

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: Bethlehem Structural Products Corporation
Facility Address: 1170 Eighth Ave., Bethlehem, PA 18016
Facility EPA ID #: PAD990824161

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, GPRRA). 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			Groundwater Data
Air (indoors) ²		X		SGO Building Indoor Air Sampling Data
Surface Soil (e.g., <2 ft)		X		Soils Data
Surface Water		X		Surface Water Data
Sediment		X		Sediments Data
Subsurf. Soil (e.g., >2 ft)	X			Soils Data
Air (outdoors)		X		Soil Gas Studies

_____ 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):

Rationale is below. References are listed after Question 4.

General

The characterization conducted at the former Bethlehem Steel plant divided the site into three primary areas, Bethlehem Works, Bethlehem Commerce Center, and Site-wide Groundwater. Bethlehem Commerce Center was further divided into four parcels, Conectiv, Saucon, Coke Works, and East Lehigh. Characterization and remediation will be discussed for each of the areas at the site. The site is zoned commercial/industrial, therefore non-residential health-based standards have been used for determining whether the soil is contaminated above acceptable levels.

Bethlehem Works

Bethlehem Steel’s redevelopment plan for Bethlehem Works hinged on removal of most of the buildings at the parcel. To maximize time and resources, building demolition and soil characterization were performed concurrently. At that time, degreasers, which may have been sources of contamination, were excavated and other soil contamination was removed (down to 2 feet) when it was found, and backfilled with clean fill. Soil, soil gas, groundwater, surface water, and indoor air were characterized, according to the May 1998 Clean-up Plan.

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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The primary location of soil contamination was the sintering plant, where lead and arsenic were found above health-based levels. Contaminated soil was removed and backfilled with clean fill. A few hot-spots of heavy-metal soil contamination (primarily lead and arsenic), above health-based limits, were found across the site. These spots were isolated, and not representative of wide-spread contamination. The depth of these hot-spots were greater than 2-feet below-ground-surface (bgs), therefore not a direct contact threat to workers and trespassers. The potential exposure route of such isolated subsurface contamination is limited to construction workers.

Conectiv

A soil and groundwater investigation was performed at the Conectiv Parcel in 2001. The area had not been used previously for industrial activity. The sampling and analysis showed no evidence of hazardous constituents above health-based levels in either the soil or groundwater.

Saucon

Phase I Assessments (historical record and report reviews) were completed for the entire Saucon parcel, identifying additional field work to be performed to complete the environmental characterization. EPA and PADEP approved the Phase I Assessments as well as the workplans to accomplish the additional field work. The U.S. Cold Storage (USCS) area, the portion of the Saucon parcel to be developed first, is on a faster timeline than the rest of Saucon for investigation and remediation work. The field work at the USCS area has been completed. The soil sampling has shown several hot-spots where arsenic and poly-aromatic hydrocarbons (PAHs) such as benzo(a)anthracene and benzo(a)pyrene were found above health-based levels. These are isolated areas, not indicative of wide-spread contamination. The soil sampling results show that the contamination is not likely to leach to the groundwater.

The remainder of the field work at the Saucon parcel is expected to be performed in 2005. Currently, there is no activity at the area outside the USCS parcel and access is restricted by a guarded gate.

Coke Works

The Coke Works is the location of former chemical processing, coking operations, and coal tar/coking waste disposal. All of these operations contributed to significant soil and groundwater contamination at the area. PAHs, BTEX, and other volatile organic contamination has been found throughout the soil and groundwater columns. Through soil and soil-gas studies, a 26-acre area was determined to provide unacceptable exposure scenarios for direct contact with soil and leaching potential to the groundwater. Removal of the materials in an area this size is not economically feasible, therefore an impermeable cap has been proposed for these worst 26-acres. The remaining acreage shows wide-spread contamination of PAH and BTEX constituents, especially in the coal tar waste disposal areas.

East Lehigh

A soils investigation was performed in 2003 for the former industrial areas of the East Lehigh parcel. The results indicated widespread low-level (10^{-5} risk range) contamination of arsenic and benzo(a)anthracene throughout the former industrial areas of the parcel. The contamination was found throughout the soil column. Several hot-spots of higher PAHs contamination were also found widely distributed across the area. The soil analysis shows a potential for leaching of the PAHs into groundwater by both the widespread and hot-spot contamination. A plan for investigating the groundwater has been approved by EPA and will be performed in 2004. The investigation will show if any there are any sources of groundwater contamination on the East Lehigh parcel.

