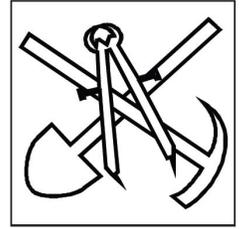


Passive Treatment: Theory and Application Workshop



This course provides information and exercises that are highly interactive and can be used to evaluate the characteristics of coal mine drainage and guide the selection and application of various passive treatment technologies designed to mitigate the impacts of discharges.

Duration: 3.5 days

TOPICS COVERED

Introduction

- ▼ Overview of Course
- ▼ Overview of Passive Treatment

Passive Treatment Problem Analysis

- ▼ Restoration Goals
- ▼ Passive versus Active Treatment
- ▼ Site Characterization and Basic Data Requirements
- ▼ Water Quality Assessment
- ▼ Water Quantity Assessment

The Geochemistry of Passive Treatment

- ▼ Acidity
- ▼ Solubility
- ▼ Metals (Fe, Al, Mn)
- ▼ Hydrolysis
- ▼ Precipitation
- ▼ Carbonate Chemistry

Passive Treatment of Net Acidic Water

- ▼ Anoxic Limestone Drains
- ▼ Vertical Flow Ponds
- ▼ Other Treatment Technologies

Passive Treatment of Net Alkaline Water

- ▼ Iron Oxidation Principles
- ▼ Aerobic Wetlands

Post Construction Monitoring and Evaluation

- ▼ Performance Evaluation
- ▼ Case Studies and Lessons Learned

In addition to classroom instruction, the course contains a one-day field trip to an existing passive treatment facility for discussion and in order to evaluate system performance. The course also allows student teams to apply knowledge gained through the course, in developing solutions for an actual mine drainage problem. Students are encouraged to bring case studies for presentation and discussion.

WHO SHOULD ATTEND: Permitting Specialists and Inspectors; AML Project Designers and Inspectors; Persons developing, designing, reviewing, or evaluating mine drainage passive treatment systems.

COMMENTS: We recommend completion of the **Acid-Forming Materials: Fundamentals and Applications** course and an AMDTreat course as a pre-requisite. A basic understanding of chemistry is very helpful.

Field Exercise: No special protective equipment is required as you will not be in active work areas. However, expect tall grass and uneven rocky ground often in bright, hot sunlight, and dress accordingly.

National Technical Training Program: (202) 208-2769