

file copy

## HSCA RESPONSE JUSTIFICATION DOCUMENT

CONESTOGA PINES PARK  
CITY OF LANCASTER  
LANCASTER COUNTY, PENNSYLVANIA

SOUTHCENTRAL REGION

HSCP Project Officer: Elise Juers

July 13, 2001

### PURPOSE

This report summarizes the technical and legal issues which justify a response under the Pennsylvania Hazardous Sites Cleanup Act (HSCA), Act of October 18, 1988, P.L. 756, No. 108, 35 P.S. Sections 6020.101-6020.1305 for the Conestoga Pines Park site (Site).

### SUMMARY OF FACTS

The Site is located in Lancaster City, Lancaster County. The Site is situated between Pitney Road and the Conestoga River. It is bordered on the north/northeast by a residential housing (Eden Manor Development), and Pitney Road to the east. Beyond Pitney Road, and up gradient of the Site, is the Commerce Industrial Park East. The Norfolk Southern railroad tracks and the CBS/Playskool, Inc. facility are located to the south. The Conestoga River forms the Site's western property boundary. The General Electric facility property lies to the west of the Conestoga River down gradient of the Site.

The Site slopes westward from Pitney Road toward the Conestoga River. The upper portion of the Site contains an existing renovated barn used as a recreation center, and the grass covered remnants of a former house foundation that is approximately 250 feet north of the barn. Approximately 100 feet below the former house foundation, is a spring discharge that forms a stream that runs to the Conestoga River through the northern third of the Site. Mid-way through the northern third portion of the Site (down-slope) is the ruins of a former day camp. Below this area is a public swimming pool and parking lot. In the southwestern portion of the Site is the Lancaster Municipal Water Authority Public Water Filtration Plant. Water taken from the Conestoga River is treated for potable use by the City of Lancaster



The water filtration plant was established in the 1930's to provide potable water for the Lancaster City residents. The plant currently treats influent water for pH adjustment, coagulation, settling, filtration and disinfection. An average of eight (8) million gallons of water per day is supplied by this filtration plant.

In the 1930s, a Civilian Conservation Corps camp was developed on the Site. Physical structures related to this camp are visible on aerial photographs from the 1940's until the 1970's. The current recreation barn building and house foundation remnants are related to past farming operations.

The General Electric Company drilled two monitoring wells in 1991 (MWs 9109 & 9110), and two monitoring wells in 1992 (MWs 9211 & 9212) at the Site as part of an Environmental Protection Agency (EPA) mandated Resource Conservation and Recovery Act (RCRA) Facility Investigation. Sampling of these wells showed elevated levels of volatile organic compounds (VOCs). The VOCs found were trichloroethylene (TCE), cis-1,2-dichloroethylene (cis-1,2-DCE), 1,1,1-trichloroethane (1,1,1-TCA), 1,1-dichloroethylene (1,1-DCE) and 1,1-dichloroethane (1,1-DCA).

The highest levels of contamination have been at the spring forming the headwaters of the stream. Sampling during 1992, 1993, 1994, 1995, and 1996 showed TCE levels in this spring ranging from 820 micrograms per liter ( $\mu\text{g/L}$ ) to 498  $\mu\text{g/L}$ .

Wells 9109 and 9110 were drilled on the west Site boundary near the Conestoga River to trace the plume of migrating TCE contamination from the GE facility on the west side of the Conestoga River. When TCE levels were found to be higher on the Site, wells 9211 and 9212 were drilled along an observed air photo lineament. These wells are near the stream headwaters. Well 9211 is 200 feet deep, and well 9212 is 30 feet deep. Water level measurements of wells 9211 and 9212 being similar, indicates hydraulic communication and negligible hydraulic gradient. The level of contamination decreases with depth in this well cluster. This indicates that the source of contamination is fairly close to the surface and in an eastern direction (up-gradient).