A closed surface impoundment is located at the northern edge of the East Lehigh parcel. The surface impoundment was closed under the direction of PADEP with a cap to eliminate direct contact with hazardous constituents. The cap is maintained under a post-closure permit program run by PADEP.

Groundwater

A number of areas throughout the former Bethlehem Steel property were found to be sources of contamination to groundwater. Some of these areas were localized, such as on the Bethlehem Works site where Machine Shop 2 and

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the Electric Repair Building were found to be sources of PAH and halogenated hydrocarbon (i.e. TCA, TCE, 1,1-DCE) groundwater contamination. Although the current readings of these contaminants in the soil do not exceed health-based levels, there remain high concentrations of these organics in the groundwater. Downgradient sampling of groundwater and the surface water of the Lehigh River has shown that the Bethlehem Works contamination is localized, and has not migrated.

The East Lehigh area has a potential of groundwater contamination from source areas, based on soil sampling results discussed in the East Lehigh section above. A groundwater investigation is planned for 2004 to determine locations of any interior source areas.

A closed surface impoundment is located at the northern edge of the East Lehigh parcel. The surface impoundment was closed under the direction of PADEP and currently is monitored quarterly for releases to groundwater under a post-closure permit.

The Coke Works area is the primary source of wide-spread groundwater contamination. The former disposal areas have leached PAHs and volatile organic constituents into the groundwater, primarily naphthalene and benzene. In order to more fully understand the contamination and groundwater flow, a time-lapse groundwater model was developed which included the pumping of the former production wells in addition to the geophysical information that was available in regional and site-specific reports. The groundwater flow from the Coke Works was determined to be primarily toward the Lehigh River, Saucon Creek, and Laubach Creek. A fate and transport model detailing the assumed path and degradation rates of the contaminants is planned to be completed in 2005.

Although there are very high levels of organic contaminants under the Coke Works area, and potential source areas in the East Lehigh area, the facility-wide perimeter groundwater, surface water and sediment sampling has shown no impact to the Lehigh River, Saucon Creek or Laubach Creek. A monitored natural attenuation approach is anticipated for the groundwater remediation.

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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	N	N	N	Y	N	N	N
Air (indoors)	—	—	—	—	—	—	—
Soil (surface, e.g., <2 ft)	—	—	—	—	—	—	—
Surface Water	—	—	—	—	—	—	—
Sediment	—	—	—	—	—	—	—
Soil (subsurface e.g., >2 ft)	N	N	N	Y	N	N	N
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).
- X 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):

Rationale is below. References are listed after Question 4.

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

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General

The site is zoned for commercial/industrial activities, not for residential use or food production. The current redevelopment plans call for the majority of the site surface to be covered by building footprints and paved parking areas. These measures will prevent incidental contact with the soil by anyone on the site (workers and trespassers). Groundwater is at least 7 feet below the surface, and often is far deeper. There is no groundwater pumping on site and all well-heads are locked. Accidental contact with the groundwater by anyone on the site is highly unlikely.

Bethlehem Works

The redevelopment plan calls for most of Bethlehem Works to be paved over, which will eliminate most avenues of exposure to soil contamination left on-site. Construction workers are the exception, however any construction will have health and safety plans associated with the work to be performed.

Conectiv

The investigation showed no evidence of hazardous constituents in the area, therefore there are no complete exposure pathways.

Saucon

When the final grading for the USCS redevelopment is done, most of the arsenic and PAH hot-spot areas will be lower than 2 feet bgs. After final build-out, the entire site will have buildings or paved parking lots on the surface. During development, any area not actively under construction will be hydroseeded to reduce potential exposure. These measures will eliminate potential exposure pathways except for construction workers.

The remainder of the field work at the Saucon parcel is expected to be performed in 2005. Currently, there is no activity at this area and access is restricted by a guarded gate. There are no exposure pathways at this time.

