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: **Vitco Corporation**
Facility Address: **802 Walnut Street Waterford, PA 16441**
Facility EPA ID #: **PAD000428136**

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).

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 record of contamination.
Air (indoors)[2]		X		No record of contamination.
Surface Soil (e.g., <2 ft)		X		No constituents detected.
Surface Water		X		No on-going releases.
Sediment		X		Releases were not required to be investigated by PADEP.
Subsurf. Soil (e.g., >2 ft)		X		No evidence of release detected during UST removal.
Air (outdoors)		X		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.

[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.

Rationale and Reference(s):
Releases occurred during Elgin's electroplating wastewater treatment. From 1964 to 1970 releases occurred from the wastewater treatment operations to drainage/wetlands adjacent the site. In addition, potential releases to soil from an underground concrete tank that was used as part of the wastewater treatment operations were investigated. Potential releases to soil from an aboveground storage tank (AST) that contained 1,1,1-trichloroethane (1,1,1-TCA) were also investigated.

Soil:
In 1992, in preparation for purchase of the facility from the Waterford Development Authority, Vitco arranged for a Phase I Environmental Assessment (EA), which was performed by Moody and Associates, Inc. (Moody) of Meadville, Pennsylvania. Moody identified and recommended addressing two environmental concerns, a subsurface concrete tank and soil in the vicinity of the former location of a 1,1,1-TCA AST. The report recommended closure of the subsurface concrete tank and a post-closure subsurface soil and groundwater investigation. The report also recommended subsurface soil sampling in the location of the former 1,1,1-TCA AST. Finally, the report recommended additional investigation of the former drain located at the southwest end of Building No. 1 that may have been used by Elgin for discharge of plating wastewater, as well as the dry well reported to be located between the building and its discharge location at Trout Run.

In May 1993, WDA contracted with InSite of Meadville, PA for removal and evaluation of the concrete UST used for the pretreatment of rinse water discharged from the facility to the sanitary sewer system and evaluation of soil at the location of the previously-removed AST containing 1,1,1-TCA. InSite concluded in their June 1993 Closure Report, that based on the integrity of the rinse-water pretreatment UST and the associated pipe, lack of any apparent signs of leaks, and the analytical evidence in soil samples collected from the UST excavation, that no impact to the surrounding area had occurred. Soil samples were collected from the four walls and the base of the excavation and analyzed for 1,1,1-TCA and metals in the TCLP leachate. One sample yielded a non-detectable leachate concentration of 1,1,1-TCA and the second sample yielded a low detected leachate concentration of 1,1,1-TCA, which does not have a regulatory limit for toxicity characteristic under 40 CFR 261.24. Two samples of soil were also submitted for TCLP metals analysis from the former UST excavation, which yielded non-detectable leachate concentrations of cadmium, lead, mercury, selenium and silver; and less than the regulatory limit for toxicity characteristic leachate concentrations of arsenic, barium, and chromium under 40 CFR 261.24. Also, soil sampled at the former AST containing 1,1,1-TCA was nondetectable for 1,1,1-TCA.

Groundwater:
Groundwater was not encountered during the underground storage tank (UST) excavation. The results of the soil investigation do not indicate that potential migration of the contamination to the groundwater could have occurred. No records of groundwater contamination exist. Furthermore, the PA (NUS, 1991) recommended no further action based on there being no reported groundwater contamination in the area surrounding the site. The recommendation was made following the end of Elgin's operations, which had resulted in discharges of industrial wastewater and the beginning of Vitco's operations which (unlike its predecessor), did not include industrial wastewater discharges.

Surface Water and Sediment:
From 1964 until 1970 discharges to the drainage/wetland area adjacent the site resulted in violations of the Clean Stream Law. Solvent compounds and heavy metals may have been deposited within the sediments of the wetlands adjacent to the facility and Trout Run. However, the PA (NUS, 1991) recommended no further action based on there being no reported surface water contamination in the area surrounding the site. The recommendation was made following the end of Elgin's operations and the beginning of Vitco's operations which (unlike its predecessor), did not include industrial wastewater discharges.

There are no current discharges to surface water and previous discharges of contaminants to surface water and sediment were not required to be investigated.

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"**[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):

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.

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 **Vitco Corporation** facility, EPA ID # **PAD000428136**, located at **802 Walnut Street Waterford, PA 16441** 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) Richard D. Marttala Date 5/27/09

(print) Richard D. Marttala

(title) Environmental Chemist

Supervisor (signature) Joel Fair Date 5/27/09

(print) Joel Fair

(title) Facilities Manager

(EPA Region or State) Pennsylvania

6-16-09
ASSOCIATE DIRECTOR
OFFICE OF PA REMEDIATION
USEPA R3

Locations where References may be found:

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Waste and Chemical Mgmt. Division
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Philadelphia, PA 19103

PADEP
Northwest Regional Office
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Meadville, PA 16335

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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.

Facility Name: Vitco Corporation
EPA ID# PAD000428136
City/State Waterford, PA 16441

CURRENT HUMAN EXPOSURES UNDER CONTROL (CA725)