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DEPARTMENT OF THE INTERIOR

AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM)

30 CFR Chapter VII: Subchapter M – Certification and Training of Blasters and Blaster Learners: Parts 850, 851
Surface Coal Mining and Reclamation Operations Permanent Regulatory Program

ACTION: Proposed rules.

SUMMARY: The Office of Surface Mining Reclamation and Enforcement is seeking comments on these proposed rules which would implement a nationwide permanent program for the regulation of surface and underground mining operations by the States and the Federal Government as required by the Surface Mining Control and Reclamation Act of 1977 (SMCRA). These proposed rules are intended to strike a balance between protection of the environment and agricultural productivity and the Nation's need for coal as an essential source of energy.

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{Preamble: 43 FR 41797}

SUBCHAPTER M – CERTIFICATION AND TRAINING OF BLASTERS AND BLASTER LEARNERS

PART 850 – REQUIREMENTS FOR BLASTER CERTIFICATION PROGRAMS

Subchapter M sets out the program requirements and criteria to be followed by the Office and the State regulatory authorities, for the training, examination and certification of persons engaging in or directly responsible for blasting or the use of explosives in surface coal mining operations. The goal of this subchapter is to ensure that blasting operations are conducted by well-trained and competent persons in order to comply with Sections 515 and 719 of the Act. States' training, examination and certification plans must comply with the requirements of this Subchapter and must:

- (1) Incorporate an OSM-approved program of instruction in the use of explosives;
- (2) Provide for administration of the Office's qualifying examination;
- (3) Allow for certification of eligible applicants and for the collection and maintenance of data upon which applicants' certification eligibility has been determined;
- (4) Include provisions for the retraining, re-examination and recertification of blasters, and
- (5) Specify the conditions under which certified blasters must work, must retain or forfeit their certification, and can appeal a decision to suspend or revoke their certification.

The following sections of the Act relate to Subchapter M: 201, 501, 507, 515 and 719.

BIBLIOGRAPHY OF TECHNICAL LITERATURE

1. ""Manufacture, Transportation, Storage, and Use of Explosive Materials," NFPA No. 495, 1973.
2. ""Safety in the Transportation, Storage, Handling and Use of Explosives," Publication No. 17, prepared by the Institute of Makers of Explosives, February, 1977.
3. ""Suggested Code of Regulations for the Manufacture, Transportation, Storage, Sale, Possession and Use of Explosive Materials," Publication No. 3, prepared by the Institute of Makers of Explosives, August, 1974.
4. ""Hard-Rock Mining Apprenticeship Program Launched at Kennecott's Tintic Mines Division," Society of Mining Engineering, June, 1977.
5. Konya, Calvin J., ""How to Cope with Blasting Problems in Strip Mining," Coal Mining and Processing, September, 1977.
6. Title 25 Rules and Regulations, Commonwealth of Pennsylvania, Department of Environmental Resources_Subpart D, Article IV, Chapter 210 Use of Explosives.
7. Chapter 19, Article 4 of the Administrative Code relating to transportation, sale, storage and use of explosives in connection with blasting operation, the Fire Department, City of New York.
8. Commonwealth of Kentucky, Department of Mines and Minerals, Laws and regulations governing explosives and blasting, March, 1977.

The regulations in this Part reflect the basic intent of Section 719 of the Act which requires the establishment of training programs and examination and certification procedures for persons engaged in or directly responsible for blasting or the use of explosives in surface coal mining operations. The requirements for a national standard examination in the regulations was

used to simplify the certification procedure and create a uniform blaster certification training and examination program nationwide.

These regulations are based on the conclusion that State regulatory agencies, rather than the Office, should perform the training, examination and certification of blasters. This position was taken because the Office believes this approach is more in keeping with the basic finding of the Congress that primary responsibility for regulation of surface mining and reclamation operations should rest with the States. The rationale for this conclusion is that:

- (1) The location of the regulatory agencies in local communities throughout the mining regions will make training much more accessible to persons seeking blaster certification; and {41798}
- (2) Several States already have training programs currently underway which will require in most instances only small modifications in order to be in compliance with the regulations.

With regard to training, the concept followed in developing these regulations is that the Office will approve the course material. However, the training could be conducted by industry, Federal agencies or State regulatory agencies. The certification examination will be given by the State regulatory authority using a standard test developed by the Office.

Authority to require States to implement a training, examination and certification program is contained in Sections 507, 515 and 719 of the Act.

Responsibility for establishing a national examination has been placed with the Director of the Office. This requirement, which is included in the Act, was placed in the regulations in order to create a more uniform testing program nationwide and to ensure that the test fully meets the proposed uniform guidelines on employee selection procedures (F.R. 65542 65552; December 30, 1977). Once developed and validated, the test could immediately be given to the States for administering to all existing blasters. This would greatly expedite the certification process.

The responsibility for reviewing, approving and monitoring State plans for the certification and training of blasters was placed with the Regional Director in order to assure that State plans are comprehensive, and that the States are following their State plans and these regulations.

