

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

Interim Final 2/5/99

RCRA Corrective Action
Environmental Indicator (EI) RCRAInfo code (CA750)

Migration of Contaminated Groundwater Under Control

Facility Name: Safety-Kleen Systems, Inc., San Antonio Center
Facility Address: 5243 Sinclair Road; San Antonio, TX; 78222
Facility EPA ID #: TXD000729400

- 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 #8 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, GPRRA). 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 stabilization or 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 RCRAInfo national database ONLY as long as they remain true (i.e., RCRAInfo status codes must be changed when the regulatory authorities become aware of contrary information).

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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):

FACILITY DESCRIPTION

Safety-Kleen Systems, Inc. (Safety-Kleen) (SWR 69048) operates a service center at 5243 Sinclair Road, San Antonio, Texas under Permit No. HW-50246-001 (Reference 5). The permit was initially issued by TWC on September 2, 1992. Safety-Kleen serves businesses that generate hazardous wastes. The facility provides equipment and cleaning solvent to customers and then collects the spent solvents for recycle and reuse (Reference 11). All wastes are ultimately shipped offsite for recycling or disposal. The following wastes are accepted at the Safety-Kleen Facility: spent parts washer cleaning solution, spent immersion cleaner, dry cleaning wastes, aqueous brake cleaning solution, aqueous parts cleaning solution, dumpster/drum washer unit sediment, bottom sediment from tanks, paint waste, vacuum heel sludge, contaminated debris and transfer waste (Reference 9).

The area surrounding the warehouse/office building and hazardous wastes management units (HWMUs) is covered with concrete or asphalt. Surrounding property use includes industrial and commercial businesses (Reference 5).

The facility’s permit included three tanks, two container storage area and two tank systems. On August 30, 2001, Safety-Kleen submitted to TNRCC a Partial Facility Closure Certification Report (Report) for the closure of the West Return and Fill Station, two 8,000 gallon above grade storage tanks, and the West Drum Storage Area. According to the Report, verification sampling was conducted after closure of the units in the soils adjacent to the container storage area and fill station. With the exception of lead, all detected contaminants were found at levels below the TNRCC Tier 1 Protective Concentration Levels (PCLs) for Residential Soils (30 acre Source Area – Class 1 Groundwater). Contaminants and respective concentrations were chlorobenzene (0.55 mg/kg), 1, 2 dichlorobenzene (0.016 mg/kg), 1,4 dichlorobenzene (0.018 mg/kg), ethylbenzene (0.012 mg/kg), 1,2,4 trimethylbenzene (0.08 mg/kg), xylenes (0.032 mg/kg), n-propyl benzene (0.077 mg/kg), barium (92 mg/kg), and Chromium (10 mg/kg). Lead was detected at 13 mg/kg, which was above the PCL but stated to be within background range for the area (Reference 5).

On October 22, 2001, TNRCC notified Safety-Kleen that the units were not closed in accordance with 40 CFR 264.17 and the permit requirements based on a lack of some information and due to releases to the soils surrounding the units being closed under Risk Reduction Standard 1. This type of “split-media closure” was deemed unacceptable. No further information regarding Safety-Kleen’s response to this letter was found in the available file materials. However, by letter dated February 19, 2002, TNRCC accepted partial closure of the site which included two above ground storage tanks, the waste return/fill station, and

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).

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one of the container storage areas (Risk Reduction Level 2). The letter indicated that the closure was in accordance with 40 CFR 264.110 through 264.115, the Texas Risk Reduction Rules 30 TAC 335.551 through 335.569 and RCRA Permit No. HW-50246-001, Provision IV, (Reference 16). The letter did not require a deed certification or post closure care.

On February 28, 2002 Safety-Kleen submitted an Application for Permit Renewal to TNRCC. Units that remained active included a spent part washer solution tank (# 004), the east warehouse container storage area (CSA #005), and one drum washer/dumpster (# 006) (Reference 9). All remaining units are constructed with secondary containment structures to reduce spills and releases into the environment. Additionally, the facility operates under TPDES Permit No. TXRO50000.

Communication with the TCEQ Project Manager, Vaishali Tendolkar, indicated that there was no known environmental threat currently present at the site (Reference 17).

Incidents of Release

The Safety-Kleen facility has a history of spills, which appear to have been satisfactorily addressed based on available file materials. On April 12, 2001, 200 gallons of chemical solvent (clean) and 75 gallons of chemical solvent (dirty) was released. The chemical solvent (clean) spill occurred when a hose came loose from the truck while offloading the material. The chemical solvent (dirty) was spilled when the truck was overfilled. Absorbent material was used to clean up the spills and materials were placed in 12 drums and included removal of contaminated soils and asphalt. None of the material leaked offsite (Reference 4).

