**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: **Pittsburgh Industrial Plating**
Facility Address: **1 Herron Avenue Pittsburgh, PA 15202**
Facility EPA ID #: **PAD087569620**

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 | | | Benzene concentrations exceeding MSC. |
| Air (indoors)[2] | | X | | Contamination below risk-based levels. |
| Surface Soil (e.g., <2 ft) | | X | | Contamination below risk-based levels. |
| Surface Water | | X | | No evidence of groundwater to surface water contamination. |
| Sediment | | X | | No record of contamination. |
| Subsurf. Soil (e.g., >2 ft) | X | | | Cyanide and benzene concentrations exceeding MSCs. |
| 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.

X 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):**

The Pittsburgh Industrial Plating (PIP) facility operated from 1995 until 2002. No operations were active at the facility until 2006, when Sampson Morris purchased and redeveloped the property. From 1934 to 1995, the facility was operated

[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.

by the Cyclops Corporation (Cyclops), a manufacturer of industrial metal building panels. The use of the property prior to its manufacturing history is not known. Currently, the facility maintains a mixture of office, flex space, light industrial, and warehouse/distribution.

Based on the description in the Preliminary Assessment (PA) prepared by NUS Corporation for the United States Environmental Protection Agency (USEPA) in 1989, Cyclops manufacturing included painting, roll forming, shearing, brake forming, and the miscellaneous fabrication of sheet metal into panels and associated accessory items. Spent roll wash (solvent) was produced as a result of these operations. The amount of waste produced was reduced by the installation of a still. Still bottoms (sludge) were temporarily stored on site until they were transported to an off-site treatment facility.

The facility was originally owned by Cyclops /E.G. Smith Construction Products from 1934, according to the 1989 PA. (Note: Other documents indicate the property was purchased by E.G. Smith Suppliers in 1955). Records indicate that Cyclops/E.G. Smith Construction Corporation Products Inc. was located at 100 Walls Street location off Ohio River Boulevard (Route 65). The facility was located at the intersection of Walls Street and Herron Avenue. E.G. Smith owned the property until 1993, when it was transferred to Smith Steelite. Cyclops was listed as a successor to E.G. Smith and Company following a merger in 1987. According to Allegheny County records, John Maneely Company purchased the facility in 1995 from Smith Steelite. John Maneely Company was doing business as PIP, which was located at 1 Herron Avenue. Other names identified for PIP included Wheatland Tube Company, which is under the parent company of John Maneely Company.

As Cyclops in 1989, the facility was located on approximately five acres of land with a main building, a paint and chemical storage building, and a parking area. Two waste generating areas were present. The first area was the still bottoms drum storage area in the paint storage building. This area was approximately 5 feet by 15 feet in size and it was characterized by concrete floors without floor drains. The second area was the distillation room located at the eastern portion of the main building. This area was approximately 10 feet by 15 feet in size and it was characterized by a still system utilizing 5 drums (one for still bottoms and four for solvents), concrete floors sloping toward the outside wall, a lack of floor drains, and a small concrete ditch running along the outside wall.

On November 15, 1980, Cyclops submitted a Part A Hazardous Waste Permit Application to USEPA. On December 22, 1980, the USEPA ID PAD087569620 was assigned. PIP, located at 1 Herron Avenue, was also assigned USEPA ID PAD987397148 in 1995. On May 21, 1997, PIP wished to retire the latter ID that was issued in 1995. However, both IDs are associated with the same location at 1 Herron Avenue. Under the RCRAInfo (online database) Facility Information for PAD087569620, PIP is still associated with that number as Large Quantity Generator (LQG) (active), although PIP does not own or operate the facility any longer and no waste generation activities currently exist at the location.

The facility operated under Allegheny County Air Permits during 1983. Specifics of the process are not known. The facility also discharged pretreated industrial wastewater to the publicly operated treatment works (POTW), Allegheny County Sanitary Authority (ALCOSAN). The facility did not operate under a National Pollutant Discharge Elimination System (NPDES) permit.

