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: **Honeywell International (former Petrowax PA, Inc., McKean Plant)**
Facility Address: **P.O. Box 3367, Farmers Valley, Pennsylvania**
Facility EPA ID #: **PAD 04 676 1763**

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.

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).

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

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)?

	Yes	No	?	**Rationale / Key Contaminants**
Groundwater	**_X_**	___	___	_____
Air (indoors) 2	___	_X__	___	_____
Surface Soil (e.g., <2 ft)	___	_X__	___	_____
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):

a) Environmental indicator inspection report, dated October 2001. **b)** the PADEP approval to discontinue GW monitoring program for the former Burn Dump, dated 1988. **c)** Closure certification for the former hazardous waste Drum Storage, PADEP, November 9, 1995. **d)** Semiannual GW monitoring for July-December, 1999. Report dated February 16, 2000. **e)** Installation operation and evacuation of dual-phase recovery system, 1995. **f)** Waste disposal areas characterization report, dated October 1998. **g)** Site characterization report, July 12, 1996. **h)** RCRA report, US EPA Region III, Environmental Monitoring and Surveillance Branch, dated April 15,1993.

The refinery operations started on the site in 1923. Petrowax was originally a petroleum crude oil refinery facility. In 1981 it was converted from a petroleum refinery to a wax processing plant. The facility is no longer manufacturing gasoline, fuel oils, or lubricant. Any materials removed during the deoiling process were sold to a petroleum refinery in 1981. The plant's principal operation is to remove the oil from the wax. The Honeywell International Farmers Valley plant, processes waxy feed stocks into finished waxes. The wax produced at the plant is used in to waterproof cups and paper plates, as well as in the manufacture of automobile tires and candles.

Cole Creek bisects the 135-acre Honeywell facility into two areas. The Main Plant is located north of Creek and a Former Gasoline Platforming Area to the south of the Cole Creek. The Main Plant has 5 operating areas: Former Gasoline Storage and Blending Area, Waste Water Treatment Area, Crude Unit Area, Filter House/Dewaxer Unit Area, and Furfural/Lube blending Area.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

From 1985 until now several environmental investigations and corrective actions took a place at the plant. In June of 1992 as a result of the PADEP Notice of Violation 2,400 tons of residual waste were removed off-site for off-site disposal. Soil and fill samples at the plant were analyzed for Target Analyte List (TAL) metals, cyanide, PADEP short list of volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), sulfate, chloride, sodium and pH. The results reported that no fill or soil samples had accedences to the provisions of the Land Recycling and Environmental Standards Act (Act 2) Medium-Specific Concentrations (MSCs). However, seven soil samples exceeded the Act 2 Non-Residential Direct Contact (NRDC) MSC for arsenic and vanadium, and one sample exceeded for selenium.

Some of the groundwater (GW) samples exceeded MSC for analyzed organic compound - benzo(a)pyrene, as well as for aluminum, beryllium, antimony, chromium, lead, and nickel. According to the Report of October 2001 Floating Separate Phase Hydrocarbons (FSPH) was detected in the GW samples. The facility operates a FSPH recovery system in the Main Plant Area. After evaluating the results of the Report the site-specific risk-based concentrations were recommended to be considered for GW and soil remediation. Under Act 2, the concentrations of site-related constituent would be evaluated at the point where GW leaves the site - the Cole Creek which is used for recreational activities. The GW contamination is currently maintained within the facility boundaries.

An additional GW and soil investigation in accordance with the provisions of EPA and the PADEP Land Recycling and Environmental Standards Act (Act 2) is necessary to protect human health and the environment.

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).

2 Recent evidence (from the CO Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above contaminated groundwater than previously believed. While this is a rapidly developing field current evidence (1/99) suggest that indoor air in structures located above (and adjacent to) contaminated groundwater should not be assumed to be acceptable without physical evidence.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

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	Res.	Worker	Const.	Tresp.	Recreat.	Food3
Groundwater	_NO__	NO___	___			___
Air (indoors)	_NO__	NO___				
Soil (surface, e.g., <2 ft)	_NO__	NO___	___	___	___	___
Surface Water	_NO__	NO___		___	___	___
Sediment	_NO__	NO___		___	___	___
Soil (subsurface e.g., >2 ft)	_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.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

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): see page 2.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

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 each potentially "unacceptable" exposure.

_____ If unknown (for any potentially "unacceptable" exposure) - continue and enter "IN" status code

Rationale and Reference(s): see page 2.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)

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 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 Honeywell International Inc., EPA ID #PAD 046 761 763, located in Farmers Valley, 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) Date: 07-31-02
(print) Ioff, Victoria
(title) Remedial Project Manager

Supervisor (signature) Date: 08-21-02
(print) Gotthold, Paul
(title) PA Operations Branch Chief
(EPA Region or State) EPA, Region 3

Locations where References may be found:

1650 Arch Street, 3WC22,
EPA files.

Telephone and e-mail numbers:

(name) Ioff, Victoria
(phone #) 215-814-3415
(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.