, Safety Kleen
   Central Files: Fayette, Boyd, Jefferson, & Henry Counties
February 2, 1998

Ms. Catherine McCord
Safety-Kleen Corporation
One Brinckman Way
Elgin, IL 60123-7857

Dear Ms. McCord:

This letter is in response to our meeting and your subsequent letter dated January 14, 1998, regarding Safety-Kleen’s “Continued Use” program. You would like to know if Ohio EPA’s Division of Hazardous Waste Management agrees with your interpretation of regulations with respect to this program.

It is my understanding that Safety-Kleen reuses some of their customers used solvents in their drum washing program in Indiana. These solvents are used to clean scrap metal from drum shredding operations. Safety-Kleen would like to expand a similar program, the Continued Use program to branches across Ohio. The branches would be reusing parts cleaning solutions collected from customers to clean drums. After the solution is reused in the Continued Use program, it will be considered Safety-Kleen generated waste and will be recycled.

In Ohio, materials are not wastes when they can be shown to be recycled by being used or reused as effective substitutes for commercial products as stated in Ohio Administrative Code (OAC) rule 3745-51-02(E)(1)(b). Although, they must not be used in a manner constituting disposal, applied to the land, or accumulated speculatively (OAC 3745-51-02(E)(2)).

Safety-Kleen’s use of the cleaning solutions are considered a continued use of the solutions. The parts cleaners are not considered a spent material. A “spent material” is defined in OAC rule 3745-51-01(C)(1) as any material that has been used and as a result of contamination can no longer serve the purpose for which it was produced without processing. U.S. EPA interprets “the purpose for which it was produced” to include all uses of the products that are similar to the original use of the particular batch of material in question. For example, in 50 FR 624, U.S. EPA discusses the continued use of solvents used to clean printed circuit boards. Although the solvents are not pure enough to be used again on the circuit boards, U.S. EPA agrees that they are still pure enough for similar applications (metal degreasers, etc.). Ohio EPA concurs with this
interpretation. Ohio EPA agrees that by being used in Safety-Kleen's Continued Use program, the cleaning solutions are serving their intended purpose.

Ohio EPA continues to encourage pollution prevention which includes environmentally friendly alternatives. If you have any questions, please contact Jeff Mayhugh or myself at (614) 644-2934.

Sincerely,

Wendy A. Miller
Compliance Assurance Section
Division of Hazardous Waste Management
April 20, 1999

Catherine A. McCord
Manager, Environment and Business Integration
1000 North Randall Road
Elgin, Illinois 60123-7857

Dear Ms. McCord:

I have received your letter of April 2, 1999 in which you address a number of concerns regarding Safety-Kleen's Continued Use Program that I raised in our telephone conversation of April 2, 1999. This letter is to grant provisional approval to that program.

Your responses to my questions eased my concerns about the structure of the program and its ability to limit the amount of reused solvent to the quantity necessary to clean the drums. This office will monitor the program for approximately one year, however, to insure that safeguards are indeed working before granting unconditional approval.

Please notify me when Safety Kleen begins the program in West Virginia so that we can begin observing the process.

I hope that this information is helpful to you. If I can be of any further assistance, please contact me at (304) 558-5989.

Sincerely,

[Signature]
H. Michael Dorsey, Assistant Chief
Compliance Assurance and Emergency Response

cc: Tom Fisher
    Stan Moskal
    Mike Stratton

"To use all available resources to protect and restore West Virginia's environment in concert with the needs of present and future generations."
April 25, 1997

via Federal Express

Ms. Michele Anders, Chief
Generator and Recycling Branch
U.S. Environmental Protection Agency
Office of Solid Waste
401 M Street, S.W.
Washington, D.C. 20460

RE: Written Confirmation of Regulatory Interpretation of 40 CFR 261.2(e)(1)

Dear Ms. Anders:

Safety-Kleen is submitting the following information as Confidential Business Information and has been labeled as such pursuant to 40 CFR Part 2, Subpart B, Section 2.203(b).

