

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: 650 Noble Drive, West Mifflin, Pennsylvania 15122
Facility EPA ID #: PAD982576258

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?

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).

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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)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale/Key Contaminants</u>
Groundwater		X		No known/documented releases to groundwater from operations. Facility and surrounding area are connected to the municipal water supply.
Air (indoors) ²		X		No VOCs detected in surface soil sample collected beneath asphalt surface of paved area where reported spill of 20 gallons of spent solvent occurred. TPH-ORO detected at 191 ppm. No other known/documented releases to soil or groundwater.
Surface Soil (e.g., <2 ft)		X		No VOCs detected in surface soil sample collected beneath asphalt surface of paved area where reported spill of 20 gallons of spent solvent occurred. TPH-ORO detected at 191 ppm. Area is paved. No other known/documented releases to soil.
Surface Water		X		No known/documented releases to surface water from operations.
Sediment		X		No known/documented releases to sediment from operations.
Subsurf. Soil (e.g., >2 ft)		X		No VOCs detected in surface soil sample collected beneath asphalt surface of paved area where reported spill of 20 gallons of spent solvent occurred. TPH-ORO detected at 191 ppm. Area is paved. No other known/documented releases to soil.
Air (outdoors)		X		Both of the facility’s waste permits are conditioned to require corrective action if air emissions exceed 5,000 ppm VOCs during monitoring. No violations of this permit condition have been documented.

 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.

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.

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_____ 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) is a national solvent recycler and owns and operates the hazardous waste management facility located in West Mifflin Borough, Allegheny County, Pennsylvania. The 2.83-acre service center (facility) was designed to facilitate the handling and storage of wastes resulting from the services offered by Safety-Kleen. Under hazardous waste permit No. PAD982576258, the facility stores hazardous waste in containers and one aboveground storage tank (AST) and also functions as an in-transit storage (10-day) facility for various small quantities of hazardous and residual wastes. The in-transit wastes are stored in the in-transit waste storage area or a truck trailer. The facility is a large quantity generator of hazardous waste, primarily consisting of spent parts washer solvents, spent immersion cleaner, dry cleaning wastes, and paint wastes. The facility also operates a waste oil transfer facility under General Permit No. WMGR029G. The waste oil is destined to several facilities operated by Safety-Kleen. The waste oil mixture can contain water and antifreeze.

A meeting at the facility was held on July 10, 2014 to discuss EPA Region III's Corrective Action process, the EI Assessment Program and the legislation driving this program. USEPA focused on determining if human exposures are controlled and groundwater releases are controlled. The site visit included an overview of areas to be observed and a tour of the facility.

Releases

September 22, 2005 Spill

On September 22, 2005, approximately 40 gallons of waste oil spilled onto the pavement during a waste oil pickup. The driver stated he assumed the center compartment was the same size as the rear compartment and he overfilled the center compartment. Waste oil ran from the top of the tanker down the overflow pipes and onto the pad. Safety-Kleen's material handlers immediately responded and contained the spill on the concrete pad. All of the material was cleaned up using absorbent pads. The concrete was then pressure washed and scrubbed with soap. All waste water from the cleanup was contained and was placed into the waste water tank.

August 23, 2011 Spill

On Tuesday, Aug. 23, 2011, a tanker truck unloading spent solvent, accidentally spilled approximately 20 gallons onto the asphalt pavement. Apparently, the valve cap vibrated from its perch and struck and opened the relief valve. The driver immediately closed the valve. Absorbent was applied, and the area was pressure washed. All waste waters and absorbent were drummed for disposal. Safety-Kleen was concerned that waste solvent may have penetrated some cracks in the asphalt pavement. On August 24, 2011, Sunpro of Pittsburgh cored through the asphalt to collect one sample of the soil under the pavement. The sample was analyzed for VOCs and total petroleum hydrocarbons—oil range organics (TPH-ORO). Note: TPH-ORO are typically aromatics >C20-C35 associated with crude oil, heavy fuel oils, lubricating oils, waxes, and asphalt/pitch. No VOCs were detected; TPH-ORO was detected at 191 ppm. As a result of the release, the cracks in the pavement were repaired (asphalt was sealed) to prevent any seepage that may occur should a similar incident occur in the future. On August 26, 2011, a general inspection was performed in response to the self-disclosure of the spill of spent solvent.

Groundwater:

The facility property and surrounding area is a former slag disposal site. Grasses, weeds, small shrubs and trees grow on/around the slopes of the slag pile. The facility obtains its water from the Pennsylvania American Water Company

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(PAWC) – Pittsburgh District which maintains an eight-inch water main on Noble Drive. The source of water for the PAWC is surface water from the Monongahela River, Becks Run and Aldrich intakes. There were no surface water intakes identified within 3 miles of the facility. The facility is connected to the municipal sanitary sewer system.

The floor of the building is epoxy-sealed and sloped to a self-contained concrete containment trench. Direction of groundwater flow in the bedrock units is unknown, but is expected to be generally to the north/northwest toward the Monongahela River. However, flow patterns are likely locally altered due to the presence of extensive mining activities in the vicinity of the facility. The facility has containment structures and blind sumps in place around their tanks and drum storage areas. The areas are routinely inspected for cracks and sealed.

The facility and the surrounding area obtain potable water from the PAWC. There are no known potable water wells within ½-mile of the facility. Therefore, it is concluded that the groundwater exposure pathway is not relevant, and no exposure pathway/release controls are necessary at this time.

