

# Mississippi Department of Environmental Quality

## Leica Microsystems Property

### Ocean Springs, Mississippi



#### FACT SHEET

MARCH 2024

#### Introduction:

This Fact Sheet has been furnished in response to inquiries and general concern from the community of Ocean Springs pertaining to the Leica Microsystems property. It contains general information about groundwater, groundwater remediation, and site-specific information.

The information is organized into the following sections:

- Site Location
- History/Ownership
- Groundwater Basics
- Recent Investigation Activity
- Recent Remediation Activity
- Contact Info

#### Site Location:

The Leica Property is an approximately 4.8-acre parcel located at 2006 North Government Street in Ocean Springs, Mississippi, at the southeast corner of the intersection of Government Street and Pine Drive. The area is a mix of both commercial and residential properties.

#### Site History/Ownership:

The subject property operated for approximately 50 years as a manufacturer of optical lenses before being vacated by Ferson Optics, Inc. in 2003. Its origins trace back to July 1953 when Ferson Optical Company constructed the original building and commenced operations. Over the years, the site underwent significant changes, including expansion of the building from 26,000 ft<sup>2</sup> to 80,000 ft<sup>2</sup> under the ownership of Bausch & Lomb. During this period, underground storage tanks (USTs) and dispensers were installed that contained Trichloroethylene (TCE). In 1987, Bausch & Lomb sold Ferson Optical Company to Cambridge Instruments of England, which later merged with Leica, Inc. Following this transition, the USTs and associated dispensers were closed. In 1993, Ferson Optics, Inc. acquired the business operations from Leica Microsystems, although the latter retained property ownership. Eventually, Ferson Optics was renamed Ferson Technologies, Inc., and it continued to occupy the building under a rental agreement until 2003, after which the building remained vacant until its eventual demolition sometime between 2007 and 2009.

#### Groundwater Basics

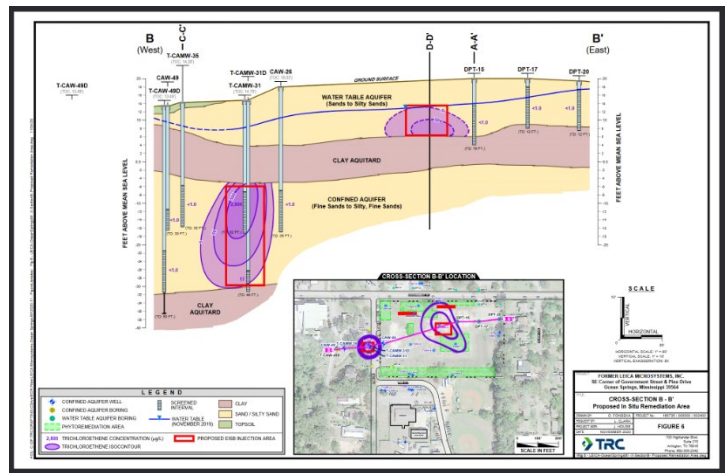
Groundwater is water that has seeped into the ground and collected in spaces between rocks and soil particles. Imagine the ground as a giant sponge, with tiny spaces between its particles where water can be stored. It forms the water table, a fluctuating level that mimics the land's contours. Driven by gravity and pressure, groundwater moves very slowly compared to surface water. Below is a depiction of the groundwater contour and flow direction within the area. The elevations indicated represent heights above mean sea level, with higher numbers indicating a higher water table. Given that gravity is a driving force in groundwater movement, it naturally flows from areas of higher elevation to those of lower elevation.



Figure 1: Leica Microsystems and Surrounding Properties

### Recent Investigation Activity:

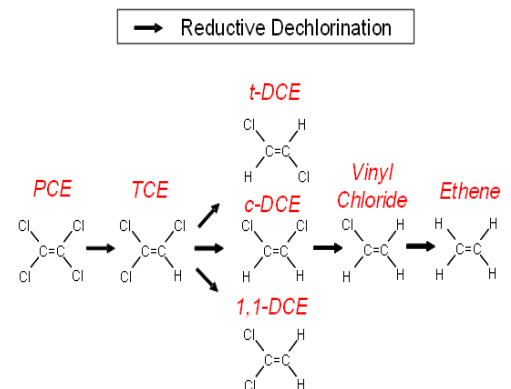
TRC Environmental Corporation (TRC) is the consultant group working on behalf of Leica that has conducted recent remediation activities and groundwater monitoring events. They currently conduct groundwater sampling annually to monitor any changes over time. Below is a figure depicting a cross-sectional view of subsurface conditions and groundwater contamination, providing insight into the contaminant plume's distribution. Notably, an approximately 10-foot-thick clay layer exists at approximately 0 to 10' above mean sea level (or starting about 10 feet below grade surface). The shallow contamination is on the Leica property, while the deeper contamination at T-CAMW-31 is off-site across Pine Drive. Although chlorinated solvents below a clay layer (or in a confined aquifer) do not typically result in vapor intrusion issues, MDEQ required ambient air and soil gas sampling due to the proximity of this contamination to the YMCA daycare. This sampling was conducted in May and October of 2021 by TRC and results were below screening levels or non-detect for chlorinated solvents. Based on the results, MDEQ has not required further vapor intrusion assessment as there is not a pathway for indoor air to the YMCA.



**Figure 2: A cross section of the contaminant plume. The plume near the YMCA is below a clay aquitard. This is a formation that has low permeability and can act as a barrier.**

### Recent Remediation Activity:

Over the years, remedial activities have included excavation of contaminated soils, phytoremediation, in-situ bioremediation, and monitored natural attenuation. In 2020, TRC conducted Enhanced In-Situ Bioremediation (EISB) injection activities injections to accelerate remediation of groundwater contamination. EISB involves implementing physical, chemical, and biological alterations within the groundwater to foster optimal conditions for microorganisms to thrive and to accelerate the reductive dechlorination process of chlorinated solvents. TCE breaks down into daughter products dichloroethylene (DCE) and vinyl chloride (VC) and so forth until less toxic compounds like ethene are formed. Understanding this decay process is crucial, as increasing levels of daughter products can indicate successful injections, signifying the degradation of contaminants further up the chain.



While groundwater sampling results indicate increases in daughter products like DCE and VC and that dechlorination is occurring, TCE has remained fairly stable at T-CAMW-31. As a result, MDEQ has requested a work plan from Leica to conduct additional remedial activities to increase the efficacy.

### MDEQ's Evaluation of the Site:

Chlorinated solvent concentrations across the site have been significantly reduced since initial remedial activities began in 2009. MDEQ believes that the site does not currently pose a risk to human health and the environment since local residents are on public water and vapor intrusion has been evaluated for off-site concerns. However, MDEQ will continue to require Leica to monitor and conduct remedial activities to ensure that contamination in the subsurface is being remediated in a timely manner and that no exposure occurs in the future (including potential reuse of the Leica property).

### MDEQ Contact Information:

Nic Gurram, EEIT  
Project Manager – GARD  
(601) 961-5360  
ngurram@mdeq.ms.gov