

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: PECO Energy Co., Penrose Avenue Site
Facility Address: 30th Street and Penrose Avenue, Philadelphia, PA 19145
Facility EPA ID #: PAD 987 279 890

- 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)

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 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 "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).

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 2

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 GW monitoring wells, but soil contaminants not mobile
Air (indoors) ²		X		No air emission sources
Surface Soil (e.g., <2 ft)	X			Chromium, cobalt, selenium
Surface Water		X		No surface water in close proximity to the site
Sediment		X		No sediment in close proximity to the site
Subsurface Soil (e.g., >2 ft)	X			Chromium, cobalt, selenium
Air (outdoors)		X		No air emission sources

_____ If no (for all media) – skip to #6, and enter "YE," status code after providing or citing appropriate "levels," and referencing sufficient support 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. (In order to present a more accurate representation of the site, the reviewer has chosen not to skip to #6.)

Rationale and Reference(s):

Groundwater: There are no groundwater monitoring wells at the site, however, according to the 1991 Phase II Report Site Characterization and Remediation Project prepared for PECO by Diversified Environmental Resources and the 1991 Assessment of Potential Risk prepared for PECO by BCM, the contaminants of concern were relatively immobile and unlikely to have reached groundwater or leave the site due to groundwater flow. As a conservative measure, GW is assumed to be contaminated.

Air (Indoor and Outdoor): Currently, the site is a vacant lot with no buildings and no operations with air emission sources.

Soil: (Surface and Subsurface): Analytical data is only available from 1990. As part of this Environmental Indicator determination, the 1990 data was compared to the PADEP Medium Specific Concentrations (MSCs) for non-residential soils in a used aquifer. Based on this comparison, chromium, cobalt, selenium were above action 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).

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.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 3

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"	<u>Residents</u>	<u>Workers</u>	<u>Day-Care</u>	<u>Construction</u>	<u>Trespassers</u>	<u>Recreation</u>	<u>Food</u> ³
Groundwater	<u>NO</u>	<u>NO</u>	<u>NO</u>	<u>YES</u>	<u>NO</u>	<u>NO</u>	<u>NO</u>
Air (indoors)	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Soil (surface, e.g., <2 ft)	<u>NO</u>	<u>NO</u>	<u>NO</u>	<u>YES</u>	<u>NO</u>	<u>NO</u>	<u>NO</u>
Surface Water	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Sediment	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Soil (subsurface e.g., >2 ft)	<u>NO</u>	<u>NO</u>	<u>NO</u>	<u>YES</u>	<u>NO</u>	<u>NO</u>	<u>NO</u>
Air (outdoors)	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>

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):

See following page for response to Question 3 – Rationale and Reference(s).

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

Question #3 – Current Human Exposures Under Control (Rationale and Reference(s))

RESPONSE:

Residents: The area around the PECO Penrose Avenue Site is heavily industrialized and is dominated by refinery and oil handling operations. There are no known residential private wells in the area. Monitoring wells on adjacent properties show that no contaminated groundwater is entering or leaving the PECO property. Due to access controls, any residents in the area would not be expected to contact site soils.

Workers: There are no workers at the site. The site is currently a vacant lot.

Day-Care: There are no known day-care operations in the area of the PECO Penrose Avenue Site.

Construction Workers: Any construction workers at the site could contact contaminated soils and groundwater.

Trespassers: A portion of the site is enclosed with a chain-link fence. The remainder of the site is surrounded by Jersey barriers. Trespassers are not expected to contact potentially contaminated groundwater or contaminated soils.

Recreation: No recreational visitors are expected in the area of the PECO Penrose Avenue Site.

Food: There are no known food supplies in the area of the PECO Penrose Avenue Site.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 4

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"** (i.e., potentially⁴ "unacceptable" levels) 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 cannot 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."

 X

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):

The only potential receptor is a construction worker. It is reasonable to assume that construction workers would use personal protective equipment when working in areas of known or suspected contamination. Therefore, this exposure is not considered "significant."

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.

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS code (CA725)
Page 5

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 a "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 a "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):

Current Human Exposures Under Control
Environmental Indicator (EI) RCRIS Code (CA725)
Page 6

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 PECO Penrose Avenue Site, EPA ID 987 279 890, located at 30th Street and Penrose Avenue, Philadelphia, PA 19145 under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

 X

NO – "Current Human Exposures" are NOT "Under Control."


IN - More information is needed to make a determination.

Completed by:

(signature) 
(print) Linda Matyskiela
(title) RCRA Project Manager

Date 03/30/2020

Supervisor:

(signature) 
(print) Paul Gotthold, Chief
(title) RCRA Corrective Action Branch 2
(EPA Region or State) EPA Region III

Date 03/31/2020

Locations where References may be found:

All reference documents can be found at the USEPA Region III Office in Philadelphia and the PADEP Southeast Regional Office in Conshohocken.

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.

