

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

Facility Name: Emtrol Inc.

Facility Address: 3050 Hempland Road, Lancaster, PA 17601

Facility EPA ID #: PAD054139506

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 #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)
Page 2

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		

 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): Emtrol, Inc. is a 7.1-acre parcel of land with an approximately 54,000 square-foot single-story building located in East Hempfield Township at 3050 Hempland Road (Facility), west of Centerville Road and south of United States (US) Route 30. The land was undeveloped, residential, and/or agricultural from at least 1864 until the construction of a structure similar to the present-day structure in 1973.

International Signals Corporation (ISC) conducted electronics manufacturing operations from approximately 1973 to 1993 and possibly used solvents in the manufacturing and assembly of electronic components. ISC Defense Systems, Inc., a division of International Signal and Control Corporation, was acquired by Ferranti International, P.L.C. in 1987. In December 1993, Ferranti International, P.L.C. was forced into bankruptcy. In 1995, Emtrol purchased the property. Emtrol used most of the building space for a design and engineering office. Some space was also used for assembly of electronic controls and automatic storage equipment in support of the baked goods industry. The physical property and structures of the facility were acquired by YLC, Inc., and the entire building was stripped down and facilities were installed for York Technical Institute (YTI), which started operations in 2003. Blackford Development purchased the property shortly after YTI started their operations and, as of 2008, were leasing it to YTI.

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.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 3

Groundwater: A limited Phase II environmental assessment was performed by Blackstone Consulting LLC in 2007. Shallow monitoring wells installed near the southwest corner and the south central portion of the single on-site building identified tetrachloroethylene (PCE) [6.3 parts per billion (ppb)], trichloroethylene (TCE) [9.6 ppb], and 1,1-dichloroethene (1,1-DCE) [84 ppb] in exceedance of EPA's Maximum Contaminant Levels (MCLs). Groundwater in these initial wells installed in 2007 was sampled at a depth of about 4 feet below ground surface (bgs) and determined to be perched water and not represent the local groundwater aquifer. At an unknown time, the wells installed by Blackwell were removed.

ARM Group Inc. later performed a limited Phase II environmental assessment in 2014 and installed five monitoring wells at locations as close as possible to the former Blackstone wells as well as near a former hazardous waste storage shed. Similar to the 2007 results, TCE (220 ppb), PCE (49.5 ppb), 1,1-DCE (915 ppb), and 1,1-dichloroethane (249 ppb) were identified in shallow perched water.

Based on the 2014 results, ARM Group Inc. performed a groundwater assessment in August 2014. Four aquifer groundwater monitoring wells were installed near and downgradient of the impacted perched water location. TCE (1.8 ppb) and trichlorofluoromethane (1 ppb) were identified in aquifer monitoring well ARM-4, the closest well to the impacted perched water, at concentrations below the EPA MCLs. Additional quarterly groundwater monitoring continues and the most recent 3rd Quarter 2016 Groundwater Monitoring Report results are non-detect for all constituents. Aquifer groundwater is not contaminated above EPA's MCLs from releases subject to RCRA Corrective Action at the facility. Impacted perched water is being addressed as a potential human health concern via the vapor intrusion pathway.

Surface Soil/ Subsurface Soil: As part of the site assessments performed by Blackstone and ARM in 2007 and 2014, surface and subsurface soil samples were collected. Minor levels of concentrations of several Volatile Organic Compounds (VOCs) were detected in the soil samples, however all of the detected concentrations were below their respective PADEP Residential Direct Contact or Soil-to-Groundwater Medium Specific Concentrations – Statewide Health Standards.

Indoor air: Soil sample results are all below indoor air screening levels. Shallow perched groundwater discussed above exceed indoor air screening levels, therefore indoor air samples were collected inside the Facility building in 2007. Constituents identified in groundwater (TCE, PCE, 1,1-DCE, and 1,1-DCA) were all non-detect in indoor air. Some VOCs were identified in indoor air samples, but they can be attributed to background sources and were all below EPA residential screening levels.

Perched groundwater impacts are located within 100 feet of the building located on the neighboring property which also has an industrial use. EPA requested that Emtrol perform additional sampling to determine if there is a potential for vapor intrusion impacts to that receptor. ARM performed two rounds of soil vapor sampling in February and April 2017. Results of the February sampling event identified TCE, PCE, 1,1-DCE, 1,1-DCA, trichlorofluoromethane, and 1,1,1-trichloroethane in the samples. All constituents were non-detect in the April sampling results. ARM utilized EPA's Vapor Intrusion Screening Level (VISL) Calculator to determine whether or not an indoor air risk is present. The VISL results showed there was no non-residential human health concerns from the levels identified in the soil vapor.

Surface Water/Sediment: There are no surface water bodies or locations on, or near, the Facility where sediment could be contaminated above appropriately protective risk-based levels.

Outdoor Air: Outdoor air is not reasonably suspected to be contaminated above appropriately protective risk-based levels.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 4

References:

- Limited Phase II Environmental Site Assessment Report – Blackstone Consulting, LLC March 14, 2007
- EMSL 280700451, Project TO-15 Analysis (indoor air lab report), April 4, 2007
- Environmental Indicator Report – Baker, August 2010
- Limited Phase II Environmental Site Assessment, ARM Group Inc. – June 24, 2014
- Groundwater Assessment, ARM Group Inc. – September 17, 2014
- RI Report & Cleanup Plan, ARM Group Inc. – July 22, 2015
- Final Report – ARM Group, Inc. September 8, 2017

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	<u>Residents</u>	<u>Workers</u>	<u>Day-Care</u>	<u>Construction</u>	<u>Trespassers</u>	<u>Recreation</u>	<u>Food³</u>
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.

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

Page 5

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):

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):

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.


Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 6


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 Entrol Inc. facility,
EPA ID # PAD054139506 , located at 3050 Hempland Road, Lancaster, PA 17601
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 9/27/17
(print) Kevin Bilash
(title) RCRA Project Manager

Supervisor (signature)  Date 9-27-17
(print) PAUL GOTTMARD
(title) Assoc Dir, LCD
(EPA Region or State) EPA R3

Locations where References may be found:

USEPA Region III
Land and Chemicals Division
1650 Arch Street
Philadelphia, PA 19103

Contact telephone and e-mail numbers

(name) Kevin Bilash
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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.