



Advanced Blasting: Investigation and Analysis of Adverse Effects

This course provides advanced blasting training for regulatory personnel who evaluate the adverse effects of blasting. It focuses on gathering and analyzing information that will assist in resolving citizen complaints from ground vibrations, air blast, flyrock, and fumes.

Duration: 3½ days

TOPICS COVERED

Introduction

- ▼ Why We Review Citizen Complaints

Blast Log Review

- ▼ Terminology
- ▼ Cross-Tabulating Data Fields
- ▼ Blast Log in Compliance with Regulations
- ▼ Calculate Scaled Distance and Maximum Charge Weight
- ▼ Signs of Elevated Ground Vibration, Air Blast and Flyrock

Review of Ground Vibration and Air Blast Standards

- ▼ Plotting Square-Root Scale Distance, Cube-Root Scale Distance
- ▼ Regression Analysis
- ▼ Spatial Relationships
- ▼ Accuracy of Measurements
- ▼ Blast Log Evaluation Program as a Guide
- ▼ Signature Blasts
- ▼ Frequency Determination

Structure Response

- ▼ Terminology of Houses
- ▼ Statistics of the Research
- ▼ Response Characteristics
- ▼ Strains
- ▼ Response Measurement
- ▼ Natural Frequency Determination

Field Exercise

- ▼ Seismic Array
- ▼ Structure Response

Damage Evaluation

- ▼ Pre-Blast and Post-Blast Surveys
- ▼ List of Available Tools and Techniques
- ▼ Not Blast Damage
- ▼ Environmental Causes of Damage
- ▼ Guide for Conducting Damage Assessments
- ▼ Vibration-Related Damages
- ▼ Documentation of Damage
- ▼ Situations When No Investigation Necessary

Public Relations/Customer Service

Safety Area and Warning Signals

Fumes

- ▼ Nitrogen Monoxide and Carbon Monoxide

Legal Issues

WHO SHOULD ATTEND: Regulatory personnel who have taken the Blasting and Inspection course within the last five years and/or whose principal job is Blasting Specialist.

COMMENTS: Students need to bring the following to class:

- △ Scientific calculator
- △ Engineering scale
- △ Seismograph, if available
- △ Problematic blast logs or seismic records
- △ Photos of alleged damages

Field Exercise: Hard hat and steel-toed boots are required.

National Technical Training Program: (202) 208-2769