THE SAFETY-KLEEN
CONTINUED USE PROGRAM™

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INTRODUCTION

Safety-Kleen Systems, Inc. ("SK") is an international company that provides environmental services to customers primarily engaged in automotive repair, industrial maintenance and dry cleaning. For over thirty years, SK has provided a nationwide parts cleaner service which allows its customers to use solvents to degrease and to clean equipment, parts and tools in an environmentally protective, effective and economic manner. Historically, SK managed all of the used solvent from its customers as a waste. Over the years, SK discovered that the used solvent from certain customers still retained solvent properties and as a result had cleaning capabilities. SK determined that this used solvent could be used to clean drums for use in its part cleaner services. This additional use of used solvent is the basis of SK's Continued Use Program™ (also referred to herein as the "CUP" or "Program").

The Continued Use Program encompasses a "closed loop" solvent use and reuse process that is owned and controlled from beginning to end by SK. The Program utilizes solvents that have been previously used by customers to clean drums at various SK branch facilities throughout the United States. The Program is both safe and environmentally-friendly. Customers for SK's Continued Use Program range from small "mom and pop" automotive repair businesses to sophisticated Fortune 500 businesses with complex maintenance and repair facilities. All of these businesses support the Continued Use Program and in particular rely on the fact that it minimizes the hazardous wastes that they generate as well as minimizing their administrative responsibilities.

SK provides its customers with recycled/regenerated mineral spirit product through SK service contracts. The SK service contract with each customer specifies a regular schedule (i.e., service interval) for the delivery of "new" recycled/regenerated solvent product and the pickup of the "used" solvent by SK. Even though the used solvent is then no longer used for parts cleaning at customer locations, used solvents meeting the CUP criteria are still effective for cleaning applications because they continue to retain their solvent properties. It is these used, but not spent, solvents that are part of the Continued Use Program. SK customers are required by their contracts to manage these solvents to prevent contamination with other materials. CUP solvents are segregated by SK and identified as "CUP solvent" that can continue to be used by SK to clean dirty drums at various SK branch facilities throughout the United States.

As discussed in more detail herein, the Continued Use Program includes specifications that are effective in identifying, and limiting the Program to, those used solvents that still retain sufficient solvent properties to be effective for continued use in the SK drum cleaning operations. For this reason, not all SK customers are eligible for or accepted into the Program.

In discussions with environmental agencies in States that have concurred with the Continued Use Program, or are considering doing so, SK has been asked to address questions relating to the regulatory status of the CUP solvent. Those questions have primarily and appropriately focused on whether CUP solvents are properly classified as a "product" or a "waste." It is appropriate to begin the regulatory review of the Continued Use Program with this

basic question because it is determinative of the scope of the necessary regulatory review. If the CUP solvent is a product, as the relevant facts show, then it is not a "waste" under either federal or state solid or hazardous waste laws. It is properly managed as an unregulated product or "non-waste."

The conclusion that CUP solvent is a product, not a waste, renders unnecessary further inquiry into whether CUP solvents may be covered by one or more of the exemptions under the Resource Conservation and Recovery Act ("RCRA") from the definition of a "solid waste." In other words, because the CUP solvent is not a waste, it is not necessary to determine whether it would be exempted from the RCRA solid waste classification for other reasons.

However, based on its past experience in submitting this Program for review by environmental agencies, SK recognizes that some reviewers have requested that SK simultaneously address both sides of the "product versus waste" question relating to CUP solvents. This paper has been prepared to consolidate these questions into a complete review and to provide a response by SK. Therefore, it first presents all of the relevant facts and law showing that CUP solvents are a product and not a waste. Then, assuming solely for this review that the CUP solvent could potentially be classified as a solid waste, an analysis is provided showing that CUP solvent nevertheless would be excluded from the definition of a solid waste because it is an effective commercial product substitute under RCRA.

DISCUSSION

I. DESCRIPTION OF THE SK CONTINUED USE PROGRAM

SK's Continued Use Program is part of a closed-loop process in which SK retains ownership and control of the parts washer solvent (either 105 or 150-Premium mineral spirits) from beginning to end. Not only does SK determine which customers will be allowed into the Program, it also retains ownership of both the recycled solvent delivered to its customers and the used CUP solvent picked up from those same customers. SK transports the used CUP solvent to one of its branch facilities where it is reused to clean dirty drums. After its use in the drum washing unit, the used solvent then becomes a "waste" which SK transports to its solvent recycling centers for reclamation into "new" solvent. This solvent is then delivered back to the SK branch service locations for distribution to SK's customers, marking the beginning of the closed-loop process once again. A graphic depiction of the Continued Use Program illustrating the steps in the "closed loop" process is attached as Exhibit 1. Each of these steps is described in more detail below.

A. SELECTION OF THE CONTINUED USE PROGRAM CUSTOMER

SK provides regular delivery and pick-up services for the solvents used by its customers for parts washing equipment that is either customer owned or leased to the customer by SK. SK collects used CUP parts washing solvents from designated customers. SK selects a customer whose solvent will be eligible for use as CUP solvent by evaluating the type of used solvent generated by potential CUP customers. Customer selection is determined by the nature and extent of the customer's use of the clean solvent delivered to it by SK. The frequency of the delivery/pickup service for certain customers impacts the condition of their used solvent. Most SK customers do not want to wait until the parts washing solvent they use has ceased being

effective for their needs before it is replaced by SK with "new" solvent. This approach would interfere with their business operations. Thus, solvents are picked up from these customers more frequently, i.e. they are replaced on a shorter interval with fresh solvent, before the solvent's cleaning ability has been exhausted.

Another factor in the selection of CUP customers is the nature of the customers' cleaning needs. For example, solvents used by gasoline stations or service centers to wash parts generally are still able to perform additional cleaning services as compared to solvents used by pipeyard customers. The CUP procedures specify that customers who produce a heavy sediment during their cleaning process are not eligible for the Program. For example, if the sediment does not pour out of the drum with the solvent but must be scooped out, then that customer is not eligible for the Program.

As noted above, the SK customer never takes ownership of the solvent utilized in the parts washer equipment, whether that equipment is owned by the customer or by SK. SK retains ownership of the solvent from delivery and pickup, through its reuse in the Continued Use Program and its subsequent recycling. The provision for retention of ownership is part of the standard terms and conditions of the SK customer agreement. Paragraph B.1. of the standard terms and conditions which SK provides to its customers states:

> Except as provided below for on-site disposal of aqueous cleaning solutions, all Safety-Kleen equipment, solvents and aqueous cleaning solutions shall remain the property of Safety Kleen and shall be returned to Safety-Kleen upon termination of service. (See attached Exhibit 2)

And, it is only SK solvent that is used in the Continued Use Program. The CUP customer must be a SK parts cleaning customer to whom SK supplies mineral spirits solvent and from whom the solvent is returned to SK. By these Program restrictions, SK knows that it is selecting used solvent that has not been used in such a way that its solvent properties would be depleted.

Finally, for those customers meeting these eligibility criteria, the number of customers accepted into the Continued Use Program is limited. SK accepts only the number of customers necessary to generate the amount of used solvent needed to clean the dirty drums generated at the SK branch facility in that customer service area.

B. CONTINUED USE PROGRAM REQUIREMENTS

In addition to the criteria used to select eligible customers for the Continued Use Program, SK also has developed additional Program requirements to ensure that the used CUP solvent provided by those customers still retains solvent properties sufficient to clean drums and is not spent material. The customer must only use the mineral spirits for parts cleaning. This restriction provides a suitable used solvent that still retains the ability to clean. The customer must comply with the contract language in SK service documents that prohibits the addition of any other materials to the SK solvent when it is being used by the customer. This restriction prevents unacceptable contamination of the used CUP solvent. Also, SK parts cleaning machines at the customer's facility are identified with Continued Use Program labels. This identification is another quality control measure to remind the customer that the cleaning

machine is subject to the CUP prohibitions against the introduction of any other additives or materials.

SK also trains its employees who pick up the used solvent from customers to examine the solvent to confirm that it remains eligible for the Continued Use Program. The used solvent must have a typical appearance at the time of pick up from the SK customer. Solvent that is not suitable for continued use can be identified by unacceptable odor, unusual color or an increase in its volume that indicates non-SK solvent material has been added to the solvent container. These on-site inspection criteria are another means of eliminating unacceptable used solvent from the Program.

SK also does not allow used solvent containing debris as CUP solvent. SK clearly conveys this prohibition to its employees and to eligible customers. SK directs its sales representatives to emphasize to customers that no additional debris should be placed into the drum of CUP solvent. SK requires that any CUP solvent containing debris is to be returned to the customer or an Unmanifested Waste Report is completed. Also, no materials that cannot go through the spray nozzle on the drum washing unit (except metal shavings and sediment) are to be in the drums of material removed from the customers.[1]

C. TRACKING AND MANAGEMENT OF CUP SOLVENT MATERIAL

The used solvents produced by CUP customers are managed as a product by SK and are not a waste. Throughout the process of retrieval and transport of CUP solvent from a customer's facility to a SK branch facility, the CUP solvent is carefully identified, managed and segregated from waste solvents by SK. Once a customer has been accepted into the Continued Use Program, SK employees place a "Continued Use Product" label on the parts cleaning unit at the customer's facility. If a customer's parts cleaning unit does not have the Continued Use label, then the used solvent material picked up by SK is not brought back to the SK branch facility as CUP solvent.

CUP solvent must be transported from the customer in U.S. Department of Transportation("DOT")-approved containers with proper DOT and applicable State law transportation shipping papers. The CUP solvent is not manifested as a hazardous waste because it is not a "waste" but rather a product that retains its effectiveness as a cleaning agent. The CUP drums also are specially identified with a CUP drum tag to distinguish them from waste solvent drums. The Continued Use procedure requires that a CUP customer's solvent drum not be placed on the SK truck for transport unless a CUP label and information sufficient to identify the customer are on the drum.

Quality control continues through the process of unloading CUP solvent at the SK facility. Upon their arrival at the SK branch facility, the CUP drums are stored separately by SK as drum cleaning solvent.[2] The Program procedures provide that the Continued Use solvent is to

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[1] Metal shavings and sediment that can go through the spray nozzle on the drum washing unit, within the criteria established for the Program, is helpful in the drum cleaning process because it can assist with necessary scouring and cleaning of the drum surfaces.

[2] In the event of a spill of CUP material, SK would handle the spill as it would any mineral spirits product spill. The CUP drums are stored in an area covered by the S-K facility's Spill Prevention Control & Contingency Plan. A spill would be cleaned up and the appropriate internal and external reporting completed pursuant to the Plan.

be segregated from hazardous and non-hazardous parts cleaner drums and must first be emptied into the CUP vat. The CUP solvents are placed in the dedicated CUP vat to prevent commingling of CUP solvent and spent hazardous solvent. The Program procedures expressly caution that if the CUP solvent is mistakenly emptied into the return and fill station without first going into the CUP vat, then it must be treated as a hazardous waste and an Unmanifested Waste Report is to be prepared.

D. CONTINUED USE PROGRAM DRUM CLEANING OPERATION

Prior to implementing the Continued Use Program, SK conservatively managed the used solvent as a hazardous waste and thus had no need to standardize the volume of material needed to clean each drum. SK's first step in developing the Program was to complete an Engineering Cleaning Study (the "Study") that standardized the time, flow rate/pressure, and volume for the existing drum cleaning system. A copy of the Study is attached as Exhibit 3. The Study included running tests on approximately 100 drums at each of two SK facilities to determine the time period required to obtain clean drums. The drums were cleaned, under controlled solvent flow conditions, for a ten-second period and inspected. Additional cleaning was performed in five second intervals until each drum was inspected and found to be sufficiently cleaned. The test results were evaluated to determine both the time and solvent volume needed to clean dirty solvent drums. Using the criterion that the need to run a dirty drum through the washing process a second time should be a rare occurrence, the study determined that a total of 35 seconds using 12.8 gallons of CUP solvent was typically necessary to clean a drum, based on an average flow rate of 22 gal./min. The Study found that this volume and cleaning time were sufficient for cleaning all but the most highly contaminated drums. The Engineering Cleaning Study formed the objective basis on which SK determined a standardized solvent volume to be used to clean the drums. This approach also serves to prevent excessive use of CUP solvent.

Based on the Engineering Cleaning Study results and findings, a new cleaning system was installed at each of the SK branches that participate in the Continued Use Program. The CUP equipment was installed with all pumps, nozzles, and timers standardized based on the Study's conclusions concerning cleaning duration, solvent volume and flow rate. The standardized cleaning system is designed to assure that all CUP product is used to clean a drum and that only the amount of CUP product necessary to clean a drum is used. The old design for the drum washing system did not have any controls over the volume of material used to clean a drum. The total volume of CUP solvent required by a particular SK branch is now the standardized cleaning volume multiplied by the total number of parts washer drums that are to be cleaned. The amount of CUP solvent collected by each branch is capped at this volume and adjusted as the level of parts washer business decreases or increases. These restrictions on the volume of CUP solvent accepted by SK prevent excess used solvent from being accumulated under the Continued Use Program.

The CUP vat is ancillary to the mechanical drum washer unit in which the dirty SK drums are cleaned by these used solvents. The drum washer spins the drums, and a pump conveys the CUP solvent from the bottom of the attached CUP vat through a spray nozzle that applies the CUP solvent to the interior of the drum to clean it.

There are two screens that the CUP solvent passes through prior to the solvent being pumped to the drum washer. The purpose of the two screens is to protect from damage the drum

washer unit pumps that pump the CUP solvent to the drum washer and to prevent clogging of the spray nozzle that applies the CUP solvent to the drums. The use of such devices to protect machinery from product that is moved through pumps or to prevent clogging is a standard engineering practice.

