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: **ITW Philadelphia Resins**
Facility Address: **130 Commerce Drive, Montgomeryville, PA 18936**
Facility EPA ID #: **PAD002278224**

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).

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		No known releases at the facility, except for minor staining on asphalt near fill ports for indoor ASTs.
Air (indoors)[2]		X		BTEX in groundwater (offsite) located downgradient of site
Surface Soil (e.g., <2 ft)		X		No known releases at the facility, except for minor staining on asphalt near fill ports for indoor ASTs.
Surface Water		X		No surface water media are relevant on site.
Sediment		X		No sediment media are relevant on site.
Subsurf. Soil (e.g., >2 ft)		X		No known releases at the facility, except for minor staining on asphalt near fill ports for indoor ASTs.
Air (outdoors)		X		Facility emissions (under permit) vented to baghouse.

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):
ITW Philadelphia Resins is a division of Illinois Tool Works (ITW), a global industrial company that has been in business since 1912. ITW currently operates at 130 Commerce Drive (formerly 26 Commerce Drive), manufacturing a variety of adhesives and specialty coatings for industrial and marine applications. The majority of the products are epoxy-based adhesives, specialty coatings, and pourable chocking and grouting compounds. Prior to ITW's acquisition of the facility in 1983, the facility was privately owned and operated as Philadelphia Resins Corporation. The facility's administration and

[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 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.

rope making operation remained at 20 Commerce Drive until 1985, when the property and the rope making operation was sold to Phillystran who currently operates at 20 Commerce Drive. Note: The facility was permitted to operate a hazardous waste storage facility at the 26 Commerce Drive property (also known as 130 Commerce Drive).

The facility consists of a 38,000 square foot manufacturing plant that includes administrative offices and a laboratory. The northern portion of the building consists of office space, the laboratory (used for quality control and quality-assurance tests, as well as product improvement and new product development), and the hazardous waste storage area. The raw materials storage, manufacturing area, finished materials storage, and shipping/receiving docks are located in the southern portion of the building. The manufacturing process consists of blending raw materials to form the finished products. Raw materials including epoxy resins, hardeners, fillers, and modifiers are received at the facility via the receiving dock. Resins and hardeners are stored in the facility's six indoor aboveground storage tanks (ASTs). Fillers are received in bags. The raw materials are blended in six separate mixing pots of varying capacities located in the manufacturing area. When well-blended, the mixtures are transferred to the dispensing area where the final products are dispensed into containers either by gravity or ramming. The final products are then transferred to the final product storage area located in the southeastern corner of the building.

The facility generates waste as a result of cleaning the mixing equipment with solvents after use. The solvent wastes, which also contain resins and curing agents, are subsequently drummed and transported to the waste accumulation area awaiting off-site disposal by licensed contractors. Prior to 1983, the waste accumulation area consisted of an open, caged, asphalt-paved area located outside of the northwestern corner of the building. In 1983, the outdoor waste accumulation area was closed (Professional Engineer Certification of Closure, 1985); and in 1985, the facility constructed an addition to the building in the same area. Currently, all wastes generated at the facility are stored in this area of the building.

The facility operates as a large quantity generator (LQG) of hazardous waste. Wastes generated at the facility primarily consist of D001 (characteristically ignitable) and F003/F005 (spent non-halogenated solvents) wastes. The facility also is a LQG of residual wastes that include silica sand filler, epoxy resin blends, wastewater, surface coatings, and plant trash (PADEP, 2009). The facility also operates under a Natural Minor State Only Operating Permit (No. NMOP-46-00107), and a National Pollutant Discharge Elimination System (NPDES) permit (No. PAR230021). The facility also reported under the Toxic Release Inventory System (18936TWPHL130C0) according to Pennsylvania Department of Environmental Protection (PADEP) eFACTS website updated on May 22, 2008. The facility was required to register with USEPA as a pesticide-producing facility (055363PA001) in accordance with Section 7 of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) because of its past use of tributyltin (an antifouling agent) in its marine paints. Facility representatives stated that tributyltin is no longer used at this facility.

Groundwater: The water supply for the facility is provided by the North Wales Water Authority (NWWA). According to the Pennsylvania Department of Conservation of Natural Resources (PA DCNR) Groundwater Information System (PaGWIS), there are four private supply wells located within 0.5 miles of the facility. The closest well is located approximately 0.3 miles southeast of the facility. Reported well depths for these private wells range from 218 feet to 508 feet.

There have been no known releases to groundwater at the site. Hazardous wastes and regulated substances (raw products in ASTs) are stored inside of the building on the concrete, epoxy-coated floors and within secondary containment units (e.g., three-foot high concrete walls and recessed/curbed concrete floors). Some minor staining was observed on the asphalt pavement around the outdoor containment box situated below the fill ports associated with the indoor regulated ASTs and near the fill ports for the indoor unregulated ASTs. Closure of the outdoor waste drum storage area in 1983 was conducted in accordance with the PADEP-approved closure plan and was certified by a Professional Engineer on PADEP certification forms. This area was enclosed and currently serves as the facility's labeling department. Based on this information, the exposure pathway or release controls for groundwater are not required at this time.

