

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)
Current Human Exposures Under Control

Facility Name: Former Monach Circuit Industries, Inc.
Facility Address: 1418 Hanford Street, Levittown, PA 19057
Facility EPA ID #: PAD980552145

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 #8 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”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)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
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.
- 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):

Facility Background Information:

The Former Monach Circuits Industries, Inc. facility (Monach or Facility) is located at 1418 Hanford Street in Bristol Township, Bucks County, Pennsylvania. The approximately 0.25-acre site was purchased by Tlapan Investments from Vanni and Midora Construction Company on January 28, 1980. Monach leased the site from Tlapan Investments between 1980 and 1982 and used the Facility building for chemical storage. Chemicals stored at the Facility included raw chemicals and waste chemicals used and generated from the production of circuit boards by another Monach facility located at 2210 Farragut Avenue in Bristol, Pennsylvania. In October 1982, Monach filed for bankruptcy and the Hanford Street Facility was closed.

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 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.

Facility Background Information (continued):

From 1982 to 1984, the Facility remained vacant. On June 11, 1984, Robert Monach, Sr., Gerald Monach and Richard Jones, III purchased the site from Tlapan Investments. In 1984, the site was leased to the former Rapid Circuits Industries (Rapid Circuits) facility for the manufacture of circuit boards. Operations conducted by Rapid Circuits included screening, painting, cleaning, electroplating using copper, lead, and nickel-to-gold, and wastewater treatment. On December 14, 1988, Robert Monach, Sr., purchased the site from Gerald Monach and Richard Jones, III, and continued to lease the Facility to Rapid Circuits. In 1989, Rapid Circuits transferred its entire circuit board operation to one of its other facilities located at 6401 McPherson Avenue in Levittown, Pennsylvania. In March 1995, Robert Monach, Sr. sold the site to the current owner and operator, Thomas Woods of Ivey Air, Inc. (Ivey Air), a sheet metal and air condition contractor.

RCRA Regulatory Status:

On November 17, 1980, Monach filed a Notification of Hazardous Waste Activity Form and submitted a Part A Hazardous Waste Permit Application to the United States Environmental Protection Agency (EPA) for the storage of hazardous waste at the Facility. On July 24, 1981, EPA granted Monach interim status under Section 3005 of RCRA, and assigned the Facility the temporary EPA ID No. PAT440012128. Interim status was granted for the storage of spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (Hazardous Waste Code F009) and spent cyanide plating bath solutions (Hazardous Waste Code F007). The hazardous wastes stored at the Facility were generated by Monach's Bristol facility. On October 29, 1981, EPA assigned the Facility the permanent EPA ID No. PAD980552145. On December 23, 1983, EPA requested submittal of Monach's Part B Hazardous Waste Permit Application (Part B). However, the Part B was never submitted because the Facility filed for bankruptcy in October 1982, and its assets were sold. Consequently, Monach was never issued a RCRA Hazardous Waste Permit.

On April 26, 2011, Michael Jr. Baker, Inc. conducted an Environmental Indicator (EI) Inspection of the Former Monach Circuits Facility, on behalf of EPA. The findings of the EI Inspection are documented in a September 2011 EI Inspection Report, prepared by Baker, for Monach Circuit Industries, Inc. (EPA ID No. PAD980552145). During the EI Inspection, it was noted that the entire Facility building is currently used for the fabrication of sheet metal into ductwork for Ivey Air's commercial clients, and the majority of the space is used for storage of sheet metal, prefabricated ductwork, wiring, and accessories. Ivey Air representative, Mr. Richard Aicher, stated that no hazardous materials are used in Ivey Air's operations.

For additional information regarding past generation and management of hazardous waste at the Facility, please refer to the September 2011 EI Inspection Report.

Solid Waste Management Units:

EPA has identified the following Solid Waste Management Units (SWMUs) for the Facility.

SWMU 1 – Former Hazardous Waste Drum Storage Area

The location of the Facility's Former Hazardous Waste Drum Storage Area is unknown. Between 1981 and 1982, Monach used SWMU1 for the storage of spent cyanide plating solutions (F007) and spent stripping and cleaning bath solutions from electroplating operations where cyanides are used in the process (F009). There are no known or documented releases for this unit.