The purpose of this letter is to follow up on an April 16 telephone conversation with Mr. Jeff Hannaple about a regulatory interpretation and to request that the interpretation Mr. Hannaple provided be confirmed in writing. The regulatory interpretation was provided in response to Safety-Kleen's request on how used parts washing solvent that was used for drum washing would be regulated, if it was used for the drum washing activity prior to any reclamation.

As previously discussed, Safety-Kleen collects used solvents from customers' parts cleaning operations and consolidates such materials at one of our branch collection facilities for shipment to one of our recycle centers. It is our intent to use a certain quantity of this material for washing drums prior to re-filling them with product. The quantity of solvent used in this manner will be dictated by the volume needed to wash a drum and the total number of drums used to service our customers. None of the solvent used in this manner will be reclaimed prior to its use as drum wash. Safety-Kleen will establish criteria for the amount and type of material to be used for this purpose.

Safety-Kleen believes that the parts washer solvent to be used in this manner is excepted from the definition of solid waste because it will be "used or reused as an effective substitute for [commercial product[s]]..." (40 CFR 261.2(e)(1)). The preamble to the Definition of Solid Waste, dated January 4, 1985 (50 FR 619), discusses the use of substitutes for commercial products in the following manner:

"When secondary materials are directly used as substitutes for commercial products, we [the Agency] also believe these materials are functioning as raw materials and therefore are outside of RCRA's jurisdiction and thus, are not wastes."
Page 637 of the preamble also states,

When secondary materials are directly used (or, in the case of previously used materials, reused)... they function as raw materials in normal manufacturing operations or as products in normal commercial applications. We [the Agency] reiterate these positions in the final regulation. These direct use recycling situations represent exceptions to the general principle that accumulated hazardous secondary materials are hazardous wastes.

The final rule consequently states that secondary materials used as ingredients or used directly as commercial products are not wastes and are outside the Agency's RCRA jurisdiction. They thus are not subject to RCRA Subtitle C regulations when generated, transported, or used...

See also attached guidance from the RCRA/Superfund Hotline.

The discussion on page 624 of the preamble, addresses "continued-use" when distinguishing between spent materials from those that are still fit for use,

"...where solvents used to clean circuit boards are no longer pure enough for that continued use, but are still pure enough for use as metal degreasers. These solvents are not spent materials when used for metal degreasing. The practice is simply continued use of a solvent. (This is analogous to using/reusing a secondary material as an effective substitute for commercial products.)"

We request that EPA confirm in writing that the solvent Safety-Kleen intends to use for drum wash in the manner described above is not a solid waste pursuant to 40 CFR 261.2(e)(1) and thus not a hazardous waste when it is being used as an effective substitute for a commercial product.

Please contact me at (847) 468-2245, if you have any questions.

Sincerely,

Catherine A. McCord, Manager
Environment and Business Integration

Attachment

cc: Jeff Hannaple
ment must be installed with special leak detection and collection systems. Many existing tank systems may not have such a system to detect and contain releases. Do the new July 14, 1986 regulations have any leak testing requirements for existing systems prior to installation of secondary containment?

Yes. The new hazardous waste tank regulations do provide for leak testing in existing tank systems prior to installation of secondary containment. 40 CFR 264.193(i) and 265.193(i) require all existing tank systems to be evaluated in some manner. Non-enterable underground tanks must be tested for leaks at least annually. All other tanks (aboveground and enterable underground tanks) under interim status must be leak-tested, inspected internally, or for cracks, leaks, corrosion and erosion at least annually. Other permitted tanks must be either leak-tested or placed on a schedule for overall integrity assessments. The frequency of assessments would depend on the construction of the tank, the age of the system, the type of waste stored or treated, the type of corrosion or erosion, and the rate of corrosion or erosion of the tank. The annual leak testing requirement also applies to all equipment. In addition, § 264.191 and § 265.191 require the owner/operator of an existing tank system that does not meet the requirements of §§ 264.193 and 265.193 to obtain a written assessment and to put back in the same landfill and the landfill will then be considered a replacement.

