

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)

Current Human Exposures Under Control

Facility Name: Conversion Systems, Inc. Research
Facility Address: 115 Gibraltar Road, Horsham, Pennsylvania
Facility EPA ID #: PAD 064362940

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 Controls" 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	_____	<u>X</u>	_____	See rationale below
Air (indoors) ²	_____	<u>X</u>	_____	See rationale below
Surface Soil (e.g., <2 ft)	_____	<u>X</u>	_____	See rationale below.
Surface Water	_____	<u>X</u>	_____	See rationale below.
Sediment	_____	<u>X</u>	_____	See rationale below.
Subsurface Soil (e.g., >2 ft)	_____	<u>X</u>	_____	See rationale below.
Air (outdoors)	_____	<u>X</u>	_____	See rationale below.

X If no (for all media) – skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient support 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):

The Conversion Systems Inc. facility ('facility') was situated in the Pennsylvania Business Campus at 115 Gibraltar Road, Horsham, in Montgomery County, Pennsylvania. The Site is located north of the intersection of Gibraltar Road and Township Line Road and can be found on the USGS Ambler, Pennsylvania 7.5-minute Topographic Quadrangle at 75° 08' 00" west longitude and 40° 10' 14" north latitude. The facility was identified as 25,000 square foot portion of an office building which Conversion occupied/rented from 1978 until December 1989. Conversion reportedly utilized the space as an analytical laboratory and pilot plant for the treatment of hazardous waste. Samples analyzed by Conversion at the site included (but were not limited to) paint waste and industrial sludges. Wastes were received and research was performed to determine potential uses and disposal methods for the hazardous waste. The number and types of tenants using this addresses' office space since Conversion vacated the space in December 1989 is not known. The current occupant of 115 Gibraltar Rd. is TAC, a private company involved in the wholesale business of control systems and regulators.

Under the Part A Hazardous Waste Permit Application the facility could use S01 (container storage) and S02 (tank storage) to handle and store under USEPA identification number PAD 064362940 the hazardous wastes listed in their Part A application. NUS noted that at the time of the report in 1990, 14 of the wastes identified had been removed from the EPA list of RCRA hazardous wastes. Presently, 37 of 63 wastes listed on their Part A permit appear to have been de-

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.

listed since 1980.

On August 25, 1983, Conversion notified PADER of its intention to close their 2,500 gallon underground holding tank which had been used for rinse water wastes containing trace amounts of organic solvents and trace amounts of metals. A tank storage closure plan was submitted to PADER, which acknowledged receipt and approved the closure plan in January 1984. PADER was notified on March 30, 1984, that the UST closure was complete. PADER confirmed the closure at a May 23, 1984, PADER inspection.

On March 2, 1983, PADER requested a Part B Permit Application. Closure plans for the hazardous waste work at Conversion were submitted to PADER in November 1983 and September 1984 as part of the Part B application process. PADER acknowledged receipt of the plans in December 1983 and October 1984, respectively. Formal closure of the Site as a hazardous waste storage facility was due to company restructuring. CSI completed closure in February 1985. PADER inspected and approved the closure in April 1985. From April 1985 until December 1989 the facility operated as an analytical laboratory dealing only with non-hazardous materials.

NUS' 1990 PAR letter report does not identify any SWMU's at this location. There is no record of reported releases at the Conversion facility.

A detailed review of available files indicates that hazardous waste inspections had been conducted at the facility beginning in 1983. No violations were reported for this facility. Inspections occurring in August 1985, July 1988, September 1991, and January 1993 indicate certified clean closure was achieved on April 24, 1985. Inspections in 1991 and 1993 indicate that Conversion was not a hazardous waste generator or a TSD facility. A letter from NUS to USEPA, dated November 5, 1990, recommended that, based on the 1990 Environmental Priorities Initiative Preliminary Assessment Letter for the Site, no further action be taken at the Site under CERCLA. The last inspection performed on January 26, 1993, indicated that Conversion was no longer located at 115 Gibraltar Road.

Groundwater:

Public water is supplied to the Horsham Area by the Aqua America Company of Philadelphia, Pennsylvania. A search of the PaGWIS website indicates there are three groundwater wells documented in the Pennsylvania Business Park complex. Two public wells (PaGWIS 27711 and 251873) are owned by the Horsham Water Authority and were installed to depths of 400 and 340 feet, respectively. An industrial well (PaGWIS 27702) owned by Willow Ridge Farm was installed to a depth of 600 feet. Thirty-seven wells, ranging in depths of 10 to 410 feet, are located within a half mile radius of the Site. Twenty-nine of those wells are monitoring wells installed at the former Exxon and a former Mobil Oil Station located on Rt. 611 (Easton Rd.) in Horsham.

There have been no known/documented releases to site soils or groundwater relative to Conversion's former operations, and therefore no detailed site-specific geologic or hydrogeologic studies have been conducted at the Site.

Indoor and Outdoor Air:

No exposure pathways to air (both outdoor air and indoor air) were documented for this facility. Exhaust fans in the laboratory area were not indicated in the PAR and no air permits were located during the file review. No air releases for this facility have been reported.

No spills of significance or NOV's have been reported at the Site and groundwater and soil sampling have not been performed, therefore the vapor intrusion to indoor air pathway does not need to be, nor can it be evaluated.

Surface and Subsurface Soils:

Similar to groundwater, on-site soils have not been investigated relative to Conversion's former operations and, based on information presented in this EI assessment, there is no indication that such a study would be required because there have been no reported/suspected releases to Site soils as a result of the former Conversion facility.

Surface Water and Sediment:

The nearest named surface water body is Pennypack Creek which is located approximately 3,000 feet northeast of the facility. Another surface water body, Tributary A, has been identified approximately 3,000 feet to the southwest. PADEP has identified both the Pennypack Creek and Tributary A as a tentative attained segment of the Integrated List according to the standards set by the Pennsylvania Clean Water Act. These standards are based upon aquatic life, fish consumption, recreational use and potable water supply criteria. The FEMA Floodplain map indicates that the facility is outside the 500 year flood zone.

The former Conversion facility had no reported surface water discharges. Additionally, there have been no reported/suspected releases to Site soils or groundwater as a result of Conversion's former operations and thus there is no reason to presume that a groundwater-to-surface water pathway from the Site could impact nearby surface water quality.

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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>	<u>Residents</u>	<u>Workers</u>	<u>Daycare</u>	<u>Construction</u>	<u>Trespassers</u>	<u>Recreation</u>	<u>Food</u> 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. Strikeout 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):

No rationale warranted.

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" (i.e., potentially⁴ "unacceptable" levels) 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):

No rationale warranted.

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 a "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 a "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.
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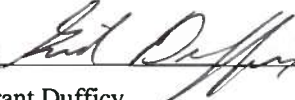
Rationale and Reference(s):


No rationale warranted.

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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 (and attach appropriate supporting documentation as well as a map of the facility):

YE – Yes, "Current Human Exposures Under Control" has been verified.
 NO – "Current Human Exposures" are NOT "Under Control."
 IN – More information is needed to make a determination.

Completed by: (signature)  Date 12-23-11
(print) Grant Dufficy
(title) RCRA Project Manager

Supervisor: (signature)  Date 12-27-11
(print) Paul Gotthold
(title) Assoc. Dir., PA Remediation, LCD
(EPA Region or State) EPA Region III

Locations where References may be found

A list of all reference documents is appended to the EI Report. Copies of these reference documents can be found at USEPA's Region III office in Philadelphia or PADEP's Southeast Regional office in Norristown, PA.

Contact telephone and e-mail numbers:

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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.

