

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**

**RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA750)  
Migration of Contaminated Groundwater 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 the groundwater media, 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 "Migration of Contaminated Groundwater Under Control" EI**

A positive "Migration of Contaminated Groundwater Under Control" EI determination ("YE" status code) indicates that the migration of "contaminated" groundwater has stabilized, and that monitoring will be conducted to confirm that contaminated groundwater remains within the original "area of contaminated groundwater" (for all groundwater "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 "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated ground water and contaminants within groundwater (e.g., non-aqueous phase liquids or NAPLs). Achieving this EI does not substitute for achieving other stabilization or final remedy requirements and expectations associated with sources of contamination and the need to restore, wherever practicable, contaminated groundwater to be suitable for its designated current and future uses.

**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. Is **groundwater** known or reasonably suspected to be “contaminated” above appropriately protective “levels” (i.e., applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action, anywhere at, or from, the facility?
- If yes - continue after identifying key contaminants, citing appropriate “levels,” and referencing supporting documentation.
- If no - skip to #8 and enter “YE” status code, after citing appropriate “levels,” and referencing supporting documentation to demonstrate that groundwater is not “contaminated.”
- If unknown - skip to #8 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.

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

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 appropriate “levels” (appropriate for the protection of the groundwater resource and its beneficial uses).

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.

#### **Groundwater:**

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. Because there have been no known/documented releases to Facility soils or groundwater, groundwater is not reasonably suspected to be contaminated above appropriately protective levels.

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.

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3. Has the **migration** of contaminated groundwater **stabilized** (such that contaminated groundwater is expected to remain within “existing area of contaminated groundwater”<sup>2</sup> as defined by the monitoring locations designated at the time of this determination)?
- If yes - continue, after presenting or referencing the physical evidence (e.g., groundwater sampling/measurement/migration barrier data) and rationale why contaminated groundwater is expected to remain within the (horizontal or vertical) dimensions of the “existing area of groundwater contamination”<sup>2</sup>).
  - If no (contaminated groundwater is observed or expected to migrate beyond the designated locations defining the “existing area of groundwater contamination”<sup>2</sup>) – skip to #8 and enter “NO” status code, after providing an explanation.
  - If unknown - skip to #8 and enter “IN” status code.

Rationale and Reference(s):

<sup>2</sup>“existing area of contaminated groundwater” is an area (with horizontal and vertical dimensions) that has been verifiably demonstrated to contain all relevant groundwater contamination for this determination, and is defined by designated (monitoring) locations proximate to the outer perimeter of “contamination” that can and will be sampled/tested in the future to physically verify that all “contaminated” groundwater remains within this area, and that the further migration of “contaminated” groundwater is not occurring. Reasonable allowances in the proximity of the monitoring locations are permissible to incorporate formal remedy decisions (i.e., including public participation) allowing a limited area for natural attenuation.

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4. Does "contaminated" groundwater **discharge** into **surface water** bodies?

- If yes - continue after identifying potentially affected surface water bodies.
- If no - skip to #7 (and enter a "YE" status code in #8, if #7 = yes) after providing an explanation and/or referencing documentation supporting that groundwater "contamination" does not enter surface water bodies.
- If unknown - skip to #8 and enter "IN" status code.

Rationale and Reference(s):

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5. Is the **discharge** of “contaminated” groundwater into surface water likely to be “**insignificant**” (i.e., the maximum concentration<sup>3</sup> of each contaminant discharging into surface water is less than 10 times their appropriate groundwater “level,” and there are no other conditions (e.g., the nature, and number, of discharging contaminants, or environmental setting), which significantly increase the potential for unacceptable impacts to surface water, sediments, or eco-systems at these concentrations)?
- If yes - skip to #7 (and enter “YE” status code in #8 if #7 = yes), after documenting: 1) the maximum known or reasonably suspected concentration<sub>3</sub> of key contaminants discharged above their groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) provide a statement of professional judgement/explanation (or reference documentation) supporting that the discharge of groundwater contaminants into the surface water is not anticipated to have unacceptable impacts to the receiving surface water, sediments, or eco-system.
  - If no - (the discharge of “contaminated” groundwater into surface water is potentially significant) - continue after documenting: 1) the maximum known or reasonably suspected concentration<sub>3</sub> of each contaminant discharged above its groundwater “level,” the value of the appropriate “level(s),” and if there is evidence that the concentrations are increasing; and 2) for any contaminants discharging into surface water in concentrations<sub>3</sub> greater than 100 times their appropriate groundwater “levels,” the estimated total amount (mass in kg/yr) of each of these contaminants that are being discharged (loaded) into the surface water body (at the time of the determination), and identify if there is evidence that the amount of discharging contaminants is increasing.
  - If unknown - enter “IN” status code in #8.

