

# NPL Site Narrative for Lehigh Valley Railroad

## LEHIGH VALLEY RAILROAD Le Roy, New York

**Conditions at Proposal (July 28, 1998):** The Lehigh Valley Railroad site in LeRoy, Genesee County, New York is the location of a chemical spill that resulted from a 1970 train derailment. The site consists of portions of Gulf Road, the former railroad bed, and the properties adjacent to the crossing. The site is in a rural setting, and the surrounding area is used for residential, recreational, and commercial purposes. An intermittent stream, Mud Creek, is located approximately 500 feet to the southeast.

The derailment occurred at approximately 3:30 a.m. on Sunday, December 6, 1970. Approximately 1 ton of cyanide crystals spilled onto the ground. The cleanup included the removal of the crystals and the overturned car. After the crystals were removed, neutralizers were spread on the ground to counteract the effects of any remaining cyanide. Trichloroethylene (TCE) was also released from two ruptured tank cars. A Genesee County Health Department (GCHD) engineer who was among the first people to respond to the accident and a claims agent for Lehigh Valley Railroad each reported in February 1971 that approximately 35,000 gallons of TCE had been spilled. A geologist hired by Lehigh Valley Railroad to investigate pollution resulting from the spill reported in March 1971 that approximately 30,000 gallons of TCE were spilled. TCE odors were noticed eight days after the derailment in the basement of the Knickerbocker Hotel, which was located 200 feet north of the crossing. Lehigh Valley Railroad tried to alleviate the odors by flushing the chemical out of the surrounding fill sometime between March and June 1971. The response action involved digging trenches near the crossing, pumping approximately 1 million gallons of water from a nearby quarry into the trenches, and allowing the water to percolate into the ground. The owners of two private wells located along Gulf Road east of the site noticed TCE in their water supplies about a week after the spill. Approximately one month later, TCE was noticed in two other wells located more than 0.5 mile southeast of the site. The TCE concentrations for samples collected from the affected wells in 1970 and 1971 ranged from 4 parts per million (ppm) to 171 ppm. By November 1971, seven wells had become contaminated. Lehigh Valley Railroad provided drinking water to residents with contaminated wells beginning in June 1971, and later provided the installation and maintenance of charcoal filtering systems at the affected wells.

In September 1989, TCE was detected during routine sampling of the Genesee County Campground well located more than 1.5 miles east of the site. Further sampling of private wells by New York State Department of Health (NYSDOH), U.S. Environmental Protection Agency (EPA), and New York State Department of Environmental Conservation (NYSDEC) between 1990 and 1994 detected TCE in approximately 50 wells located east or southeast of the site. In December 1991, EPA began installing granular activated carbon (GAC) water treatment systems at 37 locations where TCE exceeded 5 micrograms per liter ( $\mu\text{g/L}$ ), the Maximum Contaminant Level (MCL). In October 1994, the NYSDEC installed an additional GAC system at a residence exceeding the MCL.

NYSDEC completed a Remedial Investigation and Feasibility Study (RI/FS) in 1997 that included a soil gas survey, soil sampling, and a hydrogeologic investigation. The results of soil sampling conducted in September 1992, December 1992, and October 1994 showed TCE concentrations ranging from 46 to

570,000 micrograms per kilogram (?g/kg); total 1,2-DCE concentrations ranging from 40 to 5,200 ?g/kg; and cyanide concentrations ranging from 1.7 to 64.8 milligrams per kilogram (mg/kg) in soils collected at the site. The hydrogeologic investigation showed that there is a source of TCE contamination remaining in the unsaturated soil and bedrock at the spill site, and a ground water plume extending almost 4 miles east and southeast of the site. NYSDEC issued a Record of Decision (ROD) for the site in March 1997. NYSDEC selected ex-situ soil vapor extraction and bedrock vapor extraction as source control measures and a water-line extension to provide a safe potable water supply to all affected residents and businesses.

An observed release to ground water is documented by the chemical analysis of ground water samples collected from private drinking water wells in 1993 and 1994. Level I contamination (with a high of 3,100 ppb) is documented for 15 wells. Level II contamination is also documented for one well. The total population served by private ground water wells within 4 miles of the site is approximately 2,515. The bedrock aquifer is the only significant source of ground water for private wells in the site vicinity. The bedrock aquifer is not used for public supplies within 4 miles of the site. The nearest public supply wells are located in the Village of Caledonia more than 4 miles east of the site.

**Status (January 1999):** The remedial design for waterline extension is scheduled for completion in April 1999. Construction of the waterline should begin in July 1999 with completion expected toward the end of 2000. The bedrock vapor extraction system is in the pre-design phase. Pilot studies have been completed and the remedial design is scheduled to start in August 1999. The remedy for the surface soils is excavation and treatment. The remedial design is scheduled to start in August 1999.

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. ATSDR ToxFAQs can be found on the Internet at [ATSDR - ToxFAQs](http://www.atsdr.cdc.gov/toxfaqs/index.asp) (<http://www.atsdr.cdc.gov/toxfaqs/index.asp>) or by telephone at 1-888-42-ATSDR or 1-888-422-8737.