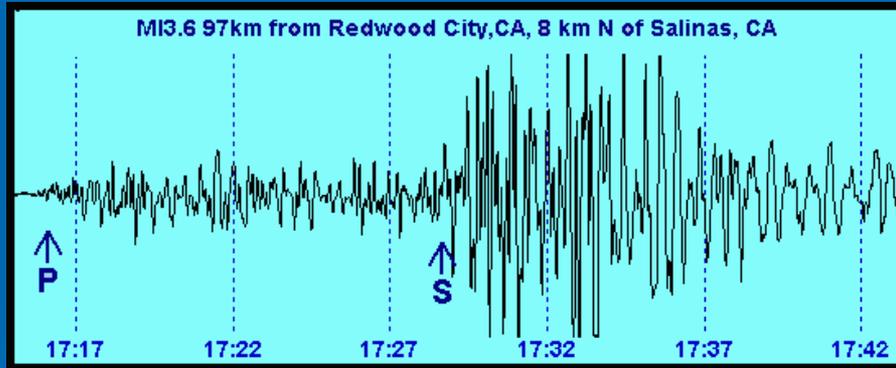


Blast Vibration and Seismograph Section - 2005



Officers

Chairman Kenneth K. Eltschlager

Office of Surface Mining

Pittsburgh, Pennsylvania

Vice-Chairman Randall M. Wheeler

White Industrial Seismology

Joplin, Missouri

Secretary Wendi Stephens

Office of Surface Mining

Lexington, Kentucky

Background

- ISEE Seismograph Standards Subcommittee formed in 1995 in response to discrepancies in seismograph readings
- Initial goal – All blasting seismographs should read the same for a given blast
- Section established 1997
- Two primary components of performance
 - Seismograph construction
 - Field deployment
- First ISEE standards complete in 2000
- Current membership - 298

SECTION PURPOSE

Provide a forum for the discussion of issues related to vibration and noise from mine, quarry and construction blasting.



SECTION SCOPE

- Develop a section of ISEE members with knowledge and interests in blast vibrations measurement, analysis, safe level criteria and regulation,
- Conduct meetings at a frequency of at least one per year,
- Form committees within the section to examine specific issues,
- Develop objective standards for vibration measurement instrumentation and field use practices, and
- Provide an advisory team for seismograph testing and calibration.

SEISMOGRAPH STANDARDS COMMITTEE

- Chairman –
- Kenneth K. Eltschlager

- Purpose: Develop uniform and technically appropriate standards for seismograph performance.



Progress

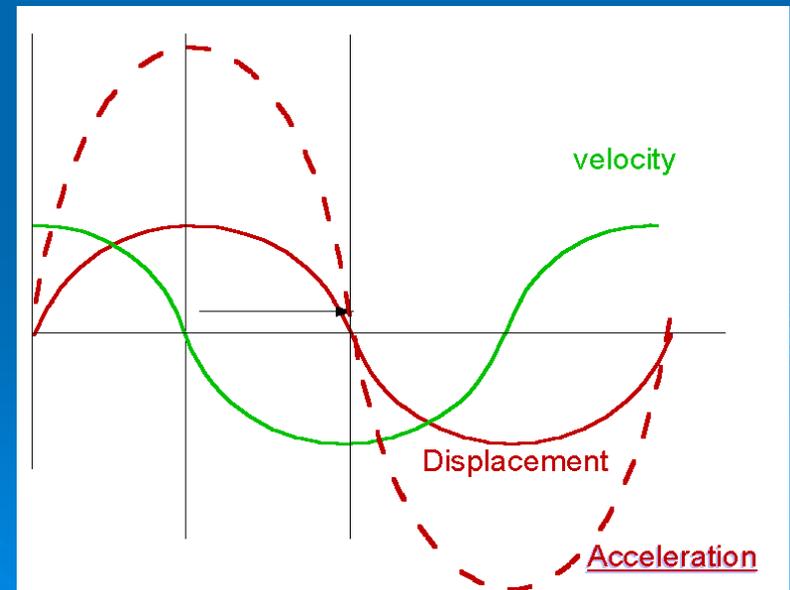
- Field Practice Guidelines for Blasting Seismographs (1999)
 - First official ISEE standard
 - Adopted by numerous regulatory bodies
 - Available in Spanish

- Performance Specifications for Blasting Seismographs (2000)
 - Current yardstick for designing blasting seismographs
 - A more stringent specification may be developed once a testing laboratory is found.