The regulations specify that States must submit to the Office, by February 3, 1979, plans for training and certification programs. This was done because Section 719 of the Act did not set out a specific time schedule for these regulations. Therefore, the Office made a decision to incorporate this program within the overall State program submission. By doing it this way, the States can use grant money to assist them in establishing the program. States must ensure that all blasters are certified as of August 3, 1979 and that all provisions in the State plan are implemented. Once a State or Federal program has gone into effect, all persons engaged in blasting operations must be certified.

The Office recognizes that there are numerous factors which contribute to and affect the performance and proficiency of persons using explosives for blasting purposes in surface coal mine operations. As a result of requiring the use of experts as instructors and a course containing specified technical content, the Office believes that blasters will better understand the hazards involved in the use of explosives and that persons using explosives will be encouraged to take appropriate steps to ensure the safety of life and property. Course content reflects the minimum basic requirements for understanding the chemical and physical properties of explosives, and the proper selection, use, and maintenance of explosive material. Such content determination was made on the basis of experience of persons familiar with blasting operations and after consulting the technical references.

These regulations recognize that the States, in most instances, will be the regulatory authorities and therefore provide for the States to conduct the training or allow industry to conduct the training subject to State approval.

Section 805.12 establishes the minimum requirements relating to the use of explosives that will be addressed in the examination for the certification of blasters. Content of the examination, which will be performance-oriented, is based on the content of the training. Questions will be designed to measure the skills and knowledge to be acquired during training. Use of a performance test avoids problems resulting from varying degrees of literacy and unfamiliarity with the English language.

There are also provisions in these regulations for an employee to become a "blaster learner." These provisions were included in the regulations both for the benefit of the employer and the employees. They allow employees an opportunity to learn the trade before having to take the certification examination, and provide the employer some flexibility in building up the blasting components of his organization. {41798}

PART 851 – MINIMUM REQUIREMENTS FOR CERTIFICATION OF BLASTERS

It is the intent of the regulations in this part to provide individual blasters or prospective blasters with the necessary information regarding requirements that they have to meet in order to become certified, to provide a basic description of the terms and conditions of certification, and the requirements for recertification, to delineate the constraints placed on blasters, and to provide for an appeal procedure.

This section delineates the various steps an individual must go through to become certified. Paramount in the process is the passing of the certification examination. All blasters must pass the examination before they can be certified. There will be no exemption based on previous certification. Experienced blasters need not take the training prior to the examination; however, they are required to present a notarized statement from their employer or other responsible persons attesting to the fact that the applicant is experienced in blasting. Even if a person has experience in blasting, he may elect to take the OSM-approved training prior to applying for the certification examination. In addition to meeting the training and examination requirements of these regulations, each applicant for certification must show proof that they have completed the Health and Safety Training as required by the Mine Health and Safety Administration. This provision is in keeping with the provisions of Public Law 95 164, November 9, 1977, which require each operator of a coal mine to have a health and safety training program approved by the Secretary of Labor. The effective date for certification of blasters is planned to coincide with the dates mandated by the Act for State program submissions and approvals.

This section of the regulations sets the term of certification and the conditions under which the certification will be issued. It also explains the circumstances under which a blaster's certification might be suspended or revoked.

These provisions are included in the regulations to ensure that blasters will keep abreast of the state of the art in the area of blasting and that the regulatory authority will have an opportunity to provide information to blasters with respect to the impact of this program on the public and to provide current information to blasters concerning possible changes in OSM programs generally. The three-year recertification requirement can be met by simply taking the eight-hour refresher course which will include the type of information mentioned above. There will be no mandatory test requirement for the first three-year period of a blaster's certification. However, at the end of each six-year period of a blaster's certification, the blaster must take the standard examination again. The Office believes this is necessary in order to assure that blasters are keeping up with the state of the art in blasting and the changes in Federal and State requirements. The Office believes that this is the only way to confirm this.

These provisions were included in the regulations to assure that blasters understand the importance placed upon the certification requirement, and to discourage them from abusing the certification privileges. They also provide some flexibility in utilizing the assistance of the "blaster learners" who might be assigned to them. However, the use of "blaster learners" is in no way intended to abrogate the responsibility of the certified blasters.

The intent of this provision is to provide an opportunity for a person whose certification has been suspended or revoked to appeal the decision and receive an expeditious hearing. This procedure will ensure that a person has the opportunity to refute any evidence upon which an adverse decision has been based.

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{Regulations: 43 FR 41934}

SUBCHAPTER M – CERTIFICATION AND TRAINING OF BLASTERS AND BLASTER LEARNERS

PART 850 – REQUIREMENTS FOR BLASTER CERTIFICATION PROGRAM

Section

850.1	Scope.
850.2	Objectives.
850.3	Responsibility.
850.5	Definitions.
850.11	Training Programs.
850.12	Examinations.

Authority: Sections 102, 201, 501(b), 515, 719, of Pub. L. 95 87, 91 Stat. 448, 449, 468, 486 and 526 (30 U.S.C. 1202, 1211, 1251, 1265 and 1309).

