**Section 1850.13 Training**

a) Training required herein, for those persons not previously trained in the subjects required herein, shall be conducted by the Department, the operator or his representative. The operator's representative may include, but is not limited to junior colleges, consultants, and explosives manufacturers. The training must meet the requirements of this Section.

b) The training for blasters certification shall include instruction in:

1) The design and layout of blasts, including geology, topography and the proper use of delays.

2) Control of ground vibration.

3) Control of flyrock and air blast.

4) Design and loading of boreholes.

5) Priming and boosting.

6) Tamping and stemming, including methods and materials.

7) Blast initiation systems.

8) The use of blasting machines.

9) The use of circuit testing equipment.

10) The general properties of explosives, including blasting agents, and selection criteria.

11) Ground vibration, air blast and monitoring.

12) The use of ground vibration and air blast records as blast design factors.

13) The need for accurate reports and blasting logs and their proper preparation.

14) Current Illinois and Federal law and regulation pertaining to blasting at the mine site, including 62 Ill. Adm. Code 1780.13, 1816.11(f), 1816.61 to 1816.68, 1817.61 to 1817.68; this Part; 62 Ill. Adm. Code 220.130; the Illinois Explosives Act [225 ILCS 210]; 30 CFR 816.61 to 816.68, 48 Fed. Reg. 9806-9807, 9492, 9809, 44780 (1983), 817.61 to 817.68, 48 Fed. Reg. 9809-9811, 9492, 44781 (1983), 30 CFR 850, 48 Fed. Reg. 9492 (1983); 30 CFR 56.6000-56.6250, 50 Fed. Reg. 5040 (1985), 30 CFR 57.6000-57.6250, 50 Fed. Reg. 4082 (1985), 36 Fed. Reg. 9634 (1971); 43 Fed. Reg. 12320 (1978).

15) Planning for unpredictable blasting hazards to the public and mine personnel. Illustrative example are adverse weather, stray electrical currents, flyrock, radio frequency energy, and misfires.

16) Signs, warning signals and control of the potential flyrock area.

17) Blasting plan requirements.

18) Pre-blast and condition surveys and their use in blast design.

19) Required blasting notices.

20) Training and certification requirements.

21) Handling, transportation and storage of explosives.

22) New technology as it develops and is implemented in the field. The Department shall advise operators of new technology which should be included in future training programs.

c) The blaster shall provide direction and on-the-job training to all non-certified blasting personnel under his supervision.

(Source: Amended at 22 Ill. Reg. 20290, effective November 5, 1998)