**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:** | Former Hoover Company (Maple Street Commerce) Site |
| **Facility Address:** | 101 E. Maple, North Canton, Ohio 44720 |
| **Facility EPA ID #:** | OHD004462131 |

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)

Enviromnental 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 enviromnent. The two EI developed to-date indicate the quality of the enviromnent 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 programs 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).

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 | | | Chlorinated VOCs, see Key References Below |
| Air (indoors)[2] | X | | | Chlorinated VOCs, see Key References Below |
| Surface Soil (e.g., <2 ft) | X | | | Chlorinated VOCs, see Key References Below |
| Surface Water | | | X | Surface Water has not been sampled |
| Sediment | | | X | Sediment has not been sampled |
| Subsurf. Soil (e.g., >2 ft) | X | | | Chlorinated VOCs, see Key References Below |
| Air (outdoors) | X | | | Chlorinated VOCs, see Key References Below |

___ 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):

Groundwater is impacted by volatile organic compounds (VOCs), in addition to other contaminants at levels above Maximum Contaminant Levels (MCLs), and Ohio's Generic Cleanup Levels. The extent of groundwater impacts exceeding each criteria is generally defined, and recent results from off-site wells show that concentrations have reduced since the time of active cleanup.

Soil is impacted by VOCs, among other contaminants. The extent of soil impacts exceeding each criteria is generally defined. The site is partially vacant, limiting the potential for exposures, however, previously proposed and additional on-site controls are required to reduce potential exposures relative to future uses.

Prior evaluations and corrective actions relied on a risk reduction effort that included active cleanup and also proposed the implementation of Institutional Controls. At present, no controls have been implemented except for a County Groundwater Use Ordinance, and an updated risk assessment is needed. As a result, pathways for potential human exposures in the table that follows are identified as "unknown", based on a lack of controls.

EPA's evaluation in 2013 concluded that vapor intrusion modeling did not sufficiently demonstrate that the pathway had been addressed. Soil gas testing in 2015 revealed impacts from VOCs at levels exceeding the Residential and Nonresidential Vapor Intrusion Screening Levels. The extent and sources of impacts are undefined.

Indoor Air is impacted by VOCs at levels exceeding the Residential and Nonresidential Vapor Intrusion

Indoor Air Screening Levels. Mitigation systems are being installed for proposed redevelopment in some on-site areas, and one off-site area where known exceedances have been documented. Impacts remain undefined and the evaluation of off-site exposures to indoor air from contaminated soil gas, and/or groundwater is incomplete. The site is partially vacant, minimizing on-site exposures, however, complete pathways were identified and will continue to be evaluated.

Key References:

1) Current Conditions Report, dated September 2016, and prepared by Hull & Associates.
2) Final Corrective Measures Proposal, dated August 2003, and prepared by CH2MHill

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 Enviromnent, 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.

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 | ? | ? | ? | ? | ? | ? | ? |
| Air (indoors) | ? | ? | ? | ? | ? | ? | ? |
| Soil (surface, e.g., <2 ft) | ? | ? | ? | ? | ? | ? | ? |
| Surface Water | ? | ? | ? | ? | ? | ? | ? |
| Sediment | ? | ? | ? | ? | ? | ? | ? |
| Soil (subsurface e.g., >2 ft) | ? | ? | ? | ? | ? | ? | ? |
| Air (outdoors) | ? | ? | ? | ? | ? | ? | ? |

Instructions for Sununary 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

X and enter IN" status code

Rationale and Reference(s):

Groundwater is impacted by volatile organic compounds (VOCs), in addition to other contaminants at

levels above Maximum Contaminant Levels (MCLs), and Ohio's Generic Cleanup Levels. The extent of groundwater impacts exceeding each criteria is generally defined, and recent results from off-site wells show that concentrations have reduced since the time of active cleanup.

Soil is impacted by VOCs, among other contaminants. The extent of soil impacts exceeding each criteria is generally defined. The site is partially vacant, limiting the potential for exposures, however, previously proposed and additional on-site controls are required to reduce potential exposures relative to future uses.

Prior evaluations and corrective actions relied on a risk reduction effort that included active cleanup and also proposed the implementation of Institutional Controls. At present, no controls have been implemented except for a County Groundwater Use Ordinance, and an updated risk assessment is needed.

EPA's evaluation in 2013 concluded that vapor intrusion modeling did not sufficiently demonstrate that the pathway had been addressed. Soil gas testing in 2015 revealed impacts from VOCs at levels exceeding the Residential and Nonresidential Vapor Intrusion Screening Levels. The extent and sources of impacts are undefined.

Indoor Air is impacted by VOCs at levels exceeding the Residential and Nonresidential Vapor Intrusion Indoor Air Screening Levels. Mitigation systems are being installed for proposed redevelopment in some on-site areas, and one off-site area where known exceedances have been documented. Impacts remain undefined and the evaluation of off-site exposures to indoor air from contaminated soil gas, and/or groundwater is incomplete. The site is partially vacant, minimizing on-site exposures, however, complete pathways were identified and will continue to be evaluated.

Key References:

1) Current Conditions Report, dated September 2016, and prepared by Hull & Associates.
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[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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)

[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.

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)

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" under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

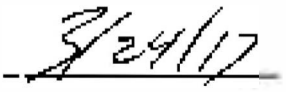
____ NO - "Current Human Exposures" are NOT "Under Control."

**IN** IN - More information is needed to make a determination whether exposures are under control at the former Hoover Company (Maple Street Commerce facility, OHD004462131, located at 101 East Maple Street, in North Canton, Ohio.

Completed by: _____ Date 03/24/2017

(print) Joseph C. Kelly, P.G.

(title) Physical Scientist

Supervisor: (signature)  Date 

(print) Michael Beedle

(title) Section Chief

(EPA Region / State) LCD/RRB, CA1 Region 5

Locations where References may be found:

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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.**