

## Forensic Engineering

Data are generated as part of an environmental investigation to characterize the environmental setting, the nature, extent, and magnitude of contamination, and the processes acting on the contaminant. From this data, contaminant fate and transport is evaluated, risks to receptors are assessed, and remediation systems are designed. The goals of such a process are to understand and mitigate the risks posed by the contaminant.

When environmental issues are subject to litigation, data is also collected and analyzed to determine the liability of one or more defendants and calculate the damages that have resulted from the release(s). Thus, the goals may include such things as:

- Confirming the source, timing, and volume of the release(s);
- Calculating the contribution of multiple sources or releases to the overall contaminant plume;
- Assessing the effectiveness and timeliness of existing investigation and remedial actions, and the defensibility of the data itself; and
- Evaluating potential costs to address the contamination.

To address these additional goals, determine liability, and quantify damages, technical approaches in support of litigation often must go beyond a non-litigious, regulatory driven investigation program. The forensic analysis of data will likely be far more involved and rigorous, and any data collection and analysis will be scrutinized by opposing counsel, opposing experts, and the court – it must be defensible.

**Aquilologic** staff has conducted forensic field investigations and analysis to determine liability, disprove such, quantify damages, or articulate that there are no damages, depending on the facts in each case. We have identified where, when, and how much of a release occurred, which releases contributed to the overall problem, and how much was their contribution, assessed the efficacy of existing remedial actions, identified key data gaps and errors in existing work, and developed remedial actions and associated costs to address the contamination.