DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
Interim Final 2/5/99
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name: **Safety-Kleen Systems, Inc.**
Facility Address: **150 Allenbill Drive, Johnstown Industrial Park, Johnstown, Pennsylvania 15904**
Facility EPA ID #: **PAD981736143**

1. Has all available relevant/significant information on known and reasonably suspected releases to the groundwater media, 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 "Migration of Contaminated Groundwater Under Control" EI

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "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 "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilizationor final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

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. Is **groundwater** known or reasonably suspected to be **"contaminated"**[1] above appropriately protective "levels" (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?

____ If yes - continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

_X_ If no - skip to #8 and enter "YE" status code, after citing appropriate "levels," and referencing supporting documentation to demonstrate that groundwater is not "contaminated."

____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

Safety-Kleen is a national solvent recycler and owns and operates the hazardous waste management facility (US Environmental Protection Agency [USEPA] Identification [ID] Number [No]. PAD981736143) located in Johnstown, Richland Township, Cambria County. The 2.4-acre service center (facility) was designed to facilitate the handling (accumulation) and storage of the wastes (transfer station) resulting from the services offered by Safety-Kleen. The services include parts cleaner waste (mineral spirits and immersion cleaner), dry cleaner waste (filter cartridges, powder residue, and still bottoms), and paint waste (thinners and paints) collection/recovery.

Safety-Kleen moved their Stoystown operations to Johnstown on April 23, 1988. The facility is located in the Johnstown Industrial Park. Safety-Kleen collects waste organic liquids from various conditionally exempt small quantity generators (SQGs) and commercial facilities (including gasoline stations, body shops, paint shops, etc.), and stores the waste materials on site until the wastes can be shipped off site to a Safety-Kleen recycling facility or contracted reclaimer and returned to customers as product. The area is zoned for light industrial use. North and west of the property are large warehouse facilities. Immediately north, east and south of the facility is open and wooded land.

The property is rectangular in shape with the shorter side along Allenbill Drive. A large warehouse is located in the southern central portion of the property. An asphalt driveway/parking circles the warehouse, with parking located south, west, and northeast of the building. A loading dock is located on the east side of the warehouse. Farther east, beyond the loading dock and the driveway, is a retention pond. Three ASTs are located north of the warehouse, beyond a grassed area. Within the grassed area is the aboveground piping to the ASTs and a concrete pad. West of the warehouse, beyond the driveway, is a concrete pad/diked area containing the frac tank. The frac tank location was the original proposed location of the tank farm; however, the location did not meet specifications. The diked area was never used for storage, but it was occasionally used for truck parking.

The facility is a large quantity generator (LQG) of hazardous waste and is a permitted hazardous waste storage and transfer facility. The wastes arrive in US Department of Transportation (DOT)-approved containers, including 55-gallon drums, 30-gallon drums, 16-gallon drums, and Safety-Kleen parts washer tanks.

The 1991 Environmental Priorities Initiative Preliminary Assessment (PA) performed by NUS Corporation (NUS) for the USEPA identified four solid waste management units (SWMUs) at the facility: a barrel (drum) washer (SWMU 1), a waste storage area (SWMU 2), a waste oil sample locker (SWMU 3), and a storage tank farm (SWMU 4). SWMUs 1, 2, and 4 handle or store hazardous waste.

The 1988 Part B of the hazardous waste permit application identified the following waste storage units.

[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 appropriate "levels" (appropriate for the protection of the groundwater resource and its beneficial uses).

Storage Unit	Capacity (gallons)	Secondary Containment (gallons)	Materials to be Stored
Container Storage – Warehouse	6,912	2,645	Dumpster sediment – D001, D006, D008 Spent immersion cleaner – F002, F004 Dry cleaning waste – F002
Container Storage – Warehouse	1,375		Paint waste – D001, D006, D007, D008, F003, F005
Storage Tank	15,000 (initially reported as 12,000 gallons)	22,440	Spent mineral spirits solvent – D001, D008

The 2004 permit allowed the following waste to be stored.

Storage Unit	Capacity (gallons)	Materials to be Stored
Container Storage – Warehouse	3,418 (operating capacity)	D001, D004-D011, D018, D019, D021-D030, D032-D043
Storage Tank	15,000 (14,250 operating capacity)	D001, D004-D011, D018, D019, D021-D030, D032-D043

The 2011 PPC plan identified the following hazardous waste storage: 1) tank - 15,000 gallons, 18,356-gallon containment capacity for spent parts washer solvent; and 2) container storage warehouse - 3,418 gallons, 341.8-gallon containment capacity for spent immersion cleaner, dry cleaning waste, spent parts washer solvent, dumpster sediment, and paint waste. The plan identified the following nonhazardous waste storage: 1) portable frac tank – 16,000 gallons, 17,600-gallon containment capacity for waste oil, oily water, and antifreeze (replaced with a 18,000-gallon tank in October 2013); and 2) tank – 15,000 gallons, 18,356-gallon containment capacity for waste oil, oily water, and antifreeze.

Over the course of operations, minor spills have occurred. Copies of the spill reports, which include the date and a brief description of these spills, are maintained at the facility. Any small spills were limited to warehouse/containment area and paved areas; they were reported to have not migrated. The floors of the building are epoxy sealed. Some cracks were observed during the 2013 site visit; however, the cracks have been sealed. The facility has containment structures and sumps in place around their tanks and drum storage areas. The areas are routinely inspected for cracks and sealed

Groundwater
The facility obtains its water from the Highland Sewer and Water Authority (HSWA) which maintains an 8-inch water main in the industrial park.