The Department performed a Site soil gas survey in October 1992. Several areas were strongly affected by VOCs in the soil gas. The most highly contaminated areas appeared northeast and northwest of the park barn and in a linear pattern extending to the west along the paved road to a former sand storage area (sand-pit). The area northeast of the barn is between the area of the former structure and the wooded land from which the contaminated spring arises. The area northwest of the barn (sand pit) is approximately fifty (50) feet south of the paved road on the edge of the wooded hill that slopes to the south.

A limited number of soil samples at some of the gas monitoring points were taken in May 1993. None of the soil samples indicated a source of continuously released organic contamination.



On October 13, 1999 and January 14, 2000, the Department sampled several surface water locations along the stream that runs approximately ¼ mile through the park. The analytical results show the springhead identified as the "headwater location" continues to have the highest levels of TCE. The range of headwater spring VOCs above groundwater regulatory standards are TCE (450 - 580 µg/L), cis-1,2-DCE (510 - 548 µg/L), and 1,1-DCE (18 µg/L). The regulatory standards are 5 ug/L, 70 ug/l and 7 ug/l respectively.

## **RESPONSIBLE PERSONS**

The following person as defined by Section 103 of HSCA, has been identified at this time as being a responsible person pursuant to Section 701 of HSCA. Each responsible person, identified below is entitled to legal notice under Section 501(a) of HSCA.

- (1) City of Lancaster (Property owner)  
120 N. Duke Street  
P.O. Box 1599  
Lancaster, PA 17603-1599

## **FINDINGS AND AUTHORITY TO ACT**

Contaminated groundwater, presumably from a Site source, is currently impacting surface water above regulatory standards and provides a threat to the public and the environment. TCE is listed as a carcinogen by the United States Environmental Protection Agency (USEPA). TCE is readily absorbed following ingestion, and absorbed readily into the lungs during inhalation. TCE is also absorbed through the skin although not as readily as through ingestion and inhalation. The acute effects of TCE are pronounced in central nervous system disturbances and heart, liver and kidney damage. The chronic effects of TCE create central nervous system and heart damage.

Although not listed as a carcinogen, 1,1-DCE is readily absorbed by ingestion and inhalation. To a lesser degree, it is absorbed through the skin. Acute effects are demonstrated as disturbances to the central nervous system and respiratory system. Chronic effects of exposure can cause kidney and liver damage.

The water quality criteria of 25 PA Code Chapter 16 (Water Quality Toxics) are the numeric limits for parameters or stream conditions that need to be maintained or attained to prevent or eliminate pollution. The latest aqueous sampling on January 14, 2001, shows TCE to exceed continuous concentrations for fish and aquatic life at the springhead, and exceeds human health criteria from the head spring to 50 feet from the confluence with the Conestoga River. Past sampling showed TCE human health criteria to be exceeded at the confluence with the Conestoga River. Human health criteria for



1,1-DCE are exceeded from the headspring to within 50 feet of the confluence with the Conestoga River.

TCE and 1,1-DCE are hazardous wastes as defined under the Solid Waste Management Act, July 7, 1980 (P.L. 380, No. 97, *as amended*), 35 P.S. §§ 6018.101 *et seq.*, and hazardous substances as defined under Section 103 of the Hazardous Sites Cleanup Act, Act of 1988, (P.L. 756, No. 108), 35 P.S. § 6020.101 *et seq.* The major exposure threat is to humans coming into contact with the unrestricted unnamed tributary waters, and its affect on aquatic life particularly near the headspring.

Based on these findings, the Department has determined that further investigation and response is necessary.

## REFERENCE

1. PADEP Progress Report, July 1993

## RESPONSE JUSTIFICATION DOCUMENT

Conestoga Pines Park  
City of Lancaster  
Lancaster County, Pennsylvania  
Southcentral Region

## DEP APPROVAL

Based on the facts and findings outlined in this Response Justification Document, further response action is deemed appropriate, pursuant to Section 501(a) of the Hazardous Sites Cleanup Act, 35 P.S. §6020.501(a).

  
\_\_\_\_\_  
Regional Manager, Environmental Cleanup Program

  
\_\_\_\_\_  
Date