Coke Works

Through soil and soil-gas studies, a 26-acre area was determined to provide unacceptable exposure scenarios for direct contact with soil and leaching potential to the groundwater. Removal of the materials in an area this size is not economically feasible, therefore an impermeable cap has been proposed for these worst 26-acres. The remaining acreage shows wide-spread contamination of PAH and BTEX constituents, especially in the coal tar waste disposal areas. However, these areas have a lower exposure potential for direct contact and leaching to groundwater, therefore, the site development plans calls for selected cover material. A intermodal terminal will use crushed stone, rail tracks and paved parking areas to eliminate incidental direct contact exposure. Other areas will primarily use building slabs and paved areas or 2 feet of cover material to eliminate the direct contact to workers. A proposed soils remedy for the Coke Works area outlining the placement of cover materials has been approved by EPA and PADEP. Through these measures, there will not be an exposure pathway for workers and trespassers to contact the soils. Construction workers are the only potentially exposed individuals.

East Lehigh

The surface redevelopment plan for the East Lehigh area calls for building footprints and paved parking lots on most of the acreage. The hot-spot areas will be covered by paving or slabs. Incidental direct contact to the soil will be eliminated by the proposed redevelopment plan. Potential exposure to contaminated soil is limited to construction workers.

Groundwater

The site-wide groundwater investigation has shown that construction workers are the only individuals potentially exposed to the contaminated groundwater.

Groundwater is at least 7 feet below the surface, and often is far deeper. There is no groundwater pumping on site and all well-heads are locked. Accidental contact with the groundwater by anyone on the site is highly unlikely.

The groundwater on-site is not currently used as a drinking water source. Additionally, there is a City of Bethlehem

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ordinance prohibiting groundwater wells from being installed for potable purposes, within the city limits. The residential areas around the site use municipal water as their potable water source. In addition, the groundwater contamination found on-site is headed toward the Lehigh River, not toward any residential areas. Sampling has shown that the contamination has not impacted the Lehigh River, Saucon Creek, or Laubach Creek, therefore no trespassers or recreational users of the surface waters are exposed to hazardous contaminants.

Off-site Groundwater

In addition to the on-site groundwater investigation, an off-site groundwater study was performed near the homes in Saucon Park. Sampling of the groundwater at the western edge of the property, near the Coke Works parcel, has shown high levels of naphthalene, as well as benzene and other volatile organic constituents. Although the groundwater model shows the general flow of the groundwater is toward the Lehigh River, a portion of the flow is expected to be toward Saucon Creek. The homes in and near Saucon Park are side-gradient to the expected contaminant flow to Saucon Creek and not expected to be impacted. However, groundwater sampling was performed to ensure that the volatile organic contaminants were not affecting the groundwater under or the air inside the homes. The study results show that there are no hazardous organic contaminants, above safe drinking-water levels, in the groundwater near the homes. This also shows that indoor air at the Saucon Park homes have not been affected by groundwater contamination from the site.

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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):

Rationale:

Construction workers, involved in the current redevelopment, have the only potentially complete exposure pathway, as discussed in the Rationale to Questions 2 and 3, above. Any construction will have health and safety plans associated with the work to be performed. These health and safety plans will contain provisions for worker training and procedures for safely handling any contaminated soil and groundwater encountered.

Present and Future:

The Human Exposures Under Control Environmental Indicator is intended to evaluate current conditions at the facility. At this time, EPA has assessed the environmental investigations information and planned redevelopment projects and has determined that human exposures are under control.

EPA expects that additional redevelopment, outside what is currently planned at this site will, occur over a number of years. As this happens, the exposure assumptions discussed in Questions 2 and 3 may no longer be valid. At the time of further redevelopment, EPA will re-evaluate this Human Exposures Under Control Environmental Indicator and assess the potential exposure pathways. Therefore, EPA’s determination of Human Exposures Under Control may be modified in the future, according to new environmental data presented.

References for Questions 2, 3, and 4

Bethlehem Works

Draft RCRA Facility Assessment, Bethlehem Steel Corporation, prepared by CDM, September 28, 1990

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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References for Questions 2, 3, and 4 cont.

Remedial Investigation, Risk Assessment, and Cleanup Plan - Bethlehem Works Site, Volumes 1, 2, and 3, May 28, 1998, prepared by SAIC

EPA Approval of Characterization and Remediation for Soils and Groundwater Verification Monitoring Plan for Bethlehem Works Project, May 6, 1999 (M. Vickers to J. Snyder)

Memo: SGO Building Indoor Air Sampling Data and Evaluation, Bethlehem Works Project, October 29, 2002, prepared by SAIC

Conectiv

Final Report for Soils, Conectiv Mid-Merit, Inc. Project Area, Bethlehem Commerce Center, prepared by SAIC, July 2001