An aluminum pretreatment wash system was located in the southeastern end of the main building. The entire system was constructed on a concrete pad and utilized six tanks, a caustic soda wash, a rinse for each tone, a chrome/phosphate bath, a second rinse, a third rinse using phosphoric acid and a wetting agent, and a drying oven. The chrome/phosphate bath utilized a filter to treat discharge. The filter collected insoluble aluminum. The five rinse tanks each had a capacity of 1,000 gallons. The system's rinses were combined, sent through a sump, and discharged to a sanitary sewer.

The main facility building also contained an aluminum cutting mill, an aluminum roll-forming mill, a finishing line, a spray line (painting), and a finished product storage area. The second building, at the western end of site was used for the storage of paints and chemicals.

Based on a description provided by the plant engineer in 1997 during PIP operations, the facility operated a wastewater treatment system that consisted of a wastewater treatment system to treat electroplating wastewater and other plant water (boiler blow down and condensate returns). The system consisted of 3,000-gallon batches that included oxidation with ferrous chloride, raising the pH with lime, clarification/flocculation, and sludge settling. The treated wastewater was adjusted to a pH in the range of 8.0 to 9.5 and discharged to the local POTW (i.e., ALCOSAN).

Currently, the facility is owned and operated by Sampson Morris Group, of Monroeville, Pennsylvania, a commercial real estate development and property management organization that specializes in the purchase and repositioning of office and warehouse properties in western Pennsylvania. Sampson Morris purchased the facility in 2006 and converted prior industrial space to usable space for various tenants including the current tenants: McCarthy Tire Company, Pittsburgh Poison Cheerleading Studio, Game Fly (video game rental company), and RAS Appliance (refrigerator and appliance shipper).

At the time of a site visit conducted on June 10, 2010, the layout of the facility is as follows for the above-mentioned tenants. McCarthy Tire Company operates a tire facility in the former spray line and finished product storage area. Pittsburgh Poison Cheerleading Studio runs a competitive cheerleading studio in the former Aluminum Pretreatment washes area and the finishing line. RAS Appliance operates as a refrigerator and appliance shipper in the former aluminum roll forming mill and aluminum cutting room. Game Fly operates as a video game rental/shipping company in the former aluminum roll forming mill and aluminum cutting room. Since its purchase in 1993 of the former PIP Building 2 (paint storage), Schaffner Manufacturing Company owns and operates the building as storage for virgin products.

During renovations, the two office extension portions of the prior building have been demolished and are current parking areas. Additionally, a portion along the area on the eastern edge of the property where the former unused storage tank and part of the spray line was also demolished.

The 1989 PA identified and described the presence of five solid waste management units (SWMUs): SWMU 1 – Distillation Room Area, SWMU 2 – Aluminum Pretreatment Wash Area, SWMU 3 – Empty Drum Storage Area, SWMU 4 – Waste Oil Storage Tank, and SWMU 5 – Still Bottoms Drum Storage Area. No further action was suggested by their evaluation of releases or potential releases at that time (no releases reported and no evidence of releases or spills were evident). The facility is no longer in operation and these SWMUs were verified to be no longer active and their current use was noted during the June 10, 2010 site visit, as follows. The areas formerly occupied by SWMUs 1, 2, and 5 were renovated and are currently occupied by existing tenants. The areas formerly occupied by SWMUs 3 and 4 are currently unused.

One above-ground storage tank (AST) for waste oil (SWMU 4) was present at the facility. Available Pennsylvania Department of Environmental Protection (PADEP) and USEPA records indicate that the facility did not operate any other ASTs or underground storage tanks (USTs). At the time of the 2010 site visit, no tanks remain at the property.

