

**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:** Republic Environmental Systems, Inc.  
(Philip Services Corporation - new name)  
**Facility Address:** 2869 Sandstone Drive, Hatfield, PA 19440  
**Facility EPA ID #:** PAD 08 569 0592

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?

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		X		
Air (indoors) <sup>2</sup>		X		
Surface Soil (e.g., <2 ft)		X		
Surface Water		X		
Sediment		X		
Subsurf. Soil (e.g., >2 ft)		X		
Air (outdoors)		X		

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.

\_\_\_\_\_ 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):** The Republic Environmental Systems Inc. (Philip Services Corporation - new name) is located at 2869 Sandstone Drive, Hatfield, PA. Since 1978, various companies have operated the hazardous waste management facility on 2.2 acres property. The facility functions were an intermediate transfer station for consolidating and treating wastes prior to off-site disposal. No disposal activities were conducted at the site. Prior to 1978 the land was used for farming.

The Facility treats various drummed liquid and solid hazardous waste, as well as residual wastes. All liquid waste processing occurs indoors in closed tanks and reactors. The Facility stores waste and treatment residues for up to 90 days, and then ships all treatment residues off-site for disposal. No landfills, surface impoundments, or land treatment units are present on the site.

The portion of the EPA full Resource Conservation and Recovery Act (RCRA), the Hazardous and Solid Waste Amendments (HSWA) Corrective Action Permit, was issued to the facility in December 1988. EPA and the facility worked together to achieve the requirements of the Permit. In 1988 sludge vault and drum storage areas were built, in 1994-1995 soil and sediment sampling took a place, a new “containment building” was built, voluntary soil clean up completed in June of 1995, the groundwater monitoring sampling started in the summer of 1995. In June of 1995, the facility voluntarily removed soil contaminated with 8000 ppm total petroleum hydrocarbons as well as some low levels of volatile compounds.

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In 1986, the EPA Region 3 Superfund program identified the Facility as one of five Potential Responsible Parties associated with contamination of North Penn Water Authority (NPWA) well NP-15. After extensive investigation, the Source Control Work Plan Report concluded that “none of the constituents identified in the groundwater at NP-15 were found in the soil sample results,” also “trichloroethene (TCE) was not detected in any of potential source areas of the facility. The above indicates that there is not a source of TCE at the facility.” The Superfund report concluded that Republic Environmental “should no longer be considered as a potential source at NP-15.” On September 4, 1998, EPA determined that the Facility satisfied its obligations under the Administrative Order on Consent under Superfund. In accordance with EPA policy, the RCRA program agreed with the conclusions developed under the Superfund Order.

EPA investigations under RCRA and Superfund demonstrated that Republic Environmental Systems Inc. (Philip Services Corporation), Hatfield facility does not represent a risk to human health and the environment from past releases. On June 9, 1999, the RCRA Corrective Action program proposed in a public notice that “no further corrective action is necessary at this time at the Facility.” EPA received no comments on its proposal, and on July 26, 1999 a Final Determination was issued to the Republic Environmental Systems Inc. (Philip Services Corporation).

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><u>“Contaminated” Media</u></b>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater	---	---	---	---	NO	NO	---
Air (indoors)	---	---	---	NO	NO	NO	NO
Soil (surface, e.g., <2 ft)	---	---	---	---	---	---	---
Surface Water	---	---	NO	NO	---	---	---
Sediment	---	---	NO	NO	---	---	---
Soil (subsurface e.g., >2 ft)	NO	NO	NO	---	NO	NO	---
Air (outdoors)	---	---	---	---	---	NO	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.

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):** See page # 2.

<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)?

  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):**            See page # 2.

<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?

  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).

       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):**            See page # 2.

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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):

  X   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 "Under Control" at the **Republic Environmental Systems Inc. (Philip Services Corporation - new name)**, EPA ID # **PAD 08 569 0592**, located at **2869 Sandstone Drive, Hatfield, Pennsylvania** 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) Signed by VEI Date 07-10-02  
(print) Victoria Ioff  
(title) Remedial Project Manager

Supervisor (signature) Signed by PG [original signer 7-1-98] Date 07-12-02  
(print) Paul Gotthold  
(title) PA Operations Branch Chief  
(EPA Region or State) EPA, Region 3

**Locations where References may be found:**

1650 Arch Street, 3WC22  
RCRA EPA files.

**Telephone and e-mail numbers:**

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(e-mail) Ioff.vickie@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.**