



UNITED STATES

ENVIRONMENTAL PROTECTION AGENCY

REGION III

STATEMENT OF BASIS

FORMER CHAIN BIKE CORPORATION

ALLENTOWN, PENNSYLVANIA

EPA ID NO. PAD053061909

TABLE OF CONTENTS

SECTION	PAGE
I. Introduction.....	1
A. Facility Name.....	1
B. Proposed Decision.....	2
C. Importance of Public Input.....	2
II. Facility Background.....	2
III. Summary of the Environmental History .....	3
IV. Evaluation of EPA's Proposed Decision.....	4
V. Institutional Controls.....	5
VI. Environmental Indicators.....	6
VII. Financial Assurance.....	6
VIII. Public Participation .....	6

**I. Introduction**

**A. Facility Name**

The United States Environmental Protection Agency (EPA) has prepared this Statement of Basis (SB) for the former Chain Bike facility located at 200 Cascade Drive, Allentown, PA 18109 (hereinafter referred to as the Facility).

The Facility is subject to the Corrective Action program under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984, 42 U.S.C. Sections 6901 to 6992k. The Corrective Action program is designed to ensure that certain facilities subject to RCRA have investigated and cleaned up any releases of hazardous waste and hazardous constituents that have occurred at their property.

Information on the Corrective Action program as well as a fact sheet for the Facility can be found at <http://www.epa.gov/reg3wcmd/correctiveaction.htm>.

EPA has prepared this SB after reviewing all available site data and has determined that no additional characterization or remediation is necessary for the Facility to satisfy its federal RCRA Corrective Action obligations. Based on its review, EPA has selected its proposed final remedy for the Facility and is now proceeding with its remedy selection process, including providing opportunity for public comment and review.

## **B. Proposed Decision**

This SB explains EPA's proposed decision that no further actions to remediate soil, groundwater or indoor air contamination are necessary given current land use. EPA's proposed remedy is to require the Facility to develop and maintain certain property restrictions known as Institutional Controls (ICs). The proposed ICs are detailed in Section V, below. These controls will provide assurance that the land use, as anticipated when the remedy was proposed, does not change without additional investigation or work and notification to the EPA. EPA's proposed decision represents "Corrective Action Complete with Controls" as described in EPA Guidance found in the Federal Register / Vol. 68, No. 37 / Tuesday, February 25, 2003 / Notices [FRL-7454-7] pages 8757 to 8764.

This SB summarizes information that can be found in greater detail in the work plans and reports reviewed by EPA and the Pennsylvania Department of Environmental Protection (PADEP), which can be found in the Administrative Record (AR).

## **C. Importance of Public Input**

Before EPA makes a final decision on its proposal for the Facility, the public may participate in the remedy selection process by reviewing this SB and documents contained in the AR for the Facility. The AR contains the complete set of reports that document Facility conditions, including a map of the Facility, in support of EPA's proposed decision. EPA encourages anyone interested to review the AR. The AR is available for public review at the EPA Region III office, the address of which is provided in Section VIII, below.

EPA will address all significant comments received during the public comment period. If EPA determines that new information or public comments warrant a modification to the proposed decision, EPA will modify the proposed decision or select other alternatives based on such new information and/or public comments. EPA will approve its final decision in a document entitled the Final Decision and Response to Comments (FDRTC).

## **II. Facility Background**

The Facility is located at 200 Cascade Drive in Allentown, Hanover Township, Lehigh County, Pennsylvania. The Facility is bordered by agricultural land to the north, light industrial and commercial development to the west and south (including the Lehigh Valley International Airport), and commercial and residential development to the east. The Facility covers approximately 56 acres.

Development of the site began in 1969. The Facility began manufacturing bicycles in 1971 as the Chain Bike Corporation, which was later renamed Ross Bicycles. Operations up to 1985 consisted of metal plating, spray painting, metal working, and assembly and warehousing related to bicycle manufacturing. The Facility ceased bicycle manufacturing in 1985 and began producing metal ammunition boxes, which included similar production processes. By approximately 1987, manufacturing ceased entirely, and the Facility was reportedly abandoned in 1988.

In 1995 Hanoverian, Ltd. acquired the Facility, which was sold in 1998 to Conewago Equities, Inc. The Facility was extensively expanded under Conewago's ownership: the main building was expanded, the 11.6-acre northwest parcel was purchased, and a second warehouse building was constructed in the southeast corner of the Facility. First Industrial Realty Trust purchased the site in 2007 and is the present owner of the Facility. The Facility currently houses several commercial and light industrial tenants.

