

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: Waring Products
Facility Address: 283 Main Street, New Hartford, CT 06057
Facility EPA ID #: CTD 001157049

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).

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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>	<u> </u>	<u> </u>	<u>Fuel Oil UST/TPH, VOCs & SVOCs</u>
Air (indoors) ²	<u> </u>	<u>x</u>	<u> </u>	<u> </u>
Surface Soil (e.g., <2 ft)	<u> </u>	<u>x</u>	<u> </u>	<u> </u>
Surface Water	<u> </u>	<u>x</u>	<u> </u>	<u> </u>
Sediment	<u> </u>	<u>x</u>	<u> </u>	<u> </u>
Subsurf. Soil (e.g., >2 ft)	<u>x</u>	<u> </u>	<u> </u>	<u>Fuel Oil UST/TPH</u>
Air (outdoors)	<u> </u>	<u>x</u>	<u> </u>	<u> </u>

 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.

 x 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): Results of an investigation of the Waring Products facility were reported in April 30, 1999. Investigation results showed evidence of a previous fuel oil release from the area of two 8,000 gallon fuel oil tanks (AOC 12 and 13), formerly used to store number 2 heating oil. At the time these tanks were removed, in 1988, no leakage was observed by the local Fire Marshal. However, no soil samples were collected from the tank graves at that time. Results of soil samples from the locations of the former tanks, as documented in the 1999 report, showed Total Petroleum Hydrocarbons (TPH) levels of 2,270mg/kg, 4,980 mg/kg, 690 mg/kg and 3,650 mg/kg, which is above the Connecticut Residential Exposure Criteria standards of 500 mg/kg. In a groundwater sample (AOC-13GW) collected from the area of the former tanks, the following constituents were detected: TPH at 556,000 µg/l; ethylbenzene at 7,680 µg/l; methylene chloride at 1,320 µg/l; naphthalene at 24,300 µg/l; and xylenes at 15,720 µg/l. Respective Connecticut Department of Environmental Protection (CT DEP) GA/GAA Groundwater Protection Criteria for these constituents are 500 µg/l for TPH, 700 µg/l for ethylbenzene, 5 µg/l for methylene chloride; 280 µg/l for naphthalene, and 530 µg/l for xylenes. These levels appear to drop off rapidly downgradient of the former tanks. At MW-2, which is approximately 30 feet downgradient from the former tanks, concentrations were as follows: 11,300 µg/l TPH ; 4 µg/l ethylbenzene; methylene chloride was not detected; 31.6 µg/l naphthalene; and 3.4 µg/l xylenes. Further downgradient at MW-4, TPH was detected at 620 µg/l but other constituents were not detected above CT DEP GA/GAA Groundwater Protection Criteria.

Shallow groundwater at the site appears to discharge into the Farmington River, approximately 250 feet to the northeast of the facility. However, given the sharp drop-off observed in the levels of fuel oil constituents in groundwater, it is unlikely that constituents in discharging groundwater could result in unsafe levels for humans in the surface water or sediments. As the locations of the fuel tank release and AOC-13GW are downgradient of the facility building there are no structures for a considerable distance downgradient of the facility the indoor air pathway is not of concern. In addition, there is no information that suggests current releases to outdoor air that could be above applicable criteria.

Footnotes:

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.

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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)

"Contaminated" Media	Residents	Workers	Day-Care	Construction	Trespassers	Recreation	Food ³
Groundwater	<u>no</u>	<u>no</u>	<u>no</u>	<u>yes</u>			<u>no</u>
Air (indoors)	___	___	___				
Soil (surface, e.g., <2 ft)	___	___	___	___	___	___	___
Surface Water	___	___			___	___	___
Sediment	___	___			___	___	___
Soil (subsurface e.g., >2 ft)	___	___		<u>yes</u>			<u>no</u>
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).

 x 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): The former tank area is on the facility property, and impact has been to subsurface soils and local groundwater. There are no drinking water wells downgradient of the property for a considerable distance and all side-gradient properties in the vicinity of the facility are supplied by public water. Exposure could occur to a construction or remediation worker that would come into contact with subsurface soils and/or groundwater during a construction project.

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"**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): There are no current or anticipated construction projects in the former tank area, thus actual exposure is not anticipated. As documented by CTS Corporation, the owner of the property, remediation workers working in this area will follow a health and safety plan which will include the use of the appropriate personal protective equipment to prevent exposure to contaminants present at unsafe levels (letter to Stephanie Carr, EPA dated April 19, 2001).

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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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. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Waring Products facility, EPA ID # CTD001157049, located at 283 Main Street, New Hartford, CT 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) *Stephanie Carr* Date May 15, 2001
(print) Stephanie Carr
(title) RCRA Facility Manager

Supervisor (signature) *Matthew R. Hoagland* Date 6/21/01
(print) Matthew R. Hoagland
(title) Chief, RCRA Corrective Action Section
(EPA Region or State) EPA - New England

Locations where References may be found:

- Final Draft RCRA Facility Assessment dated May 7, 1992 prepared by CDM for EPA
- Report of Voluntary Corrective Action Program Environmental Investigation Activities 283 Main Street, New Hartford, CT dated April 30, 1999, prepared by ATC Associates, Inc. for CTS Corporation (available at U.S. EPA - New England office)
- Remedial Action Plan Waring Products dated December 6, 1999, prepared by ATC Associates, Inc. for CTS Corporation (available at U.S. EPA - New England office)
- Letter dated March 28, 2001 from ATC Associates, Inc to Marv Gobles, CTS Corporation re: soil and concrete sampling, former Waring facility (available at U.S. EPA - New England office)
- Letter dated April 19, 2001 from Marv Gobles, CTS Corporation to Stephanie Carr, EPA re: RCRA Corrective Action at Waring Products (available at U.S. EPA - New England office)

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.