**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:** | Former Anvil Products, Inc. (Currently Allison Park Industrial Complex) |
| **Facility Address:** | 3812 Wm Flynn Highway (Rt 8), Allison Park, PA 15101 |
| **Facility EPA ID #:** | 004 336 822 |

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).

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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)?

| | Yes | No | ? | Rationale/Key Contaminants |
|---|---|---|---|---|
| Groundwater | | X | | No known releases – see below |
| Air (indoors)[2] | | X | | No known releases, no current emissions |
| Surface Soil (e.g., <2 ft) | | X | | No evidence of current soil contamination |
| Surface Water | | X | | Past releases. Nothing current – see below |
| Sediment | | X | | Past releases. Nothing current – see below |
| Subsurface Soil (e.g., >2 ft) | | X | | Land-based units removed – see below |
| Air (outdoors) | | X | | No known releases, no current emissions |

X 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.

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):

**See following page for response to "Rationale and Reference(s)".**

[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.

**Response to Question 2, Current Human Exposures Under Control, "Rationale and References":**

The original wastewater treatment system (built in 1962) at the facility neutralized cyanide wastewater from the electrogalvanizing process, by treating it with chlorine to convert the cyanide to inert cyanate. Treated water was discharged into Pine Creek or a series of on-site earthen lagoons. The lagoons also received acidic and caustic wastes that were mixed together to neutralize them. Solids settled out of the mixture and were periodically removed from the earthen sides and bottom of the lagoons. There is no indication that the lagoons were lined to prevent contamination of the underlying soil and groundwater.

The lagoons were located just north of the wastewater treatment building, approximately 70 feet west of Pine Creek. It is not known when the lagoons were constructed and placed into operation.

Between 1973 and 1974, the earthen lagoons were replaced with concrete holding basins. According to the 1989 *Preliminary Assessment*, the soil lining the original lagoons was removed to a state-approved depth; however, this was not confirmed in any of the other files reviewed for the site.

PADER granted closure approval for the 30,000-gallon concrete holding basins (same location as the lagoons) in 1983. During the closure of the concrete holding basins, a 30-mil PVC membrane was placed over the basins when they were backfilled.

It is not likely that surface soil at the site is contaminated due to the earthen lagoons, since the location was backfilled with clean fill when the 30,000-gallon concrete holding basins were closed in 1983.

There is a potential for subsurface soil contamination caused by the earthen lagoons. If this occurred, contaminants could migrate to groundwater, and then to the surface water and sediment of Pine Creek, which borders the property. Pine Creek is used for recreational fishing and boating, and flows south into the Allegheny River, approximately 4 miles south of the site, near Etna, Pennsylvania. Shaler Township Water Authority utilizes a series of production wells located along the Allegheny River near Etna.

No sampling data is available for soil, groundwater, or surface water in the vicinity of the earthen lagoons. However, given the proximity of the former lagoons to Pine Creek and the time elapsed since they were closed, it is expected that any residual contamination that might have been present in soil and capable of lateral migration would have already migrated to Pine Creek. EPA is not aware of any impacts to Pine Creek from this site since Anvil closed in 1985. While there might have been residual soil contamination after removal of the lagoons (this activity occurred pre-RCRA and the Pa. Solid Waste Management Act and apparently did not include confirmatory soil sampling), the area where the lagoons were located is covered over with several feet of soil and topped with asphalt, thereby eliminating a direct contact exposure pathway.

The current companies occupying this site are not causing environmental problems. As such, EPA believes there is no need for further investigation. Therefore, EPA considers the human exposure environmental indicator to be under control at this time.

(Pennsylvania Department of Health Application Review Memo, 3/26/62; Correspondence from Anvil to Bureau of Sanitary Engineering, 11/18/70; Correspondence from PADER to Anvil, 5/27/83; *Preliminary Assessment of Anvil Products, Inc*., NUS Corporation, 8/23/89)

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[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.)

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **"significant"** (i.e., potentially[4] " 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 (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.

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):

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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 Former Anvil Products, Inc. (currently Allison Park Industrial Complex), facility, EPA ID 004 336 822, located at 3812 Wm Flynn Highway (Route 8), Allison Park, PA 15101, 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) /Griff E. Miller/ Date 8/13/2009

(print) Griff Miller

(title) Remedial Project Manager

Supervisor: (signature) /Paul J. Gotthold/ Date 8/13/2009

(print) Paul Gotthold

(title) Associate Director

(EPA Region or State) EPA Region 3

Locations where References may be found:

References have been appended to the Environmental Indicator report and can also be found at PADEP's Pittsburgh office and USEPA's Region III office.

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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.**