

**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:** SPS Technologies, Inc.  
**Facility Address:** 302 Highland Avenue, Jenkintown, Pennsylvania 19046-2611  
**Facility EPA ID #:** PAD 00 000 0554

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 is under control, and that monitoring will be conducted to confirm that contaminated groundwater remains within the "existing 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 stabilizing the 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).

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2. Is **groundwater** known or reasonably suspected to be “contaminated”<sup>1</sup> 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?

**X** 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):** 1) the PADEP the “Comprehensive Monitoring Evaluation Report” dated October, 2000. The Report concluded: “Based on the consistency of the groundwater quality data from the facility, the PADEP approved a reduction in the frequency of [GW] monitoring from annual to biannual.” Contaminants of concern historically associated with the closed hazardous waste surface impoundments and include trichloroethene, vinyl chloride, and 1-2 dichloroethene. 2) “RCRA Hazardous Waste Annual Monitoring Report”, dated July 18, 2000 included sampling of groundwater (GW) taken on May 11, 2000 detected concentrations of trichloroethylene in the wells MW-4 - 9.5 µg/l, and MW-7 - 5.1 µg/l; vinyl chloride, and 1-2 dichloroethene were both below detection limits. 3) “RCRA Hazardous Waste Annual Monitoring Report” dated October 29, 1998 included sampling taken on April 8, 1998 detected trichloroethylene and cis-1,2-dichloroethene. 4) 1997 “RCRA Comprehensive GW Monitoring Evaluation” detected trichloroethene, vinyl chloride, and 1-2 dichloroethene, also pH=2. 5) the GW results of 1st quarter of 1986 detected 1,4-dioxane, vinyl chloride, cadmium, and trans-1,2-dichloroethene. 6) “Analysis of Perimeter Streams”, letter from SPS Technology to PADEP dated July 30, 1993. All streams on the perimeter of SPS were analyzed on July 22, 1993. Three samples “A”, “C”, and “D” were taken upstream, sample “B” - downstream from the SPS facility. Results of all 4 stream samples show that TCE is not present in the stream above the detection limit of 5 ppb. 7) RFA Report, dated August 26, 1986.

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3. Is the migration of contaminated groundwater stabilized (such that contaminated groundwater is expected to remain within “existing area of contaminated groundwater” as defined by the monitoring locations designated at the time of this determination)?

**X** 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”<sup>2</sup>).

\_\_\_\_\_ If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination”<sup>2</sup>) - 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):** 1) the PADEP the “Comprehensive Monitoring Evaluation Report” dated October, 2000. The Report concluded: “Based on the consistency of the groundwater quality data from the facility, the PADEP approved a reduction in the frequency of [GW] monitoring from annual to biannual.” Contaminants of concern historically associated with the closed hazardous waste surface impoundments and include trichloroethene, vinyl chloride, and 1-2 dichloroethene. 2) “Analysis of Perimeter Streams”, letter from SPS Technology to PADEP dated July 30, 1993. All streams on the perimeter of SPS were analyzed on July 22, 1993. Three samples “A”, “C”, and “D” were taken upstream, sample “B” - downstream from the SPS facility. Results of all 4 stream samples show that TSE is not present in the stream to the detection limit of 5 ppb.

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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):** 1) The GW is discharge in the Tacony and Balder Creeks which could be used for fishing and/or swimming. 2) Report "A description of the contaminated plume", April 3, 1987. 3) "Analysis of Perimeter Streams", letter from SPS Technology to PADEP dated July 30, 1993. All streams on the perimeter of SPS were analyzed on July 22, 1993. Three samples "A", "C", and "D" were taken upstream, sample "B" - downstream from the SPS facility. Results of all 4 stream samples show that TSE is not present in the stream to the detection limit of 5 ppb. 4) Most recent sampling (May 11, 2000) shows only TSE is present at levels slightly above the MCL.

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5. Is the discharge of “contaminated” groundwater into surface water likely to be “insignificant” (i.e., the maximum concentration 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)?

**X** 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<sup>3</sup> 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 suspected 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<sup>3</sup> 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<sup>3</sup> 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):** 1) the PADEP the “Comprehensive Monitoring Evaluation Report” dated October, 2000. The Report concluded: “Based on the consistency of the groundwater quality data from the facility, the PADEP approved a reduction in the frequency of [GW] monitoring from annual to biannual.” Contaminants of concern historically associated with the closed hazardous waste surface impoundments and include trichloroethene, vinyl chloride, and 1-2 dichloroethene. 2) Report “A description of the contaminated plume”, April 3, 1987. 3) “Analysis of Perimeter Streams”, letter from SPS Tech. To PADEP dated July 30, 1993.

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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 implemented<sup>4</sup>)?

**X** 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 with documentation demonstrating that 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 include: surface water body size, flow, use/classification/habitats and contaminant loading limits, 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):** 1) the PADEP the “Comprehensive Monitoring Evaluation Report” dated October, 2000. The Report concluded: “Based on the consistency of the groundwater quality data from the facility, the PADEP approved a reduction in the frequency of [GW] monitoring from annual to biannual.” Contaminants of concern historically associated with the closed hazardous waste surface impoundments and include trichloroethene, vinyl chloride, and 1-2 dichloroethene. 2) Report “A description of the contaminated plume”, April 3, 1987. 3) “Analysis of Perimeter Streams”, letter from SPS Tech. To PADEP dated July 30, 1993.

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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?”

**X** 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):** PADEP continues to oversee groundwater monitoring at SPS facility. Monitoring frequency reduced from annual to biannual.

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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).

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 **SPS Technologies, Inc.** facility, EPA ID # **PAD 00 000 0554**, located at **302 Highland Avenue, Jenkintown, Pennsylvania 19046-2611**. 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: 08-29-00  
                          (print) V. IOFF  
                          (title) Remedial Project Manager

Supervisor        (signature) \_\_\_\_\_    Date: 09-28-00  
                          (print) P. GOTTHOLD  
                          (title) PA Operations Branch Chief  
                          (EPA Region or State) EPA, Region 3

**Locations where References may be found:**

EPA Region III, 1650 Arch St, Philadelphia, Pa. 19103-2029.

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