### **III. Summary of Environmental History**

Investigations of the Facility began in 1983 after a Notice of Violation was issued for dumping sludge from the on-site wastewater treatment plant (WWTP) onto the adjacent northwest parcel. It was determined that the northwest parcel and the drainage swale from the WWTP to the northwest parcel were impacted by metals contamination. In 1987 and 1988, additional site characterizations were performed, including soil and WWTP sludge samples and installation and sampling of four monitoring wells. Groundwater samples were found to be impacted with chromium, trichloroethene (TCE), 1,1,1-trichloroethane, and 1,1-dichloroethene.

In 1992 EPA assessed the abandoned Facility and conducted an emergency removal and site investigation. Approximately 500 drums were removed from the Facility. Soil borings from the investigation confirmed the metals contamination north of the main building. Groundwater samples analyzed did not exceed the PADEP Statewide Health Standard (SHS) for total chromium. From 1996 to 1998, approximately 261 tons of impacted soil and sludges were excavated and removed from the Facility.

From 1998 to 1999, Phase I and II site characterizations were conducted at the Facility and a Notice of Intent to Remediate (NIR) was submitted to PADEP. Approximately 250 soil samples were collected and analyzed. Sample results showed three areas of concern; as a result, approximately 269 tons of soil and sludge were excavated and removed from the Facility. PADEP and EPA approved the attainment of non-residential SHS for soils at the Facility in December 2002. These remedial efforts, in conjunction with a determination by EPA in October 2001 that the contaminated groundwater plume underneath the Facility was stable and not migrating off-site, resulted in the Facility meeting both of EPA's Environmental Indicators in 2002.

As part of the groundwater investigation of the Facility, five additional monitoring wells were installed in 2001 to supplement information obtained from the four existing monitoring wells installed in 1988. The groundwater investigation from 1999-2004 focused on obtaining an understanding of groundwater beneath the Facility through a traditional site conceptual model using geophysical logging techniques, quarterly sampling, groundwater level contour analysis, and other methods. However, several confounding factors, foremost of which was the direction and extent of contaminant migration, were difficult to apply to or predict using a traditional site conceptual model. In addition, levels of TCE remained above the non-residential SHS. A Final Report for groundwater at the Facility was submitted in 2004 to PADEP, who submitted comments in November 2004 outlining several deficiencies including the two mentioned above. PADEP stated it could not complete its review of the Final Report due to the deficiencies noted. Since these deficiencies were never adequately addressed, the 2004 Final Report was never approved. PADEP continued to monitor off-site wells northeast of the Facility for evidence of

contaminant migration in 2004 and 2005; results indicated that no contamination from the Facility appeared to be migrating off-site to the private wells northeast of the Facility.

After First Industrial Realty Trust purchased the Facility in 2007, a new groundwater investigation was begun to fill in gaps in the understanding of hydrogeological conditions underneath the Facility, address the deficiencies noted by PADEP in the previous Final Report, and obtain a release of liability for groundwater under Act 2. The multiple components of this investigation, including down-hole geophysical logging, continuous water level monitoring, and analysis of geologic bedding strike and dip, revealed a different groundwater site conceptual model based on karstic, solution cavity-driven groundwater flow. The new model developed from this investigation explained many of the inconsistencies of the old traditional model (e.g. areal variation of contaminant concentrations and transport) but also meant that remaining contaminants could potentially travel further distances and at higher concentrations due to the preferential pathways provided in the geology beneath the Facility. In order to address these conditions, a non-use aquifer designation was proposed as part of the final remedy for groundwater beneath the Facility. A groundwater receptor survey was completed in 2009 that verified no groundwater users exist within the non-use aquifer area, no public supply wells exist within one-half mile of the non-use aquifer boundaries, and identified private groundwater users within a 1500-foot buffer zone outside the non-use aquifer area. All accessible downgradient private water wells within this 1500-foot buffer zone were sampled (four residences). All analytes that could potentially be related to contamination from the Facility were either well below the residential SHS (chromium in one sample) or non-detect (all others). The non-use aquifer designation was codified in a municipal ordinance and adopted by Hanover Township and approved by PADEP in June 2009. The boundaries of the aquifer non-use area extend: downgradient to greater than twice the recommended distance for porous media sites (2300 feet versus 1000 feet), up to 1500 feet in each direction transverse to the inferred flow path to account for exact flow direction uncertainty, and approximately 450 feet northeastward to provide a buffer region for TCE impacts observed near the (upgradient) eastern property boundary (see figure, below). With the aquifer non-use area in place, groundwater beneath the Facility could be screened using the non-use aquifer SHS. Over four quarters of groundwater monitoring results showed levels of contamination below this standard. The Final Report for groundwater at the Facility was submitted in September 2009 and demonstrates attainment of the residential non-use aquifer SHS for groundwater beneath the Facility. The Final Report also provides more comprehensive information on groundwater investigation, remediation, and completion efforts. This Final Report was approved by PADEP on September 29, 2009.

