



Forensic Hydrologic Investigation

This course provides training on how to conduct a hydrologic autopsy relating to mine problems including but not limited to: dewatering or contamination of aquifers, wells, streams, springs, pond/lakes, problems associated with increased amount of water from mine flooding, and other hydrologic problems associated with mining activities.

Duration: 3½ days

TOPICS COVERED

A number of case studies will be given for the student to discuss and examine as to cause of problem, effect of the problem and what action can be taken to eliminate or minimize the problem. Each case will identify the tools, methods and other measure taken to arrive at a logical conclusion of the problem and the remediation.

Introduction and Philosophy

Impact Determination

Art of Interviewing

- ▼ Data Collection
 - ◇ *Data Collection and Compilation*
 - ◇ *Data Collection Exercise*
- ▼ Borehole Camera
 - ◇ *Borehole Video Camera System*
 - *Fracture Logging*
 - *Well Bore and Casing Integrity*
 - *Groundwater Information*
 - *Biological Activity*
- ▼ Mining Impacts
 - ◇ *Uses with Other Instruments and Equipment*
- ▼ Data Analysis
 - ◇ *Data Checking and Management*
 - ◇ *Overview of Statistical Methods*
 - ◇ *Display Techniques*
 - *Binomial and some Polynomial*
- ▼ Data Analysis Exercise 2

Blasting

- ▼ Impacts on Domestic Water Wells and Springs
- ▼ Case Studies (published and unpublished)
- ▼ Investigating Blasting Impacts

Report Preparation (Conclusions)

Preparation for Court

- ▼ Water Replacement
 - ◇ *Can Problem be fixed?*
 - ◇ *Treatment*
 - ◇ *Developing a New Source*
 - ◇ *Problem Remediation*

WHO SHOULD ATTEND: This course is geared mainly for geologists, hydrologists, and possibly inspectors who conduct hydrologic investigations on surface and groundwater problems related to coal mining activities.

National Technical Training Program: (202) 208-2769