

## DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION

### RCRA Corrective Action Environmental Indicator (EI) RCRIS code (CA725)

#### Current Human Exposures Under Control

**Facility Name:** Dal -Tile International (formerly American Olean Tile)  
**Facility Address:** Cannon Avenue, Lansdale, Pennsylvania  
**Facility EPA ID #:** PAD 00 234 7003

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 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”**<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>  | ---      | Detected VOCs are from off-site migration.<br>Chromium concentrations are inherent to the Brunswick Formation’s Mineralogy |
| Air (indoors) <sup>2</sup>  | ---        | <u>X</u>  | ---      | No record of releases/contamination.   |
| Surface Soil (e.g., <2 ft)  | ---        | <u>X</u>  | ---      | Contaminated soil has been excavated.  |
| Surface Water               | ---        | <u>X</u>  | ---      | No record of contamination.  |
| Sediment                    | ---        | <u>X</u>  | ---      | No record of contamination.  |
| Subsurf. Soil (e.g., >2 ft) | ---        | <u>X</u>  | ---      | Contaminated soil has been excavated.  |
| Air (outdoors)              | ---        | <u>X</u>  | ---      | No record of contamination.  |

\_\_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):**

**Groundwater:**

Six monitoring wells were installed as part of the post-closure activities for the closure of the seven former surface impoundments. One well is located upgradient to the former impoundments, two are adjacent to the former impoundments, the remaining three wells are situated downgradient. The wells were used to monitor residual contaminant migrations, specifically heavy metal leachate from the former impoundments. They were monitored for a period of 5 to 10 years depending on when the wells were installed. The three downgradient and two adjacent wells have shown non-detects for the contaminants of concern. The one upgradient well has shown persistent volatile organic compounds (VOCs) concentrations (TCE = 1800 ppb, PCB = 20 ppb, 1,1-DCE = 13 ppb) above MCLs. After further investigation, it was concluded that the detected VOCs were not released by the facility. On the contrary, detected VOCs are due to an off-site source, specifically North Penn 6 a nearby Superfund site. The last round of groundwater sampling was procured in June of 1999. PADEP anticipates to officially terminate post-closure monitoring for the former surface impoundments in November 1999. (Environmental Indicator (EI) Inspection Report, 4/99, PADEP Conshohocken Contact: Daniel Snowden, 610-832-6212)

**Surface and Subsurface Soil:**

A 12,000 gallon Underground Storage Tank (UST) was removed. Sampling of the surrounding soils indicated that the UST had leaked. Kerosene was detected in the soil. A composite sample from the excavated soil had a level of 1100 ppm while a composite sample from the soil remaining in the pit had a level of 2800 ppm. Portion of the contaminated soil was excavated. The remaining soil was left in place due structural obstructions that limited excavation. The excavated area was backfilled with clean soil. The undertaking, which eliminated human exposure risks, was approved by PADEP. (EI Inspection Report, 4/99)

**Air (Indoors & Outdoors), Surface Water, and Sediment:**

There has been no record of releases that are above protective risk-based “levels” by the facility. (EI Inspection Report, 4/99)

Footnotes:

<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.

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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)

| <b>“Contaminated” Media</b>   | Residents | Workers | Day-Care | Construction | Trespassers | Recreation | Food <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.)

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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): \_\_\_\_\_

<sup>4</sup> 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): \_\_\_\_\_