**Groundwater:**
Two USTs were removed prior to 1987; no documents exist noting their removal. Subsequent investigations were conducted in order to characterize soil and groundwater in the vicinity of the former gasoline UST. Benzene, toluene, ethylbenzene were detected in two monitoring wells (MW-4 and MW-5). Benzene was detected in MW-4 and MW-5 at concentrations exceeding the state limit of 5 microgram per liter (ug/L). MW-3, located hydraulically downgradient of the source area and adjacent to Lowries Run, did not contain total petroleum hydrocarbons (TPH) or benzene, toluene, ethylbenzene, and xylenes (BTEX) delineating the extent of petroleum compounds. As the majority of the source area was removed, and on September 24, 1996, PADEP stated the requirements of the Consent Order and Agreement (CO&A) [Buyer/Seller Remediation Agreement] have been met, the groundwater to surface water pathway is not relevant. Note: In the letter, PADEP reserved the right to require additional remediation if future information indicates pollution/contamination not discovered or identified.

Available documentation indicates that benzene was detected at 265 ug/L in groundwater, most likely as a result of a release from a former gasoline UST. According to the Focused Phase II Assessment, groundwater contained concentrations below Pennsylvania's Land Recycling and Environmental Remediation Standards Act (Act 2) MSC with exception of benzene (265 ug/L) vs. the used aquifer MSC (5ug/L).

**Indoor Air:**
Soil samples collected from the vicinity of the former gasoline UST during the 2003 Focused Phase II Assessment detected a concentration of benzene at a soil depth of 10-12 feet below ground surface (bgs) of 2,120 microgram per kilogram (ug/kg). The concentration of benzene is above: 1) the PADEP used aquifer nonresidential soil–to–groundwater MSC (0.5 milligram per kilogram [mg/kg]); 2) the PADEP nonuse nonresidential aquifer soil–to–groundwater MSC (50 mg/kg); and 3) the direct contact non-residential MSCs for surface and subsurface soils of 210 and 240 mg/kg, respectively.

The benzene detection was in an outside area below a paved parking area adjacent to the building. Soil boring logs from a previous investigation conducted in 1992 indicate that soil in this area is mainly brown sandy clay with sandstone fragments.

Based on the PADEP's *Land Recycling Program Technical Guidance Manual – Section IV.A.4 (Vapor Intrusion into Buildings from Groundwater and Soil under the Act 2 Statewide Health Standard)* and decision matrix flowchart for soil, if there is a depth of greater than or equal to 5 feet of soil-like material separating the soil and/or groundwater sample containing constituents of potential indoor air concern (COPIACs) and the sample concentrations do not exceed the PADEP soil to groundwater MSC for a used aquifer (500 ug/kg for benzene), the vapor intrusion pathway is incomplete or presents negligible risk and there are no further indoor air quality issues for groundwater. The soil sample at CEC-1 was collected from a depth of 10-12 feet bgs. Based on boring logs from sampling conducted at the site, the soil type across the site has been documented to be fill and river alluvium (fill, followed by sand and gravel).

Benzene was also detected in the groundwater in the same location at a concentration of 265 ug/L which exceeds its used aquifer MSC (5 ug/L); however, this level does not exceed its nonuse aquifer MSC (500 ug/L). It should be noted that the uppermost aquifer at the site is located approximately 22.5 to 25 feet bgs within the clayey sand and sand and gravel alluvium. Static water levels were observed at 21 and 22 feet bgs. Based on the depth to groundwater at this site, vapor intrusion from groundwater would not be a viable indoor air exposure pathway.

As per the 2003 Focused Phase II Assessment analytical results, benzene was the only detected compound that was identified as sufficiently volatile and toxic at one soil and groundwater sampling location post source area remediation. Based on the above groundwater evaluation, which provides a more reliable measure of the potential for vapor intrusion into indoor air, exposure controls for vapor intrusion of benzene from groundwater and/or soil to indoor air are not relevant.

**Soil:**
Soil was investigated after two releases of hazardous wastes from the plating operation that occurred in 1996. However, nearby soil sampling in these areas and stream sediment sampling in Lowries Run indicated that the chemicals analyzed were either less than or slightly above background concentrations. TPH concentrations in soil were as high as 7,320 and 3,410 mg/kg as a result of the releases.

In 1995, approximately 250 tons of soil were remediated in the former gasoline UST area following detection of elevated xylenes levels. Between April 24 and May 5, 1995 excavation and mobile injection treatment unit (MITU) technology was used to remediate soils within the UST area. Approximately 250 tons of soil was excavated, treated, and re-introduced into the excavation as clean backfill. Verification soil samples analyzed for TPH and BTEX following the source area remediation showed that these constituents were less than analytical detection limits or were well below

PADEP generic groundwater protection levels.

