

**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:** Laird Technologies, Inc.  
**Facility Address:** 1 Shielding Way, Delaware Water Gap, PA 18327  
**Facility EPA ID #:** PAD002161685

I. 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 #6 and enter "IN" (more information needed) status code.

**BACKGROUND**

The facility is located at 1 Shielding Way, Delaware Water Gap, Pennsylvania. The property lies in a commercial zoned area in the Delaware Water Gap Borough, Monroe County. The property is bound by Interstate 80 to the east, Route 611 (Broad Street) to the west and the Interstate 80/Route 611 interchange to the north. Cherry Creek forms the southern boundary of the property. Land use surrounding the property includes commercial development to the north and west, and residential/retail to the west and south. The Delaware Water Gap Municipal Sewage Treatment Plant is located directly north of the facility. The Delaware River is approximately 0.9 miles to the southeast.

The facility is situated on approximately 25 acres of land that slopes gently to the southeast. Two buildings currently exist onsite: the front building and the main building. The front building was constructed in 1968 and was used by various tenants and later by the facility for forming and extruding beryllium/copper wire. The main building was constructed in 1957 and was used by the facility for manufacturing purposes. An additional wood frame building known as World Compliance Center was constructed in 1993 and was utilized by the facility as a conference center until it was washed from its foundation during the flood in 2005.

The facility is in the 100-year flood plain of the Delaware River. No drinking water intake are known to exist within 15 miles downstream. The Delaware River is used for fishing and recreational purposes within region.

Potable water is provided to the facility by the Delaware Water Gap Municipal Authority community water system.

The property was used for:

Ronson Corporation (1957-1979) – Ronson Corporation conducted operations between 1957 and 1979. The Main Building was leased to Ronson Corporation to house its cigarette lighter manufacturing operations.

Delaware Metals (1979 to 1987) - The Front Building was leased to the facility between approximately 1979 and 1987 for its machine shop and chrome plating operations.

Transistor Devices dba Alumitek and Circuitek (1987 to 1997) – Transistor Devices leased the Front Building between 1987 and 1997. Alumitek manufactured aluminum parts and Circuitek manufactured (assembled)

printed circuit boards.

Instrument Specialties/Laird Technologies (1979-2008) – Operations at the facility included die machining, die stamping, degreasing, heat treating, pickling/plating, tumbling, and assembly of electromagnetic interference and radio frequency interference shielding equipment.

Current use (2008 to present) - The property is owned by Laird Technologies. The property is currently vacant, and has been vacant since 2008.

On April 19, 2016, Laird Technologies entered into a Buyer-Seller Agreement with P&R Real Estate, LLC.

### **Investigations and Remedial Actions:**

Soil, soil vapor and groundwater investigations have been performed at the facility. TCE was detected in soil at the Photo Etch area and in shallow overburden groundwater. A soil vapor extraction remediation system, to control soil vapor and reduce TCE concentrations in soil, was installed in 2011 and continues to operate. NIRs for soil and groundwater have been submitted to PADEP. The facility intends to remediate the contamination at the facility to an Act 2 Non-Residential Standard. A Non-Use Aquifer Determination Application was submitted to PADEP on 6/1/2017. In a May 2014 letter, USEPA and PADEP acknowledged Laird Technologies, Inc.'s interest in completing the environmental cleanup at the facility under the One Cleanup Program.

### **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”<sup>1</sup> 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			Groundwater contaminated with TCE at concentrations above the MCL of 5 ug/l TCE detected in indoor air sample at concentration above the EPA residential indoor air SL and below the EPA non-residential indoor air SL.
Air (indoors) <sup>2</sup>	X			
Surface Soil (e.g., <2 ft)		X		Releases not documented
Surface Water		X		Releases not documented
Sediment		X		Releases not documented
Subsurf. Soil (e.g., >2 ft)	X			Subsurface soil contaminated with TCE at concentrations above the EPA industrial soil SL
Air (outdoors)		X		Releases not documented

- 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:**

TCE was detected at concentrations of 26 mg/kg in soil sample collected in the former plating area beneath the concrete floor of the main building at depths of 2-3 feet boring, above the EPA industrial soil SL of 6 mg/kg. TCE was detected in indoor air sample at concentration of 6.4 ug/m<sup>3</sup>, below the EPA non-residential screening level of 8.8 ug/m<sup>3</sup>. A SVE/SSD system was installed in the former plating area in 2011 to remediate the TCE-contaminated soil and soil vapor and continues to operate.

TCE was detected in groundwater shallow aquifer at concentrations as high as 39.8 ug/l, above the MCL of 5 ug/l. Groundwater flows toward Cherry Creek. Cherry Creek is designated as a cold-water fishery and as an attaining stream supporting aquatic life. Cherry Creek discharges into Broadhead Creek approximately 0.3 mile east of the facility. Broadhead Creek is designated as a warm water fishery and trout stocking stream and is an attaining segment supporting recreation and aquatic life. Broadhead Creek converges with the Delaware River approximately 0.9 mile southeast of the site. Delaware River is a designated warm water fishery, is an attaining segment supporting recreation and aquatic life, and is listed as a non-attaining segment impaired for fish consumption due to an unknown source of mercury. No drinking water intake are known to exist within 15 miles downstream.

Although likely to be below appropriate standards, TCE impacts to surface water are not known at this time. Surface water will be investigated under PADEP Act 2 program. EPA will re-evaluate the Human Exposure under Control Environmental Indicator as new information become available. Sediment will also be re-evaluated when the surface water sampling results are available.

**Reference:** 2012 EPA Environmental Indicator Inspection Report, April 2016 Buyer-Seller Agreement

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

<sup>2</sup> 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.

**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)

<b><u>“Contaminated” Media</u></b>	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food <sup>3</sup>
Groundwater	No	No	No	No	NA	NA	NA
Air (indoors)							
Soil (surface, e.g., <2 ft)							
Surface Water							
Sediment							
Soil (subsurface e.g., >2 ft)	NA	No	NA	No	NA	NA	NA
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:**

The facility has been vacant since 2008. The facility and surrounding area are connected to the DWGMA community water supply. No community water supply sources were identified within 0.5 miles of the facility. No domestic wells located downgradient of the facility. The onsite production wells are unused. Groundwater is not used at the facility for potable purposes. Construction worker exposures would be protected thru PPE.

**Reference:** 2012 EPA Environmental Indicator Inspection Report, April 2016 Buyer-Seller Agreement

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

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

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **“significant”**<sup>4</sup> (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:**

**Reference:**

<sup>4</sup> 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.

**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?
- 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):


**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 (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 Laird Technologies, Inc., EPA ID # PAD002161685, located at 1 Shielding Way, Delaware Water Gap, PA 18327 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)   
Tran Tran  
Project Manager

Date: 9-17-18

Supervisor (signature)   
Paul Gotthold  
Associate Director  
EPA Region 3

Date 9-17-18

Locations where References may be found:

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