

US EPA ARCHIVE DOCUMENT

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: Beazer East, Inc.
Facility Address: 1359 Logan Ave., Youngstown, Ohio
Facility EPA ID #: OHD 004 198 784

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	X			VOCs and SVOCs ^A
Air (indoors)		X		Not applicable; no buildings above plume ^B
Surface Soil (e.g., <2 ft)	X			Arsenic, SVOCs and VOCs ^C
Surface Water		X		SVOCs and VOCs are below risk levels ^D
Sediment		X		Sediment concentrations of VOCs and SVOCs, including PAHs are below risk levels ^E
Subsurf. Soil (e.g., >2 ft)	X			Arsenic, SVOCs and VOCs ^C
Air (outdoors)		X		No source of air emissions ^B

_____ 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):

A. Groundwater - The constituents detected in groundwater samples that exceed MCLs are benzene, benzo(a)pyrene, ethylbenzene, pentachlorophenol, toluene, trichloroethylene. The levels are reported in the CMS; These constituents are compared to MCLs in the July 28, 2000 *Statement of Basis*, USEPA.

B. The facility is mostly demolished; there are no structures above the contaminated soil plume.

C. Surface Soil - Contaminants of concern are arsenic, benzo(a)anthracene, benzo(b)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. The Corrective Measures Study¹ (CMS) describes how media clean-up standards (MCSs) were developed in two stages. First, site constituents were screened against Region 9 PRGs for exposures at an industrial setting (there are no homes above the aqueous phase of the plume). MCSs were derived for those constituents exceeding the screening thresholds. Exposure to potential human receptors (worker, trespassers, nearby residents) was evaluated. Maximum detected concentrations were compared to MCSs and any contaminant exceeding the MCS became a Constituent of Interest (COI).

¹*Final Corrective Measures Study*, January 31, 2000, Key Environmental, Inc.

D. Sediment - Soil PRGs for industrial risk levels were used as a surrogate for sediment PRGs which are not promulgated. Constituents in sediments are below risk levels.

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).

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E. Surface Water - Constituents in surface water are below OEPA or National Ambient Surface Water Quality Standards for human health (or standard does not exist).

F. The facility is demolished; there are no releases to the ambient air.

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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 ²
Groundwater	No	No	NA	No	No	No	No
Air (indoors)							
Soil (surface, e.g., <2 ft)	No	No	NA	No	No	No	No
Surface Water							
Sediment							
Soil (subsurface e.g., >2 ft)	No	No	NA	No	No	No	No
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.

- X** 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):

Groundwater: Currently the groundwater near the facility is not used for any purpose, including drinking water. Per the Phase I and Phase II hydrogeologic investigations and the RFI, drinking water for residents is supplied by the City of Youngstown, which obtains its water from a reservoir seven miles upgradient of the facility. Additionally, to deter any potential use of groundwater in this area, the remedy includes institutional controls such as deed notices

² Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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and notices to off-site property owners regarding the contaminated nature of the groundwater. The groundwater remedy (DNAPL and groundwater recovery/treatment) is underway for on- and off-site contamination.

Surface Soils: The surface soil corrective measure was completed 11/7/02. Soils where risk levels exceed 1×10^{-6} cancer risk have been capped to preclude an exposure pathway (reference Completion Report 2003). Some areas of soils were excavated. Construction workers are required to follow a site-specific Health and Safety Plan.

Subsurface Soils: Construction and utility workers are required to follow a site-specific Health and Safety Plan.

Note: *The site is currently being used as a parking lot by a towing company. Per the CMS, institutional controls through deed restrictions and other means will restrict property to non-residential, non excavation light-industrial uses.*

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be “**significant**”³ (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):

³ 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 “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):

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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):

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 Beazer East, Inc. facility, EPA ID # OHD-004-198-784 located in Youngstown, Ohio 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 _____
 (print) _____
 (title) _____

Supervisor (signature) _____ Date _____
 (print) _____
 (title) _____
 (EPA Region or State) EPA Region 5

Locations where References may be found:

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.