After the CUP solvent drum cleaning process has cleaned the drums, for those drums that will be filled with "150 solvent," SK conducts an additional polishing step. These cleaned drums are put through a drum spritzer step that uses a minimal amount, about 4-12 ounces of clean, recycled solvent, for a polishing rinse. The "150 solvent" drums are provided to SK's non-hazardous waste customers and SK performs the polishing step to assure that residues on the drum surface from the cleaning process do not leave trace levels of 105 solvent that may contaminate the fresh 150 solvent.

E. GENERATION OF RCRA WASTE SOLVENT

RCRA regulation of the CUP solvent does not begin until it has finished its continued use for cleaning the drums. It is at this point that the used solvent becomes "spent" for SK's purposes and, thus, a regulated "waste" within the meaning of RCRA. When the level of used solvent material in the bottom of the drum washer unit reaches a predetermined level, a float triggers the transfer of this material by pumping to either a RCRA permitted tank (i.e., either an above ground tank or an underground storage tank) or a ten-day transfer tanker. SK continues to maintain its control and management of the waste solvent material. The waste solvent material is classified as SK branch-generated hazardous waste, RCRA manifested by SK, and shipped off-site by SK to a SK recycle center for reclamation into fresh solvent. The "closed-loop process" then begins again as SK delivers this fresh solvent to its customers for use in their parts cleaning operations.

II. CUP SOLVENT IS A PRODUCT, NOT A RCRA WASTE

The fundamental issue that must be addressed to determine the proper regulatory status of SK's CUP solvent is whether it constitutes a "product" or a "waste." Because the CUP solvent still retains sufficient solvent properties after being used by a customer and is therefore neither a spent material nor discarded by SK, it retains its status as a "product" and does not become a "waste" under RCRA. Each of these reasons is discussed in more detail below.

A. CUP SOLVENT IS A PRODUCT AND NOT A SPENT MATERIAL UNDER RCRA

After a customer's normal use of SK solvent, the used solvent can continue to be used for its originally intended purpose (i.e., cleaning) without processing. The used solvent continues to retain solvent properties that enable its continued use for cleaning purposes. In the Continued Use Program, SK continues to use the solvent, for its solvent properties, to clean dirty drums.

SK's Continued Use Program is consistent with the RCRA program's "continued use" policy. EPA's "continued use" policy provides that when a used solvent can be and is employed for another solvent use, this continued solvent use indicates that the solvent remains a product. In its guidance, EPA applies the policy to provide that used solvent employed for its solvent properties would not be considered a solid waste and would not be subject to the RCRA Subtitle

C hazardous waste regulations when generated, transported, or used. 50 Fed. Reg. 614, 624 (January 4,1985). As the U.S. EPA stated, "[w]hen 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." 50 Fed.Reg. at 637. (See excerpts from the 50 Fed. Reg 614 Preamble attached in Exhibit 4) (emphasis added).

The used solvent in the CUP continues to be used as a solvent for its solvent properties. It is not a spent material being used for an entirely different purpose, such as an ingredient in a manufacturing process. A "spent material" is "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." 40 C.F.R. § 261.1(c)(1). The EPA has clarified that "spent materials" are "materials that have been used and are no longer fit for use without being regenerated, reclaimed, or otherwise re-processed."). 50 Fed.Reg. at 618 (See attached Exhibit 4); *Clarification of When a Secondary Material Meets the Definition of "Spent Material,"* Memorandum from Michael Shapiro, Director, Office of Solid Waste, to Regional Directors (March 24, 1994) (hereinafter "1994 EPA Secondary Material Guidance"). When solvents become "spent," they become a secondary material that is subject to RCRA Subtitle C regulation unless otherwise excluded.

The SK solvents accepted into the Continued Use Program are not "spent" for the purpose of cleaning drums and thus are not subject to regulation under RCRA. They have not lost their "solvent" properties and are still suitable for their original purpose. The CUP solvents are consistent with EPA guidance on this issue. The EPA provides the following example of an acceptable continued use of solvents that does not render them "spent material" under RCRA:

> ...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.) 50 Fed.Reg. 614, 624 (January 4, 1985) (See attached Exhibit 4).

The EPA reasoned that such a used solvent is not a "spent material" when used subsequently for metal degreasing and is outside the scope of RCRA because it can still fulfill its original purpose, namely as a cleaner. As also stated in the above-quoted Preamble to the final rule defining "spent material," the definition does not include material that is actually being put to further direct use. *Id.*

The EPA expanded upon the above example and provided further clarification in its Guidance Manual on RCRA Management of Recycled Hazardous Waste, NTIS, 1986 ("1986 Guidance Manual"):

> Distinguishing spent materials from products that are not yet "spent" may present some difficulty. As noted above, a spent material is 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. EPA interprets "the purpose for which a material was produced" to include all uses of the product

> that are similar to the original use of the particular batch of material in question. For example, EPA cites the case of materials used as solvents to clean printed circuit boards (50 FR 624). If the solvents become too contaminated for this use but are still pure enough for similar applications (e.g. use as metal degreasers), they are not spent materials. Use of slightly contaminated solvents in this way is simply continued use of the original material rather than recycling of a spent material. However, the solvents would be spent materials if they had to be reclaimed before reuse or if the manner in which they were used was not similar to their original application. Examples of the latter are burning solvents as fuel, or using materials originally used as solvents as feedstocks in chemical manufacturing. 1986 Guidance Manual at p.7 (emphasis in original).

In the same 1986 Guidance Manual, EPA discussed another example that also closely parallels SK's Continued Use Program: the status of used methyl ethyl ketone (MEK) from coated fabric production (a listed hazardous waste when spent) which was then used to wash equipment in the synthetic rubber industry. The Agency concluded that because the MEK was continuing to be used for the purpose for which it was intended (i.e., cleaning), it never became a secondary material and was not subject to RCRA regulation:

> Solvents such as methyl ethyl ketone are commonly produced and used as cleaning agents. As long as the methyl ethyl ketone (in this case) is used as a cleaner/degreaser, it is serving a purpose for which it originally was manufactured; since it is not "spent," it is not a secondary material. Materials that are not secondary materials are not solid wastes and are not subject to RCRA Subtitle C regulation. 1986 Guidance Manual at p. 250.

EPA guidance provides strong support for SK's position that the Continued Use Program involves appropriate continuing use of a product for its original purpose. It is not surprising then, that in a letter to SK from David Brussard, Director, Hazardous Waste Identification Division, Office of Solid Waste at EPA, dated August 21, 1998, the EPA agreed that the CUP used parts washing solvent that is reused to wash drums at SK facilities without first being reclaimed does not meet RCRA's definition of solid waste because SK was continuing to use it as a product in the CUP Program. (See attached Exhibit 5). The EPA recognized that like the solvents used to clean circuit boards, CUP solvents are not as clean as they were when originally used to clean customer's parts. However, they are still usable to wash drums that do not need as extensive a cleaning as do customer's parts. Most importantly, the EPA concluded that this reuse of CUP solvent is consistent with EPA guidance because the reuse of the CUP solvents to wash drums is the same as their original application. Applying the same reasoning set forth in the EPA's concurrence letter, many States have agreed with EPA's interpretation. For example, the State of Ohio concluded in its February 2, 1998 concurrence letter, "Ohio EPA agrees that by being used in Safety-Kleen's Continued Use program, the cleaning solutions are serving their intended purpose." (See Exhibit 6). (See also, letters of concurrence from Colorado, Oregon, and Wyoming, copies of which are included in Exhibit 6). Because all of the CUP material is

used for cleaning - the same purpose for which the customer originally used the material - the CUP is properly considered a continued use of this material and is not subject to RCRA regulation.

1. CUP Solvents are Effective Cleaning Agents

It is well established that petroleum fractions, like the CUP mineral spirits solvent, are used extensively and effectively for maintenance cleaning. SK knew from its years of experience with the used solvents that they were effective in cleaning the dirty drums. Drum washing was, and continues to be, a production activity that adds real value to SK's operations. As part of the development of the Continued Use Program, SK also conducted the Engineering Drum Cleaning Study that demonstrated the effectiveness of the CUP solvent. The drum cleaning study encompassed the basic elements of any industrial cleaning process evaluation: time, agitation and chemistry (type and concentration of the solvent).

Theoretically, SK could purchase and install a high-pressure/high-temperature (even steam) aqueous (water-based) drum washing system at the branch service locations to clean dirty solvent drums. However, this alternate cleaning method would not only be very expensive and energy intensive (due to the water heating or steam requirements for such a system), but it would generate significant volumes of aqueous hazardous waste. This new hazardous wash stream would not be amenable to solvent recycling and its generation would be at odds with the waste minimization and source reduction goals established by U.S. EPA and all RCRA-authorized States.

SK recognizes that because CUP solvents would be used to clean drums holding a residual amount of identical CUP solvent, a question may arise as to whether the only cleaning action which may be occurring results from mechanical agitation or flushing in conjunction with brushes used as part of the CUP drum washer unit, rather than from actually dissolving or degreasing one substance with another. However, the question wrongly assumes that cleaning solvent can work on a particular matrix without mechanical agitation. Though this assumption may hold true for miscible liquids without agitation (given enough time), this assumption does not hold true when the matrix to be cleaned includes solid material, such as is the case with the dirty drums.

Similar to the parts cleaning process, drum cleaning is accomplished by a combination of factors working hand-in hand, including chemical interaction (here, the solvent and dirt plus residual petroleum products), mechanical agitation and pressure. The chemical interaction element of the process is critical. Solvent dissolves materials on the metal surface of the drum. Solvent solubilizes these materials by molecularly attracting and thereby separating molecules of a particular material from each other. This "like dissolves like" relationship is at the core of the drum cleaning process.

This attraction between the solvent molecules and the "dirty" materials to be removed requires direct contact between the solvent molecules and the molecules of the material in question. Thus, solvent can only solubilize material when the molecules of the material are exposed to the solvent molecules, i.e., when the surface area of the solid material is maximized through mechanical removal and agitation so that large solid pieces are broken up into small particulates. Additionally, the kinetics, or reaction rate, of the solubilization process is enhanced

by agitation. As the agitation exposes surface area, it reduces boundary layer thickness, thereby increasing the reaction rate. Without agitation, i.e., any force reducing the boundary layer thickness of the solids exposed to the solvent, only negligible solubilization will occur over time.

The above description of the solvent cleaning process is true of both virgin solvent and used solvent. Clearly, SK's parts washer machines using "fresh" solvent combined with mechanical agitation (*i.e.*, brushes) to remove solid material, break these solid materials into small pieces with larger surface areas so that the solvent molecules can contact the molecules of the solid material and allow solubilization to occur. In the CUP, SK continues to use the solvent, again combined with agitation, to clean drums by dissolving or redissolving solid materials that adsorb to the surface of the drum or that flocculate together and collect at the bottom of the drum, during our customers' initial use.

The effectiveness of the solvent must be judged based upon the goal of the intended use, and whether the solvent cleaning produces results acceptable to the solvent user. In this case, the CUP solvent is adequate for SK's intended use of cleaning drums, and the used solvent SK utilizes in this process produces results completely acceptable to SK. Perhaps the best evidence that CUP solvent is effective in cleaning the SK drums is the fact that SK for years prior to launching the Continued Use Program employed customer-used solvent for the purpose of cleaning drums. Since the 1985 RCRA re-definition of solid waste, there was no regulatory benefit achieved by doing so. SK still manifested the used solvent and managed it as a hazardous waste during prior years when it was using it to clean dirty drums. Hence, SK would not have expended the significant effort and cost involved to apply used solvent to clean drums for no true cleaning purpose. The used solvent was capable of accomplishing this necessary cleaning job. That was the only benefit SK realized. Thus, SK's prior practice of using used solvent to clean drums clearly is independent evidence of its effectiveness to clean the drums.

Additionally, after cleaning the drums, the additional polishing step SK follows now and employed previously for those drums that will hold "150 solvent" is unrelated to whether the CUP solvent is effective to clean the drums. After the 150 solvent drums are already cleaned with the CUP solvent in the drum washer unit, they are put through a drum spritzer step that uses a minimal amount, about 4-12 ounces of clean, recycled solvent, for a polishing rinse. Even if SK applied virgin solvent instead of CUP solvent to clean these "150 solvent" drums, it would still need to perform this same final polishing step on the drums. These drums are provided to our non-hazardous 150 waste customers and SK must perform the polishing step to assure that residues on the drum surface from the cleaning process do not leave trace levels of 105 solvent that may contaminate the 150 solvent.

The spritzer stage on the "150 solvent" drums does not accomplish the drum cleaning. This already has been done by the use of the CUP solvent. If SK did not use the CUP solvent to clean these drums, it would have to use much more of the fresh solvent to do so, thus generating additional waste solvent, and it would *still* require the spritzer polishing step. The de minimis use of clean, recycled solvent to spray the inside of the 150 solvent drums is unrelated to the effectiveness of the CUP solvent for basic drums cleaning, and thus does not support a finding that the CUP solvent is not an effective cleaning material. The CUP solvent effectively does its cleaning "job" in the drum cleaning phase.