Rationale and Reference(s):

<sup>3</sup> As measured in groundwater prior to entry to the groundwater-surface water/sediment interaction (e.g., hyporheic) zone.

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6. Can the **discharge** of “contaminated” groundwater into surface water be shown to be “**currently acceptable**” (i.e., not cause impacts to surface water, sediments or eco-systems that should not be allowed to continue until a final remedy decision can be made and implemented<sup>4</sup>)?
- If yes - continue after either: 1) identifying the Final Remedy decision incorporating these conditions, or other site-specific criteria (developed for the protection of the site’s surface water, sediments, and eco-systems), and referencing supporting documentation demonstrating that these criteria are not exceeded by the discharging groundwater; OR 2) providing or referencing an interim-assessment<sup>5</sup>, appropriate to the potential for impact that shows the discharge of groundwater contaminants into the surface water is (in the opinion of a trained specialists, including ecologist) adequately protective of receiving surface water, sediments, and eco-systems, until such time when a full assessment and final remedy decision can be made. Factors which should be considered in the interim-assessment (where appropriate to help identify the impact associated with discharging groundwater) include: surface water body size, flow, use/classification/habitats and contaminant loading limits, other sources of surface water/sediment contamination, surface water and sediment sample results and comparisons to available and appropriate surface water and sediment “levels,” as well as any other factors, such as effects on ecological receptors (e.g., via bio-assays/benthic surveys or site-specific ecological Risk Assessments), that the overseeing regulatory agency would deem appropriate for making the EI determination.
  - If no - (the discharge of “contaminated” groundwater can not be shown to be “**currently acceptable**”) - skip to #8 and enter “NO” status code, after documenting the currently unacceptable impacts to the surface water body, sediments, and/or eco-systems.
  - If unknown - skip to 8 and enter “IN” status code.

Rationale and Reference(s):

<sup>4</sup>Note, because areas of inflowing groundwater can be critical habitats (e.g., nurseries or thermal refugia) for many species, appropriate specialist (e.g., ecologist) should be included in management decisions that could eliminate these areas by significantly altering or reversing groundwater flow pathways near surface water bodies.

<sup>5</sup>The understanding of the impacts of contaminated groundwater discharges into surface water bodies is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration to be reasonably certain that discharges are not causing currently unacceptable impacts to the surface waters, sediments or eco-systems.

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7. Will groundwater **monitoring** / measurement data (and surface water/sediment/ecological data, as necessary) be collected in the future to verify that contaminated groundwater has remained within the horizontal (or vertical, as necessary) dimensions of the “existing area of contaminated groundwater?”

If yes - continue after providing or citing documentation for planned activities or future sampling/measurement events. Specifically identify the well/measurement locations which will be tested in the future to verify the expectation (identified in #3) that groundwater contamination will not be migrating horizontally (or vertically, as necessary) beyond the “existing area of groundwater contamination.”

If no - enter “NO” status code in #8.

If unknown - enter “IN” status code in #8.

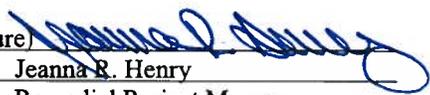
Rationale and Reference(s):

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8. Check the appropriate RCRIS status codes for the Migration of Contaminated Groundwater Under Control EI (event code CA750), 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).

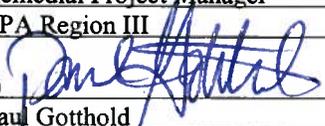
- YE - Yes, "Migration of Contaminated Groundwater Under Control" has been verified. Based on a review of the information contained in this EI determination, it has been determined that the "Migration of Contaminated Groundwater" is "Under Control" at the Former Monach Circuit Industries, Inc. Facility, EPA ID No. PAD980552145, located at 1418 Hanford Street, Levittown, Pennsylvania 19057. This determination will be re-evaluated when the Agency becomes aware of significant changes at the facility.
- NO - Unacceptable migration of contaminated groundwater is observed or expected.
- IN - More information is needed to make a determination.

Completed by

(signature)   
(print) Jeanna R. Henry  
(title) Remedial Project Manager  
EPA Region III

Date 1/12/12

Supervisor

(signature)   
(print) Paul Gotthold  
(title) Associate Director  
EPA Region III

Date 1-12-12

Locations where References may be found:

US EPA Region III  
Land & Chemicals Division  
1650 Arch Street  
Philadelphia, PA 19103

Contact telephone number and e-mail address:

(name) Jeanna R. Henry  
(phone #) (215) 814-2820  
(e-mail) [henry.jeannar@epa.gov](mailto:henry.jeannar@epa.gov)