

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: Triangle Suspension Systems/International Jensen, Inc.
Facility Address: 1 Meter Street Punxsutawney, PA 15767
Facility EPA ID #: PAD001746460

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 #8 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”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)?

	<u>Yes</u>	<u>No</u>	<u>?</u>	<u>Rationale / Key Contaminants</u>
Groundwater		X		No record of contamination
Air (indoors) ²		X		Contamination is below risk-based levels
Surface Soil (e.g., <2 ft)		X		Contamination is below risk-based levels
Surface Water		X		Wastewater sources have been discontinued
Sediment		X		No record of contamination
Subsurf. Soil (e.g., >2 ft)		X		Contamination is below risk-based levels
Air (outdoors)		X		No record of contamination

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):

A Phase I ESA (SECOR, May 2000) indicated the presence of surface staining and ponding in the zinc chromate plating line and recommended subsurface soil investigation to determine whether releases have impacted the environment. Investigation of soil was also recommended in the location of two former 10,000-gallon heating oil underground storage tanks (USTs) where elevated concentrations (140 mg/kg and 900 mg/kg) of TPH had been found at the time of the UST removal.

Soil:

A Phase II Limited Subsurface Investigation report (SECOR, June 2000) presented the results of an investigation in the plating room area and the locations of the former USTs.

Soil samples were collected beneath the 3-foot thick concrete slab from two depth intervals (0 to 4 feet below ground surface[bgs], and 4 to 8 feet bgs) at four borings within the plating area, and analyzed for eight RCRA constituents (arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver), and zinc. Concentrations of these elements were considered to be similar to naturally occurring levels in the judgment of SECOR. The data were evaluated against subsequently promulgated Pennsylvania Act 2 Statewide Health Standards (SWHSS) for the purpose of this EI. The comparison to Act 2 standards indicates that the concentrations of these elements were less than the residential direct-contact Medium-Specific Concentrations (MSCs) or the residential soil-to-groundwater generic MSCs.

Soil samples were also collected from two borings within the former UST area. One sample was collected from each boring based on the highest photoionization detector (PID) reading among the samples from that boring, and consisted of a sample from 4 to 8 feet bgs from one boring and 8 to 12 feet bgs from the other boring. Depth to refusal at each boring varied from approximately 7 to 11 feet bgs. The samples were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX); polynucleated aromatic hydrocarbons (PAHs); and total petroleum hydrocarbons (TPHs) as diesel-range organics (DRO). All of the detected BTEX and PAH compounds were at concentrations below the PADEP UST closure Standards for Confirmatory Samples Collected at Closure Site Assessments for site

conditions where groundwater has not been encountered. The PADEP UST closure standards do not include limits for TPH. Previously (in 1996), PADEP had sent correspondence to the facility stating that no further action was required regarding the UST closure. A comparison to standards for the soil samples collected during the Phase II Limited Investigation by SECOR confirmed the applicable UST closure standards were met; however, because of the presence of elevated TPH concentrations in the former UST location, the report (SECOR, June 2000) recommended that should the area be disturbed in the future, special handling of the excavated material may be required.

Groundwater:

No releases are known to have occurred to the groundwater. Soil contamination was determined to be below PADEP Act 2 Residential Soil to Groundwater MSCs. Therefore, exposure pathway controls for groundwater are not necessary.

Surface Water and Sediment:

The industrial wastewater treatment system experienced difficulty in meeting the discharge limits for several parameters, in particular cyanide, silver, and zinc. However, the evaluation of releases presented in the PA (NUS, 1991) resulted in a conclusion of no further action necessary for these industrial discharges, which was stated in a memo issued on March 13, 1991. Subsequently, the facility made improvements to attain discharge limits by eliminating the use of cyanide and silver. The use of chemicals containing silver was replaced by those containing copper in 1994; however, the facility did not foresee any problems with meeting the discharge limits for either silver or copper at that time. After 1994, the facility was not cited for violations of industrial discharge limits until the Industrial wastewater discharges ceased in 1999, when the plant closed. Since that time, the occupants have not operated under NPDES or industrial discharge permits.

However, during the site visit in 2008, staining of the parking lot was observed underneath a rolloff container that contained metal shavings awaiting pickup for recycling offsite. Excess coolant from the metal shavings apparently drained and leaked from the rolloff. The rolloff container belonged to Argo Industrial Machining, whose owner was asked to take appropriate housekeeping measures to address the release of excess coolant.

Footnotes:

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.

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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)

<u>“Contaminated” Media</u>	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.)

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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):

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.

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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):

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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 (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 **Triangle Suspension Systems/International Jensen, Inc.** facility, EPA ID # **PAD001746460**, located at **Meter Street Punxsutawney, PA 15767** 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) *Linda A. Matyskiela*
(print) Linda Matyskiela
(title) EPA Project Manager

Date 10/16/2012

Supervisor (signature) *Paul Gotthold*
(print) Paul Gotthold, Associate Director
(title) Office of Pennsylvania Remediation
(EPA Region or State) _____

Date 10-18-12

Locations where References may be found:

US EPA Region III
Land and Chemicals Division
1650 Arch Street
Philadelphia, PA 19103

PADEP
Northwest Regional Office
230 Chestnut Street
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