



BACKGROUND

Barenco was retained by a Toronto law firm to assist in building a defence for their client, the owner of a property which had a long history of use as a gasoline service station. The lawsuit alleged that the gas bar the law firm's client had historically operated on its property was responsible for contaminating the ground water in the area. The law firm's client had not operated a gas bar on its property for some years; the property had been leased to another gas bar operator.

A site assessment by another consultant working on the contiguous property concluded that the only environmental concern in the area was the gas bar at the subject site. The Ministry of Environment (MOE) was also involved when an Order for assessment and remediation was issued to the law firm's client after gasoline fumes were reported in nearby basements.

THE INVESTIGATION



Barenco's role was to conduct a detailed forensic investigation, including an extensive historical search and a geochemical study of the petroleum found in the subsurface. The integration of the historical and geochemical data would be key to building a defence for the law firm's client. In the course of our historical investigation, Barenco traced the history of the subject site and surrounding properties back to first development in the 1800s. We determined that the subject property had been developed for use as a gasoline service station c. 1925. Our historical investigation of the area identified four additional properties that had previously contained gasoline service stations (two of these were contiguous with the subject site). We obtained photographs of the area from as early as 1880, including c. 1930s and c. 1940s photographs of

two of the historic gasoline service stations. We also located and interviewed the oldest living operator of an historic service station on the subject site.

Barenco's **geochemical investigation** examined gasoline additives (including alkyl lead components, MMT and various fuel oxygenates), hydrocarbon composition, octane levels, water washing, degree of evaporation and refining feedstock. We determined there were four different gasolines present in the subsurface and none of these gasolines matched the gasoline that was currently being dispensed at the property. In addition, some areas were co-contaminated by diesel/fuel oil. Some samples showed mixing of the various gasoline releases. Sewer sampling results obtained through the MOE Freedom of Information process showed impacts from a sixth source (lube oil).

THE RESULT

As a result of Barenco's work, the law firm was able to have over 20 new parties join in the action. The case against the law firm's client did not proceed to trial; the action was dropped after mediation. In addition, the law firm's client was released from the MOE Order. The current gas bar operator is now operating a ground water remediation system at the property.