DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)
Current Human Exposures Under Control

Facility Name: **Safety-Kleen Systems, Inc.**
Facility Address: **77 Towpath Road (77 Canal Road), Fairless Hills, PA 19030**
Facility EPA ID #: **PAD987266715**

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

   [X] If yes – check here and continue with #2 below.

   [ ] If no – re-evaluate existing data, or

   [ ] If data are not available skip to #6 and enter "IN" (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to-date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of "Current Human Exposures Under Control" EI

A positive "Current Human Exposures Under Control" EI determination ("YE" status code) indicates that there are no "unacceptable" human exposures to "contamination" (i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all "contamination" subject to RCRA corrective action at or from the identified facility [i.e., site-wide]).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The "Current Human Exposures Under Control" EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective risk-based "levels" (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

	Yes	No	?	Rationale/Key Contaminants
Groundwater		X		No known/documented releases to groundwater from operations.
Air (indoors)[2]		X		Releases to soil were contained or remediated.
Surface Soil (e.g., <2 ft)		X		Releases to soil were contained or remediated.
Surface Water		X		No known/documented releases from operations.
Sediment		X		No documented discharges to sediment. No known releases to sediment.
Subsurf. Soil (e.g., >2 ft)		X		Releases to soil were contained or remediated.
Air (outdoors)		X		No known releases at the facility.

X If no (for all media) - skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient supporting documentation demonstrating that these "levels" are not exceeded.

____ If yes (for any media) - continue after identifying key contaminants in each "contaminated" medium, citing appropriate "levels" (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

____ If unknown (for any media) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

Safety-Kleen Systems, Inc. (Safety-Kleen or facility) owns and operates a treatment, storage, and disposal (TSD) facility (USEPA ID No. PAD987266715) located in Fairless Hills, Falls Township, Bucks County, Pennsylvania. According to the Bucks County Assessors Records the property is located at 77 Canal Road, Fairless Hills, Pennsylvania and is 2.379 acres. The road name was changed from Canal Road to Towpath Road.

[1] "Contamination" and "contaminated" describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

[2] Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

The facility has been operational since August 1, 1988. The facility operates as a collection and distribution service center for parts washer, dry cleaning, and fluid recovery service wastes, as well as paint waste and waste antifreeze collection. The facility consists of a 10,000-square foot warehouse building which includes office space, a return/fill area used for processing waste mineral spirits, and a container storage area. Additionally, there are six ASTs located in an exterior tank farm (two covered AST containment areas). A paved parking lot is also present. A six-foot high chain link fence surrounds the active area of the facility. Access to the active areas is through gates which remain locked, except when trucks or other business-related vehicles are entering or exiting the facility.

On April 27, 1993, Safety-Kleen notified PADEP of a waste antifreeze leak from the AST piping into secondary containment. The waste was managed as USEPA hazardous waste codes D008 (lead) and D039 (PCE). The antifreeze AST was observed to be leaking on April 23, 1993; approximately 500 to 1,000 gallons of waste was estimated to have been released. Safety-Kleen's Spill/Release Inventory Spreadsheet indicates the quantity was 2,500 gallons (revision January 4, 2012). The waste antifreeze was removed from the AST and placed into a wastewater AST. Safety-Kleen decontaminated the AST and analyzed the residual liquid for PCE. The secondary containment was pressure washed and the rinsate analyzed for lead and PCE. On May 5, 1993, Safety-Kleen sent a full report of the spill incident to PADEP. Following removal of the waste antifreeze from the AST, the AST and piping was pressurized for a pressure test, certified by a Professional Engineer, and placed back into service on April 30, 1993. After cleaning the wastewater AST with 500 gallons of water, the AST was analyzed and found to be clean (<5 ppb PCE). No waste antifreeze was released to the soil or groundwateer.

Ten contained spills involving ten gallons or more were included in the October 28, 1994 NPDES Notice of Intent (NOI).Eighteen (18) other contained releases that were greater than or equal to ten gallons that occurred at the facility subsequent to July 1994 were identified on the Safety-Kleen Spill/Release Inventory Spreadsheet (Rev. January 4, 2012). These spills occurred during routine operations in the Solid Waste Management Units and other general facility locations. All of these small quantity spills and releases were immediately cleaned up with vacuum trucks and/or absorbents. Therefore, no impacts to the soil or groundwater are reasonably suspected from these releases.

On September 8, 2011, a stationary tanker truck that is used to store ethylene glycol on-site tipped over and released a portion of its contents (3,029 gallons) impacting the drainage swale of the adjacent business (ISC) according to a report by Shaw Environmental & Infrastructure, Inc. (Shaw), dated December 8, 2011. Approximately 729 gallons of waste ethylene glycol was recovered. The area of impacted soil was approximately 75 feet in length and ranged from 3 feet to 12 feet in width. The excavation was advanced until approximately six inches deep, when the soil was observed to be dry and without odor. The sediment in the storm drain traps and drain pipes were cleaned with absorbents. Confirmation soil samples were collected from 0 to six inches deep along the center of the excavation in the drainage swale; additional excavation was required. The initial concentrations of ethylene glycol in the upper six inches of soil ranged from below laboratory detection limits up to 80,900 milligrams per kilogram (mg/kg), with the highest concentrations near the center of the affected area. The subsequent sampling result for the 6 to 12-inch deep interval within the excavation was below detection levels for ethylene glycol. This sample was collected at the location where the maximum concentration for the shallow interval had been previously observed. Approximately 22-tons of soil were removed and disposed at an offsite landfill.