A unit is considered a replacement if it is taken out of service and all or substantially all waste is removed from it and reused. If the removal, stabilization, and replacement of the waste is part of closure, and no new waste is being added, then EPA does not consider that the unit has been "reused." Therefore, the landfill would retain its status as an existing unit and would not have to meet minimum technology standards prior to replacing the waste.

RCRA-78 Existing Units, Replacement Units, and Minimum Technology Standards

The owner/operator of an existing landfill unit which is holding F006 waste, wants removal of all the waste from it in order to stabilize it. Once the waste is stabilized, it will be put back in the same landfill and the landfill will then be a replacement unit. Would it have to meet minimum technology requirements under Section 3004(a) of RCRA if stabilized waste is replaced?

A unit is considered a replacement if it is taken out of service and all or substantially all waste is removed from it and reused. If the removal, stabilization, and replacement of the waste is part of closure, and no new waste is being added, then EPA does not consider that the unit has been "reused." Therefore, the landfill would retain its status as an existing unit and would not have to meet minimum technology standards prior to replacing the waste.

RCRA-79 Land Disposal Definition

How is land disposal defined regarding the Section 3004(d) RCRA land disposal restrictions?

Land disposal is defined to include, but not be limited to, any placement of hazardous waste in a landfill, surface impoundment, and waste pile, injection well, land treatment facility, salt dome formation, or underground mine or cave (Section 3004(k)). EPA also considers placement of hazardous wastes in concrete vaults or bunkers intended for disposal purposes as hazardous waste management subject to the land disposal restrictions. However, EPA does not consider open detonation, waste incineration, or waste combustion facilities, including waste combusting as methods constituting land disposal.

RCRA-80 Lab Packs and the Land Disposal Prohibitions

Are lab packs containing wastes restricted from land disposal included in the land disposal restrictions?

Neither the legislative history nor the statute indicates that lab packs can be excluded from the land disposal restrictions if they contain restricted wastes. If a lab pack contains these restricted wastes, the entire lab pack is subject to the land disposal restrictions.

RCRA-81 Definition of Solid Waste

A generator generates a 5% solution of sodium hydroxide from his metal cleaning operation. Another facility can use the waste as a substitute for a commercial product in their process of cleaning out tanks, except the waste is too dilute to be effective. If the generator adds 5% sodium hydroxide to his waste to make a 10% solution, would this material be a solid waste?
According to § 261.2(c)(1)(ii), materials are not solid waste when they can be shown to be recycled by being used reused as effective substitutes for commercial products. The waste is employed in a particular function or application as an effective substitute for a commercial product (40 CFR 261.1(c)(5)(iii)). Since it would function as a product in a non-commercial use, it would not be a solid waste and is not subject to RCRA Subtitle C regulations when generated, transported or used (unless accumulated speculatively).

(May 1987; Regulatory Cross References: 261.2(c)(1)(ii), 261.1(c)(5)(iii))

RCRA-82 Disposal Prior to November 19, 1980

A tank owner closed a tank which contained waste solvent in 1977. The waste solvent was an unlisted ignitable waste (DC which was pumped out of the tank. Some ignitable residues remained in the tank. The tank was sealed and has not been used since 1977. Is the tank a RCRA disposal facility?

The preamble of the May 19, 1980 Federal Register (40 CFR 264 and 265, page 33170) specifically states that the regulatory scheme of Subtitle C is prospective, i.e., it applies to hazardous waste management which takes place after effective date of the Subtitle C regulations. Inactive (either closed or abandoned) disposal facilities could be subject to RCRA Section 7003 enforcement authorities and CERCLA.

If the tank was closed in accordance with existing regulations, it would be an inactive disposal facility not subject to RCRA Subtitle C regulation unless the waste in the tank is subsequently managed in a manner that would constitute treatment, storage or disposal.

(May 1987; Regulatory Cross Reference: 265.197)

RCRA-83 Hazardous Waste Tanks

An existing above-ground hazardous waste tank is moved to another location at the same facility. Does it become subject to new tank standards when it is moved? What would the situation be if the tank was underground?