2. CUP Program Requirements Help Ensure that CUP Solvents Retain their Cleaning Effectiveness

To ensure that the CUP solvents are not spent for the purpose of drum cleaning, and that their continued use is a legitimate implementation of EPA's "continued use" policy, SK has developed and implemented several Continued Use Program requirements to identify used solvents that retain their solvent properties. These requirements ensure that the used solvent is effective for the drum washing operations. They include limiting participation in the Program to only SKs parts cleaning customers to whom SK supplies mineral spirits solvent and from whom the used solvent is picked up by SK. By so restricting the Program, SK knows from years of experience with such customer used solvent that it is retrieving used solvent that has not been used in a way that its solvent properties would have been depleted. Unacceptable contamination of the used solvent is controlled by the SK customer agreement that prohibits the addition of any other materials to the SK solvent as it is being used by the customer, and Continued Use labels that remind the customer of this obligation. SK service representatives also check the CUP solvent at the time it is picked up from the customer, and when it is returned to the SK branch and poured into the CUP vat by the warehouseman. The SK service representative that picks up the CUP solvent and the branch warehouseman that pours the CUP solvent into the CUP vat check the CUP solvent for unusual odors, color or enhanced volumes, to eliminate unacceptable used solvents from the Program. These Program requirements provide added assurance that CUP used solvent retains its solvent effectiveness.

The Continued Use Program is based on the continued use of the original solvent material for its intended purpose, and it remains a product at all times. As stated in the EPA's concurrence letter to SK, "[t]he 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 [RCRA] when generated, transported or used." (See Exhibit 5)

B. CUP SOLVENT IS NOT "DISCARDED" WITHIN THE MEANING OF RCRA'S SOLID WASTE DEFINITION

It is a fundamental principle of RCRA that in order for a material to be a hazardous waste, it must first be a solid waste. If the material is not a solid waste within the meaning of RCRA and its implementing regulations, it is not subject to RCRA manifesting requirements. Rather, it will be subject to U.S. Department of Transportation requirements and other applicable requirements of State transportation law. Because the CUP solvent does retain its solvent properties and is continued to be used by SK for its originally intended cleaning purpose in an appropriate subsequent use, it is not a "discarded material." Thus, it does not meet the definition of a "solid waste" under the RCRA regulations.

Both the RCRA statute and the RCRA regulations contain a definition of "solid waste."[3] The RCRA statutory definition of "solid waste," 42 U.S.C. § 6903(27), includes in relevant part "any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant or air

[3] The controlling definition of solid waste was promulgated by the EPA on January 4, 1985, 50 Fed.Reg. 614, and has been codified primarily in 40 CFR Parts 260, 261, 264, 265 and 266.

pollution control facility and other discarded material." (emphasis added). The emphasis in the statutory definition is on the "discarded" nature of the material. In promulgating the RCRA regulations, the EPA also defined "solid waste" by referring to "discarded material." 40 C.F.R. § 261.2(a)(1).[4]

1. CUP Solvents are not "Discarded Material"

A "discarded material" is any material that is "abandoned," "recycled," or "inherently waste-like." 40 C.F.R. § 261.2(a)(2). As already shown above, because the CUP solvents retain their solvent properties, they are not spent solvents. This also means that the CUP solvents are not "inherently waste-like" within the definition of "discarded material" under RCRA. Clearly, the CUP solvents also are not "abandoned" as SK continues to retain ownership of the CUP solvents and continues to use them effectively in its drum cleaning operations.

The federal appellate courts have addressed the proper interpretation of "discarded" under RCRA. Most recently, the District of Columbia Circuit Court of Appeals considered this issue in *Association of Battery Recyclers, Inc. v. EPA*, 208 F.3d 1047 (D.C. Cir. 2000). In that case, various industry groups challenged a portion of the "Land Disposal Restrictions Phase IV Rules" that created a new definition of "solid waste" for materials reclaimed by the mineral processing industry. The new definition required that such materials meet certain storage requirements prior to recycling in order to avoid being classified as a "solid waste." The petitioners argued that the EPA regulation went beyond the Agency's authority under the statute, questioning how a material held for recycling in production can qualify as a "waste" when the RCRA statute defines "wastes" as "discarded materials."

The *Association of Battery Recyclers* court agreed with the petitioners. Relying on a prior decision in 1987, *American Mining Congress v. EPA*, 824 F.2d 1177 (D.C. Cir. 1987) (known as "*AMC I*"), the court stated that secondary materials destined for recycling are "obviously not" the sort of materials that Congress was referring to when it used the term "discarded" in the RCRA definition of "solid waste." The court further clarified that reference must be made to the "everyday reading of the term 'discarded.'" Quoting from its *AMC I* decision, the court stated:

> Congress clearly and unambiguously expressed its intent that 'solid waste' (and therefore EPA's regulatory authority) be limited to materials that are 'discarded' by virtue of being disposed of, abandoned, or thrown away. *American Mining Congress v. EPA*, 824 F.2d 1177, 1190 (D.C.Cir. 1987).

The court found that "under RCRA, material must be thrown away or abandoned before EPA may consider it to be a 'waste.'"

EPA contended that the *AMC I* decision only excluded from the "solid waste" definition those secondary materials that were immediately recycled rather than being stored for any length of time. Again, the court disagreed and reiterated the meaning of "discarded" under RCRA:

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[4] Similarly, because CUP solvents are not a solid waste, they cannot be a hazardous waste. A "hazardous waste" is a "solid waste" that is legally hazardous by characteristic or by listing. 40 C.F.R. § 261.3(a)(2). Thus, to be a "hazardous waste," a material must first meet the definition of "solid waste."

> To say that when something is saved it is thrown away is an extraordinary distortion of the English language. Yet that is where EPA's definition leads.

Under the federal appellate court's holding in *Association of Battery Recyclers*, it is not proper to assert RCRA jurisdiction over the Continued Use Program because SK always retains title to the CUP solvents and never "abandons" or "discards" them.[5] The customer never takes ownership of the solvent utilized in the parts washer equipment. As described in Section I. above, the provision for retention of SK ownership in the solvents is part of the standard terms of the Safety-Kleen agreement with its customers. From the original delivery and use of the solvents by SK customers, through the reuse of the CUP solvent to clean SK's drums, the ownership and management of the solvents remains with SK as part of this closed-loop system.

The CUP solvents used for cleaning drums are clearly not "discarded." They continue to be used. The continued use is appropriate and consistent with its original purpose. The fact that they are not immediately reused in the same process, i.e., by SK customers for cleaning parts, does not change this finding. In the *AMC I* decision, the materials at issue included the dusts released in processing a particular metal. These dusts were captured, recycled and reused frequently in processes different than the one from which the dusts originally were generated. The reuse of the dusts even outside the original process from which they were generated and for different purposes did not fall within the definition of "discarded" under RCRA. Although less directly addressed by the court in the *Association of Battery Recyclers* decision, the court there generally referred to materials that are reused in an ongoing production process, without requiring that the materials be returned to the same process from which they were generated. Here, the continued use of the CUP solvents by SK in a separate, subsequent process, but consistent with its original purpose, namely to wash drums, does not constitute "recycling" within the meaning of the RCRA definition of "discarded material."

2. CUP Solvent is not First "Reclaimed" Before Being Used to Clean Drums

The only other basis on which the CUP solvents could qualify as "discarded material" is if they were deemed to be "recycled." Materials are solid waste if they are recycled by being (a) "used in a manner constituting disposal"; (b) "burn[ed] for energy recovery"; (c) "reclaimed"; or (d) "accumulated speculatively." 40 C.F.R. § 261.2(c). Clearly, the CUP solvents are not applied to land or otherwise released to or disposed of in the environment as part of the drum cleaning operation. Because it is obvious that the drum cleaning operation does not constitute burning the used solvents for energy recovery, and SK does not speculatively accumulate CUP solvent, we move on to the question of whether the CUP solvent is "reclaimed."

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[5] Certain state law decisions are also consistent with the holding in *Association of Battery Recyclers*. See, e.g., *Safety-Kleen Corp. v. Illinois Environmental Protection Agency*, PCB 80 -12 (February 7, 1980) (holding that because Safety-Kleen maintained control over the solvents at all times, recovered the used solvents and reused them, the solvents were never discarded and never became waste); cited with approval in *R.R. Donnelly v. Illinois Environmental Protection Agency*, PCB 88-79 (February 23, 1989) (used oil that Donnelly generated and sold to a third party for reuse without treatment was not discarded and therefore, not subject to regulation); *accord*, *Bliss v. IEPA*, 138 Ill.App. 3d 699, 485 N.E.2d 1154, 1158-59 (5th Dist. 1985) (holding that to be a waste the material must be "discarded").

The *Association of Battery Recyclers* decision rejects the notion that the reuse or recycling of materials must be immediate, reasoning that as long as the material proceeded "directly" for recycling (i.e., no intermediate step between its generation and the recycling process), the amount of time it was stored in between these two events does not render it a "discarded material" subject to regulation as a "solid waste." There is no intermediate step between the generation of the CUP solvent and its continued use to clean SK's drums. It is returned to SK's facility and then placed directly into the CUP vat. There is no reclamation step in between the recovery and the continued use of the CUP solvent.[6]

A material is "reclaimed" if it is processed to recover a usable product or if it is regenerated. Examples are recovery of lead values from spent batteries and regeneration of spent solvents. 40 C.F.R. § 261.1(c)(4). As EPA has stated, "reclamation" under RCRA means processing to remove contaminants in a way that restores the material to its usable condition. 50 Fed.Reg. at 633. SK does not subject CUP solvents to any processing to restore the material's usable condition. It simply transfers the CUP solvent into the CUP vat.

SK identifies effective CUP solvent and eliminates used solvent that may need first to be reclaimed. SK developed Continued Use Program criteria for selecting and segregating suitable used solvent that maintains its ability to clean drums prior to filling them with product. SK selects eligible CUP solvent by evaluating the type of used solvent generated by potential Continued Use Program customers. For example, customers who produce a heavy sediment during their cleaning process are not eligible for the program. SK also does not allow used solvent containing debris as CUP solvent. SK clearly conveys this prohibition to its employees and to eligible customers. SK sales representatives also are instructed to advise customers that no additional debris should be placed into the drum of CUP material. Under the Program requirements, any material containing debris is to be returned to the customer.

Through these criteria and requirements, the Continued Use Program distinguishes between eligible CUP solvent and waste solvent that may need to be reclaimed before it can be re-used. Further, they serve to provide a used solvent that retains its ability to clean the drums in the washing system established at the SK branch facilities through direct reuse.

The two screens that the CUP solvent passes through prior to being pumped to the drum washer do not "reclaim" the solvent. Reclamation typically involves the extraction of the valuable component of the material so that it is suitable for use. That is not what the screens do in this case. The purpose of the two screens is to protect from damage the drum washer unit pumps that are necessary to pump the CUP solvent to the drum washer and to prevent clogging of the spray nozzle that applies the CUP solvent to the drums. It is the same purpose such devices perform in the many types of industrial machinery used to move product through pumps or to prevent clogging. For example, every transporter who loads liquid material through the use of pumping or piping equipment installs a basket strainer in the transfer lines of the equipment to prevent damage to the pumps. Neither federal nor state regulators have concluded that these transporters are performing "reclamation" of those materials within the meaning of RCRA because of the use of the strainer. Similarly, SK must employ the screens to prevent damage to

[6] Under the court's reasoning in the *Association of Battery Recyclers* decision, it is also arguable that an interim step of onsite reclamation by the owner of the process that generated the original material before its reuse is not relevant to determining whether the material is "discarded" within the meaning of RCRA. However, for purposes of this review, this argument does not apply because the CUP solvent is not reclaimed prior to its reuse.

the pumps that transfer the CUP solvent to the drum washer unit. Otherwise, a damaged pump would shut down the drum washing operation on which the SK branch facility relies to provide the clean drums for refilling with fresh solvent. In fact, even if SK were transferring virgin solvent from the CUP vat to the drum washer unit it would still retain the use of the screens to protect the pumps in the event that, for example, a bolt or screw from the equipment were to come loose and fall into the CUP solvent prior to pumping.

Moreover, separating a nut or a bolt from virgin or CUP solvent does not change its physical nature. The screens are not intended to, and do not, provide a form of treatment or reclamation to make the CUP solvent more amenable for recovery.

Screening to protect equipment does not meet the RCRA definition of treatment.

> Treatment means any method, technique, or process, including neutralization, designed to change the physical character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from such waste, or so as to render such waste non-hazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous. 42 U.S.C. § 6903(34).

There is no "extraction" or "treatment" of the CUP solvent performed by the drum washing unit. As stated by the federal district court in *United States v. Great Lakes Castings*, 1994 U.S. Dist. LEXIS 5745 (W.D. Mi. 1994), "in order for a process to be considered treatment under RCRA it needs to both have the effect of changing the characteristic of the waste as defined in RCRA and to be purposefully designed to have that effect," citing the federal definition of "treatment" in 43 U.S.C. § 6903(34).

The screens in the drum washer unit have no effect on the characteristics of the CUP solvent and are not designed for that purpose. The screens allow material to be pumped to the drum washer, not to reclaim the CUP solvent to make it more effective for use as a cleaning solution. CUP solvent has the same basic makeup as virgin solvent. None of these solvent characteristics is changed or affected when the CUP solvent passes through the screening in the drum washer unit. The screening also does not change the physical nature of the CUP solvent. It has the same viscosity, fluidity, etc. as it did before passing through the screens. It is also clear that the screens do not change the chemical nature of the CUP solvent to make it more effective. Their presence does not constitute "reclamation" within the meaning of RCRA.

In summary, the drums that are cleaned in the SK Continued Use Program need cleaning. They cannot be re-used to transport clean, recycled solvent without first being cleaned. The CUP solvent performs that cleaning job effectively. The drums, as can readily be observed at any SK CUP branch facility that is implementing the Continued Use Program, exit the drum washer unit in a clean condition. The Program speaks for itself. It is an environmentally responsible, direct, continued use of used solvents that is not subject to RCRA regulation as a solid waste.