Since the Facility met the non-residential SHS for soil and is located in an aquifer non-use area, ICs are required to ensure that land use at the Facility remains non-residential and groundwater beneath the Facility is prohibited from use. These ICs are discussed in more detail in Section V below.

#### **IV. Evaluation of EPA's Proposed Decision**

This section provides a description of the criteria EPA uses to evaluate proposed remedies under the Corrective Action Program. The criteria are applied in two phases. In the first phase, EPA evaluates three criteria, known as Threshold Criteria. In the second phase, EPA sometimes uses seven balancing criteria to select among alternative solutions, if more than one is

proposed. The Facility has demonstrated that the current conditions meet the threshold criteria established by EPA. Because EPA is not selecting among alternatives, a complete evaluation of the balancing criteria is not necessary.

The following is a summary of EPA's evaluation of the Threshold Criteria:

**1. Protect Human Health and the Environment** - This proposed remedy protects human health and the environment from exposure to contamination. EPA's proposed decision meets this standard for current and anticipated land use. Most of the Facility is covered with buildings or pavement and effectively functions as a cap or barrier to any remaining metals contamination. The prohibition of groundwater use in an aquifer non-use area effectively eliminates exposure to the minimal amounts of contaminated groundwater that remain beneath the Facility. As the Facility is presently used as commercial and light industrial space and is highly likely to remain in this type of use for the foreseeable future, this remedy protects human health and the environment at the Facility.

**2. Achieve Media Cleanup Objectives** - EPA's proposed remedy meets the appropriate cleanup objectives based on assumptions regarding current and reasonably anticipated land and water resource use(s). Contaminated soil at the Facility met the non-residential SHS for soil in 2002 and contaminated groundwater at the Facility met the residential non-use aquifer SHS for groundwater in 2009. An analysis of the potential for vapor intrusion into buildings at the Facility was performed as a conservative measure to ensure that indoor air is not impacted by soil or groundwater contamination. Results of this analysis were well below screening levels, indicating that indoor air was not a media of concern at the Facility for current or future uses. Therefore, all media at the Facility meet cleanup levels that are protective for current and reasonable future non-residential uses where groundwater is not used.

**3. Remediating the Source of Releases** - In all remedy decisions, EPA seeks to eliminate or reduce further releases of hazardous wastes or hazardous constituents that may pose a threat to human health and the environment. The Facility has remediated the sources of releases by initiating several soil and sludge removal efforts, in addition to removing old process equipment and materials after production ceased. The 1992 EPA removal action was also instrumental in eliminating much of what could have potentially become further sources of contamination at the Facility. Any remaining contamination at the Facility will likely continue to naturally attenuate due to the elimination of the sources of contamination at the Facility.

## **V. Institutional Controls**

Under this proposed decision, some concentrations of contaminants will remain in the groundwater and soil at the Facility above levels appropriate for residential and domestic uses. In response, the proposed remedy will require the Facility to utilize ICs to restrict use of the Facility property and groundwater while those media remain contaminated. ICs are generally non-engineered instruments such as administrative and/or legal controls that minimize the potential for human exposure to contamination by limiting land or resource use. The proposed ICs are:

1. No person may withdraw or make use of any groundwater underneath the Facility for any purposes unless and until such groundwater meets applicable Act 2 standards. This IC eliminates the potential for residents, workers, recreators, or trespassers to come into contact with or ingest contaminated groundwater.
2. No person may use or occupy any portion of the Facility, either temporarily or permanently, for any residential use, recreational area use, or any other residential-style facility use as defined in Section 103 of Act 2. This IC prevents chronic human exposure to any remaining contamination at the Facility.