The 2003 Focused Phase II Assessment indicated that cyanide at two sampling locations (300 and 420 ug/kg) were above the Act 2 soil-to-groundwater MSC (200 ug/kg) for used aquifers. However the soil is capped beneath the building and cyanide was not detected in groundwater above the applicable PADEP MSCs. Benzene in soil (2,120 ug/kg) was detected in a soil sampling location at 10-12 feet bgs in the UST area that exceeded the used aquifer soil-to-groundwater MSC of 500 ug/kg. The exceedance is located outdoors adjacent to the building and is capped by an asphalt parking area; therefore, eliminating direct contact exposures to soil.

**Surface Water and Sediment:**
The facility did not operate under a NPDES permit. While it is possible that the releases that occurred in 1996 from the neutralized acid and oil release area and the plating line rinse water release area may have discharged into Lowries Run, soil sampling events conducted in these two areas and stream sediment sampling indicated that the potential releases had an insignificant effect on the environment. There is no evidence to suggest that groundwater to surface water contamination exists.

As the majority of the source area was removed, and on September 24, 1996, PADEP stated the requirements of the Consent Order and Agreement (CO&A) [Buyer/Seller Remediation Agreement] have been met, the groundwater to surface water pathway is not relevant.

During the June 10, 2010 site visit, two pipe discharges were observed on the bank of Lowries Run with unknown discharge sources. It is possible one or both likely originate from a French drain outlet from recent building renovations; therefore, exposure controls for surface water may be relevant.

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 | No | No | No | No | No | No | No |
| ~~Air (indoors)~~ | | | | | | | |
| ~~Soil (surface, e.g., <2 ft.~~ | | | | | | | |
| ~~Surface Water~~ | | | | | | | |
| ~~Sediment~~ | | | | | | | |
| Soil (subsurface e.g., >2 ft. | No | No | No | No | No | No | No |
| ~~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.

__X__ 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):**

**Groundwater:**
While the groundwater at the site has not formally received non-use aquifer status, the facility and surrounding properties are on public water supply. Therefore, exposure pathway controls for groundwater are not considered necessary. The Buyer's covenants in the CO&A included not to use the groundwater for any consumptive use.

[3] Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.

**Subsurface Soil:**
Verification soil samples analyzed for TPH and BTEX following the 1995 source area remediation showed that these constituents were less than analytical detection limits or were well below PADEP generic groundwater protection levels.

The 2003 Focused Phase II Assessment indicated elevated levels of cyanide at two sampling locations. However the soil is capped beneath the building and cyanide was not detected in groundwater above the applicable PADEP MSCs. Concerning the benzene exceedance, the location is outdoors adjacent to the building and is capped by an asphalt parking area; therefore, eliminating direct contact exposures to soil.

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 **Pittsburgh Industrial Plating** facility, EPA ID # **PAD087569620**, located at **1 Herron Avenue Pittsburgh, PA 15202** 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) Elizabeth R Bertha Date 10/15/12

(print) Elizabeth R. Bertha

(title) Environmental Protection Specialist

Supervisor (signature) [signature] Date 10/15/12

(print) Diane D. McDaniel P.E

(title) Engineer Manager

(EPA Region or State) PADEP SWRO Region 3

Locations where References may be found: Paul Gottlieb ~~10/13~~ 8/13/13

USEPA Region III
Waste and Chemical Mgmt. Division
1650 Arch Street
Philadelphia, PA 19103

PADEP
SouthWest Regional Office
400 Waterfront Drive
Pittsburgh, PA 15212

Contact telephone and e-mail numbers
(signature) _____
(print) _____
(title) _____

**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: | Pittsburgh Industrial Plating |
| EPA ID# | PAD087569620 |
| City/State | Pittsburgh, PA 15202 |

## CURRENT HUMAN EXPOSURES UNDER CONTROL (CA725)