There have been no known hydrogeological investigations conducted at the facility. There are no known or documented releases to groundwater during operations of the facility. Small spills that have occurred at the facility were limited to the warehouse/containment areas and paved areas. Two larger documented releases that occurred at the facility in 2005 (40 gallons of waste oil) and 2011 (20 gallons of waste solvent) as described above were immediately cleaned up with absorbent and the areas were pressure washed. There was no known release to groundwater resulting from either of these spills.

Air (Indoors/Outdoors):

Allegheny County Air Quality Department did not issue a permit, and PADEP Air Quality considers the facility to be a minimal potential source for VOC emissions. PADEP conditioned both of the facility's waste permits (hazardous and residual) to require corrective action if the facility detected 5,000 ppm during VOC monitoring. There have been no known exceedances of this monitoring limit, and none are expected under normal operating conditions.

Soil (Surface/Subsurface):

The facility property is primarily covered with impermeable surfaces. A large metal warehouse is located in the northern central portion of the property. An asphalt driveway/parking circles the warehouse, with a large parking lot located south and a smaller parking lot located northeast of the building. At the time of the 2014 site visit, the asphalt-paved areas were in fair condition with numerous unsealed cracks throughout. A concrete loading dock is located on the southwest side of the warehouse. A concrete blind sump is located adjacent to the dock underneath the in-transit trailer. An AST farm that currently houses 11 ASTs is located southeast of the warehouse. The ASTs, with the exception of tanks 010A and 012A, are situated within secondary containment systems that are constructed of epoxy-coated concrete floors and 3-foot high walls. Stainless steel plates are also present beneath ASTs 001A, 002A, 003A, 008A and 011A. ASTs 010A and 012A are situated on concrete pads. The fill/removal areas for the ASTs are contained within metal boxes. A concrete pad containing a blind sump is present in the southern portion of the facility near the AST farm and the back gate.

Several areas of impermeable surfaces are also present on the property. A strip of trees and grass is located directly east of the AST farm. Gravel areas are located directly south of AST 012A and along the south fence. A gravel lot that contains the propane tank storage shelter and often empty trailers and totes is located immediately south of the warehouse. A grass area is located in the south central portion of the parking lot

Small spills that have occurred at the facility during its operations have been to concrete or paved surfaces and have been cleaned up with rags and/or absorbents. The two larger releases that occurred at the facility in 2005 (40 gallons of waste oil) and 2011 (20 gallons of waste solvent) were immediately cleaned up with absorbent and the areas were

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pressure washed. After the 2011 release of waste solvent, Safety-Kleen retained Sunpro of Pittsburgh to core through the asphalt and collect one sample of the soil under the pavement, which was analyzed for VOCs and TPH-ORO (typically aromatics associated with crude oil, heavy fuel oils, lubricating oils, waxes, and asphalt pitch). No VOCs were detected. This area is currently asphalt-paved.

Surface Water/Sediment:

There are no surface water bodies located on or directly adjacent to the facility. Streets Run is located approximately 1 mile northwest of the facility. Unnamed tributaries to Streets Run are located approximately 0.3 miles north and 0.6 miles northwest of the facility. According to the Pennsylvania eMapPA online application (accessed August 12, 2014), Streets Run and its tributaries have designated use as a warm water fishery. These water bodies are also identified on the streams integrated list as non-attaining segments impaired for aquatic life due to metals from abandoned mine drainage and siltation from urban runoff and storm sewers. No known wetland or critical habitats exist within ¼-mile of the facility (PPC Plan, 2006).

Surface water runoff is directed to a curb-cut drain consisting of two six-inch diameter PVC pipes that drain to the ground surface past the property fence to the south. There are no known or documented releases from this drain during operations at the facility. Per PADEP, as the facility stormwater runoff drains to the back of the property and onto the ground surface and not to waters of the Commonwealth, an NPDES permit is not applicable.

Small spills that have occurred at the facility were limited to the warehouse/containment areas and paved areas. The two larger documented releases that occurred at the facility in 2005 (40 gallons of waste oil) and 2011 (20 gallons of waste solvent) as described above were immediately cleaned up with absorbent and the areas were pressure washed. Soil samples obtained after the 2011 spill revealed no contamination as a result of the 20 gallon spill.

Therefore, groundwater, soil, surface water, sediments, and air media are not known or reasonably suspected to be contaminated 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 or AOCs).

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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

Contaminated Media	Potential <u>Human Receptors</u> (Under Current Conditions)						
	<u>Residents</u>	<u>Workers</u>	<u>Day-Care</u>	<u>Construction</u>	<u>Trespassers</u>	<u>Recreation</u>	<u>Food</u> 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 mediareceptor 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.

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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 combination of 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 to be 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.

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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):

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 Systems, Inc. facility,
EPA ID # PAD982576258, located at 650 Noble Drive, West Mifflin, Pennsylvania 15122
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) [Signature] Date 4/1/15
(print) Kevin Bilash
(title) RPM
Supervisor (signature) [Signature] Date 4-1-15
(print) PAUL GOTTZLID
(title) _____
(EPA Region or State) US EPA REG 3

Locations where References may be found:

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

PADEP
South West Regional Office
400 Waterfront Drive
Pittsburgh, PA 15222

Contact telephone and e-mail numbers
(signature) Kevin Bilash
(print) phone 215-814-2796
(title) email bilash.kevin@epa.gov

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.