

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: 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 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? (**Note this determination is site-wide and includes all identified contaminated media on- and off-site as shown in SPS Technologies Inc. Reports and the “RCRA Hazardous Waste Annual Monitoring Report” prepared for PADEP, dated July 18, 2000).**

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			trichloroethylene, vinyl chloride and 1-2 dichloroethene.
Soil Vapor / Air (indoors) ²		X		
Surface Soil (e.g., <2 ft)		X		most of the site covered with asphalt or concrete.
Surface Water		X		
Sediment		X		
Subsurf. Soil (e.g., >2 ft)		X		
Air (outdoors)		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.

X 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): 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 to the detection limit of 5 ppb. 7) RFA Report, dated August 26, 1986.

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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

Potential **Human Receptors** (Under Current Conditions)

<u>“Contaminated” Media</u>	Res.	Worker	Const.	Tresp.	Recreat.	Food ³
Groundwater	___	YES	___			___
Air (indoors)via Soil Vapor		NO_	___			
Soil (surface, e.g., <2 ft)	NO_	_	___	___	___	___
Surface Water	___	NO_		___	___	___
Sediment	___	NO_		___	___	___
Soil (subsurface e.g., >2 ft)		NO	___			___
Air (outdoors)	___	NO_	___	___		

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 media-receptor 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).

__Y_ 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): 1) facility is an active manufacturing plant located in Jenkintown, Pennsylvania. Jenkintown derives its water from public supply sources. There are no drinking water wells within one (1) mile of the facility. As of February 7, 2000 the plant “has no information on the location or water quality of the private drinking water wells” in the facility area. 2) 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.

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3) "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. 4) "RCRA Hazardous Waste Annual Monitoring Report" dated October 29, 1998 included sampling taken on April 8, 1998 detected trichloroethylene and cis-1,2-dichloroethene. 5) 1997 "RCRA Comprehensive GW Monitoring Evaluation" detected trichloroethene, vinyl chloride, and 1,2-dichloroethene, also pH=2. 6) the GW results of 1st quarter of 1986 detected 1,4-dioxane, vinyl chloride, cadmium, and trans-1,2-dichloroethene. 7) "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 to the detection limit of 5 ppb.

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4. Can the **exposures** from 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)?

X 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): 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. 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 to the detection limit of 5 ppb.

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5. Can the “significant” **exposures** (identified in #4) be shown to be within **acceptable** limits?

X 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). The 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. Contaminants of concern historically associated with the closed hazardous waste surface impoundments and include trichloroethene, vinyl chloride, and 1-2 dichloroethene

_____ If no (there are current exposures that can be reasonably expected to be “unacceptable”)- continue and enter “NO” status code after providing a description each potentially “unacceptable” exposure.

_____ If unknown (for any potentially “unacceptable” exposure) - continue 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.” 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. 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 to the detection limit of 5 ppb. 7) RFA Report, dated August 26, 1986.

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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):

Yes, "Current Human Exposures Under Control" has been verified. Current levels in the 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. GW is not used by residents. "Current Human Exposures" are "Under Control" at the **SPS Technologies, Inc.** facility, EPA ID # **PAD 00 000 0554**, located at **301 Highland Ave., Jenkintown, Pennsylvania 19046-2611** under current and reasonably expected conditions. PADEP will be **biannually monitoring GW monitoring wells on the site as of October, 2000**. The PADEP Comprehensive Monitoring Evaluation Report of October, 2000 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." **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	<u>(signature)</u> <u>(print) V. IOFF</u> <u>(title) Remedial Project Manager</u>	Date: <u>08-29-00</u>
Supervisor	<u>(signature)</u> <u>(print) P. GOTTHOLD</u> <u>(title) PA Operations Branch Chief</u> <u>(EPA Region or State) EPA, Region 3</u>	Date: <u>09-28-00</u>

Locations where References may be found: EPA Region 3, 1650 Arch St., Philadelphia, Pa. 19103-2029.

Contact telephone and e-mail numbers:

(name) Victoria Ioff
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Final Note: The Human Exposures EI is a Qualitative Screening of the exposures and the determinations within this document should not be used as the solid basis for restricting the scope of more detailed (e.g., site specific) assessments of risk.