For both above-ground and underground tanks, the tank would be classified as a new tank after being moved and reinstalled (see 50 FR 25446, July 17, 1986). The tank would be subject to the requirements for new tank systems. The tank would have to be reinstalled with secondary containment meeting the requirements specified in §§ 264.193(a) or 265.193.

(May 1987; Regulatory Cross References: 264.190, 265.190)

RCRA-84 Applicability of Contingent Closure and Post-Closure Plans for Tanks

Section 264.197(c)(1) and (2) requires that, unless a tank has secondary containment, a contingent plan for closure as a landfill or a contingent post-closure plan must be prepared. 40 CFR 264.193(a)(3) requires that an existing tank be retrofitted with secondary containment by the time it reaches 15 years of age. If the owner of an existing tank is planning to install secondary containment before the tank reaches 15 years of age, is the owner/operator required to prepare the contingent plans?

Yes. The contingent closure and contingent post-closure plans are required for all tanks not having secondary containment even if the owner/operator is planning on installing secondary containment. The plans would be required until the secondary containment meeting the requirements of §§ 264.193 or 265.193 is installed.

(May 1987; Regulatory Cross References: 264.197(c), 264.193(a); 265.197(c), 265.193(a))

RCRA-85 Dissolved vs. Entrained Metals Subject to the Land Disposal Restrictions

The land disposal restrictions in RCRA Section 3004(d) require that the California List wastes be banned from land disposal by July 8, 1987. Concentrations of nickel greater than 134 mg/l are subject to the ban. Is hazardous wastewater containing nickel dispersed by agitation, but not chemically in solution, included in the restriction?

Yes. It does not matter whether the nickel is chemically or physically contained in the wastewater. The ban applies to the total concentration of nickel in the filtrate as determined by subjecting a representative sample of wastewater to the Filter Liquids Test. If the facility were to settle out the pieces of nickel and lower the concentration of nickel below 134 mg/l the wastewater would no longer be subject to the ban. Until treatment standards are finalized, this method of testing the concentration is allowable.

(July 1987; Regulatory Cross Reference: 268.32)

RCRA-86 Domestic Sewage Exclusion

A RCRA hazardous waste is transported by truck accompanied by a Uniform Hazardous Waste Manifest to a publicly owned treatment works (POTW). Does the domestic sewage exclusion apply to this hazardous waste if it mixes with domestic sewage prior to treatment? Is the sludge generated from treating the RCRA hazardous waste and the domestic sewage subject to RCRA Subtitle C regulations when generated, transported or used (unless accumulated speculatively)?

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Ms. Catherine A. McCord  
Manager, Environment and Business Integration  
Safety-Kleen  
1000 North Randall Road  
Elgin, Illinois  60123-7857  

Dear Ms. McCord:

Thank you for your April 25, 1997 letter to Michele Anders requesting a written confirmation of the regulatory status of used parts washing solvent that is to be used for drum wash at Safety-Kleen's facilities without first being reclaimed. You asked whether the used parts washing solvent would be excluded from the definition of solid waste pursuant to 40 CFR §261.2(e)(1) when it is used as an effective substitute for a commercial product. Based on the information that you provided, it is the Agency's understanding that Safety-Kleen intends to collect used parts washing solvents from its customers. Some of the used parts washing solvent from designated customers would be used for drum washing at Safety-Kleen facilities. This used solvent designated for drum washing would be consolidated, but would not be reclaimed, prior to its use for drum washing. The solvents designated for drum washing would also be segregated (i.e., always in separate containers or tanks) from the other used solvents collected from Safety-Kleen's customers.

Because the material (i.e., used solvent continuing to be employed in solvent uses) remains a product, your question about the applicability of 40 CFR §261.2(e)(1) is moot. That regulatory section is intended to apply to secondary materials, which is not the case for used solvents that are not yet "spent."

The Agency has previously stated that when a used solvent is employed for another solvent use, this continued use indicates that the solvent remains a product. The used solvent in this case is a material continuing to be used as a solvent, the purpose for which it is intended, rather than a spent material being reused. Consequently, the used solvent to be employed for drum washing would not be considered a solid waste and would not be subject to the Resource Conservation and Recovery Act ("RCRA") Subtitle C hazardous waste regulations when generated, transported, or used. 50 Fed. Reg. 614, 624 (1985). Accordingly, used parts washing solvents that are collected and consolidated by Safety-Kleen and then used for drum washing without first being reclaimed would not be a RCRA solid waste.