III. EVEN IF CUP SOLVENT WERE CATEGORIZED AS A "WASTE," IT IS EXEMPT AS AN EFFECTIVE PRODUCT SUBSTITUTE

SK maintains that CUP solvent is not a waste because it is neither spent nor discarded material. However, even if CUP solvent is assumed to be a waste, it would be excluded from RCRA regulation pursuant to 40 C.F.R. § 261.2(e)(1)(ii) because the CUP material is used or reused as an effective substitute for commercial products. Materials are not solid wastes when they can be shown to be recycled by being used or reused as effective substitutes for commercial products. *Id.* Certainly here, the used CUP solvent is an effective substitute for the use of virgin solvents, which qualify as commercial products under RCRA.

The EPA explained the basis for this "exemption" from RCRA regulation in the Preamble to the RCRA re-definition of solid waste, 50 Fed.Reg. 614, as follows:

> (2) Using or reusing secondary materials as effective substitutes for commercial products. When secondary materials are directly used as substitutes for commercial products, we also believe these materials are functioning as raw materials and therefore are outside of RCRA's jurisdiction and, thus, are not wastes. Examples are certain sludges that are used as water conditioners and by-products hydrochloric acid from chemical manufacture used in steel pickling. In these examples, the recycled materials are substituting for other commercial products, and material values are not being recovered from them. 50 Fed.Reg. 614, 619 (January 4, 1985).

In the 1986 Guidance Manual, EPA further clarified that the "exemption" is intended to apply to direct use of secondary materials in non-manufacturing applications, which is fully consistent with SK's direct continuing use of CUP solvent for cleaning operations.

> Use or reuse of secondary materials as effective substitutes for commercial products - This activity involves direct use of secondary materials in non-manufacturing applications or functions. (This situation differs from the one just described paralleling [40 CFR 261(2)(e)(1)(A)] in that the material substitutes for a finished product rather than a raw material ingredient in a production process.] An example is the use of certain sludges as a substitute for commercial wastewater conditioners (50 FR 619-620). 1986 Guidance Manual at p. 8 (emphasis in original).

The CUP material qualifies for this "exemption" because it acts as a substitute for commercial products (*e.g.*, virgin solvents) that could otherwise be used to clean drums. As demonstrated earlier in this paper, the CUP solvents have sufficient remaining capacity for drum cleaning. The CUP solvents are used directly by SK in the form and condition received from customers without any reclamation prior to use.

The fact that waste solvent was previously used for the purpose of cleaning drums not only does not prevent the CUP solvent from qualifying as a commercial product substitute, it

shows it qualifies as an effective substitute.[7] SK simply never took advantage of the available RCRA exemption in the past. Carried to its logical conclusion, a contrary rationale would lead to the determination that once a material has been previously classified as a waste, it can never qualify as a commercial substitute product, even where it is later identified as performing a use that does qualify for the solid waste exemption. This is not what the RCRA regulations provide nor is it consistent with the national and state goals of minimizing the generation of hazardous waste. SK's prior practice of employing used solvent to clean its drums is clear and independent evidence of the effectiveness of such used solvent to clean the drums. SK would not have been using this material to clean drums, when it had no regulatory incentive to do so, if the material was not effective in getting the cleaning job done.

The attached copy of a June 30, 1998 letter from the Kentucky Natural Resources and Environmental Protection Cabinet (the "KNREPC") lends support to our position. (A copy of which is included in the attached Exhibit 7) The KNREPC letter expressly acknowledges that under the Program, the used solvent will be "used as an effective substitute for the spent mineral spirit waste currently utilized to wash the drums." The KNREPC obviously was aware of, and specifically considered, the fact that the prior SK system utilized a spent mineral spirit. This did not prevent the KNREPC from determining, as stated in the letter, that it concurs that the CUP solvent is not a hazardous waste and that the Program falls within the requirements of the commercial product substitute exemption. The KNREPC regulations on the substitute product exception are substantially the same as the federal regulations.

A. CONTINUED USE PROGRAM IS LEGITIMATE RECYCLING

In a detailed guidance memorandum to the EPA Regions on April 26, 1989, the EPA addressed whether recycling activities are legitimate recycling. See Memorandum, Sylvia K. Lowrance, Director, EPA Office of Solid Waste, to Hazardous Waste Management Division, Directors, Regions I-X (April 26, 1989). This EPA guidance memorandum is often referred to as presenting the "Lowrance recycling criteria." The Lowrance recycling criteria were developed to address the following key issues reviewed in that same EPA guidance memorandum:

> (1) whether the secondary material truly has value as a raw material-product (i.e., is it likely to be abandoned or mismanaged prior to reclamation rather than being reclaimed?); and
>
> (2) whether the recycling process (including ancillary storage) is likely to release hazardous constituents (or otherwise pose risks to human health and the environment) that are different from or greater than the processing of an analogous raw material/product.

SK has briefly reviewed below each of the above issues because the analysis has been requested by a state regulator. However, SK submits that attempting to apply the Lowrance recycling criteria here is akin to trying to fit a "square peg into a round hole." The Lowrance criteria were primarily intended to address those situations where the material in question was being used as an ingredient to make a product. This is not the case here. Accordingly, a

[7] Historically, S-K did not solely use customer used solvent to clean drums or metal scrap. S-K also used off-spec mineral spirits and low-grade internally produced solvent. Under CUP, the entire volume of cleaning material used is limited to customer used solvent.

determination of whether CUP qualifies under the commercial product substitute exemption should not be based on the application of the Lowrance recycling criteria.

1. CUP Solvents have Value as a Raw Material-Product and will not be Mismanaged

The CUP solvents have value as a raw material product. The CUP solvent is not a spent material and is still capable of serving as an effective cleaning agent. The SK drum cleaning study described above shows the efficacy of the CUP solvent.

As discussed above, the CUP involves a closed-loop system controlled by SK. Through various procedures and requirements, SK ensures that the CUP solvents will not be mismanaged. Once SK employees have identified eligible CUP solvent, based on the Program criteria, SK takes several additional precautions. Employees place a "Continued Use Product" label on the unit at the customer's facility. If the unit does not have the Continued Use label, then the material is not brought back as CUP solvent. Material must be transported from the customer in DOT-approved containers with proper DOT shipping papers. CUP drums are specially identified with a CUP drum tag. The SK CUP procedures requires that a CUP customer's solvent drum/canister not be placed on the SK truck for transport unless a CUP label and information sufficient to identify the customer is on the drum/canister. Quality control continues through the process of unloading CUP solvent at the SK facility. The CUP procedures provide that the CUP solvent is to be segregated from hazardous and non-hazardous parts cleaner drums and must first be emptied into the CUP vat. The CUP procedures expressly caution that if the CUP solvent is mistakenly emptied into the return and fill station without first going into the CUP vat area, then it must be treated as a hazardous waste and an Unmanifested Waste Report is to be prepared. These procedures are fully consistent with the commercial product substitute exemption.

2. CUP Process does not Release Either Different or Greater Amounts of Hazardous Constituents than If Virgin Solvents were Used to Clean Drums

There is no difference between the use of CUP solvent versus the use of virgin solvent in terms of the potential release of hazardous constituents. If virgin solvent were used in the CUP drum washing units, the same process and equipment would be followed as is currently employed for the CUP solvents. The CUP solvents are added to the drum washing unit in the same way that virgin solvents would be added. Similarly, the form of application of the CUP solvents to the dirty drums, through the spray nozzle, also would be identical to that which would be used with the application of virgin solvent. In either case, there is a minimal loss of the same hazardous solvent constituents. The amount of that loss is the same whether CUP or virgin solvents were to be used. Simply stated, no environmental harm is caused by the CUP process. There is, however, an environmental benefit in not using virgin solvent to clean drums.

3. There are no "Toxics Along for the Ride" in the Cup Process

SK cannot re-use the drums in the condition that they are returned by its customers. Before these drums can be filled with clean solvent, the inside of the drums has to be cleaned of

the dirty solvent residuals. The presence of any solvents, metal fines and shavings all contribute to the drum cleaning process. These materials help to remove the residuals remaining in the drums as a result of the customer parts washing process. The absence of these materials would (if anything) reduce the effectiveness of the CUP solvent for cleaning the drums. Finally, the CUP cleaning process does not introduce toxic materials that remain with the cleaned drums. In no sense are any "toxics along for the ride" in the CUP process.

4. CUP solvent is not Used in Excess of what is Necessary to Clean Drums

SK spent a considerable effort on the development of the Continued Use Program for the specific purpose of minimizing the amount of used solvent that is applied to clean the drums. The quantity of solvent used in the process is dictated by the volume needed to clean a drum and the total number of drums used to service SK's customers. The amount of used solvent does not exceed that which is necessary for SK's use. As such, the Continued Use Program does satisfy the requirements of the commercial product substitute exception.

Prior to implementing the Program, SK did not regulate the volume of material needed to clean each drum because SK conservatively managed the used solvent as a waste and such scrutiny was not required. Based on its Engineering Cleaning Study (the "Study"), SK has now standardized the time, flow rate/pressure, and volume for the CUP drum cleaning system. This new cleaning system, including pumps, nozzles and timers, has been installed at each of the SK branches that participate in the Continued Use Program. This approach and the operating parameters used in the Program's equipment fully satisfy the requirement that the volume of CUP solvent used is not in excess of what is required to clean drums.

The automated CUP drum cleaning system is similar to a dishwasher standard design. It uses an established volume of material returned from SK customers to clean all the drums. The standardized cleaning system is designed to assure that all CUP product is used to clean a drum. The old design for the drum cleaning system did not have any controls over the volume of material used to clean a drum. The total volume of CUP solvent required by a particular SK branch is the standardized wash volume per drum multiplied by the total number of parts washer drums to be cleaned. The amount of CUP solvents collected by each branch is capped at this volume and adjusted as the level of parts washer business decreases or increases. These restrictions on the volume of CUP solvent accepted by SK prevent excess used solvent from being accumulated under the Program.

When the level of material in the bottom of the drum washer unit reaches a predetermined level, a float triggers the transfer of the excess material by pumping to a permitted tank or ten-day transfer tanker. This material is classified as a SK branch-generated hazardous waste.

The CUP procedures repeatedly stress that this is a limited capacity program. Each SK branch can only offer CUP to a limited number of customers. The number of customers is limited by the number of drums cleaned at the facility or for transfer branches, the number of drums its receiving facility cleans for the transfer branch. The Program also includes extensive administrative procedures that allow the amount of CUP solvent received to be tracked closely so that the SK facility's capacity is not exceeded. Repeatedly, the CUP procedural manual cautions that capacity limits are not to be exceeded. These provisions evidence the Program's adherence

to the requirement that only the amount of material actually required to clean the drums received be used in order to comply with the commercial product substitution requirements.

CONCLUSION

SK's "closed-loop" CUP process is a safe, environmentally-friendly program that continues SK's long-standing commitment to the effective use and re-use of cleaning solvents. The Continued Use Program helps ensure that used solvents are properly managed and put to effective use. The CUP solvents are not spent; they are not discarded; they are not reclaimed. The CUP solvents are a product and not a waste. For these reasons, they are not regulated under RCRA. However, even assuming that CUP solvents were to be considered a "waste," RCRA would exempt them from regulation because the CUP solvents qualify as an effective commercial product substitute that is used for a legitimate recycling purpose.

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THE SAFETY-KLEEN
CONTINUED USE PROGRAM™

EXHIBIT 1

Safety-Kleen Continued Use Program

THE SAFETY-KLEEN
CONTINUED USE PROGRAM™

EXHIBIT 2

BEFORE USING SAFETY-KLEEN SOLVENTS, CLEANING SOLUTIONS OR EQUIPMENT, READ ALL APPLICABLE MATERIAL SAFETY DATA SHEETS (MSDS), LABELS, AND INSTRUCTIONS. IF YOU HAVE ANY QUESTIONS OR NEED ADDITIONAL INFORMATION, PLEASE CONTACT YOUR LOCAL SAFETY-KLEEN SERVICE CENTER OR CALL 1-800-669-5740

A. **PROVISIONS APPLICABLE TO SAFETY-KLEEN'S PARTS CLEANER AND PAINT GUN CLEANER SERVICES.** The following three paragraphs A. 1-3. apply only where Safety-Kleen furnishes its parts Cleaner or Paint Gun Cleaner Services to Customer:

1. Safety-Kleen agrees to collect for reclamation from Customer the used solvent supplied by Safety-Kleen to parts or paint gun cleaner machines(s). Collection of the used solvent shall be on a periodic basis as otherwise provided herein. Safety-Kleen shall reclaim the used solvent for redelivery. Safety-Kleen has the capacity and is permitted to accept, store and/or reclaim the spent solvents provided to Customer hereunder. Safety-Kleen and customer agree that this agreement is intended to satisfy the requirements of 40 Code of Federal Regulations 262.20(e), as amended, and any state regulations which implement said provision. Customer agrees to keep this form on file for 3 years from the date of last service.
2. Customer agrees that it will not introduce any substance into the solvent or aqueous cleaning solution, including without limitation any hazardous waste or hazardous waste constituent, except to the extent such introduction is incidental to the normal use of the machine. Customer further agrees that it will not clean parts/paint guns that have been contaminated with or otherwise introduce polychlorinated biphenyls (PCB's), herbicides, pesticides, dioxins or listed hazardous wastes into the solvent or aqueous cleaning solution.
3. If Safety-Kleen provides its Nonhazardous Parts Cleaner or Paint Gun Cleaner Services to Customer, Customer represents, warrants and certifies that the solvent or aqueous solution collected by Safety-Kleen hereunder has not been mixed, combined or otherwise blended in any quantity with any material that would render the solvent or aqueous cleaning solution hazardous under applicable law, including without limitation 40 CFR part 261. Customer further represents, warrants and certifies that such solvent or aqueous cleaning solution was generated in the same process that generated the waste solvent or aqueous cleaning solution that was: (a) sampled and analyzed by Safety-Kleen to qualify the waste stream for nonhazardous treatment; or (b) in the event Customer qualifies and has elected not to have its waste solvent or aqueous cleaning solution analyzed by Safety-Kleen, analyzed or otherwise investigated by Customer to support Customer's certification that such waste stream is nonhazardous.