SWMU 2 – Former Resin Treatment System

The Former Resin Treatment System (wastewater treatment system) was located in the northwestern corner of the plant and was operated by Rapid Circuits from 1984 to 1989. SWMU 2 is approximately 15 feet wide and 20 feet long and situated on a concrete floor with floor drains that parallel the cement walls that surround the area. A concrete sump, approximately three by four feet in size, surrounded by three-foot concrete walls, is located in the southwestern corner. During Rapid Circuits operations, the sump received all wastewaters from the floor drains (spills/releases), nickel-to-gold bath, copper baths, tin lead baths, and cleaning rinses (10 percent acid, 5 percent alkaline). Treatment of Rapid Circuits wastewaters by the Former Resin Treatment System resulted in the generation of wastewater treatment sludge, which was dewatered and shipped off-site for disposal as a hazardous waste (EPA Hazardous Waste Code F006). The treated effluent was recycled through the plant; therefore, wastewaters were not discharged by Rapid Circuits to the sewer system. There are no known or documented releases for this unit.

SWMU 3 – Former Dumpsters

The Former Dumpsters were located along the outside eastern wall of the Facility in the parking lot and were operated by Rapid Circuits from 1984 to 1989. SWMU 3 was used for all non-hazardous waste, including scrap metals, film, containers, and office waste. There are no known or documented releases for this unit.

Potential Exposure Pathways:

Please note that there have been no known and/or reported releases at this Facility, and that the majority of the Site is covered with impermeable surfaces, such as, concrete slabs and asphalt paving.

1. Groundwater: Water and sewer are provided to the Facility and surrounding area by the Lower Bucks County Joint Municipal Authority (LBCJMA). LBCJMA owns, operates and maintains a system whose area is approximately 9.86 square miles serving the Levittown portions of Bristol Township, Falls Township, Middletown Township, and the Borough of Tullytown. According to the LBCJMA's 2008 Water Quality Report (PWSID# 1090026), LBCJMA draws surface water from the Delaware River and groundwater from five (5) wells. The Delaware River is the primary source of drinking water. The average depth of the wells is approximately 45 feet. Raw surface water withdrawn from the river and groundwater from the wells are mixed prior to treatment at LBCJMA's water treatment plant. In addition, the Bristol Township Code of Ordinances, Chapter 201 Section 201-2, mandates that each building within 150 feet of the public water main must be connected to the public water supply.
- Based on the information above, and because there have been no known/documented releases to Facility soils or groundwater, exposure to groundwater is not considered to be a potential exposure pathway.
2. Indoor and Outdoor Air: Because there have been no known/documented releases to Facility soils or groundwater, subsurface investigation data to conduct a vapor intrusion assessment are not available, nor is it believed to be warranted based on past and present operations. Therefore, vapor intrusion into the Facility building and nearby structures is not considered a potential exposure pathway.
3. Surface Soils and Subsurface Soils: Because there have been no known/documented releases to Facility soils or groundwater operations, and the entire Facility property is covered with either concrete or asphalt, surface soils and subsurface soils are not considered potential exposure pathways.
4. Surface Water and Sediment: The nearest surface water body is a portion of the former Delaware Canal located approximately 0.15 miles southeast of the Facility. The Delaware River is located approximately 0.5 miles east of the Facility. The Delaware River meets Pennsylvania Water Quality Criteria for the protection of warm-water fish and the passage of migratory fish. It is also federally designated as a scenic river and is used for boating. There are two (2) drinking water surface intakes are located downstream of the Facility. Surface water runoff from the Facility typically accumulates in the low-lying areas of Hanford Street until it evaporates, as there is not a stormwater drainage system at the Facility. As previously discussed, there have been no known or documented releases to surface waters by the Facility; therefore, exposure to surface water and sediment do not represent potential exposure pathways.

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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)

<u>“Contaminated” Media</u>	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.)

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4. Can the **exposures** from any of 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)?
- 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.

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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 (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 Former Monach Circuit Industries, Inc. facility, EPA ID # PAD980552145, located at 1418 Hanford Street under current and reasonably expected conditions. This determination will be re-evaluated if 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)  (print) Jeanna R. Henry (title) Remedial Project Manager EPA Region III	Date <u>1/12/12</u>
Supervisor	(signature)  (print) Paul Gotthold (title) Associate Director Office of Pennsylvania Remediation EPA Region III	Date <u>1-12-12</u>

Locations where References may be found:

· US EPA Region III
Land & Chemicals Division
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