

U.S. Shoe

March 2009

Site Location and History

The US Shoe Corporation historically leased 4.25 acres of a 13.51 acre lot owned by the village of Ripley, which includes the Ripley municipal building, fire station and the village drinking water wells. The US Shoe facility was originally addressed as 1009 South Second Street, Ripley, Ohio (current tenant is addressed at 111 Waterworks Road, Ripley, Ohio), and is located near the southern corner of the intersection of South Second Street and Waterworks Road. The current property contains one 50,000 square-foot single story structure currently occupied by Ripley Metalworks, Limited (RML). US Shoe operated shoe assembly line from 1941 to 1993 and there is documentation that spent solvents and adhesives were stored on-site.

Preliminary Site Investigations and Enforcement

The Ohio EPA and its contractors conducted an investigation of the village of Ripley well field beginning in June 1996. The investigation was performed in order to locate and delineate source of 1,2-dichloropropane (1,2-DCP) and trichloroethene (TCE) ground water contamination, which had been detected in the village production wells. The investigation included direct-push technology borings at 76 locations in and around the village well field. Groundwater and soil samples were collected for analytical and stratigraphic information.

Ohio EPA determined that two distinct plumes existed at and near the village well field. A TCE plume extended towards the village well field from the vicinity of the former US Shoe facility. Groundwater concentrations approaching 300 µg/L were reported from direct-push borings located in the northern portion of the former US Shoe facility. The northern extent of the plume was not delineated but the general trend of the plume direction was determined to be “east-west” extending from the former shoe factory toward the well field. Several additional contaminant detected in the plume, including *cis*-1,2-dichloroethene (*cis*-1,2-DCE), 1,1-dichloroethane (1,1-DCA) and 1,2-dichloroethane (1,2-DCA) were likely the result of the degradation of TCE.

In August 2001, Ohio EPA performed a Preliminary Assessment/Site Inspection (PA/SI) of the former US Shoe facility and surrounding areas in cooperation with the United States Environmental Protection Agency (U.S. EPA). The PA/SI sampling results further suggested that TCE had been released into the ground water at the former US Shoe facility.

On November 8, 2004, US Shoe and the Village of Ripley signed an Administrative Consent Order with the Ohio EPA to perform an interim action. The order requires US Shoe to perform source control, plume delineation, and plume remediation of VOC contamination. The order also requires US Shoe to evaluate and potentially mitigate any threats associated with the ground water to indoor air vapor intrusion pathway. The village of Ripley signed on to the Orders for access purposes.

Cleanup Progress

Site characterization and sampling activities took place between August 2005 and November 2006. The Source Delineation/Characterization, Plume Delineation/Characterization & Conceptual Design Report was approved by Ohio EPA on May 14, 2007. Soil sampling and soil-gas sampling was performed in and around former facility. No significant levels of VOCs were found in soil or soil gas. The source area was defined by the highest levels of VOCs in ground water. The highest level of TCE (60 µg/L) was found in the parking lot adjacent to the manufacturing facility. TCE was also found at a concentration of 11µg/L in a monitoring well close to the village's two production wells. Soil gas samples were taken adjacent to a down-gradient residence. No significant levels of vapors were detected. Sub-slab and indoor air sampling was not required.

During the end of 2007 and beginning of 2008, US Shoe conducted a pilot study for an ART In-Well Air Sparging system that would be used to remediate the ground water source area. Although the pilot study was not successful in demonstrating the effectiveness of the system, Ohio EPA approved a Conceptual Design Plan in December of 2008 allowing US Shoe to continue operating an improved ART system for source control along with installing and operating an interceptor well to pump and treat contaminated ground water in the down-gradient portion of the plume.

US Shoe is currently working on the Detailed Plans and Specification Report for the site remediation. The ART System and interceptor well should be installed and operating by the summer of 2009.

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