B. **PROVISION APPLICABLE TO SAFETY-KLEEN'S PARTS CLEANER, PAINT GUN CLEANER AND IMAGING SERVICES.** The following paragraph B. 1 applies only where Safety-Kleen furnishes its Parts Cleaner, Paint Gun Cleaner or Imaging Services to Customer:

1. Customer acknowledges placement of the parts cleaner units(s), immersion cleaner units(s), paint gun cleaner unit(s), metallic replacement compliance system(s) and/or electrolytic unit(s) set forth on the face of this document. Safety-Kleen agrees to service and maintain its equipment and Customer agrees that all servicing, repair and maintenance of such equipment shall be performed only by Safety-Kleen. Except as provided below for on-site disposal of aqueous cleaning solutions, all Safety-Kleen equipment, solvents and aqueous cleaning solutions shall remain the property of Safety-Kleen and shall be returned to Safety-Kleen upon termination of service. Customer agrees to pay for replacement of such equipment due to loss or damage. All Customer-owned equipment shall be serviced by Safety-Kleen, but shall be maintained and repaired by and remain the property of Customer.

   In the event Customer elects to dispose of aqueous cleaning solutions provided hereunder at Customer's site, title to such solutions shall pass to Customer upon such disposal. In such event, Customer (a) represents and warrants that such on-site disposal complies with all applicable laws, regulations and orders and (b) agrees to indemnify, hold harmless and defend Safety-Kleen from and against any and all claims, penalties, losses, damages, costs, expenses and other liabilities of whatever nature (including without limitation costs of defense, settlement and reasonable attorney, consultant or other professional fees and the reasonable costs of investigation, containment and cleanup and any remedial actions under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 or comparable state superfund law), which Safety-Kleen may incur, become responsible for, or suffer by reason of such disposal of aqueous cleaning solutions provided hereunder at Customer's

C. **PROVISIONS APPLICABLE TO SAFETY-KLEEN'S FLUID RECOVERY, IMAGING SERVICES AND OTHER WASTE HANDLING AND DISPOSAL SERVICES.** The following two paragraphs C. 1-2 apply where Safety-Kleen furnishes its Fluid Recovery, Imaging Services or any other handling or disposal Services to Customer for which a Material Profile is required:

1. In accordance with the Agreement by and between Customer and Safety-Kleen, which is incorporated herein by this reference, Customer represents, warrants and hereby re-certifies to Safety-Kleen that all waste materials (the "Waste Materials") tendered by Customer to Safety-Kleen will conform to the description of such Waste Materials contained in the Material Profile that was submitted by Customer for such Waste Materials and the Material Profile Report which bears the Profile or Reference number associated with that particular stream of Waste Materials. Customer re-certifies that no material change has occurred either in the characteristics of the Waste Materials or the process generating the Waste Materials. Customer acknowledges and agrees that the Waste Materials, as well as any nonconforming Waste Materials, shall be handled in accordance with the terms of the aforementioned Agreement.
2. If Safety-Kleen provides its Nonhazardous Fluid Recovery Service to Customer hereunder, Customer represents, warrants and certifies that the Waste Materials collected by Safety-Kleen (a) were produced in the same process that produced the waste materials described in said Material Profile/Material Profile Report and (b) have not been mixed, combined or otherwise blended in any quantity with any material which would render the Waste Materials hazardous under applicable law, including without limitation 40 CFR Part 261.

D. **PROVISIONS APPLICABLE TO SAFETY-KLEEN'S PAINT WASTE SERVICE.** The following four paragraphs D. 1-4 apply only where Safety-Kleen furnishes its Paint Waste Service to Customer:

1. Safety-Kleen agrees to collect, transport, recycle and/or dispose of, in accordance with all applicable laws and regulations, all paint thinners, solvents and paints ("Paint Waste") generated by Customer and tendered to Safety-Kleen. Customer represents and warrants that all Paint Waste tendered by Customer to Safety-Kleen will conform to the DOT description of such waste contained on the face of this Service and Sales Acknowledgment.
2. Customer agrees that Paint Waste that is not pumpable or has six inches or more of settled solids will be subject to additional charges.
3. All storage equipment and containers provided by Safety-Kleen shall be and remain the property of Safety-Kleen, and, upon termination of service, shall be returned to Safety-Kleen in good repair and condition.
4. If Safety-Kleen provides its Nonhazardous Paint Waste Service to Customer hereunder, Customer represents, warrants and certifies that the Paint Waste collected by Safety-Kleen has not been mixed, combined or otherwise blended in any quantity with any material that would render the Paint Waste hazardous under applicable law, including without limitation 40 CFR Part 261. Customer further represents, warrants and certifies that such Paint Waste was produced in the same process that produced the Paint Waste that was: (a) sampled and analyzed by Safety-Kleen to qualify the waste stream for nonhazardous treatment; or (b) in the event Customer qualifies and has elected not to have its paint waste stream analyzed by Safety-Kleen, analyzed or otherwise investigated by Customer to support Customer's certification that such waste stream is nonhazardous.

E. **PROVISIONS APPLICABLE TO SAFETY-KLEEN'S DRY CLEANING SERVICE.** The following two paragraphs E. 1-2 apply only where Safety-Kleen furnishes its Dry Cleaning Service to Customer.

1. Safety-Kleen agrees to collect, transport, recycle and/or dispose of, in accordance with all applicable laws and regulations, all dry cleaning filter cartridges, filter powder and/or still residues containing perchloroethylene, petroleum naptha or trifluorotrichloroethane dry cleaning solvents ("Dry Cleaning Waste") generated by Customer and tendered to Safety-Kleen in accordance with all applicable laws and regulations. Customer agrees to store its Dry Cleaning Waste in containers provided by Safety-Kleen and agrees not to mix its different streams of Dry Cleaning Waste together or with other materials. Customer represents and warrants that all Dry Cleaning Waste tendered by Customer to Safety-Kleen will conform to the DOT description of such waste contained on the face of this Service and Sales Acknowledgment.
2. All storage equipment and containers provided by Safety-Kleen shall be and remain the property of Safety-Kleen, and, upon termination of service, shall be returned to Safety-Kleen in good repair and condition.

F. **PROVISIONS APPLICABLE TO ALL SAFETY-KLEEN SERVICES.** The following six paragraphs F. 1-6. apply to all Safety-Kleen Services.

1. Safety-Kleen agrees to indemnify, hold harmless and defend Customer from and against any and all claims, penalties, losses, damages, costs, expenses and other liabilities of whatever nature (including without limitation costs of defense, settlement and reasonable attorney, consultant or other professional fees and the reasonable costs of investigation, containment and cleanup and any remedial actions under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 or comparable state superfund law), which Customer may incur, become responsible for, or suffer by reason of: (a) Safety-Kleen's breach of any representation, warranty, term or provision of this Agreement or (b) the negligence, intentional misconduct or violation of law of Safety-Kleen, its employees, agents, or subcontractors in the performance of this Agreement.

   Customer agrees to indemnify, hold harmless and defend Safety-Kleen from and against any and all claims, penalties, losses, damages, costs, expenses and other liabilities of whatever nature (including without limitation costs of defense, settlement and reasonable attorney, consultant or other professional fees and the reasonable costs of investigation, containment and cleanup and any remedial actions under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 or comparable state superfund law), which Safety-Kleen may incur, become responsible for, or suffer by reason of: (a) Customer's breach of any representation, warranty, term or provision of this Agreement (b) the negligence, intentional misconduct or violation of law of Customer, its employees, agents, or subcontractors in the performance of this Agreement.

   In the event that any claims, penalties, losses damages, costs, expenses and other liabilities referred to above are contributed to by the breach of contract, negligence, intentional misconduct or violation of law of both Safety-Kleen and Customer, the parties agree that all such claims, penalties, losses, damages, costs, expenses and other liabilities shall be apportioned among the parties on the basis of their comparative degrees of fault.
2. Customer certifies that all material tendered to Safety-Kleen are properly classified, described, packaged, marked and labeled and are in proper condition for transportation in accordance with applicable regulations of the Department of Transportation.
3. Customer agrees that service hereunder will continue until Customer or Safety-Kleen terminates service. If Customer is a party to a One or Two Year Service Agreement or Exclusive Service/Guaranteed Pricing Agreement with Safety-Kleen, the parties may only terminate service as provided in such agreement. If Customer is not a party to such an agreement, either party may terminate by furnishing the other party with sixty (60) days prior written notice thereof.
4. Customer shall pay Safety-Kleen according to Safety-Kleen's standard price schedules, which schedules are subject to change by Safety-Kleen from time to time without notice; provided, however, that in the event Customer has entered into Safety-Kleen's One or Two Year Service Agreement or Guaranteed Pricing/Exclusive Service Agreement, prices will be as set forth in such agreement. Prices do not include any applicable sales tax. All amounts due Safety-Kleen are subject to an interest charge of the lesser of 1½% per month (18% per annum) or the maximum rate allowed by law on any unpaid invoices that are not paid within thirty (30) days.
5. If any legal action is commenced because of an alleged dispute, breach, default, or misrepresentation, the prevailing party shall be entitled to recover attorney's fees and costs (including costs of collection), in addition to any other relief to which it may be entitled.
6. In the event the credit card issuer refuses to accept the credit card charge for this transaction set forth on the front of this document, Safety-Kleen is authorized to charge the amount of this transaction to Customer's Safety-Kleen account.

Safety-Kleen, its agents and contractors, have the capacity, and are authorized and permitted, in accordance with all applicable laws and regulations, to transport, accept,

THE SAFETY-KLEEN
CONTINUED USE PROGRAM™

EXHIBIT 3

safety-kleen • Allan A. Manteuffel Technical Center

Study of Drum Cleaning with Continued Use Solvent

Robert Janicki & Dennis Brinkman
Safety-Kleen Corp.

September 24, 1997

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Study of Drum Cleaning with Continued Use Solvent

Robert Janicki & Dennis Brinkman
Safety-Kleen Corp.

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 indictor 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 on 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.

% Clean Drum	Wash Time	Solvent Volume
31%	10 sec.	3.7 gal.
70%	15 sec.	5.5 gal.
88%	20 sec.	7.3 gal.
96%	25 sec.	9.2 gal.
100%	35 sec.	12.8 gal.

Table 2 presents the data for Elgin, IL.

% Clean Drum	Wash Time	Solvent Volume
35%	10 sec.	3.7 gal.
66%	15 sec.	5.5 gal.
92%	20 sec.	7.3 gal.
99%	25 sec.	9.2 gal.
100%	35 sec.	12.8 gal.

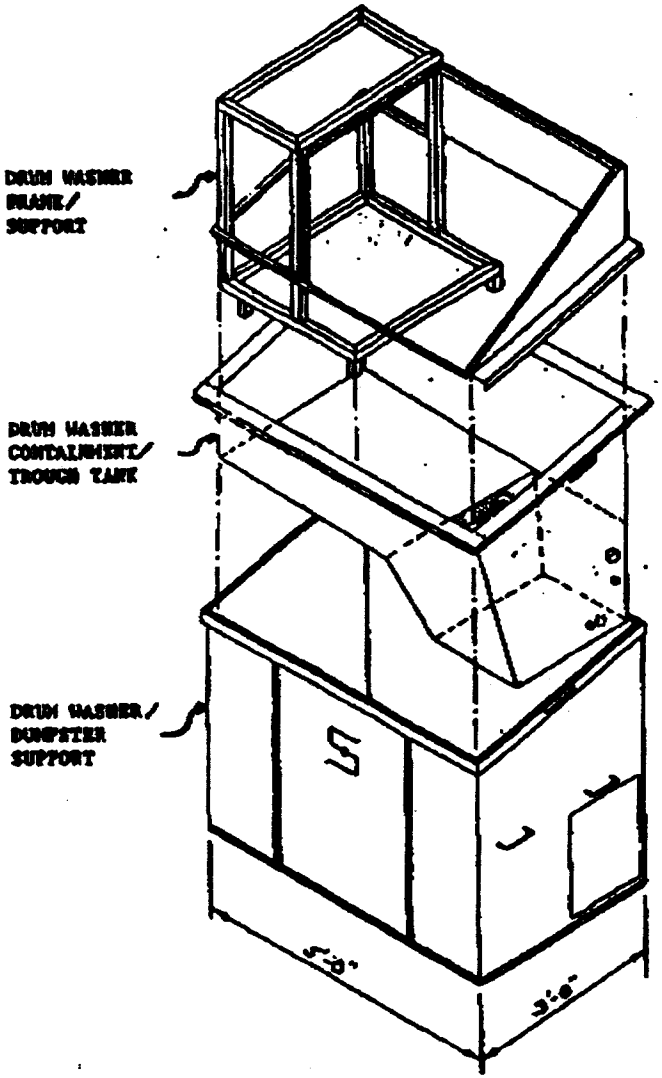
As can be seen, the data are very similar. By combining all of the data and utilizing the known flow rate to associate a solvent volume with each time interval, Table 3 presents both the time and solvent volume required to clean dirty solvent drums. If one assumes the goal is to only rarely run any drums 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.