Groundwater: No known releases to groundwater have occurred from the SWMUs. Refer to the Migration of Contaminated Groundwater Under Control Environmental Indicator Determination for the Safety-Kleen Systems, Inc. facility located at 77 Towpath Road, Fairless Hills, PA, EPA ID # PAD987266715 for further detail.

Air (Indoors): Releases to soil have been contained or remediated as described above. No known releases to groundwater have occurred from the SWMUs which could contribute to indoor air contamination

Soil (Surface/Subsurface): In general, releases at the facility have been to the pavement or within containment areas.

Documented releases to soil described above have been appropriately remediated. The facility is essentially capped with structures and pavement and most releases have not migrated to site soils. Pavement is stained with oil/product; however, the staining is not evidence of a release from a SWMU.

Surface Water/Sediment: Stormwater runoff appears to flow from the paved areas into the drainage swale surrounding the property to the southwest, southeast and northeast, then infiltrates into the surrounding soils. There are no storm sewer inlets on the property. These are located on Towpath Road at the entrance to the facility, outside of the operational area. Storm sewer inlets were observed on the neighboring property to the west. The nearest surface water body is Rock Run located 0.7 miles west of the facility, flowing into Martins Creek, which flows to the Delaware River located approximately 1.75 miles east of the facility. There is no surface water body on site. In general, small spills that may occur in the loading/unloading areas in the return/fill area drain toward sumps within the facility. Small spills and releases that may occur to paved areas outside of the building are generally contained with absorbents.

Air (Outdoors): The facility operates under SOOP 09-00139 related to the operation of the storage tanks. Therefore, releases from routine operations are controlled under the permit. No violations of the air permit have been cited. According to USEPA's Envirofacts Warehouse Toxic Release Inventory tracking system, 2010 fugitive emissions were 25.51 pounds of ethylene glycol and 46.5 pounds of methanol. Stack emissions were 4.79 pounds of ethylene glycol and 1,120.65 pounds of methanol.

Reference: Environmental Indicator Inspection Report for Safety-Kleen Systems, Inc., 77 Towpath Road (77 Canal Road) Fairless Hills, Pennsylvania 19030, prepared by Michael Baker Jr., Inc., May 2012.

3. Are there **complete pathways** between "contamination" and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table

	Potential **Human Receptors** (Under Current Conditions)						
Contaminated Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
Groundwater							
Air (indoors)							
Soil (surface, e.g., <2 ft.							
Surface Water							
Sediment							
Soil (subsurface e.g., >2 ft.							
Air (outdoors)							

Instructions for Summary Exposure Pathway Evaluation Table:

1. Strike-out specific Media including Human Receptors' spaces for Media which are not "contaminated" as identified in #2 above.

2. enter "yes" or "no" for potential "completeness" under each "Contaminated" Media-- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential "Contaminated" Media - Human Receptor combinations (Pathways) do not have check spaces ("___"). While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

_____ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter "YE" status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g, use optional Pathway Evaluation Work Sheet to analyze major pathways).

_____ If yes (pathways are complete for any "Contaminated" Media- Human Receptor combination) - continue after providing supporting explanation.

_____ If unknown (for any "Contaminated" Media - Human Receptor combination) - skip to #6 and enter "IN" status code.

Rationale and Reference(s):

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"**[4] (i.e., potentially "unacceptable" because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable "levels" (used to identify the "contamination"); or 2) the combinationof exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable "levels") could result in greater than acceptable risks)?

_____ If no (exposures can not be reasonably expected to be significant(i.e., potentially "unacceptable") for any complete exposure pathway)- skip to #6 and enter "YE" status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If yes (exposures could be reasonably expected to be "significant" (i.e., potentially "unacceptable") for any complete exposure pathway)- continue after providing a description (of each potentially "unacceptable" exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to "contamination" (identified in #3) are not expected to be "significant."

_____ If unknown (for any complete pathway)- skip to #6 and enter "IN" status code

Rationale and Reference(s):

5. Can the "significant" **exposures** (identified in #4) be shown to be within **acceptable** limits?

_____ If yes (all "significant" exposures have been shown tobe within acceptable limits)- continue and enter "YE" after summarizing and referencing documentation justifying why all "significant" exposures to "contamination" are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).

_____ If no (there are current exposures that can be reasonably expected to be "unacceptable") - continue and enter "NO" status code after providing a description of each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s):

[4] If there is any question on whether the identified exposures are "significant" (i.e., potentially "unacceptable") consult a human health Risk Assessment specialist with appropriate education, training and experience.

6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

__X__ YE – Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the Information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **Safety-Kleen System, Inc.** facility, EPA ID # **PAD987266715**, located at **77 Towpath Road (77 Canal Road), Fairless Hill, PA 19030** under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

_____ NO - "Current Human Exposures" are NOT "Under Control."

_____ IN - More information is needed to make a determination.

Completed by (signature) _____ Date 8/14/12

(print) Kevin Bilash

(title) RPM

Supervisor (signature) Paul Gotthold Date 8-14-12

(print) Paul Gotthold

(title) Associate Director, LCD

(EPA Region or State) _____

Locations where References may be found:

USEPA Region III
Land and Chemicals Division
1650 Arch Street
Philadelphia, PA 19103

PADEP
South East Regional Office
2 E Main Street
Norristown, PA 19401

Contact telephone and e-mail numbers
(signature) _____
(print) _____
(title) _____

FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.