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	Address:	1100 Virginia Drive, Fort Washington, PA
Facility	EPA ID#:	PAD 00 238 6761
1.	groundwater, su	e relevant/significant information on known and reasonably suspected releases to soil, arface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste hits (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been considered in this 1?
	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

Facility Name:

Definition of Environmental Indicators (for the RCRA Corrective Action)

Honeywell, Inc.

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).

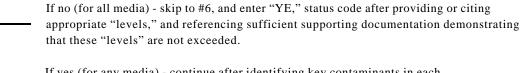
Duration / Applicability of EI Determinations

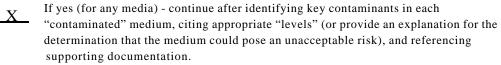
EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

Page 2

2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be "contaminated" 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)?

	Yes	No	?	Rationale / Key Contaminants
Groundwater	X			Trichloroethene (TCE), tetrachloroethene (PCE), 1,1-
				dichloroethene (1,1-DCE), and vinyl chloride are all
				above MCLs / risk-based levels.
Air (indoors) ²		X		See Final RCRA Facility Investigation.
Surface Soil (e.g., <2 ft)		X		"
Surface Water		X		"
Sediment		X		"
Subsurf. Soil (e.g., >2 ft)		X		"
Air (outdoors)		X		"





	If unknown	(for any	media) -	skip	to #6 a	and enter	"IN"	status code.
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Rationale and Reference(s):		

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 appropriately protective risk-based "levels" (for the media, that identify risks within the acceptable risk range).

²Recent 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.

Page 3

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

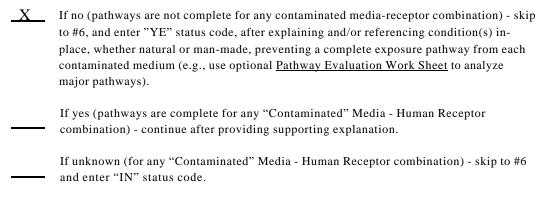
Potential **Human Receptors** (Under Current Conditions)

"Contaminated" Media Resident	ents	Workers	Day-Care	Construction	Trespassers	Recreation	$Food^3$
Groundwater	no	no	no	no	no	no	no
Air (indoors)*	NA	NA	NA	NA	NA	NA	NA
Soil (surface, e.g., <2 ft)	"	"	"	"	**	"	"
Surface Water	"	"	"	"	**	"	"
Sediment	"	"	"	44	44	"	"
Soil (subsurface e.g., >2 ft)	"	"	"	44	••	66	"
Air (outdoors)	**	44	**	"	66	**	"

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.



Rationale and Reference(s): The RFI found that nearby residential wells had not been adversely impacted by groundwater contamination attributable to the facility, that there was no information to suggest that any other existing well users were threatened by the subject contamination and that there otherwise was no health threat posed by the groundwater under current or reasonably expected conditions.

In accordance with Consent Order RCRA-III-079-CA of August 18, 1995, a groundwater pump and treat system has been operational at the facility since 1997 to restore all contaminated groundwater at the facility to levels protective of human health. Quarterly reporting by the facility confirms that the system has been operational since 1997.

* In the event that the industrial use of the facility changes to a different use, the vapor intrusion to indoor air pathway will be evaluated as needed to confirm that this pathway does not present an unacceptable risk to human health under the different use.

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

Page 5

4.	Can the exposures from any of the complete pathways identified in #3 be reasonably expected to be " significant " (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):

⁴ 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.

	If yes (all "significant" exposures have been shown to be within acceptable limits) - continue and enter "YE" after summarizing <u>and</u> 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

Page 7

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 bel (and attach appropriate supporting documentation as well as a map of the facility):							
X	review of are expect 6761, locareasonably	, "Current Human Exposures Under Co the information contained in this EI Det red to be "Under Control" at the Honey ated at 1100 Virginia Drive in Fort Wa by expected conditions. This determination tate becomes aware of significant chan	ermination, "Current Human Expos well, Inc. facility, EPA ID # PAD 00 ashington, PA under current and on will be re-evaluated when the				
	NO - "Cu	irrent Human Exposures" are NOT "Und	der Control."				
	IN - Moi	re information is needed to make a dete	rmination.				
Completed by	(signatur	e)	Date <u>09/27/02</u>				
	(print)	Darius Ostrauskas					
	(title)	Remedial Project Manager	PRIGINAL SIGNED 06/12/98				
Supervisor	(signatur	e)	Date <u>09/27/02</u>				
-	(print)	Paul Gotthold	<u> </u>				
	(title)	PA Operations Branch Chief					
	(EPA Reg	gion or State) EPA, Region 3	<u> </u>				
Locations where References may be found:							
EPA Region III							
Waste and Chemicals Management Division							
1650 Arch Street							
Philadelphia, PA 19103-2029							
Contact telepho	ne and e-ma	il numbers:					

FINAL NOTE: THE HUMAN EXPOSURES ELIS 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.

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