In addition to the above ICs, the owner of the Facility and each subsequent owner shall submit, to the PADEP or EPA and any other required entity (e.g. Hanover Township), written documentation following transfer of the property concerning proposed changes in use of the property, filing of applications for building permits for the property, or proposals for any site work affecting the contamination on the property.

These ICs are enforceable through deed restrictions that were recorded in the deed of January 10, 2007 effecting the sale of Facility property to First Industrial Realty Trust.\* The groundwater IC is further enforceable through the Mandatory Aquifer Non-Use Ordinance (Hanover Township Ordinance Number 494) that was signed into law in June 2009 designating the aquifer non-use area. If the Facility fails to meet its obligations under any of these enforcement mechanisms or EPA, in its sole discretion, deems that additional ICs are necessary to protect human health or the environment, EPA has the authority to require and enforce additional ICs.

\* It is the intention of PADEP that by February 2013 any instrument (such as these deed restrictions) imposing an activity and use limitation that was created prior to the enactment of the Uniform Environmental Covenants Act (UECA) to demonstrate attainment or maintenance of an Act 2 standard is required to be converted to an environmental covenant.

## **VI. Environmental Indicators**

Under the Government Performance and Results Act (GPRA), EPA has set national goals to address RCRA corrective action facilities. Under GPRA, EPA evaluates two key environmental clean-up indicators for each facility: (1) Current Human Exposures Under Control and (2) Migration of Contaminated Groundwater Under Control. The Facility met these indicators on January 29, 2002.

## **VII. Financial Assurance**

Due to the negligible amount of post-remedial activities (e.g. notifications of property transfers) that must be performed as part of the final remedy of the Facility, no financial assurance is required.

## **VIII. Public Participation**

Interested persons are invited to comment on EPA's proposed decision. The public comment period will last thirty (30) calendar days from the date that notice is published in a local

newspaper. Comments may be submitted by mail, fax, e-mail, or phone to Mr. Griff Miller at the address listed below.

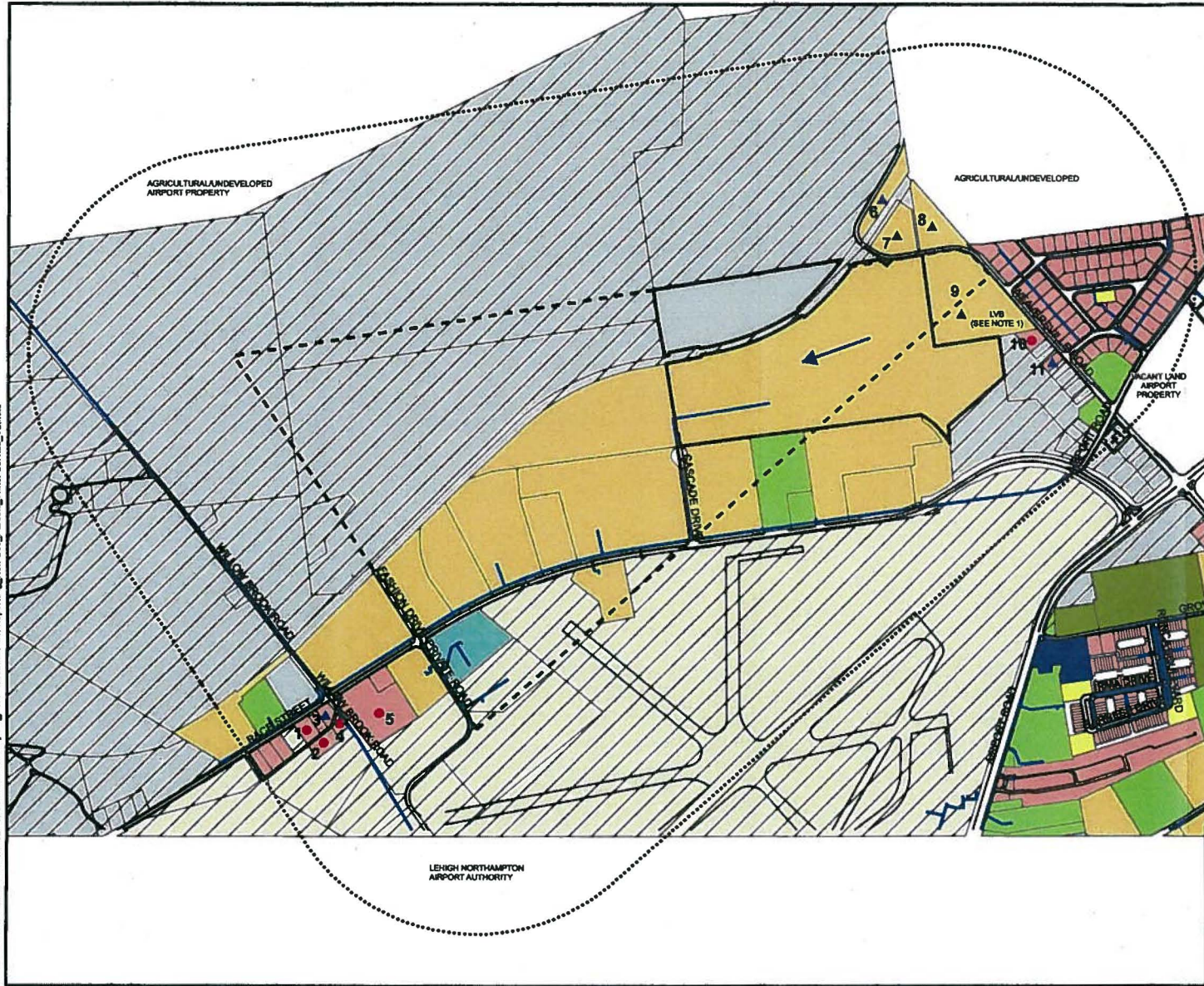
A public meeting will be held upon request. Requests for a public meeting should be made to Mr. Griff Miller at the address listed below. A meeting will not be scheduled unless one is requested.

