

**DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION**

**RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA750)**

**Migration of Contaminated Groundwater Under Control**

**Facility Name:** Conversion Systems, Inc.  
**Facility Address:** Stenton Avenue, Whitmarsh Township, Plymouth Meeting,  
Pennsylvania  
**Facility EPA ID #:** PAD 064361835

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?

  X   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 nonhuman (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 "Migration of Contaminated Groundwater Under Control" EI pertains ONLY to the physical migration (i.e., further spread) of contaminated groundwater 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"<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 anywhere at, or from, the facility?

\_\_\_\_\_ If yes – continue after identifying key contaminants, citing appropriate "levels," and referencing supporting documentation.

  X   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 (for any media)– skip to #8 and enter "IN" status code.

**Rationale and Reference(s):**

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In a 1990 report completed by NUS Corporation, the Conversion Systems Inc. building was identified as a 3,200 square foot building located on the Corson Lime Company property off Stenton Avenue in Whitemarsh Township, Montgomery County, Pennsylvania. The Site is located just south of the intersection of Stenton Avenue and Joshua Road and can be found on the United States Geological Survey (USGS) Germantown, Pennsylvania 7.5-minute Topographic Quadrangle at 75° 14' 30" north longitude and 40° 06' 29" west latitude. Conversion occupied/rented the Site building from March 22, 1982, until March 3, 1984, and it was reportedly utilized for hazardous waste storage of materials in support of Conversion's Horsham, Pennsylvania Facility (PAD 064362940). Currently, neither of these Facilities exists under Conversion's operations. A letter from Corson Lime Company (parent tract) to Conversion, dated December 28, 1983, indicated that they wanted to terminate the lease to Conversion because they needed the building to be utilized as an electrical shop and for warehouse storage. The parent tract (former Corson Lime quarry) is currently identified as the Highway Materials Inc. Reclamation Project

Wastes stored by Conversion at the Site included (but were not limited to) paint waste and industrial sludges. Wastes were reportedly stored in drums. Manufacturing by Conversion was not performed on Site. The wastes were received from the Conversion Horsham facility. The Horsham facility performed the hazardous waste research to determine potential uses and disposal methods for the hazardous waste.

Hazardous wastes were stored at the Site, under USEPA identification number PAD 064361835. Wastes stored at the Site included K053 through K069, K074, K075, K078 through K087, K089 through K092, F016, F017 and F018. NUS noted that at the time of the report in 1990, most of the wastes identified had been removed from the EPA list of RCRA hazardous wastes. A closure plan was initiated and submitted on January 11, 1984, to PADER and accepted on March 6, 1984. Closure was issued by PADER on August 15, 1984, and the hazardous waste Part B application returned on August 30, 1984.

A letter from USEPA to Conversion, dated August 28, 1990, indicated that based on information reviewed by USEPA about the closure of the Facility, the USEPA recommended that no further action be taken. A letter from NUS to USEPA, dated September 27, 1990, indicated that based on the 1990 Environmental Priorities Initiative Preliminary Assessment Letter for the Site, NUS recommended that no further action be taken at the Site under CERCLA.

No spills have been reported at this site and there appear to be no negative environmental impacts from Conversion's operations.

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<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).

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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>1</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):**

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No rationale warranted.

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<sup>1</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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No rationale warranted.

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5. Is the discharge of "contaminated" groundwater into surface water likely to be "insignificant" (i.e., the maximum concentration<sup>2</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<sup>3</sup> 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 judgment/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 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<sup>3</sup> greater than 100 times their appropriate "level(s)," and if 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):** \_\_\_\_\_

No rationale warranted.

<sup>2</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>3</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>4</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 specialist, 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 a "NO" status, 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):**

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No rationale warranted.

<sup>3</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>4</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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No rationale warranted.



Facility Name: Conversion Systems, Inc.  
EPA ID #: PAD 064361835  
Location: Stenton Avenue, Whitemarsh Township, Pennsylvania

### MIGRATION OF CONTAMINATED GROUNDWATER UNDER CONTROL (CA 750)