In the case of shipments of used solvents in tanker trucks, if any part of a shipment of solvent is reclaimed, burned for energy recovery, or otherwise defined as solid or hazardous waste (as opposed to being directly used only for drum wash), the entire shipment must be managed according to the
applicable RCRA Subtitle C regulations. In situations in which used solvents collected from multiple sources are handled in separate drums or containers on the same truck, each container must be handled according to the applicable regulations (depending on how the solvent is to be used or managed), including hazardous waste manifest requirements. After the solvents have been used for drum washing, any residual solvents would be subject to a hazardous waste determination and must be managed according to the applicable RCRA Subtitle C requirements.

Furthermore, the Agency is aware of the potential for the "continued use" policy to be abused, and thus, notes that the continued use must be legitimate for the used solvents to be excluded from regulation as a solid waste. The Agency would consider the continued use of the used solvents for drum washing to be legitimate in situations in which: 1) the used solvents are effective for the drum-washing operation, especially if the used solvents substitute for solvents that would otherwise have to be purchased (if the used solvents would not be an effective washing agent for the drums, using the used solvents in lieu of other effective drum-washing agents would not be considered legitimate); 2) the used solvents are used only for washing drums that actually need it (if the used solvents are used as drum-washing agent when the drums do not need washing, using the used solvents would not be considered legitimate), and 3) the used solvents are not used in excess of what would normally be required to wash the drums (if the used solvents are being used in excess of the amount of solvents needed for the drum-washing operation, e.g., more than would be necessary to wash the drums effectively, using the used solvents would not be considered legitimate).

The regulatory interpretation provided above is based on the U.S. EPA's interpretation of federal regulations. Some states in which the continued use of the used parts washing solvent occurs may have different regulatory requirements or interpretations. For case-specific determinations on the status of the continued use of the parts washing solvent for drum wash, please contact the appropriate state regulatory agency or EPA Regional Office.

If you have any questions or would like additional information, please contact Jeff Hannapel at (703) 308-8826.

Sincerely,

[Signature]

David Bussard
Director, Hazardous Waste Identification Division
Office of Solid Waste
Study of Drum Cleaning with Continued Use Solvent

Robert Janicki & Dennis Brinkman
Safety-Kleen Corp.

September 24, 1997
Study of Drum Cleaning with Continued Use Solvent

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INTRODUCTION

This report provides the results of an engineering study of drum cleaning at Safety-Kleen branch facilities. The study established a standard system to assure adequate cleaning of drums prior to their return to customers. Drums will be cleaned with solvent that has been initially used by our customers and returned to our branches for continued-use as a cleaning solvent. After use as a drum washing agent, the material will be recycled.

Parts washing involves the use of various cleaning agents to remove deposits or surface contamination from hard surfaces. Over the years, the primary agent has been a hydrocarbon distillate variously called mineral spirits, Stoddard Solvent, or petroleum naphtha. During initial use, this solvent becomes unacceptable for the intended application and fresh solvent is provided. However, the partially used solvent still retains the capacity for less rigorous cleaning applications, such as drum washing.

This multiple use of the solvent allows maximum value out of this commodity.
DRUM WASHING SCENARIOS

Existing Drum Washer/Dumpster System

For many years, Safety-Kleen has used a system that combines drum washing within a large trough that is used as a receptacle for receiving parts washer solvent returned from our customers. The trough portion of this unit is typically 1.5 ft wide x 3 ft. long x 1.5 ft. deep. It allows easy access for the emptying of drums and typically contains up to 40 gallons of solvent.

The drum washer mechanism sits to the side of the dumpster trough and within a unified containment area (see Figure 1). The complete system is 3 ft. wide x 5 ft. long x 6 ft high. As shown in Figure 2, it is fitted with a brush and nozzle assembly designed to wash bottom interior and exterior sidewalls of drum. Solvent is pumped from the bottom of this trough to a nozzle that sprays solvent inside drums that rotate around a large brush that scrubs the inside surface.

