

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS code (CA725)
Current Human Exposures Under Control

Facility Name: Beazer East, Inc. (formerly Koppers Company, Inc.)
Facility Address: 15 Plum Street, Verona, PA 15147
Facility EPA ID #: PAD980554950

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 #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 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		No impacts to groundwater.
Air (indoors) ²		X		SVOC levels in subsurface soils do not pose an indoor air risks
Surface Soil (e.g., <2 ft)		X		Levels below PADEP nonresidential stds.
Surface Water		X		No impacts to surface water.
Sediment		X		No impacts to sediment.
Subsurf. Soil (e.g., >2 ft)		X		Levels below PADEP nonresidential stds.
Air (outdoors)		X		No known or reported releases.

- 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):

In 1996, Beazer East, Inc. filed a Notice of Intent to Remediate (NIR) under the Pennsylvania’s Land Recycling Program (Act 2 Program) to investigate and remediate the Site to site-specific standards for nonresidential reuse of the property. As part of the investigation Beazer conducted a Phase I Environment Site Assessment that included a record review and site reconnaissance to evaluate the history and the conditions of the Site. The Phase I preliminary environmental assessment did not identify any past operations at the site that would have significantly impacted the environment or pose a human health exposure risks. Subsequently, Beazer conducted a Phase II Environmental Site Assessment that consisted of groundwater, soils, and sediment sampling to determine and confirm the environmental impact of past operations at the Site. In 1997, PADEP approved the Final Report and issued the Facility a release of liability under the PADEP Act 2 Land Recycling Program.

Surface and Subsurface Soils:

The soil investigation targeted volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons (TPH), heavy metals and total cyanide. A total of eighteen soil borings (11 deep, 4 shallow, 3 had borings) were advanced at various locations where chemicals and/or raw materials were formerly handled on a regular basis. The soil investigation identified a subsurface layer of coal tar material located in the northern end of the Facility. None of the levels of constituents associated with coal tar were detected above the PADEP direct contact for non-residential soil standards. The subsurface layer of coal tar appears to be isolated and immobile. The coal tar constituents are highly insoluble in water and no evidence of leaching was identified. Groundwater collected beneath the coal tar layer indicated that the groundwater had not been impacted. As a precaution, Beazer installed an impermeable asphalt cap above the area of the coal tar layer to eliminate pathway of exposures and to prevent water infiltration and potential leaching of the coal tar constituents into groundwater. Other than the presence of the coal tar layer, the soils results for VOCs, SVOCs, heavy metals and total cyanide did not exceed the PADEP non-residential soil standards. Onsite soils at the Facility do not appear to have been significantly impacted by past operations.

Groundwater:

Several groundwater monitoring wells were installed upgradient and downgradient of the Facility to investigate groundwater. Groundwater was encountered in the shallow aquifer approximately 9 feet below ground surface (bgs). Groundwater is not the source of water supply in the area. Oakmont Water Authority supplies public water to the Facility and the surrounding areas and draws its water from the nearby Allegheny River. The constituents of concern (COCs) for VOCs, SVOCs, heavy metals and total cyanide were non-detects in groundwater. Groundwater quality at the Facility have not been impacted.

Sediment:

Sediment samples were collected along Plum Creek, which borders the northwest and northeast sides of the Facility. The groundwater in the shallow aquifer discharges to the Creek. No VOCs, SVOCs, and heavy metals were detected in significant concentration in any of the Plum Creek sediment samples. Based on the results, PADEP determined that no further action at Plum Creek is warranted.

Surface Water:

On November 22, 1982, the Facility accidentally released 17 gallons of 75-percent arsenic acid via a storm sewer into Plum Creek. To assess the impact of the spill to the surrounding surface waters the Facility collected multiple water samples along Plum Creek, the Allegheny River located three-quarters of a mile west of the Facility where Plum Creek discharges, and at the Nadine Pumping Station Water Intake along the Allegheny River. The initial surface water results along Plum Creek detected elevated levels of arsenic between 175-275 parts-per-billion (ppb). However, after two days the arsenic levels in surface water in Plum Creek decreased significantly and were below drinking water standards. The arsenic release did not impact the Allegheny River or the Nadine Pumping Station Water Intake. Since 1982, there have been no reported releases to surface water.

Indoor Air:

VOCs and SVOCs were non-detects in groundwater. VOCs levels detected in surface and subsurface soils are either non-detects or below PADEP statewide health standards. Levels of SVOCs in subsurface soils are below PADEP non-residential soil standards. VOCs and SVOCs levels detected in soils do not pose a potential risk via indoor vapor intrusion.

Outdoor Air:

Beazer East, Inc., is no longer operational at the Site. In 1996, the Beazer, East Inc. sold the site to Pearson, Inc.. The Site is currently occupied by the Aloma Shim and Manufacturing Company's who manufactures precision Custom Shims, Fabricated Parts, Aloma Shims, Shim Kits, alignment devices, and accessories. Presently, there are no known releases at the Facility that would warrant a concern for outdoor air

(EI Inspection Report 2012, 1996 Final Report, Site Characterization, Cleanup Plan and Remediation, 1996 Phase I Environmental Assessment Report, 1989 Final RCRA Facility Assessment Report)

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)

<u>“Contaminated” Media</u>	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 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).
- 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):

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):

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 “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.

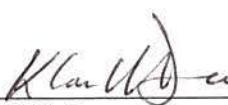
Rationale and Reference(s):

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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 (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 Beazer East, Inc. (formerly Koppers Company, Inc.) facility, EPA ID # **PAD980554950**, located at **15 Plum Street, Verona, Pennsylvania 15147** 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

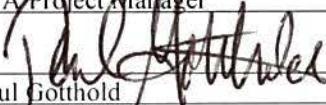
(signature) 

Date 5/2/16

(print) Khai M. Dao

(title) EPA Project Manager

Supervisor

(signature) 

Date 5-2-16

(print) Paul Gotthold

(title) Assc. Director/Office of PA Remediation

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Locations where References may be found:

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