EPA Approval of Final Report for Soils, Conectiv Mid-Merit, Inc. Project Area, Bethlehem Commerce Center, October 30, 2001 (M. Vickers to E. Wilson)

Saucon

Saucon Plant - Preliminary Phase I, Environmental Issues - Saucon Mills Area, Bethlehem Steel Corp., Bethlehem Plant; prepared by SAIC; December 2002

Saucon Plant - Preliminary Phase I, Environmental Issues - Iron Hill Area, Bethlehem Steel Corp., Bethlehem Plant; prepared by SAIC; December 2002

Saucon Plant - Preliminary Phase I, Environmental Issues - BOF / IMF Area, Bethlehem Steel Corp., Bethlehem Plant; prepared by SAIC; December 2002

Phase II Investigations and Reporting: U.S. Cold Storage Parcel at the Saucon Plant, SAIC Proposal, January 31, 2003, prepared by SAIC (resubmitted by LMS Engineers May 19, 2003)

Phase II Investigations and Reporting for the LVIP Parcel at the Saucon Plant - Scope of Work, February 10, 2003, prepared by SAIC (resubmitted by LMS Engineers May 19, 2004)

EPA Approval of Saucon Parcel - Phase I Environmental Assessment and Saucon Parcel - Phase II Scope of Work, October 20, 2003 (L. Matyskiela to K. Wrobel)

*Phase II Investigation Results: U.S. Cold Storage Parcel at the Saucon Plant, prepared by LMS Engineers (Submissions: 10/28/03, 11/05/03) (electronic submissions)

East Lehigh

Results of the Focused Coke Plant and East Lehigh Plant Investigation, prepared by Fluor Daniel GTI, July 1997

Supplemental Characterization - East, West, and North of Coke Ovens Area, Bethlehem Commerce Center, September 2001, prepared by URS

Majestic Realty/Bethlehem Commerce Center Field Soil Sampling Plan (Submissions: 2/28/03, 03/06/03, 03/11/03, 03/31/03, 04/07/03)

EPA Letter: Approval of Soils Investigation Workplan; Bethlehem Commerce Center - Majestic Parcel, April 8, 2003 (L. Matyskiela to E. Wilson, T. Cozzolino)

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References for Questions 2, 3, and 4 cont.

Majestic Bethlehem Center - Groundwater Investigation Plan, prepared by O'Brien & Gere Engineers, Inc.
(Submissions: 02/27/03, 03/05/03)

EPA Letter: Conditional Approval of Majestic Bethlehem Center - Groundwater Investigation Plan, March 11, 2003
(L. Matyskiela to E. Wilson, T. Cozzolino)

Baseline Investigation - Summary of Analytical Results, Majestic Realty Company, Majestic Bethlehem Center,
prepared by O'Brien & Gere Engineers, April 28, 2003

Coke Works

Proposed Work Scope for Coke Works Characterization, monitoring wells, geophysical survey, and soil gas survey,
February 25, 1999, prepared by SAIC for Bethlehem Steel Corporation

Final Passive Soil Gas Investigation Report at Former Coke Ovens Area, Bethlehem Commerce Center, April 1999,
prepared by SAIC

CD: Coke Oven Facility Soil Analytical Data, June 1999, prepared by URS Greiner Woodward Clyde

SVE Pilot Test - Bethlehem Steel Inactive Coke Works, March 30, 2000, prepared by URS Corp.

Proposed Soils Remedy at Coke Oven area, submitted by BSC, 09/22/00

Summary and Evaluation of EMFLUX(r) Study Results- Coke Ovens Area, Bethlehem Commerce Center, April 30,
2002, prepared by SAIC

Risk Assessment for Commerce Center Boulevard (Submissions: 04/17/01, 07/03/01, 07/06/03)

Intermodal Conceptual Plan, prepared for LVIP (Submissions: 09/30/02, 05/08/02)

EPA Letter: Approval of Intermodal Soils Characterization and proposed Intermodal Location, August 7, 2003 (P.
Gotthold to K. Wrobel)

Groundwater

Groundwater Study Plan, Groundwater Quality Assessment and Abatement Plan, Volumes I, II, and III, August
1988, prepared by Baker Engineers

Groundwater Flow Study - Report of Finding, Bethlehem Plant, prepared by Groundwater Technology, June 1995

Draft RCRA Facility Assessment, Bethlehem Steel Corporation, prepared by CDM, September 28, 1990

Remedial Investigation, Risk Assessment, and Cleanup Plan - Bethlehem Works Site, Volumes 1, 2, and 3, May 28,
1998, prepared by SAIC

EPA Approval of Characterization and Remediation for Soils and Groundwater Verification Monitoring Plan for
Bethlehem Works Project, May 6, 1999 (M. Vickers to J. Snyder)

Final Report for Soils, Conectiv Mid-Merit, Inc. Project Area, Bethlehem Commerce Center, prepared by SAIC,
July 2001

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References for Questions 2, 3, and 4 cont.