% Clean Drum	Wash Time	Solvent Volume
33%	10 sec.	3.7 gal.
68%	15 sec.	5.5 gal.
90%	20 sec.	7.3 gal.
98%	25 sec.	9.2 gal.
100%	35 sec.	12.8 gal.

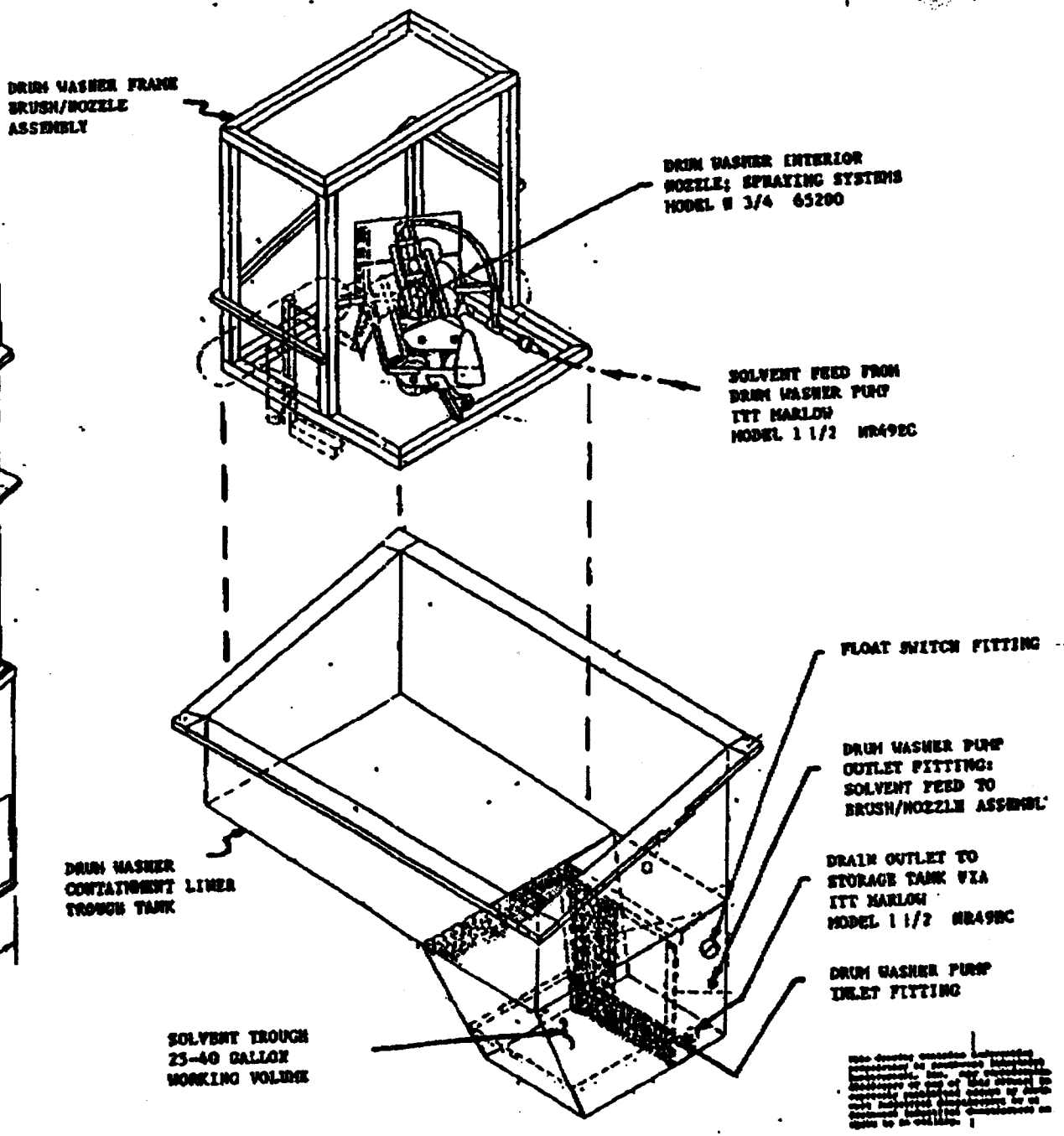
CONCLUSIONS

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 1



DRUM WASHER/DUMPSTER



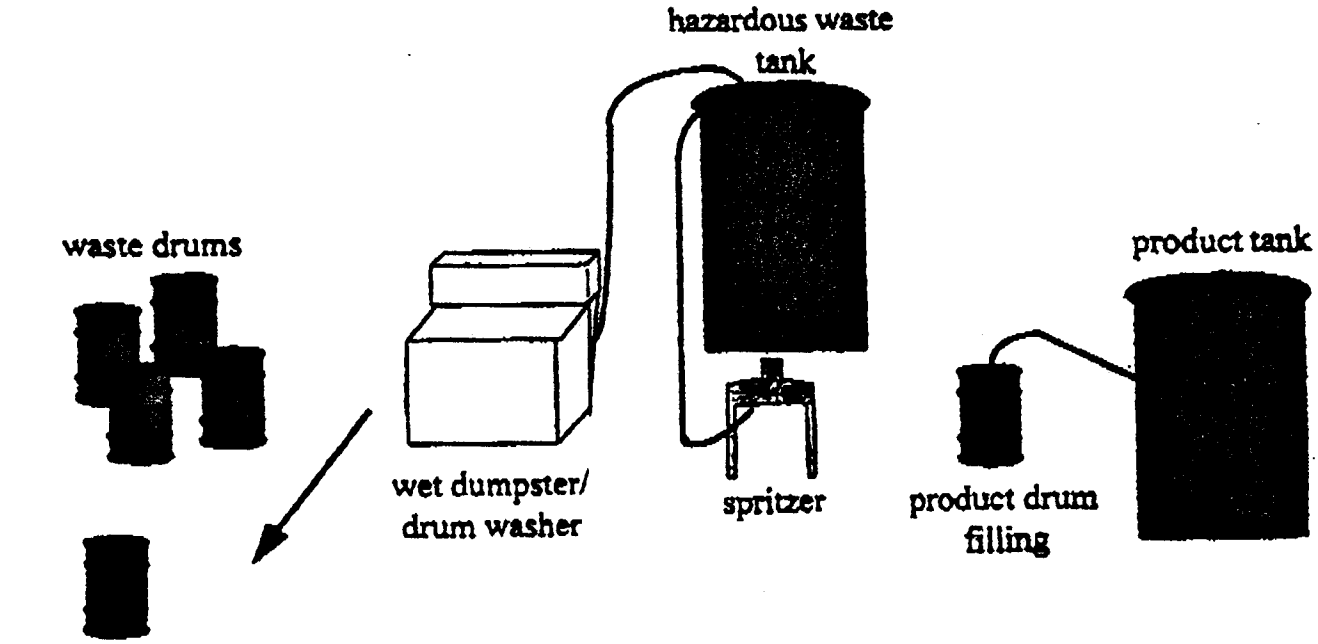


FIGURE 2 - CURRENT NORMAL CONFIGURATION

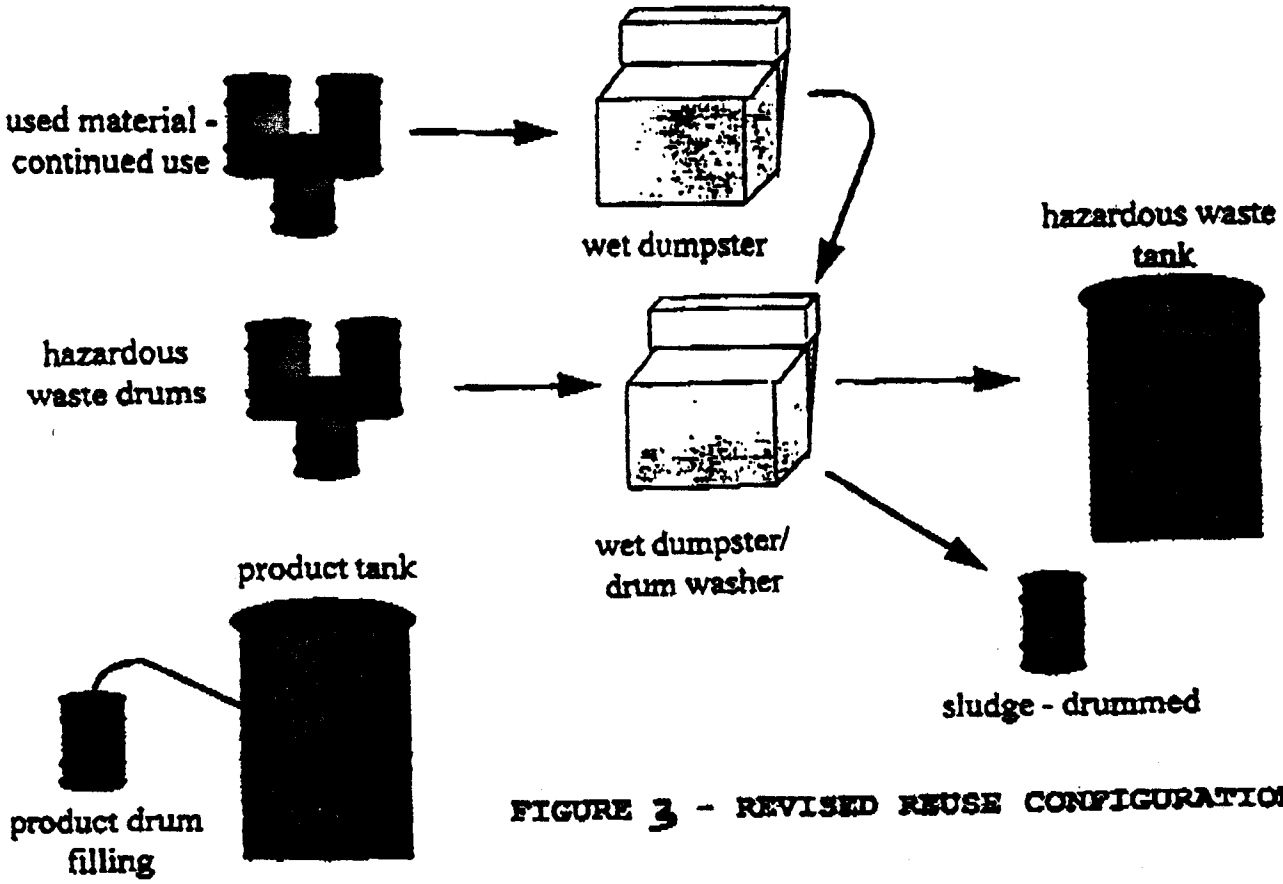


FIGURE 3 - REVISED REUSE CONFIGURATION

BARREL WASHER/ REUSE SOLVENT SUPPLY TANK PIPING SCHEMATIC

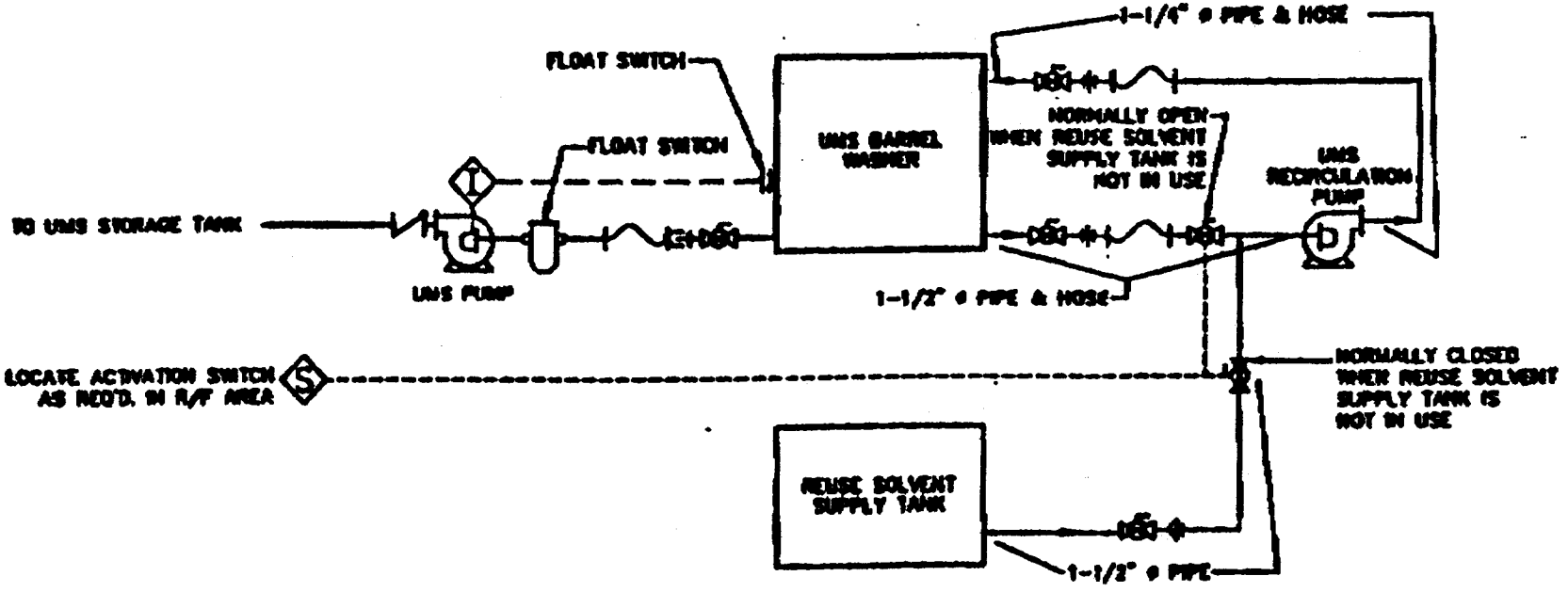


FIGURE #4

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RULES and REGULATIONS

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 260, 261, 264, 265, and 266

[SWH-FRL 2703-7]

Hazardous Waste Management System; Definition of Solid Waste

Friday, January 4, 1985

***614** AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: On April 4, 1983, EPA proposed to amend its existing definition of solid waste used in regulations implementing Subtitle C of the Resource Conservation and Recovery Act (RCRA). Most of the proposal dealt with the question of which materials are solid and hazardous wastes when they are recycled. The Agency also proposed general and specific standards for various types of hazardous waste recycling activities.