The Administrative Record contains all the information considered by EPA for the proposed decision at this Facility. The Administrative Record is available at the following location:

U.S. EPA Region III  
1650 Arch Street  
Philadelphia, PA 19103  
Contact: Mr. Griff Miller (3LC30)  
Phone: (215) 814-3407  
Fax: (215) 814 - 3113  
Email: [miller.griff@epa.gov](mailto:miller.griff@epa.gov)



CITY: NEWTOWN U:\G\GROUP: ENV DB: PIC. PH. TR. TR.  
 PROJECT NUMBER: C001432.D002 C:\Common\GIS\Projects\_Files\RossBike\Final Report\Fig\_Non-Use\_Parcel\_Water\_Services\_V2.mxd



**Legend**

- 200 CASCADE DRIVE
  - AQUIFER NON-USE AREA
  - RECEPTOR SURVEY AREA
  - PRIVATE WELL - POTABLE USE
  - PRIVATE WELL - NON-POTABLE USE
  - PUBLIC WATER SERVICE LINE
  - AIRPORT AUTHORITY PROPERTY
- LAND USE**
- COMMERCIAL
  - ATHLETIC CLUB
  - GOVERNMENTAL
  - INDUSTRIAL
  - PARK
  - RELIGIOUS/CEMETERY
  - RESIDENTIAL
  - VACANT/AGRICULTURE
  - AIRPORT
- APPROXIMATE GROUNDWATER FLOW DIRECTION

**NOTES**

- 1) ALL DEVELOPED PARCELS IN AQUIFER NON-USE AREA ARE SERVED BY CITY OF BETHLEHEM WATER AND SEWER EXCEPT LEHIGH VALLEY BLOCK (LVB). THE WELL ON LVB (# 9) IS OUTSIDE THE NON-USE AREA. IT IS USED FOR NON-POTABLE PURPOSES ONLY.
- 2) FIGURE SHOW ALL WELLS CURRENTLY IN USE (EXCLUDING MONITORING WELLS) INSIDE AND WITHIN 1800 FEET OF THE NON-USE BOUNDARY.
- 3) PARCEL AND WATER SERVICE DATA PROVIDED BY LEHIGH COUNTY AND THE CITY OF BETHLEHEM WATER SEWER DEPARTMENT.



FORMER ROSS BICYCLE FACILITY  
 200 CASCADE DRIVE  
 ALLENTOWN, PENNSYLVANIA

**AQUIFER NON-USE AREA AND  
 RECEPTOR SURVEY AREA**