EPA Approval of Final Report for Soils , Conectiv Mid-Merit, Inc. Project Area, Bethlehem Commerce Center, October 30, 2001 (M. Vickers to E. Wilson)

Saucon Plant - Preliminary Phase I, Environmental Issues -Saucon Mills Area, Bethlehem Steel Corp., Bethlehem Plant; prepared by SAIC; December 2002

Saucon Plant - Preliminary Phase I, Environmental Issues- Iron Hill Area, Bethlehem Steel Corp., Bethlehem Plant; prepared by SAIC; December 2002

Saucon Plant - Preliminary Phase I, Environmental Issues- BOF / IMF Area, Bethlehem Steel Corp., Bethlehem Plant; prepared by SAIC; December 2002

Phase II Investigations and Reporting: U.S. Cold Storage Parcel at the Saucon Plant, SAIC Proposal, January 31, 2003, prepared by SAIC (resubmitted by LMS Engineers May 19, 2003)

*Phase II Investigation Results: U.S. Cold Storage Parcel at the Saucon Plant, prepared by LMS Engineers (Submissions: 10/28/03, 11/05/03) (electronic submissions)

Results of the Focused Coke Plant and East Lehigh Plant Investigation, prepared by Fluor Daniel GTI, July 1997

Supplemental Characterization - East, West, and North of Coke Ovens Area, Bethlehem Commerce Center, September 2001, prepared by URS

Majestic Bethlehem Center - Groundwater Investigation Plan, prepared by O'Brien & Gere Engineers, Inc. (Submissions: 02/27/03, 03/05/03)

EPA Letter: Conditional Approval of Majestic Bethlehem Center - Groundwater Investigation Plan, March 11, 2003 (L. Matyskiela to E. Wilson, T. Cozzolino)

Baseline Investigation - Summary of Analytical Results, Majestic Realty Company, Majestic Bethlehem Center, prepared by O'Brien & Gere Engineers, April 28, 2003

Proposed Work Scope for Coke Works Characterization, monitoring wells, geophysical survey, and soil gas survey, February 25, 1999, prepared by SAIC for Bethlehem Steel Corporation

CD: Coke Oven Facility Groundwater, Surface Water, and Sediment Analytical Data, April 1999, prepared by URS Greiner Woodward Clyde

Summary of Groundwater Natural Attenuation Sampling- Coke Oven Area, Bethlehem Commerce Center, June 29, 2001, prepared by SAIC

CD: Analytical Data for Groundwater, Surface Water and Sediment Samples, April 1999 through July 2002, prepared November 6, 2002 by SAIC

CD: Stream Gage Data, Well Logs, Water Levels, Well Coordinates, November 11, 2002, prepared by SAIC

Technical Brief - Natural Attenuation at the Bethlehem Commerce Center, January 22, 2003, prepared by SAIC

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References for Questions 2, 3, and 4 cont.

Off-Site Groundwater

Final Sampling and Analysis Plan for the Groundwater Investigation at Route 412 and Saucon Creek, prepared by USCOE and EA Engineering Science and Technology, Inc., September 2003

Draft Report on 2003 Groundwater Investigation at Saucon Park, Route 412 and Saucon Creek, prepared by EA Engineering, November 25, 2003

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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):

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):

 Y 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 Bethlehem Steel Structural Products Corporation facility, EPA ID # PAD990824161, located at 1170 Eighth Avenue, Bethlehem, PA, 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) _____ /s/ _____ Date 12/31/03
(print) Linda A. Matyskiela
(title) Senior Project Manager

Supervisor (signature) _____ /s/ _____ Date 01/07/04
(print) Paul Gotthold, Chief
(title) PA Operations Branch
(EPA Region or State) EPA Region III

Locations where References may be found:

PA Operations Branch - 3WC22
EPA Region III
1650 Arch Street
Philadelphia, PA 19103

Contact telephone and e-mail numbers:

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