A maximum volume of 40 gallons is retained in the bottom of the drum washing unit. A float switch controls a second pump that moves excess solvent to a storage tank. This solvent is then transported to a recycling plant.

New Continued Use System

Continued use material will be deposited in a 200-gallon open top vessel is (3 ft. wide x 4 ft. long x 5 ft. high) which has been fitted with a sloped bottom directed to a centered 1 ½” threaded outlet. This tank has a full lid which is closed when not in use and is held open with a fusible-link for emergency closure during use. As shown in Figure 3, solvent for drum washing is taken preferentially from this dumpster until it is empty. This vessel is the primary source of drum washing solvent. When this vessel is empty, solvent residing in the bottom of the main dumpster is recirculated through the drum washer for any remaining requirements.
EQUIPMENT DESCRIPTION

Pumps

This system utilizes two ITT Marlow pumps (Model 1½HR49EC) which are 1½-inch open impeller centrifugal-type units powered by a 1½ HP (3450 RPM) motor. These pumps are specially useful for handling liquids with substantial solids loading.

Valves

The drum-washing solvent feed is controlled by two Watts Mfg. 1½" motor-driven ball valves (Model 1801-212). These valves are electrically-controlled. The valve between the final dumpster and the continued use solvent storage vessel are manually controlled by the operator from a control panel.

Nozzles

Two styles of nozzles are utilized in the drum washing assembly. The primary interior nozzle is a Spraying Systems; Model H-U ¾ 65200 Brass unit. The primary working dimension for this nozzle is its 11/32-inch orifice diameter, which yields a flowrate of 22 gal/min.

Three Model H-U ¼ 6510 Brass nozzles are utilized for exterior washing. The primary working dimension for this nozzle is a 3/16-inch orifice (this is drilled out from the normal 5/64-inch orifice), which yields a liquid stream instead of a mist spray to minimize air emissions.

Both of these nozzles were selected to give good area coverage with maximum cleaning efficiency without excessive vaporization.

Electrical Logic

The primary electrical circuit regulates the use of solvent from each dumpster unit. A single switch panel controls each valve simultaneously and has indicator lights to verify open (green)/ closed (red) positions. The drum washer pump will only operate when each valve is opposite each other, assuring that solvent cannot be mixed during the wash cycle (i.e., two illuminated green lights will lock out the washer pump).

A timer located in the drum washer control panel automatically stops the washer pump. The timer has a 1-9,999 second range. This assures that a specific volume of solvent is utilized during each wash cycle. Part of the objectives of this test was to establish the setting for this timer.
SYSTEMS OPERATION

The drum washer/dumpster and reuse dumpster are integrated by a pump dedicated to washing drums, as shown in the system layout in Figure 4. The two motor-driven valves control the inlet to this pump from each dumpster unit. The valves operate simultaneously opposite each other to maintain a sufficient solvent flow and specify which solvent is to be used for washing drums. The reuse dumpster is always the primary source. The washer pump is activated manually once a dirty drum is in place and is automatically stopped following the preset wash cycle period.

The second pump is dedicated to removing excess solvent from the drum washer/dumpster and is automatically controlled by a float switch mounted in the trough area of this unit.

EXPERIMENTAL RESULTS AND DISCUSSION

The volume of solvent required to remove sediment from parts washer drums is related to a time factor to be incorporated into the wash cycle since the solvent flowrate is constant and reproducible. All sediment settles to the bottom of a drum and a proper cleaning is considered accomplished when the interior drum bottom is visually free of any residue. It is extremely rare that the exterior is still dirty once the interior is clean.

Studies were performed at two locations to substantiate a time period required to obtain clean drums. The Safety-Kleen Branches at Elgin, IL and South Bend, IN are representative of all Safety-Kleen Branches, since all drum washer installations are identical. Approximately 100 drums were cleaned at each location to generate the data for this study.