HSWA utilizes the Beaverdam, Lloydell, and Bear Rock No. 1 Reservoirs and the South Fork of the Little Conemaugh River for its water supply. These surface water sources are not located within the study area and do not receive drainage from the facility. The system is not integrated. Water from the Bear Rock Reservoir serves residents north of the Bear Rock pumping station to and including Gallitzen. The remainder of the system is integrated. HSWA serves about 35,000 people throughout Richland and Adams Townships and sells water to 25 small water systems. HSWA serves the central, southern, and eastern parts of the surrounding area, including the facility. No surface water intakes are within 15 downstream miles of the facility (NUS, 1991).

Residents in the area rely on public and private supplies utilizing surface water and groundwater sources for their water supply (NUS, 1991). No wells were identified in the Pennsylvania Groundwater Information System (PaGWIS) database within 0.5 miles of the facility. No wells are present at the facility. The nearest well is a gas well, located approximately 2 miles north of the site. No known oil or gas wells exist within one-quarter mile of the facility, the facility is not in or near a critical habitat; and no schools, parks, or wetlands exist within one-quarter mile of the facility (Safety-Kleen, 1988).

On May 9, 1988, PADEP, in an internal memo, stated that there was no record of any public or semi-public water supply within the watershed or aquifer, using a subsurface water source, and within 1 mile or downstream within 3 miles from the facility. Private wells are in the immediate area of the facility and should be monitored. From 1991 to 1994 (data found in the PADEP's files), as required under Act 108 for commercial hazardous waste facilities, quarterly residential well

sampling was performed. During the limited sampling, general inorganic water quality parameters and VOCs were analyzed for groundwater at one residential well. No VOCs were detected in the residential well samples.

There is no listed critical habitat for endangered species in the facility area (NUS, 1991).

The depth to groundwater beneath the site is not known. Shallow groundwater flow direction beneath the site is expected to be to the northeast, toward an unnamed intermittent tributary of Sandy Run. Actual groundwater flow direction is not known but is based on the role of streams as discharge points for groundwater and the assumption that the water table configuration is similar to surface topography but with less relief.

Groundwater storage and movement in the bedrock units are primarily through joints, fractures, and bedding-plane separations. Groundwater occurs under water-table conditions, with local areas of artesian conditions (NUS, 1991). No extensive confining layers have been identified within the study area, allowing for the hydraulic interconnection of bedrock units through fractures. The Casselman Formation has a variable primary porosity. Secondary porosity is present primarily due to jointing. Yields are highly variable and dependent on local effective porosity. Sandstonesare expected to be the best producers. Reported yields of 91 wells completed in the Conemaugh Group range from 1 to 33 gallons per minute (gpm). Median yields of domestic and non-domestic wells are 10 and 16 gpm, respectively. These wells range in depth from 48 to 716 feet. Most water-bearing zones are encountered from 51 to 100 feet below land surface. Water drawn from the Conemaugh Group is usually hard; high levels of iron and manganese are a frequent problem.

There are no known or documented releases to groundwater during operations of the facility. The facility and the surrounding area obtain its water from the HSWA. There have been no known hydrogeological investigations conducted at the facility. Accordingly, no exposure pathway/release controls are relevant.

3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within "existing area of contaminated groundwater"[2] as defined by the monitoring locations designated at the time of this determination)?

_____ If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the "existing area of groundwater contamination"[2]).

_____ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the "existing area of groundwater contamination"[2]) - skip to #8 and enter "NO" status code, after providing an explanation.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

_____ If yes - continue after identifying potentially affected surface water bodies.

_____ If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.

_____ If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

[2] "existing area of contaminated groundwater" is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of "contamination" that can and will be sampled/tested in the future to physically verify that all "contaminated" groundwater remains within this area, and that the further migration of "contaminated" groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

5. Is the **discharge** of "contaminated" groundwater into surface water likely to be **"insignificant"** (i.e., the maximum concentration[3] of each contaminant discharging into surface water is less than 10 times their appropriate groundwater "level," and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?

_____ If yes - skip to #7 (and enter "YE" status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration[3] of key contaminants discharged above their groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.

_____ If no - (the discharge of "contaminated" groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration[3] of each contaminant discharged above its groundwater "level," the value of the appropriate "level(s)," and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations[3] greater than 100 times their appropriate groundwater "levels," the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

[3] As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

6. Can the **discharge** of "contaminated" groundwater into surface water be shown to be '**currently acceptable**" (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented[4])?

_____ If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site's surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR
2) providing or referencing an interim-assessment,[5] appropriate to the potential for impact, that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment "levels," as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.

_____ If no - (the discharge of "contaminated" groundwater can not be shown to be '**currently acceptable**") - skip to #8 and enter "NO" status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.

_____ If unknown - skip to 8 and enter "IN" status code.

Rationale and Reference(s):

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[4] Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

[5] The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the "existing area of contaminated groundwater?"

_____ If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the "existing area of groundwater contamination."

_____ If no - enter "NO" status code in #8.

_____ If unknown - enter "IN" status code in #8.

Rationale and Reference(s):

8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (attach appropriate supporting documentation as well as a map of the facility).

X YE Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the **Safety-Kleen Systems, Inc.** facility, EPA ID # **PAD981736143**, located at **150 Allenbill Drive, Johnstown Industrial Park, Johnstown, Pennsylvania 15904**. Specifically, this determination indicates that the migration of "contaminated" groundwater is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing area of contaminated groundwater". This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.

____ NO - Unacceptable migration of contaminated groundwater is observed or expected.

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

Completed by (signature) _____ Date 8/6/14

(print) Kevin Bilash

(title) RPM

Supervisor (signature) _____ Date 8-12-14

(print) Paul Gotthold

(title) Associate Director, Office of PA Remediation

(EPA Region or State) EPA Region III

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
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