- <http://www.isee.org/sections/blast.htm>

SEISMOGRAPH TESTING AND CALIBRATION COMMITTEE

- **Chairman**
Bob Turnbull
- **Purpose: Develop a program to test blasting seismograph performance, enlist the services of a testing facility and maintain a seismograph calibration program.**



Progress

- Draft testing protocol, “Certification of Seismographs Used to Monitor Vibrations from Blasting at Mines, Quarries and Construction Sites”
- The protocol addresses the basic frequency sweeps to evaluate seismograph performance
- We are currently looking for a testing facility!
 - US BOM equipment to U. of Missouri - Rolla
 - USGS – Iris Pascal
 - COE

VIBRATION LIMITS, TECHNICAL COMMITTEE

- **Chairman**
Randy Wheeler
- **Purpose: Establish a set of model standards for safe ground and air vibration levels during the surface use of explosives in mine, quarry and construction blasting.**



Progress

- The committee developed a draft standard on appropriate ground vibration and airblast limits at residential structures.
- The standard will provide guidance to regulatory personnel and contractors on safe vibration levels.
- Future standards may be recommended for other types of structures.

VIBRATION REGULATIONS COMMITTEE

- Chairman - Larry Schneider
- Purpose: Catalogue the vibration and airblast regulatory levels being enforced at Federal, State and municipal government levels.
- A secondary purpose was to evaluate the consistency of the existing regulations with the current scientific findings on structural response and damage potential.

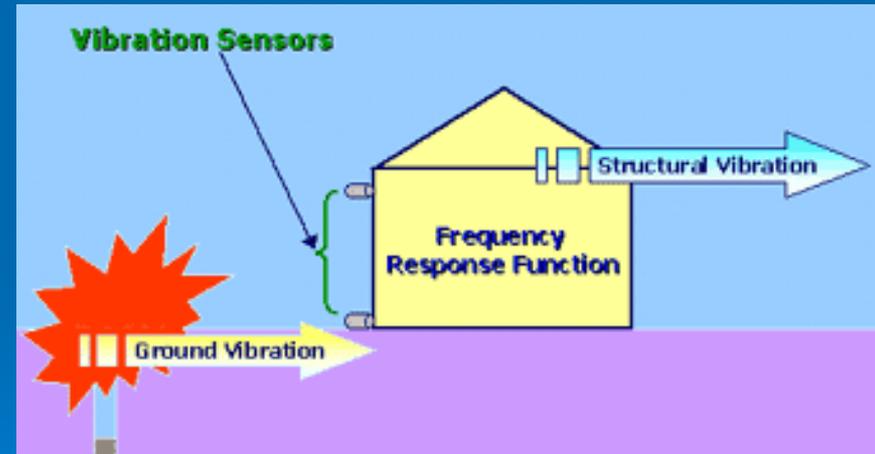


Progress

- The committee has compiled a database on the existing rules of Federal, State and local governments.
- The Federal, State and Local Vibration Regulations Database is currently available through the ISEE
- Rules not included in the datadase should be sent to the chairman

PROGRAM AND COMMUNICATIONS COMMITTEE

- **Chairman**
Sarah Zraggen
- **Purpose: Improve education and disseminate technical information on blast vibrations and work towards other training and educational programs**



Progress

- Working towards publishing a Section article in each ISEE journal
- Looking for vibration related papers for the annual conference to have a Seismograph session. If you become aware of a project worthy of publication, please contact the chairman.
- Some of the section members are currently involved in the ISEE Public Education Committee. A video on the effects of blast vibrations on homes is being scripted.

Help?

- Questions and comments are welcome on any of the section initiatives
- Participation is also welcome
- Articles or papers on vibration topics are needed. Topics could include regulatory pitfalls, unusual field observations, tricks of the trade, etc.

Questions?

