

**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:** Spectrum Control Inc. (formerly known as AMP - Elizabethtown)

**Facility Address:** 1593 S. Mt. Joy Street, Elizabethtown, PA 17022

**Facility EPA ID #:** PAD 990 823 858

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?

**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 "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”**<sup>1</sup> 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	<u>X</u>	___	___	<u>1,1-Dichloroethene and 1,1,1-Trichloroethane</u>
Air (indoors) <sup>2</sup>	___	<u>X</u>	___	_____
Surface Soil (e.g., <2 ft)	___	<u>X</u>	___	_____
Surface Water	___	<u>X</u>	___	_____
Sediment	___	<u>X</u>	___	_____
Subsurf. Soil (e.g., >2 ft)	___	<u>X</u>	___	_____
Air (outdoors)	___	<u>X</u>	___	_____

\_\_\_ 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):

Environmental data from all potential release areas has been collected by AMP and Spectrum. Sampling data from 1985 to 1999 is compiled in the referenced reports. Currently, only groundwater contains levels of contamination that are above appropriate screening levels.

A groundwater contaminant plume contains 1,1-Dichloroethene (1,1-DCE) and 1,1,1-Trichloroethane (1,1,1-TCA) above protective screening levels. Only the central part of the plume, around the remediation recovery well (RW-2), currently contains concentrations above the screening levels.

<u>Contaminant</u>	<u>Drinking Water MCL</u>	<u>Region III Tap Water</u>	
		<u>Risk-Based Screening Level</u>	<u>RW-2 Concentration in 1999</u>
1,1-DCE	7 parts per billion	0.04 parts per billion	197 parts per billion
1,1,1-TCA	200 parts per billion	3,200 parts per billion	575 parts per billion

References:

1. Annual Monitoring Report, Building 87 Facility, Elizabethtown, PA, November 1999  
Prepared for AMP Corporation, Prepared by Roy F. Weston  
Figure 2-2 and Appendix B-Historical Groundwater Data
2. RCRA Facility Assessment/Facility Investigation, AMP Incorporated, Elizabethtown Facility, Prepared by Roy F. Weston, February 2000

3. AMP Incorporated Phase II ESA, Elizabethtown, PA, Prepared by Conestoga Inc., June 1999  
Tables 1 through 7 - Sample Analytical Data

Footnotes:

<sup>1</sup> “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 appropriately protective risk-based “levels” (for the media, that identify risks within the acceptable risk range).

<sup>2</sup> Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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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)

<b>“Contaminated” Media</b>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater	___	___	___	___			___
Air (indoors)	___	___	___				___
Soil (surface, e.g., <2 ft)	___	___	___	___	___	___	___
Surface Water	___	___			___	___	___
Sediment	___	___			___	___	___
Soil (subsurface e.g., >2 ft)				___			___
Air (outdoors)	___	___	___	___	___		___

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.

- X** 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).
- 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):

The groundwater contaminant plume is contained on site. On-site groundwater is not used for any purpose. The contaminant plume is being stabilized/remediated by a pump and treat system that has operated since 1994. The concentrations of the contaminants of concern (1,1-DCE and 1,1,1-TCA) are now about 1/3 of the levels that existed in 1995. Contamination above the drinking water MCLs is now found only in the recovery well (RW-2), which is located at the center of the plume.

References:

1. Annual Monitoring Report, Building 87 Facility, Elizabethtown, PA, November 1999  
Prepared for AMP Corporation, Prepared by Roy F. Weston  
Figure 2-2; Appendix B-Historical Groundwater Data
2. RCRA Facility Assessment/Facility Investigation, AMP Incorporated, Elizabethtown  
Facility, Prepared by Roy F. Weston, February 2000  
Section 2.4.2 - Known Groundwater Contamination

<sup>3</sup> Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **“significant”**<sup>4</sup> (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)?

\_\_\_\_\_ 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):

<sup>4</sup> If there is any question on whether the identified exposures are “significant” (i.e., potentially “unacceptable”) consult a human health Risk Assessment specialist with appropriate education, training and experience.

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

\_\_\_\_\_ 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).

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

\_\_\_\_\_ If unknown (for any potentially “unacceptable” exposure) - continue and enter “IN”  
status code

Rationale and Reference(s):

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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):

**YE** - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the **Spectrum Control Inc.** facility, EPA ID # **PAD 990 823 858**, located at **1593 S. Mt. Joy Street, Elizabethtown, PA 17022** under current and reasonably expected conditions. 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 (signature) \_\_\_\_\_ Date 09-12-00  
Maureen Essenthier  
Remedial Project Manager

Supervisor (signature) \_\_\_\_\_ Date 09-21-00  
Paul Gotthold  
PA Operations Branch Chief  
EPA, Region 3

Locations where References may be found: Facility RCRA Project File  
EPA, Region 3  
1650 Arch Street  
Philadelphia, PA 19103-2029

Contact telephone and e-mail numbers:

(name) Maureen Essenthier  
(phone #) 215-814-3416  
(e-mail) essenthier.maureen@epa.gov

**FINAL NOTE: THE HUMAN EXPOSURES EI IS A QUALITATIVE SCREENING OF EXPOSURES AND THE DETERMINATIONS WITHIN THIS DOCUMENT SHOULD NOT BE USED AS THE SOLE BASIS FOR RESTRICTING THE SCOPE OF MORE DETAILED (E.G., SITE-SPECIFIC) ASSESSMENTS OF RISK.**