

DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

RCRA Corrective Action  
Environmental Indicator (EI) RCRIS code (CA725)  
Current Human Exposures Under Control

April 30, 2008

Facility Name: Sunoco Inc.  
Facility Address: Neville Island Plant, 200 Neville Road, Pittsburgh, PA 15225-1696  
Facility EPA ID #: PAD 000824730

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).

**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”<sup>1</sup> 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>No record of contamination.</u>
Air (indoors) <sup>2</sup>	_____	<u>X</u>	_____	<u>No record of contamination.</u>
Surface Soil (e.g., <2 ft)	_____	<u>X</u>	_____	<u>Contaminated soil removed: no further action needed</u>
Surface Water	_____	<u>X</u>	_____	<u>Releases reported.</u>
Sediment	_____	<u>X</u>	_____	<u>Contaminated soil removed: no further action needed</u>
Subsurf. Soil (e.g., >2 ft)	_____	<u>X</u>	_____	<u>Contaminated soil removed: no further action needed</u>
Air (outdoors)	_____	<u>X</u>	_____	<u>No record of contamination.</u>

X 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):**

***Air:***

In 2004 the facility provided late notice to conduct vent condenser tests and the Allegheny County Health Department (ACHD) sent a settlement offer based on noncompliance for omitting 30 day prior notification. The facility provided Pennsylvania Department of Environmental Protection (PADEP) with clarification including the condenser history and protocol and testing identifying the condenser as a minor source and not subject to US Environmental Protection Agency’s (USEPA’s) High Priority Violator. While a civil penalty was assessed, accusations of violation of Air

<sup>1</sup> “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).

<sup>2</sup> 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

Pollution Control Rules were erroneous. The facility currently maintains a synthetic minor air permit at the facility. There have been no other complaints or violations filed with PADEP regarding this media.

***Surface Water:***

The facility currently operates under NPDES Permit No. PA 0003832, expiring September 11, 2011. According to available records, various spills occurred at the facility that resulted in discharges to the Ohio River. Documented spills range from 0.2 to 8700 pounds and 3 to 1400 gallons of various chemicals, stemming from equipment malfunction and/or operator error. Other documentation illustrates timely oral and written spill notifications to the National Response Center, US Coast Guard, USEPA, PADEP, and various local agencies. There are currently no outstanding issues regarding surface water.

***Groundwater and Soil:***

Records do not indicate extensive remedial action at the facility. On July 7, 1983, the facility sent correspondence to PADEP indicating that 300,000 pounds of contaminated soil and tarry residue were excavated from leaking cooling water lines. In addition, water samples were collected at the storm sewer outfall and excavation. Although the soil and residue were found to contain compounds typical of coal tar, none of the water samples contained any priority pollutants nor any of the compounds identified in the residue. Based on the analyses of the extracted materials' leachate, there was no basis to classify the contaminated soil as hazardous waste. The bulk of the contaminated soil involved in the excavation of the cooling water line was removed. Analytical results from US Steel Corporation Research in Monroeville, PA showed concentrations for metal toxicity were below the hazard limits in gas chromatography/mass spectrometry, wet-chemical, and EP extract analyses. Records do not indicate a response from PADEP on this issue.

An UST Closure Report was filed on January 5, 1993 for the permanent closure of one 5,000-gallon UST for heating oil; 66.2 tons of soil were removed and no visible staining was observed. On October 16, 1998, PADEP notified the facility that no further action was necessary.

On November 29, 1999, the facility notified PADEP that approximately 130,000 pounds of soil containing diethylhexyl phthalate were excavated during an emergency containment improvement project. The soil was removed from within the dike to the maximum depth of contamination or as deep as structurally sound in the area of the tanks, support structures or dike walls in the South Tank Farm. Emergency containment was required by PADEP tank regulations and completed by a PADEP-certified installer. The soil was incinerated. Since the South Tank Farm has a sump system to collect releases within the diked area, the plasticizer was believed to be the result of 40 years of industrial operation at the facility.

The facility is connected to the public water system. Records indicate that the facility is not located within a private water well supply area. Residents in the vicinity of the facility rely on public water supplies as a source of potable water. The facility has never installed, operated, or monitored groundwater wells. There are currently no outstanding issues of contamination nor any current or planned groundwater monitoring or soil sampling.

The former Sunoco facility and outside areas are enclosed by locked fence and under constant supervision of facility personnel. Visitors are required to sign in and are escorted by facility personnel at all times. The entire 44 acre facility is surrounded by chain link fence and entrance to the facility requires identification, key card scan, and an escort.

**SWMUs**

Sonoco operated several waste satellite accumulation areas and less than 90 day storage units. There is no evidence of releases from these units. 2 former less than 90 day storage tanks have been emptied and closed.

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

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> <sup>3</sup>
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):**

---

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

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

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

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):**

---

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 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 the Sunoco Inc. facility,  
EPA ID # PAD 000824730, located at Neville Island Plant, 200 Neville Road,  
Pittsburgh, PA 15225-1696  
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 April 30, 2008  
(print) Carl Spadaro  
(title) Acting Facilities Manager – PADEP-SWRO

Supervisor (signature)  Date 4-2-2010  
(print) PAUL GOTTBOLD  
(title) ASSOCIATE DIRECTOR, LCD  
(EPA Region or State) EPA Region 3

Locations where References may be found:

USEPA Region III  
Waste and Chemical Mgmt. Division  
1650 Arch Street  
Philadelphia, PA 19103

PADEP  
Southwest Regional Office  
400 Waterfront Drive  
Pittsburgh, PA 15222

Contact telephone and e-mail numbers

(name) Carl Spadaro  
(phone#) 412-442-4157  
(e-mail) cspadaro@state.pa.us

**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.**