On July 1, 2003, a spill of approximately 50 gallons of waste solvent occurred when waste solvent was being offloaded into a tanker truck from an above ground storage tank. Waste solvent was spilled onto the asphalt in the facility. The spill was immediately cleaned using absorbent material. Materials generated from the spill were placed in four 30-gallon drums and was then sent to Safety-Kleen Systems Accumulation Center in Missouri City where they would be shipped to the Safety-Kleen, Denton, Texas Recycling Center (Reference 13). The TCEQ determined that the actions taken to clean up the spill were satisfactory and no further actions were required (Reference 13).

On January 27, 2005 an estimated 20 gallons of used oil and 40 gallons of wastewater discharge was reported at the Safety-Kleen facility. The spill occurred when the wastewater mixed with used oil (Vac-Waste) was being transferred into a frac tank. The mixture spilled onto the pavement. The spill was contained with absorbent materials and pads. The waste was pumped into 55-gallon drums. No surface soils were impacted and the spill did not discharge offsite (Reference 14).

Rationale Groundwater

There are no water wells located within one mile of the facility (Reference 9). From the information presented in the file material, waste management units are operated within secondary containment and there is no reported history of groundwater contamination at the facility.

REFERENCES

1. HW Permit No. HW-50246 -001; SWR 69048, Issued September 2, 1992.
2. Correspondence from Michael Sanderock of Safety-Kleen to Jeffrey Saitas of TNRCC. RE: Change of Internal Site Inspection Forms and Corporate Name Change, dated October 6, 1998.
3. Correspondence from Henry Karnei of TNRCC to Randy Lembke of Safety-Kleen Systems. RE: RCRA Compliance Investigation conducted September 2000, dated May 15, 2001.

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4. Correspondence from Henry Karnei of TNRCC to Randy Lembke of Safety-Kleen Systems. RE: Notice of Violation for the Incident Which Occurred on April 12, 2001, dated May 23, 2001.
5. TriHydro Corporation. Partial Facility Closure Certification Report, dated August 29, 2001.
6. Correspondence from Gerhard Risse of Safety-Kleen to Karen Cleveland of TNRCC. RE: Partial Facility Closure, dated August 30, 2001.
7. Correspondence from Karen Cleveland of TNRCC to Gerhard Risse of Safety-Kleen. RE: Partial Facility Closure Certification Report, dated October 22, 2001.
8. Correspondence from Gerhard Risse of Safety-Kleen to Dipak Bhakta of TNRCC. RE: Partial Facility Closure, dated November 21, 2001.
9. Application for Permit Renewal, dated February 28, 2002.
10. Correspondence from Henry Karnei of TNRCC to Ricardo Saucedo of Safety-Kleen. RE: Notice of Violation for the Compliance Evaluation Investigation, dated July 10, 2002.
11. Correspondence from Ricardo Saucedo of Safety-Kleen to Dipak Bhakta of TNRCC. RE: Class 1 Permit Modification, dated August 4, 2003.
12. TCEQ Investigation Report, dated November 13, 2003.
13. Correspondence from Henry Karnei of TNRCC to Ricardo Saucedo of Safety-Kleen. RE: Review of Documentation submitted for the July 7, 2003 and September 11, 2003 for the incident of July 1, 2003, dated November 19, 2003.
14. Correspondence from TNRCC to Ricardo Saucedo of Safety-Kleen. RE: Incident of January 27, 2005 at Disposal Properties Facility, dated March 23, 2005.
15. Correspondence from Vaishali Tendolkar of TCEQ to Ricardo Saucedo of Safety-Kleen. RE: Biennial Report 2004/2005-Waste Minimization Certification, dated February 27, 2006.
16. Correspondence from TNRCC to Gerhard Risse of Safety-Kleen Systems. RE: Partial Facility Closure Certification Report, dated February 19, 2002.
17. Communication between Vaishali Tendolkar of TCEQ and Elisa Durum of TechLaw on June 23, 2006.
18. Facility Maps

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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):

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.

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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):

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5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration³ 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 concentration³ 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 concentration³ 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 concentrations³ 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.

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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 implemented⁴)?

_____ 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):

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.

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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):

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8. Check the appropriate RCRAInfo 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).

YE 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 # TXD000729400, located at 5243 Sinclair Road; San Antonio, TX; 78222. 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

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

Completed by (signature) Eleanor T. Wehner Date 10/13/2011
(print) Eleanor T. Wehner
(title) CA Program Specialist

Researched by (signature) Elisa Durum Date June 23, 2006
(print) Elisa Durum
(title) TechLaw, Inc. (U.S. EPA Contractor)

Supervisor (signature) Geoffrey E. Mayer Date 10/20/11
(print) Geoffrey E. Mayer
(title) VCP - CA Supervisor
(EPA Region or State) TX

Locations where References may be found:
Texas Commission on Environmental Quality
File Room, Building E
12118 N IH 35
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Filed Under:
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Recommended Action Items: Since partial closure of the facility occurred under TRRP 2, EPA may wish to verify that a deed certification was not required. GK E.W. 10/13/2011