We are finalizing much of the rule as proposed, but have made a number of changes and clarifications. The effect of the rule is to clarify the extent of EPA's jurisdiction over hazardous waste recycling activities and to set forth the regulatory regime for recycling activities subject to the Agency's jurisdiction.

DATES: Effective Dates: These rules with exceptions noted below, become effective on July 5, 1985. Sections 261.1(b), 261.2(e), and Part 266 Subpart F (rules for which the regulated community does not need time to come into compliance) are effective December 20, 1984.

Compliance Dates: All persons who generate, transport, treat, store, or dispose of wastes which are covered by today's regulation must notify EPA or a State authorized by EPA to operate the hazardous waste program of their activities under Section 3010 of RCRA no later than April 4, 1985 unless these persons previously have notified EPA or an authorized State that they generate, transport, treat, store, or dispose of hazardous wastes and have received an identification number. Notification instructions are set forth in 45 FR 12746, February 26, 1980. [FN1]

FN1 Under the Solid Waste Disposal Amendments of 1980 (Pub. L. 96-452 (October 21, 1980)), EPA was given the option of waiving the notification requirement under section 3010 of RCRA, following revision of the section 3001 regulations, at the discretion of the Administrator.

All existing hazardous waste management facilities which treat, store, or dispose of hazardous waste covered by today's rule and which qualify to manage these wastes under interim status under section 3005(e) of RCRA must file with EPA or a State authorized by EPA to operate the hazardous waste program to notification by April 4, 1985, and a Part A permit application by July 5, 1985. Under the Solid and Hazardous Waste Act Amendments of 1984, a facility is eligible for interim status if they were either in existence on November 19, 1980 or were in existence on the effective date of any statutory or regulatory change under RCRA that requires them to obtain a section 3005 permit. See RCRA amended section 3005(e). Facilities which have qualified for interim status will not be allowed to manage the wastes covered by today's rule after July 5, 1985, unless: (1) They file a notification with EPA or an authorized State by April 4, 1985, and (2) they submit an amended Part A permit application with EPA or an authorized State by July 5, 1985 (see 40 CFR 270.10(g)).

ADDRESSES: The official record for this rulemaking is located in Room S- 212A, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 and is available for viewing from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays.

FOR FURTHER INFORMATION CONTACT: RCRA Hotline, toll free, at (800) 424-9346 or at (202) 382-3000. For technical information, contact Matthew A. Straus, Office of Solid Waste (WH-562B), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460 (202) 475-8551.

PART I: Introduction and Background

I. Legal Authority

II. Alternatives

A. Alternative Approaches of Determining When Secondary Materials Which Are To Be Recycled Are RCRA Solid Wastes

B. Alternatives for Regulating Hazardous Wastes That Are To Be Recycled

III. An Overview of the Final Definition of Solid Waste

A. Materials That Are Solid Wastes

1. Types of Recycling Activities That Are Within the Agency's Subtitle C Jurisdiction

hazardous wastes awaiting reclamation by their generator, hazardous wastes being reclaimed pursuant to batch tolling agreements, and hazardous wastes being reclaimed before use by the reclaimer--the situations that would have been conditionally exempt under the proposal. (See Appendix A.)

Equally important, the Agency already has determined that it is necessary to regulate hazardous waste storage in order to protect human health and the environment, and has also determined that regulations are needed to prevent the "uncontrolled release of hazardous waste constituents into the environment." See 46 FR 2802, 2807 (January 12, 1981). These prior findings are relevant to the question of regulating hazardous waste storage before recycling. There is a risk, as stated above, that spills and leaks of hazardous waste will occur, even if the wastes eventually will be recycled. Spills and leaks are the principal example of uncontrolled hazardous waste releases from storage and thus ordinarily require regulatory control. The Agency is persuaded that its existing findings are valid for hazardous wastes stored before recycling except in those situations in which wastes are so economically valuable that there is an economic imperative to avoid release.

The Agency thus finds that the factual basis for most of the conditional exemptions in the proposal was not justified, and that the Agency's general findings as to the need to control hazardous waste storage are valid for these recycling situations. Hazardous wastes stored before reclamation--even where there is minimal risk of overaccumulation--still can present significant potential for harm to human health and the environment if mismanaged, and market mechanisms are insufficient to prevent mismanagement from occurring. Regulation thus is called for.

In determining the level of regulation to adopt for those facilities which would have been conditionally exempt, the Agency is guided by the principle that the paramount and overriding statutory objective of RCRA is protection of human health and the environment. The statutory policy of encouraging recycling is secondary and must give way if it is in conflict with the principal objective. See 48 FR 1447 4/1 , 1449 2/2 ; see also H.R. Rep. No. 98-198, supra, at 46. [FN6] We accordingly have determined that, for the most part, the conditional exemptions we proposed were unwarranted and facilities recycling in these ways should be subject to regulation under the Subtitle C rules.

FN6 The Agency also does not believe that hazardous waste recycling will be discouraged in those situations that we now intend to regulate. Not only do the incremental costs of regulation appear to be minimal (see Part IV of this preamble), but regulation can actually encourage recycling. See 45 FR 33092 (May 19, 1980) and Section II.A. above.

III. An Overview of the Final Definition of Solid Waste

A. Materials That Are Solid Wastes

The revised definition of solid waste states that any material that is abandoned by being disposed of, burned, or incinerated--or stored, treated, or accumulated before or in lieu of these activities--is a solid waste. The remainder of the definition states which materials are wastes when recycled.

The amended definition adopts the approach that for secondary materials being recycled, one must know both what the material is and how it is being recycled before determining whether or not it is a Subtitle C waste. This approach differs sharply from the existing definition (40 CFR 261.2), which states that all sludges, and virtually all other secondary materials (i.e. all those that are sometimes discarded by anyone managing them (see fn. 2 above)), are wastes no matter how they are recycled. In understanding the revised definition, therefore, one must consider the types of secondary materials in conjunction with types of recycling practices.

1. Types of Recycling Activities That Are Within The Agency's Subtitle C Jurisdiction. The definition states that four types of recycling activities are within EPA's jurisdiction:

Use constituting disposal. This activity involves directly placing wastes or waste-derived products (a product that contains a hazardous waste as an ingredient) onto the land. Extending jurisdiction to waste-derived products placed on the land represents a change from the proposal;

Burning waste or waste fuels for energy recovery, or using wastes to produce a fuel;

→ Reclamation. This activity involves the regeneration of wastes or the recovery of material from wastes;

Speculative accumulation. This activity involves either accumulating wastes that are potentially recyclable, but for which no recycling market (or no feasible recycling market) exists, or accumulating wastes before recycling unless 75% of the accumulated material is recycled during a one-year period. (This provision now includes the activity referred to in the proposal as overaccumulation.)

2. Types of Secondary Materials That Are Within The Agency's Subtitle C Jurisdiction. These categories of recycling activities then are divided further according to the type of secondary material involved--spent materials, sludges, by-products, or commercial chemical products (a division present in the existing regulations--see 40 CFR 261.2(b)(1)(3)). We also have clarified the proposal by adding a new category of secondary material--scrap metal.

→ "Spent materials" are materials that have been used and are no longer fit for use without being regenerated, reclaimed, or otherwise re-processed. Examples are spent solvents, spent activated carbon, spent catalysts, and spent acids.

"Sludges" are defined in RCRA and the implementing regulations as residues from treating air or wastewater, or other residues from pollution control operations. (See RCRA section 1004(26)(A) and 40 CFR 260.10.)

"By-products" are defined essentially the same way as in the existing definition

In addition, there are certain materials that are inherently waste- like, regardless of how they are recycled. The Agency has reserved the right to designate these materials as solid wastes, and has designated the chlorinated and dioxin dibenzofuran containing F020, F022-F023, F026, and F028 wastes as solid wastes no matter how they are recycled.

The Agency again emphasizes that to determine if a secondary material is a RCRA solid waste when recycled, one must examine both the material and the recycling activity involved. A consequence is that the same material can be a waste if it is recycled in certain ways, but would not be a waste if it is recycled in other ways. For example, an unlisted by-product that is reclaimed is not defined as a solid waste. However, the same by-product is defined as a waste if it is recycled by being (a) placed on the land for beneficial use, (b) incorporated into a product that is placed on the land for beneficial use, (c) burned as a fuel, (d) incorporated into a fuel, or (e) accumulated speculatively. Obviously, the by-product also is a waste whenever it is disposed of or incinerated rather than recycled.

→ B. Secondary Materials That Are Not Solid Wastes

Not all recycling activities involve waste management. Based on our reading of the statute and legislative history, the definition excludes two activities involving direct use or reuse of secondary materials, and one activity where these materials are recycled without first being reclaimed by being returned as a raw material substitute to the original primary production process. These activities ordinarily will not be considered to involve waste management because they are like ordinary production operations or ordinary usage of commercial products.

(1) Using or reusing secondary materials as ingredients or feedstocks in production processes. When secondary materials are directly used as an ingredient or a feedstock, we are convinced that the recycled materials are usually functioning as raw materials and therefore should not ordinarily be regulated under Subtitle C. Examples are using fly ash as a constitutent in cement, or using distillation bottoms from the manufacture of carbon tetrachloride as feedstock in producing tetrachloroethylene. However, when distinct components of the material are recovered as separate end products (i.e., recovering lead from scrap metal in smelting operations), the secondary material is not being used, but rather reclaimed and thus, would not be excluded under this provision. The other major exception to this provision is when spent materials, by-products, sludges or scrap metal are used as ingredients in waste-derived fuels or in waste-derived products that will be placed on the land. In these situations, not only is the spent material, sludge, scrap metal, or by-product a solid waste, but the waste-derived product remains subject to RCRA jurisdiction as well.

(2) Using or reusing secondary materials as effective substitutes for commercial products. When secondary materials are directly used as substitutes for commercial products, we also believe these materials are functioning as raw materials and therefore are outside of RCRA's jurisdiction and, thus, are not wastes. Examples

are certain sludges that are used as water conditioners and by-products hydrochloric acid from chemical manufacture used in steel ***620** pickling. In these examples, the recycled materials are substituting for other commercial products, and material values are not being recovered from them.

(3) Return of secondary materials to the original primary production process in which they are generated without first reclaiming them. When secondary materials are returned to the original primary production process (from which they are generated) without first being reclaimed, we likewise believe this recycling activity does not constitute waste management. This provision has been modified from the proposal to cover more precisely those closed-loop production processes that use secondary materials as return feed to the original primary process.

C. Variances From Classification as Solid Wastes

We also have promulgated variance provisions allowing the Regional Administrator or authorized States to determine that certain materials that are to be recycled are not solid wastes. There are three such variances:

Materials accumulated without sufficient amounts being recycled. The Agency proposed that persons failing to recycle 75% of their accumulated waste material could petition the Regional Administrator to declare that the material is not a waste. We are retaining this provision and are formally terming it a variance;

Materials that are reclaimed and then reused within the original primary production process in which they were generated. The Agency proposed a complete exclusion for this type of situation, referred to in the proposal as closed- loop recycling. We are now convinced that the proposal was too broad but that individual exclusions may be warranted; and

Materials that are reclaimed but must be reclaimed further before material recovery is completed. This variance would allow individual consideration of whether an initial reclamation process is only minimal processing or whether it substantially completes the recycling process.

The following tables summarize the differences between the final and proposed rules with respect to the secondary materials that are and are not solid and hazardous wastes when recycled:

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Table 3. Materials That Are Not Solid And Hazardous Wastes When Recycled: Proposal v. Final Rule

Proposal	Final rule

The final definition classifies the universe of secondary materials that are wastes when recycled as either sludges, spent materials, by-products, or scrap metal. [FN8] With the exception of scrap metal, this is the same classification scheme as in the proposed rule. See 48 FR 1447 6/2 . We have not changed the proposed definition of "sludge," but are clarifying what we mean by spent materials and by-products. We also are explaining the new definition of scrap metal.

FN8 Commercial chemical products listed in § 261.33 also are wastes when recycled to the land or burned as fuels, when this is not their normal manner of use.

→ 1. Spent Materials. We are continuing to define spent materials as those which have been used and are no longer fit for use without being regenerated, reclaimed, or otherwise re-processed. In response to comments, however, we have altered the wording of the definition of spent material to express this concept more clearly. As the proposal was worded, a spent material was one that had been used and no longer could serve its original purpose. The Agency's reference to original purpose was ambiguous when applied to situations where a material can be used further without being reclaimed, but the further use is not identical to the initial use. An example of this is where solvents used to clean circuit boards are not 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.) The reworded regulation clarifies this by stating that spent materials are those that have been used, and as a result of that use become contaminated by physical or chemcial impurities, and can no longer serve the purpose for which they were produced. (This reworded definition appropriately parallels the definition of "used oil"--a type of spent material--in RCRA section 1004(36).)

