

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: General Electric Transportation Systems  
Facility Address: 1503 West Main Street Extension, Grove City, PA 16127  
Facility EPA ID #: PAD 059 290 908

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 nonhuman (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)**

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>	_____	_____
Air (indoors) <sup>2</sup>	_____	<u>X</u>	_____	_____
Surface Soil (e.g., <2 ft)	_____	<u>X</u>	_____	_____
Surface Water	_____	<u>X</u>	_____	_____
Sediment	_____	<u>X</u>	_____	_____
Subsurface Soil (e.g., >2 ft)	_____	<u>X</u>	_____	_____
Air (outdoors)	_____	<u>X</u>	_____	_____

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):

On March 12, 1991 NUS Corporation, under EPA contract, submitted an Environmental Priorities Initiative Preliminary Assessment (PA) for the Facility. Twenty-three SMWUs were identified at the facility. No releases were observed or reported from the SWMUs and no further action was suggested.

The PA did, however, indicate two events at the Facility determined to be AOCs. First, on June 16, 1985, approximately 1,000 gallons of waste Van Stratten 759 coolant were accidentally released from a drain at the tank unloading facility to a storm sewer leading to nearby wetlands. The coolant is not a RCRA-regulated hazardous waste. O.H. Materials was contracted for the cleanup. 20,500 gallons of water were removed from the wetlands and processed through the plant's wastewater treatment facility. PADEP was notified and involved in the cleanup. No samples were collected. Second, on September 19, 1990, approximately 100 gallons of high-flash virgin mineral spirits leaked out beneath a door onto the front lawn of the property. PADEP was notified and was involved in the cleanup. A backhoe removed 60 to 70 cubic yards of soil and soil samples were collected. Since the spirits contained a large variety of solvents, the samples were analyzed by comparing sample chromatograph peaks with peaks present in an analysis of the virgin product. Contaminated soil was removed to a depth below the building foundation, when it was not possible to excavate further. Trace amounts of mineral spirits were still present in the soil. The area was backfilled, and three monitoring wells were installed on November 14, 1990 under PADEP oversight. The wells were sampled on November 21, 1990. The sample analyses did not reveal total petroleum hydrocarbons (TPH). PADEP granted closure of the spill

<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.

investigation in 1992.

On March 24, 1994, Tetra Tech, Inc. submitted a Screening Site Inspection Report prepared for the EPA. Sampling results indicated benzo(a)pyrene, benzo(b)fluoranthene, and benzo(a)anthracene above EPA's Risk-Based Concentration (RBC) screening levels. The location of these exceedances was in the wetland sediment at Outfall 2, the discharge point of the stormwater drain where the 1985 Van Stratten 759 coolant release occurred.

In December 2003, Tetra Tech FW, Inc. submitted a Final Environmental Indicator (EI) Inspection Report. The EI Report indicated that all underground storage tanks were removed in 1992. The report summarized the two release events discussed above and indicated that there was no reported or observed releases from the Facility SWMUs. EPA reviewed this report and scheduled a site visit on October 8, 2008 to discuss the next steps regarding questions about the following areas: mineral spirits spill excavation, SWMU 2 (former engine test cell scrap engine oil UST), SMWU 4 (removed spent mineral spirits tank), and Outfall 2 sample results. The Facility provided responses to EPA's questions on October 28, 2008. The responses satisfied EPA that the mineral spirits spill excavation, SWMU 2, and SMWU 4 were no longer a Corrective Action concern at the Facility. However, EPA requested a follow-up sampling at Outfall 2 to assess current conditions and to abandon wells related to the closure of USTs.

The Facility performed the requested actions on May 14 & 15, 2009. A Sediment Sampling and Well Abandonment Report was submitted July 13, 2009. The Report indicated that polycyclic aromatic hydrocarbons (PAHs) were detected at each sample location; the 1994 samples were generally higher concentrations suggesting the Facility was not a continuing source; no PAHs were detected above PADEP Non-Residential Direct Contact medium-specific concentrations (MSCs); only benzo(a)pyrene exceeded the PADEP Residential Direct Contact MSC at one location (directly adjacent to Outfall 2); and the sample collected 15 feet downgradient of Outfall 2 did not exceed any MSC indicating benzo(a)pyrene concentrations are not widespread. EPA agreed with the conclusions and approved the report on July 30, 2009.

The one sample at Outfall 2 that exceeded the PADEP Residential Direct Contact MSC for benzo(a)pyrene was in the wetland off the Facility property. EPA believes that exposure to the benzo(a)pyrene, given the location at an outfall adjacent to railroad tracks, would more likely resemble Non-residential settings. Given that the sample does not exceed the Non-Residential MSC and that the downgradient sample, 15 feet away, did not exceed any MSC, EPA believes this isolated condition is not a threat to human health or the environment.

**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" 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):

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<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 4

4. Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be "**significant**" (i.e., potentially<sup>4</sup> "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): \_\_\_\_\_

<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.

**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 the General Electric Transportation Systems facility, EPA ID PAD 059 290 9098 located at 1503 West Main Street, Extension, Grove City, PA 16127, 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)  Date 8/7/09  
(print) Kevin Bilash  
(title) RCRA Project Manager

Supervisor: (signature)  Date 8-7-09  
(print) Paul Gotthold  
(title) Associate Director, Office of Pennsylvania Remediation  
(EPA Region or State) Region 3

Locations where References may be found

References have been appended to the Environmental Indicator Report, which can be found at PADEP's Meadville office and USEPA's Region III office.

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.**