In each test, drums were washed for a 10 second period and inspected. Additional cleaning was performed in 5 second intervals until each drum was finished. The following chart associates the percentage of drums determined to be clean to the required time to achieve the desired results.

In each test, the washer was metered at a 22 gal./min. flow rate. This was determined by extending the nozzle into a drum via a 1-inch diameter X 5-ft hose and measuring the volume using a drum and calibrated dip stick.
Table 1 presents the data for South Bend, IN.

<table>
<thead>
<tr>
<th>% Clean Drum</th>
<th>Wash Time</th>
<th>Solvent Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>31%</td>
<td>10 sec.</td>
<td>3.7 gal.</td>
</tr>
<tr>
<td>70%</td>
<td>15 sec.</td>
<td>5.5 gal.</td>
</tr>
<tr>
<td>88%</td>
<td>20 sec.</td>
<td>7.3 gal.</td>
</tr>
<tr>
<td>96%</td>
<td>25 sec.</td>
<td>9.2 gal.</td>
</tr>
<tr>
<td>100%</td>
<td>35 sec.</td>
<td>12.8 gal.</td>
</tr>
</tbody>
</table>

Table 2 presents the data for Elgin, IL.

<table>
<thead>
<tr>
<th>% Clean Drum</th>
<th>Wash Time</th>
<th>Solvent Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>35%</td>
<td>10 sec.</td>
<td>3.7 gal.</td>
</tr>
<tr>
<td>66%</td>
<td>15 sec.</td>
<td>5.5 gal.</td>
</tr>
<tr>
<td>92%</td>
<td>20 sec.</td>
<td>7.3 gal.</td>
</tr>
<tr>
<td>99%</td>
<td>25 sec.</td>
<td>9.2 gal.</td>
</tr>
<tr>
<td>100%</td>
<td>35 sec.</td>
<td>12.8 gal.</td>
</tr>
</tbody>
</table>

As can be seen, the data are very similar. By combining all of the data and utilizing the known flow rate to associate a solvent volume with each time interval, Table 3 presents both the time and solvent volume required to clean dirty solvent drums. If one assumes the goal is to only rarely run any drums through a second time, the timer will need to be set at 35 seconds and a total volume of solvent of around 13 gallons will be required. This is around the typical volume brought back in an average drum of dirty solvent.

<table>
<thead>
<tr>
<th>% Clean Drum</th>
<th>Wash Time</th>
<th>Solvent Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>33%</td>
<td>10 sec.</td>
<td>3.7 gal.</td>
</tr>
<tr>
<td>68%</td>
<td>15 sec.</td>
<td>5.5 gal.</td>
</tr>
<tr>
<td>90%</td>
<td>20 sec.</td>
<td>7.3 gal.</td>
</tr>
<tr>
<td>98%</td>
<td>25 sec.</td>
<td>9.2 gal.</td>
</tr>
<tr>
<td>100%</td>
<td>35 sec.</td>
<td>12.8 gal.</td>
</tr>
</tbody>
</table>

CONCLUSIONS

The average total flowrate for the drum washer is 22 gal/minute. Our study showed the time needed for cleaning all but the most highly contaminated drums was 35 seconds. Thus, 13 gallons of solvent per drum is required. When this continued use system is installed, all pumps, nozzles, and timers will be standardized to be identical to these operating parameters.
FIGURE 2 - CURRENT NORMAL CONFIGURATION

FIGURE 3 - REVISED REUSE CONFIGURATION
BARREL WASHER/REUSE SOLVENT SUPPLY TANK PIPING SCHEMATIC

FLOAT SWITCH

FLOAT SWITCH

UMS PUMP

UMS BARREL WASHER

1-1/2" PIPE & HOSE

1-1/4" PIPE & HOSE

NORMAL OPEN WHEN REUSE SOLVENT SUPPLY TANK IS NOT IN USE

NORMALLY CLOSED WHEN REUSE SOLVENT SUPPLY TANK IS NOT IN USE

REUSE SOLVENT SUPPLY TANK

TO UMS STORAGE TANK

LOCATE ACTIVATION SWITCH AS REQ'D. IN R/F AREA

FIGURE 24