Note: Two PADEP Land Recycling Program (Act 2) clean-up sites also are located in close proximity to the facility. These

include the property located directly southwest of the facility (SGS-Thomson Microelectronics (SGS) [formerly Advanced Power Technology RF Pennsylvania, Inc. - PAD021047584] formerly located at 140 Commerce Drive) and the property located approximately 700 feet northeast of the facility (Thomas & Betts Corporation formerly located at 120 Commerce Drive). Documents pertaining to these sites were not reviewed as part of the EI for this facility. An NIR was submitted to PADEP for the SGS site on October 28, 1996. A final report concerning remediation of site soils and groundwater contaminated with chlorinated solvents and benzene, toluene, ethylbenzene, and xylenes (BTEX) was submitted in December 1996. The report documented demonstration of the PADEP non-residential statewide health standards for soil and site-specific standard for groundwater. The final report was approved on February 26, 1997 with implementation of deed restrictions and use of engineering controls. One monitoring well related to this investigation was observed on the property boundary between ITW and the former SGS facility.

Air (indoors): According to facility representatives, the facility operates in accordance with Occupational Safety and Health Administration (OSHA) regulations. Air and noise monitoring is conducted throughout the facility by an industrial hygienist every three years. The most recent air and noise monitoring was conducted in June 2009. The results indicated that workers were not exposed to air contaminants (including styrene and total hydrocarbon vapors) above currently accepted OSHA permissible exposure limits and the threshold limit values established by the American Conference of Governmental Industrial Hygienists.

There have been no known releases to soil or groundwater related to the ITW facility. However, according to the PADEP eFACTS website, engineering controls have been instituted at the property located directly southwest of the facility (140 Commerce Drive, former SGS facility. (Note: SGS is also undergoing the EI assessment process.) The site demonstrated attainment of the PADEP non-residential statewide health standard for soils and a site-specific standard (by means of deed restrictions and engineering controls) for groundwater contaminated with chlorinated solvents and BTEX. One monitoring well related to this investigation was observed along ITW's southern property boundary. Groundwater information for this well was not reviewed. Therefore, it is unknown whether any contaminants from the SGS facility are present at the property boundary (less than 100 feet from the ITW building). However, based on topographic mapping of the area, it is assumed that shallow groundwater flow is toward the south/southwest, away from the ITW facility.

Soil: There have been no known/reported releases to soil at this facility with the exception of some minor staining on the asphalt surface beneath the outdoor containment box situated beneath the fill ports associated with the indoor regulated ASTs and near the fill ports for the indoor unregulated ASTs. Prior to 1983, drummed raw and waste materials (including some hazardous wastes) were stored outdoors on the asphalt pavement. As previously discussed, the waste drum storage area was certified closed by a Professional Engineer in accordance with the PADEP-approved closure plan, and an addition was constructed in 1990 over this area. All raw and waste materials are currently stored inside of this portion of the building on the concrete, epoxy-coated floor within secondary containment, where necessary. The majority of the site is covered with impermeable surfaces with the exception of the grassy area on the east site of the building along Commerce Drive.

Surface Water/Sediment: The nearest surface water body is the intermittent headwaters to Park Creek located approximately 0.35 miles south of the facility. All stormwater at the facility is directed to its stormwater detention basin, which according to facility personnel is typically dry. In 1999, based on historical sampling results, PADEP approved the facility's request to reduce its monitoring requirements to the Appendix J list (annual visual inspection or annual monitoring). Stormwater in the facility's detention basin, along with the upstream facilities, discharges to the stormwater detention basin located on Enterprise Road. The stormwater in this detention basin is then discharged to the intermittent headwaters of Park Creek. There have been no known violations of the facility's NPDES permit, and no know releases have occurred at the site that may have entered the stormwater detention basin.

Air (outdoors): Emissions from the facility's process areas are vented via indoor piping to the permitted baghouse. The emissions sources and control devices are permitted under NMOP No. 46-00107. No violations have been noted during air quality inspections conducted by PADEP since 2002 (the year the NMOP was issued).

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	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food[3]
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.

_____ 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):

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

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 **ITW Philadelphia Resins** facility, EPA ID # **PAD002278224**, located at **130 Commerce Dr, Montgomeryville, PA 18936** 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) Draghiciu Date 3/22/2011

(print) Camelia M. Draghiciu

(title) Geologic Specialist

Supervisor (signature) Mohamad Mazid Date 3/22/2011

(print) Mohamad M. Mazid, P.E., PhD

(title) Environmental Engineer Manager

(EPA Region or State) PADEP, Southeast Regional Office

Paul Hotchkiss

Locations where References may be found:

USEPA Region III
Waste and Chemical Mgmt. Division
1650 Arch Street
Philadelphia, PA 19103

PADEP
South East Regional Office
2 E Main Street
Norristown, PA 19401

Contact telephone and e-mail numbers
(name) Camelia M. Draghiciu
(phone #) 484.250.5743
(e-mail) cdraghiciu@state.pa.us

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.

Facility Name: ITW Philadelphia Resins
EPA ID# PAD002278224
City/State Montgomeryville, PA 18936

CURRENT HUMAN EXPOSURES UNDER CONTROL (CA725)