In response to comment, we also note that leftover, unreacted raw materials from a process are not spent materials, since they never have been used. Unreacted raw materials thus are not subject to RCRA jurisdiction unless they are discarded by being abandoned.

2. Scrap Metal--a. Classification. We have added a new definition of scrap metal to the final regulations. At proposal, scrap metal that was generated as a result of use by consumers (copper wire scrap, for example) was defined as a spent material. (This type of scrap is usually referred to as "obsolete scrap".) Scrap from metal processing, on the other hand (such as turnings from machining operations) was defined as a by-product. (It is usually called "prompt scrap".) Yet the scrap metal in both cases is physically identical (i.e., the composition and hazard of both by-product and spent scrap is essentially the same) and, when recycled, is recycled in the same way--by being utilized for metal recovery (generally in a secondary smelting operation).

In light of the physical similarity and identical means of recycling of prompt scrap and obsolete scrap, the Agency has determined that all scrap metal should be

health or the environment." This determination would be based on an assessment taking into account such factors as effects of the material on human health and the environment, benefits of using the material, and economic consequences of listing.

This standard, as the commenter admits, is drawn essentially from the Toxic Substances Control Act. This is not the standard Congress enacted for RCRA decisionmaking. RCRA determinations are to be based on health and environmental based factors. (See 45 FR 33089 (May 19, 1980).)

The consequences of being designated as a solid waste is that the material will be within the Agency's jurisdiction no matter how it is being recycled. Thus, the particular dioxin-containing wastes designated in today's regulation (see the following subsection) are considered to be wastes (for example) even if used directly as substitutes for commercial products or as ingredients in producing a product. On the other hand, § 261.6 must be consulted to determine the type of regulation that applies to the waste.

2. Application of the Standard to Specific Wastes. EPA proposed to designate a group of dioxin-containing materials as solid wastes. See 48 FR 14491- 492. We are modifying the proposal, in response to comments, to exclude the listed commercial chemical formulations (Hazardous Waste FO27). These formulations do not meet the designation criteria because they are not chemically dissimilar from analogous commercial products (i.e. they are virtually the same as pesticides that are used), and they are not typically discarded. In determining if these formulations are wastes when disposed or recycled, the regulated community should refer to the rules applicable to commercial chemical products. The formulations thus would be wastes when they are discarded by being abandoned, or when they are burned for energy recovery (the manner of recycling not analogous to normal use). See § 261.33 as amended by today's rule.

We also are indicating that Hazardous Waste F021 is not designated as a solid waste if it is used as an ingredient to make a product at the site of generation. It is a solid waste if recycled in any other way (or if disposed.) The Agency is taking this step in response to comments indicating that pentachlorophenol production plants typically reuse these materials in their own production process.

→ H. Section 261.2(e): Secondary Materials That Are Not Solid Wastes When Recycled

1. Secondary Materials Used as Ingredients to Make New Products, or Used as Substitutes for Commercial Products. a. The Agency's Subtitle C Jurisdiction. EPA proposed that secondary materials that are used as ingredients to make new products were not solid wastes provided that distinct components were not recovered (i.e. reclaimed) as end products. We also proposed that secondary materials used as substitutes for commercial products in particular functions or applications are not solid wastes. See 48 FR 14477, 14487-88. An example of the former practice--i.e., use as an ingredient--is the use of chemical industry still bottoms as feedstock. Use of hydrofluorosilicic acid (an air emission control dust) as a drinking water fluoridating agent, or use of spent pickle liquor as a wastewater conditioner, are examples of use of a secondary material as a commercial product substitute.

When secondary materials are directly used (or, in the case of previously used materials, reused) in these ways, we stated, they function as raw materials in normal manufacturing operations or as products in normal commercial applications. We reiterate these positions in the final regulation. These direct use recycling situations ***638** 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 so are outside the Agency's RCRA jurisdiction. They thus are not subject to RCRA Subtitle C regulations when generated, transported, or used (unless they are accumulated speculatively, as described earlier).

Most commenters agreed with the Agency on this point. Those who didn't felt that the Agency's jurisidiction over recycled secondary materials is unlimited. The Agency disagrees. Our RCRA authority over recycling of hazardous secondary materials is broad, but has some limits. The legislative history indicates that Congress rejected an approach that would have required modifying production processes in order to reduce the volume of hazardous waste generated. This is because such restrictions "i(n) many instances would amount to interference with the productive (sic) process itself. . . ." H.R. Rep. No. 94-1491, 94th Cong. 2d Sess. at 26. The Agency accordingly has interpreted its jurisdiction so as to avoid regulating secondary materials recycled in ways that most closely resemble normal production processes. These types of recycling are use of secondary materials as ingredients or as direct commercial product substitutes, or (as explained below) use in a closed- loop type of production process. [FN26]

FN26 We note, in response to comments, that the materials excluded from the RCRA definition still can be hazardous materials for purposes of Department of Transportation regulations governing the transportation of hazardous materials.

b. Redrafting of the Exclusion in the Final Rule. In the proposal, exclusions for using and reusing materials directly took the form of exceptions to the definition of reclamation (proposed § 261.2(c)(1)(i)-(iii)). We have redrafted the final regulation so that § 261.2(e)(1) indicates explicitly which secondary materials used/reused in particular ways are not solid wastes. A definition of "use"/"reuse" appears in § 261.1(c). Exceptions to this principal are found in § 261.2(e)(2), and restate the situations where recycling might be considered to involve a use (or a closed-loop recycling situation, explained in the next section), but nevertheless constitutes waste management.

As noted above, there are several such use/reuse circumstances where the nature of the material or the nature of the recycling activity indicates that RCRA jurisdiction exists:

where the material being used is inherently waste-like;

where insufficient amounts of the material are recycled;

where the material is incorporated into a product that is used in a manner

THE SAFETY-KLEEN
CONTINUED USE PROGRAM™

EXHIBIT 5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG 21 1998

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

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 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,

Michael P. Flynn

for David Bussard
Director, Hazardous Waste Identification Division
Office of Solid Waste

THE SAFETY-KLEEN
CONTINUED USE PROGRAM™

EXHIBIT 6

OhioEPA
State of Ohio Environmental Protection Agency

STREET ADDRESS:
1800 WaterMark Drive
Columbus, OH 43215-1099

TELE: (614) 644-3020 FAX: (614) 644-2329

MAILING ADDRESS:
P.O. Box 104
Columbus, OH 43216-104

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 Miller

Wendy A. Miller
Compliance Assurance Section
Division of Hazardous Waste Management

wp61.WAM.lcn.g:sftyklee.

STATE OF COLORADO

Bill Owens, Governor
Jane E. Norton, Executive Director
Dedicated to protecting and improving the health and environment of the people of Colorado
HAZARDOUS MATERIALS AND WASTE MANAGEMENT DIVISION
http://www.cdphe.state.co.us/hm/

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-3300
Fax (303) 759-5355

222 S. 6th Street, Room 232
Grand Junction, Colorado 81501-2768
Phone (970) 248-7164
Fax (970) 248-7198

Colorado Department
of Public Health
and Environment

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

Oregon
John A. Kitzhaber, M.D., Governor

Department of Environmental Quality
811 SW Sixth Avenue
Portland, OR 97204-1390
(503) 229-5696
TDD (503) 229-6993

June 28, 1999

Ms. Catherine McCord, Director
Business and Environmental Management
Safety-Kleen
One Brinkman 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
1. David Bussard, EPA, to Catherine McCord, Safety Kleen, August 21, 1998.

Cc: Hazardous Waste Managers, DEQ
Larry Edelman, DOJ

Gcgjc62899

THE STATE OF WYOMING

JIM GERINGER
GOVERNOR

Department of Environmental Quality

Herschler Building • 122 West 25th Street • Cheyenne, Wyoming 82002

ADMINISTRATION	ABANDONED MINES	AIR QUALITY	INDUSTRIAL SITING	LAND QUALITY	SOLID & HAZARDOUS WASTE	WATER QUALITY
(307) 777-7758	(307) 777-6145	(307) 777-7391	(307) 777-7368	(307) 777-7756	(307) 777-7752	(307) 777-7781
FAX 777-7682	FAX 634-0799	FAX 777-5616	FAX 777-0937	FAX 634-0799	FAX 777-5973	FAX 777-5973

October 5, 1999

Mr. Clark Lloyd
Regulatory Compliance Manager
Safety-Kleen
1066 South Pioneer Road
Salt Lake City, UT 84104

Dear Mr. Lloyd:

This letter is in response to your letter dated September 29, 1999, in which you requested a written determination whether solvent generated from Safety Kleen's Continued Use material program would not be classified as a solid waste under the Wyoming Department of Environmental Quality (WDEQ), Hazardous Waste Rules and Regulations (HWRR), and therefore, would not be subject to the HWRR. Department personnel, Mr. Tim Link, had also met with you and several other Safety Kleen representatives on September 21, 1999, in Casper, to discuss the specifics of this program.

After reviewing the attached process information and correspondence, the department agrees with the EPA interpretation that when a used solvent is employed for another solvent use, the continued use indicates that the solvent remains a product and it would not be classified as a solid waste, and therefore, would not be subject to the Resource Conservation and Recovery ("RCRA") Subtitle C hazardous waste regulations when generated, transported, or used. Therefore, used parts washer solvent that is collected and consolidated by Safety-Kleen and then used for drum washing without first being reclaimed (i.e., the Continued Use Program) would be excluded under HWRR, Chapter 1, Section 1(f)(i)(E)(I)[261.2(e)(1)] as an effective substitute for a commercial chemical product.

The attached information/correspondence and our discussions with you on September 21st, all appear to verify the legitimacy of the Continued Use Program materials. The attached study

verifies the used solvents are effective for the drum-washing operation and it establishes the volume of material necessary to clean a drum. The established centrally controlled computer Branch Automation Program should assure that a Safety-Kleen branch office does not have excess drum cleaning material, thereby, assuring the used solvents are not used in excess of what would normally be required to wash drums. You have also stated that the material will not be speculatively accumulated, nor reclaimed prior to it's use for drum washing.

Should you have any questions concerning our determination, please feel free to contact me at (307) 777-7752.

Sincerely,

Timothy Link

Timothy Link
I&C Program Principal
Solid and Hazardous Waste Division

C: David A. Finley, Administrator, SHWD
Bob Brewer, I&C Program Manager, Casper Office
File 125.30

THE SAFETY-KLEEN
CONTINUED USE PROGRAM™

EXHIBIT 7

JAMES E. BICKFORD
SECRETARY

PAUL E. PATTON
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
14 REILLY RD
FRANKFORT KY 40601-1190

June 30, 1998

Ms. Catherine A. McCord
Manager, Environment and Business Integration
Safety-Kleen Corp.
One Brinckman Way
Elgin, Illinois 60123-7857

JUL 13 1998

ENVIRONMENTAL POLICY
AND GOVERNMENT RELATIONS

Re: Branch-Based Continued Use Program

Dear Ms. McCord:

Thank you for your letter requesting our formal regulatory interpretation regarding the management of used cleaning solutions, received from Safety-Kleen's Kentucky customers, to clean drums at the Safety-Kleen branches.

It is our understanding that Safety-Kleen would like to reuse, directly without any prior reclamation, used mineral spirits received from its customers to wash drums at the Safety-Kleen branches before filling these washed drums with product. This material will be used as an effective substitute for the spent mineral spirit waste currently utilized to wash the drums.

In accordance with 401 KAR 31:010, Section 2 (5) (a) 2, materials are not wastes when they can be shown to be recycled by being used or reused as effective substitutes for commercial products. After reviewing the documentation submitted to this office, we concur with your opinion that this material is not hazardous waste and not subject to the hazardous waste regulations provided the following conditions are adhered to:

- The material used to wash the drums will only be used once in this program, and will be classified as hazardous waste after use.

- This material, when spent, may be accumulated on-site in accordance with 401 KAR 32:030, Section 5 and must be ultimately managed off-site at a permitted treatment/storage hazardous waste management facility.

- 401 KAR 31:010, Section 2(5)(b), prohibits Safety-Kleen Corporation and the original users of this material from speculatively accumulating this material, ultimately land disposing/storing, or using this material for the purposes of fuel blending for energy recovery (i.e., sent to a cement kiln).

- Once it is co-mingled with hazardous waste, any re-use of the spent material from the continued use program is prohibited in either the branch based drum washing program or Recycle Center-based scrap washing programs. Furthermore, the reused material is automatically classified as hazardous waste and will no longer qualify for this exemption.

- This determination only and specifically addresses the "Continued Use Program" implemented at the Safety-Kleen branches in Kentucky and is not intended to cover any other "similar in definition" programs Safety-Kleen has or will implement.

- This determination may not apply if the above mentioned secondary material is mismanaged contrary to intention of this submittal. Mismanagement may cause it to become a waste that is subject to a hazardous waste determination upon receipt by the Safety-Kleen branch.

- 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, Manager
Hazardous Waste Branch
Division of Waste Management

MVW/gw

c: Caron Falconer, US EPA Region IV
Keith Crabtree, Florence Regional Office
Hannah Helm, Field Operations Branch
Abbie Meyer, Hazardous Waste Branch
Dale Burton, Hazardous Waste Branch
Ron Gruzesky, Hazardous Waste Branch
Massoud Shoa, Hazardous Waste Branch
George Wakim, Hazardous Waste Branch
Central File: Safety-Kleen/Correspondence
Fayette, Jefferson, Boyd, and Henry Counties