

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: McKinney Products Company
Facility Address: 820 Davis Street, Scranton, Pennsylvania 18505
Facility EPA ID #: PAD004320248

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		See rational below
Air (indoors) ²		X		See rational below
Surface Soil (e.g., <2 ft)		X		See rational below
Surface Water		X		No surface water at site
Sediment		X		No sediment at site
Subsurf. Soil (e.g., >2 ft)		X		See rational below
Air (outdoors)		X		See rational below

- 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):

General Facility Information

McKinney Products Company (McKinney or Facility) occupies 16-acres of a 33.6-acre parcel of land in the Borough of Moosic, Lackawanna County, Pennsylvania. The subject site is situated in an area that includes light industrial, commercial, and residential properties. McKinney has occupied the subject site since 1964. The Facility manufactured metal door hinges and other hardware at the site until manufacturing operations ceased in June 2007. The manufacturing processes were conducted in a 200,000 square foot building and included milling, drilling, tapping, blanking, broaching, parts washing, electroplating, powder coating, painting, and final assembly. ASSA ABLOY (parent company) bought McKinney in 1997 and is the current owner. The subject site is currently vacant.

Prior to 1964, the subject site was owned by Trane who manufactured heating and air conditioning units. Trane purchased the site from the Scranton Lackawanna Industrial Building Company (SLIBC) in 1956. SLIBC constructed the on-site building, but never performed operations at the Site. SLIBC purchased the site from the Scranton Industrial Development Company (SIDC) in 1948. During SIDC ownership, the site was undeveloped with no manufacturing operations. SIDC bought the site from an unknown owner in the early 1940s.

Summary of Environmental Investigations

A Phase I Environmental Site Assessment (ESA) was conducted at the subject site by Cardinal Resources LLC (Cardinal) between 2005 and 2006. The findings of the Phase I ESA are documented in a report dated October 2006. The purpose of the Phase I ESA was to assess the potential for environmental concerns on the site. Cardinal assessed the potential for contamination by performing a site reconnaissance survey of the property, reviewing available reports/information, and contacting regulatory agencies. The Phase I ESA concluded that chemicals historically used on-site include: 1,1,1-trichloroethane (1,1,1-TCA), lubricating oils, chlorine, chromium, copper, nickel, cyanide, sodium hydroxide, and sulfuric acid. In addition, the following eight (8) recognized environmental conditions (RECs) were identified for the subject site.

- Historic use of 1,1,1-TCA and lubricating oils may have resulted in a release of these constituents to the environment;
- Two (2) chemical storage areas in the manufacturing area of the Facility building did not have secondary containment, which could have allowed for historic releases into the environment;
- Suspect asbestos containing material (ACM) was noted in the form of pipe wrap.
- Potential PCB-containing transformers, owned by Pennsylvania Power and Light (PPL), were present outside the facility building;
- Storage shed located along western side of the facility building that was used for the storage of waste oil and other chemicals. The floor of the shed was constructed of concrete and there was a potential for a release to the environment from cracks or pathways in the concrete floor;
- Green staining on the floor where a former wastewater treatment tank was located. The tank was removed from the site in 2006. There is the potential for a release of metals, cyanide, and solvents to the environment;
- Potential for the release of metals into the environment from dust collects used at the site since 1964; and,
- Potential for the release of heating oil constituents to the environment from two former above-ground storage tanks (ASTs) that contained heating oil at the site.

Following the Phase I ESA, Cardinal developed a Phase II ESA Work Plan to address all of the RECs, except for the ACM. The objective of the Phase II ESA was to identify soil, groundwater, and indoor air impacts that may have been caused by historic use of the site or from background or upgradient sources. The Phase II ESA Work Plan was implemented from July 30 through August 10, 2007. The results of the Phase II ESA are presented in a report dated August 2007. The planned scope of work included: soil sampling of areas inside and around the building to evaluate potential impacts from historic site use; soil gas sampling to identify potential indoor air issues; and, groundwater sampling to evaluate current groundwater conditions.

