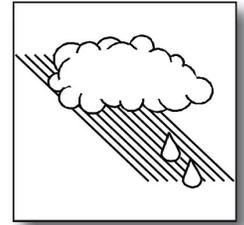


Permitting Hydrology

This course will emphasize reviewing probable hydrologic consequences determinations, defining material damage, and preparing cumulative hydrologic impact assessments.



Duration: 3½ days

TOPICS COVERED

Permitting Hydrology Information

- ▼ Objectives of Course
- ▼ Permitting Process
- ▼ Hydrologic Cycle

Overburden/Geology Information

- ▼ Geologic Data Sources
- ▼ Structural Characteristics and Features

Backfill Materials Evaluation

- ▼ Baseline Information
- ▼ Acid/Alkaline Mine Drainage
- ▼ Acid-Base Accounting (Overburden)
- ▼ Overburden Sampling

Surface Water Information

- ▼ Baseline Information (Quality/Quantity)
- ▼ Data Collections
- ▼ Surface Water Quality Parameters (Analysis)
- ▼ Flow Measurement

Groundwater Information

- ▼ General Groundwater Terminology
- ▼ Groundwater Concepts
- ▼ Aquifer Properties
- ▼ Fracture System and Aquifer Properties/Testing
- ▼ Groundwater Monitoring: Some Basics
- ▼ Permit Review Basics

Hydrologic Baseline Data

- ▼ Data Checking
- ▼ Acid/Alkaline Mine Drainage, Oil & Gas Well Brine
- ▼ Quality Assurance/Quality Control
- ▼ Extraction Methods
- ▼ Water Sampling

EXERCISES

Probable Hydrologic Consequences (PHC)

- ▼ Principle Element of PHC Baseline Quality and Quantity
- ▼ Overburden Analysis
- ▼ Conceptual Models (Effecting Surface and Groundwater)
- ▼ Fly Ash/Biosolids for Reclamation
- ▼ Best Management Practices

Hydrologic Reclamation Plan (HRP)

- ▼ Acid/Alkaline Toxic Materials
- ▼ Alkaline Addition (Studies/Practices)
- ▼ Coal/Non-Coal Waste
- ▼ Erosion/Sediment Control (BMP)

Material Damage Standards

- ▼ Examples of Material Damage
- ▼ Material Damage, Hydrologic Impact (Minor, Major & Significant)

Cumulative Hydrologic Impact Assessment (CHIA)

- ▼ Anticipated Mining Example
- ▼ PHC vs CHIA?

WHO SHOULD ATTEND: Hydrologists, hydrogeologists, engineers, and others who review hydro sections of permits and area involved in preparation of hydrologic assessments.

COMMENTS: This course does not present material applicable to inspectors of AML program activities and is not suitable for newly hired personnel.

Students need to bring the following to class:

△ calculator

National Technical Training Program: (202) 208-2769