

Acid mine drainage (AMD) Site Investigations

PSD assists states in evaluations of AMD discharges from both SMCRA and AML sites. This includes site investigations which merge mapping and GIS with advanced mobile computing technologies to implement automated chemical and flow monitoring of AMD impacted waterways. Projects conducted to date have employed automated rain gauges and flow measurement transducers and recording water quality sondes to gather data on water quality and quantity to more efficiently develop inventories of mine drainage problems and design remediation measures. Projects typically result in the development of a water information database, geochemical models, and a conceptual AMD treatment design which can be used by the state (with or without MCR assistance) for project planning and remediation design.

Equipment:

Multi-parameter meter for pH, specific conductance (SC), temperature, dissolved oxygen (DO), and oxidation and reduction potential (ORP)

Portable colorimeter (field determination of dissolved ferrous and ferric iron)

Portable spectrophotometer (field determination of sulfide and nitrite at sites with installed bioreactor cells)

Field alkalinity test kit

Apparatus to measure flow (site specific- includes a portable flume, a velocity measuring device or a temporary weir and pressure transducer installation)