- Soil Sampling Results: Twenty-two (22) borings were drilled at the site, and one soil sample was collected from each boring. The selected soil sampling locations were chosen because these locations had the highest likelihood of environmental impacts from historical site use. The soil samples were analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, cyanide, and PCBs depending upon the activities at each sampling location. The sample results were compared to Pennsylvania's Department of Environmental Protection (PADEP) Land Recycling Program's (Act 2) non-residential Medium Specific Concentrations (MSCs) because the current use and expected future use of the site is nonresidential. None of the soil samples contained concentrations of constituents of concern (COC) that exceeded the selected MSCs. Please refer to Table 2 and Table 3 of the Phase II ESA for the COC that were detected and their respective concentrations.
- Groundwater Results: Four (4) exploratory borings were drilled through unconsolidated material and into bedrock for the evaluation of groundwater conditions upgradient and downgradient of the site. In developing the July 2007 Work Plan, it was anticipated that monitoring wells would be installed within the first water-bearing unit encountered in each of the borings. However, during the field work, groundwater was not encountered to a drilling depth of 175 below ground surface (bgs). In addition, mine voids were encountered 92 to 118 feet bgs and the void areas ranged in thickness between 8 and 21 feet. Therefore, the proposed groundwater monitoring wells could not be installed due to the lack of groundwater and the presence of mine voids. It is suspected that the voids are related to historic mining and that this has disrupted the normal flow of groundwater in this area.
- Soil Gas Results: Seven soil gas samples were collected and the analytical results were compared to PADEP's Nonresidential Indoor Air Criteria. Although these criteria are for ambient indoor air, not soil gas, if the soil gas results are below the indoor air criteria, then it can be assumed that there are no impacts to indoor air in the building. However, several of the chemicals detected exceeded the indoor air criteria, it was necessary to calculate the incremental risks for any carcinogenic COC and the hazard quotient for the noncarcinogenic COC. The Johnson and Ettinger model for subsurface vapor intrusion into buildings was used to calculate the incremental risk and the hazard quotient for all

seven (7) of the soil gas sample locations. Results of the modeling showed that there are no incremental risks to site workers from the COC present in soil gas.

On October 7, 2010, a PPL crew discovered three (3) 500k VA transformers at the subject site had been vandalized. As a result, the three (3) transformers had been drained of their oil, estimated to be 240 gallons total. The PCB content was unknown; however, it was assumed that the oil contained PCBs. A total of thirty-six (36) 20-cubic yard roll-off containers (approximately 446 tons) of impacted soils were excavated and forty-four (44) 55-gallon drums of material (40 drums of oily water; 4 drums of PCB-impacted PPE, absorbents, etc.) were removed from the site. An oil sample was collected and found to contain PCBs at a concentration of 288 parts per million (ppm).

PPL verified completeness of the remediation by sampling and lab analysis. A total of 40 post-remediation samples were collected, and results for all 40 samples were non-detect for PCBs. The remediated area was backfilled and restored upon completion of soil removal and post-remediation sampling. The PCB spill was address through PADEP's Act 2 program and the Final Report was submitted to PADEP on January 7, 2011. PADEP approved the Final Report on January 25, 2011 stating that contamination had been remediated to an Act 2 standard, residential Statewide Health Standard for site soils within the area of the site as specified in the report.

References:

- (1) Environmental Indicator Inspection Report, Prepared by URS, January 2007
- (2) Phase I Environmental Site Assessment, Prepared by Cardinal Resources LLC, October 2006
- (3) Addendum to Phase I Environmental Site Assessment, Prepared by Cardinal Resources LLC, July 2007
- (4) Phase II Environmental Site Assessment, Prepared by Cardinal Resources LLC, August 2007
- (5) PADEP Act 2 Final Report Submittal-PPL Transformer Spill, January 2011

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 McKinney Products Company facility, EPA ID # PAD004320248, located at 820 Davis Street, Scranton, Pennsylvania 18505 under current and reasonably expected conditions. This determination will be re-evaluated if 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) _____ Date 4/27/2011
(print) Jeanna R. Henry
(title) Remedial Project Manager
Office of Pennsylvania Remediation
EPA Region 3

Supervisor (signature) Paul Gotthold Date 4/27/2011
(title) Associate Director
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Locations where References may be found:

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