

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: Sentry Paint Technologies
Facility Address: 237 Mill Street, Darby, PA 19023
Facility EPA ID #: PAD002480002

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?
- ☒ 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, (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 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 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).

**Migration of Contaminated Groundwater Under Control
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1. 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.
- ☐ 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):

The Property is comprised of 2.3 acres along the Darby Creek in Darby, Delaware County, PA. Sentry Paint Technologies, Inc. operated at the Property since March 20, 1963 manufacturing paint, primer, and industrial coatings. Raw materials used in manufacturing these products included resins, alkyd polyesters, epoxy, polyurethane resins, aromatic and aliphatic solvents. Sentry Paint Technologies, Inc. permanently shutdown operations at the Property on April 30, 2003. The assets of Sentry were purchased by the Sheboygan Paint Company, while the property remained an asset of Sentry. After this purchase, the Property was used as a distribution center by Sheboygan Paint Company until the sale of the property in September 2020 to Mill Creek Holdings I, LLC.

Prior to 2003, the Facility used raw materials in its manufacturing process that included resins, alkyd polyesters, epoxy, polyurethane resins, aromatic and aliphatic solvents. Only physical processes such as weighing, mixing, grinding, tinting, and packaging took place at the facility. The processes occurred at room temperature and no chemical reactions took place. Hazardous wastes generated at the facility from routine operations were primarily the result of cleaning of the mixing equipment and holding tanks. Toluene was the primary solvent used in cleaning, however, xylene, mineral spirits, and petroleum naphtha, and various other solvents were sometimes used. Other hazardous wastes included bad mixes and leftover product from special orders.

Numerous inspections between 1983 and 2003 found improper storage of hazardous materials, evidence of spillage/leakage, illegal drum disposal, and general poor maintenance and handling practices at the Facility. Sampling from illegally disposed drums in 1985 confirmed that paint sludges were disposed in this suspected disposal area, and sample results indicated high concentrations of phenol, nitrobenzene, isophorone, and xylene which are all components of paints and coatings used in the manufacturing process at the Facility. Some remediation took place in this disposal area in 1986, and 12 drums were removed and the area was graded. However, accounts from community officials reported that as many as 100 drums may have been buried in this area.

A Solvent and Resin Tank Farm and Resin Fill Area were located at the rear of the facility. The Solvent Tank Farm consisted of six aboveground storage tanks (ASTs) ranging in size from 1,000-2,000 gallons and was located adjacent to the rear parking lot. These tanks stored volatile organic solvents. The Resin Tank Farm consisted of five 6,000 gallon ASTs to store resin and was located inside the rear of the Plant Area. The Resin Fill Area was used to fill the resin and solvent tanks and was located near the Solvent Tank Farm at the rear of the Plant Area; materials were transported to

the fill area via tanker truck and then pumped into the appropriate tank. Inspections from 1983 to 1987 found numerous instances of spillage in the Solvent Tank Farm and Resin Fill Area. On February 5, 1987 a Remediation Plan for Soils in the Solvent Tank Farm and Resin Fill Area was prepared in response to PADEPs observations of spillage. In July 13, 1987, PADEP noted the Plan was deficient as it did not address groundwater recovery or treatment. Groundwater wells sampled during this time indicated both soil and groundwater contamination in the area of the tank farm. PADEP approved a proposal by Sentry's consultant to use vapor extraction to remediate soil and groundwater contamination at the site. During an interview with Sentry representatives in 2003, they stated that there is no soil vapor extraction system at the site and that no remediation had taken place in this area. Hurricane Floyd produced floodwaters in the Solvent Tank Farm area on September 16, 1999. All six ASTs from the Solvent Tank Farm were washed away in these floodwaters; the tanks were recovered, properly disposed of, and were not replaced.

A parcel of this property had historically been leased to PECO and operated as a manufactured gas plant (MGP). This parcel is currently undergoing remediation under oversight by PADEP's Act 2 program for contaminants related to PECO's operations on this parcel.

Based on this information, it is reasonably suspected that groundwater may still be contaminated although it is not known whether the contamination may be above appropriate standards. It is recommended that groundwater is further investigated to understand whether contamination is still present and to what extent.

Reference:

Environmental Indicator Inspection Report for Sentry Paint Technologies, Inc. October 2003. Tetra Tech FW, Inc.

Footnotes:

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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2. 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):

EPA does not have records indicating any remediation took place at the Facility, despite the evidence of contamination noted previously. Additionally, data available from previous investigations is over 30 years old and therefore is not representative of current site conditions. Therefore, the presence, extent, or migration of groundwater contamination cannot be determined. Further investigation is warranted to determine whether contamination is present and if it is migrating offsite.

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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3. 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 judgment/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-assessment⁵, 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 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).

- ☐ 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 (insert facility and EPA ID #, located at (insert address)). 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

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