SECTION 850.1 - SCOPE.

This part establishes program requirements and criteria for the training, examination and certification of persons engaging in or directly responsible for blasting or the use of explosives in surface coal mining and reclamation operations.

SECTION 850.2 - OBJECTIVES.

The objectives of this part are:

- (a) To establish minimum requirements and criteria for a training course in the use of explosives to ensure that blasting operations are conducted by well trained persons, and
- (b) To establish standard examination and certification requirements to assure that blasting operations are conducted by competent persons.

SECTION 850.3 - RESPONSIBILITY.

- (a) The Director is responsible for establishing a national examination for persons engaged in or directly responsible for blasting or the use of explosives in surface coal mining and reclamation operations and requirements governing the administration of that examination.
- (b) Each Regional Director of the Office is responsible for:
 - (1) Reviewing and approving training, examination and certification programs proposed in a State program submitted under 30 CFR 731.
 - (2) Establishing and conducting Federal training courses and examining and certifying qualified blasters or blaster learners, in a State which does not have an approved State program after August 3, 1979, or for each person working on Federal lands after February 3, 1979. {41935}
 - (3) Monitoring approved State training courses, examinations and certification programs to ensure compliance with the requirements of this Part.
- (c) Each State is responsible for:
 - (1) Preparing and submitting to the Regional Director on or before February 3, 1979, a State plan for the training, examination, and certification of blasters and blaster learners within a State program submitted under 30 CFR 731, which meets the requirements of this part, or notifying the Director of an intention not to submit a plan;
 - (2) Requiring that any person engaging in or directly responsible for blasting or use of explosives in surface coal mining and reclamation operations in the State shall, on and after the approval of a State program, be certified by the State or Federal government;
 - (3) Conducting training programs, holding examinations, and certifying blasters and blaster learners under an approved State plan;
 - (4) Approving and monitoring training programs conducted by any surface coal mine operator to ensure compliance with the requirements of State regulations where the program is authorized under an approved State program; and
 - (5) Collecting, maintaining and providing the Office with data on course attendance, test results and other information the Office may require.
- (d) Any person who intends to be directly responsible for the conduct of blasting or use of explosives in surface coal mining and reclamation operations shall obtain a blaster's certification after approval of a State plan or implementation of a Federal program for certification before conducting these activities.
- (e) Any person who intends to engage in, but not be directly responsible for the conduct of, blasting or using explosives in surface coal mining and reclamation operations shall obtain a blaster learners certificate after approval of a State plan or implementation of a Federal program for certification before engaging in these activities.

SECTION 850.5 - DEFINITIONS.

BLASTER means any person engaging in or responsible for conducting blasting or use of explosives in surface coal mining and reclamation operations.

BLASTER LEARNER means any person engaging in blasting or using explosives on surface coal mining and reclamation operations under the direct supervision of a certified blaster.

SECTION 850.11 - TRAINING PROGRAMS.

A State program may provide that the State regulatory authority conduct all training to meet the requirements of this part, or that training courses will be conducted by surface coal mine operators under the supervision of the State. In either case the training course must be approved by the Office and at a minimum meet the requirements of this section.

(a) Each Instructor shall have a thorough knowledge of the subject matter they teach and have had practical field experience in its application.

(b) The course of training for blaster learners shall be the course required by the Mine Health and Safety Administration, and an introductory course in blasting and the use of explosives as approved by the Office.

(c) The course of training for blasters shall, at a minimum, include instruction in:

- (1) The storage, transportation and use of explosives for blasting purposes;
- (2) The design and layout of blast patterns, including proper use of delays;
- (3) Loading of boreholes;
- (4) Priming and boosting;
- (5) Tamping and stemming;
- (6) Blasting with detonating cord and other nonelectrical initiating systems;
- (7) The use of blasting machines;
- (8) The use of testing machines;
- (9) The hazards and dangers involved in the use of explosives for blasting purposes;
- (10) The chemical and physical properties of explosives;
- (11) Ground vibrations and methods of monitoring and control;
- (12) Air blast and methods of monitoring and control;
- (13) Electrical blasting hazards;
- (14) The need for accurate reports and blasting logs; and
- (15) Any other subject matter that a State or the Office may require.

(d) On the job training shall be encouraged to the extent possible.

SECTION 850.12 - EXAMINATIONS.

(a) Examinations for blasters and blaster learners shall be conducted as needed by:

- (1) The State regulatory authority in each State where there is an approved State program; and
- (2) The Office in each State where there is a Federal program and for operations on Federal lands where there is no cooperative agreement between the State and the Office.

(b) The examination for blasters shall be a written examination established by the Office and shall include questions related to:

- (1) Explosive energy:
 - (i) Types of explosives;
 - (ii) Selection of explosives; and
 - (iii) Explosive properties.
- (2) Blast design:
 - (i) Important rock and explosives properties;
 - (ii) Design of blast holes;

- (iii) Pattern design, surface blasting, including timing of blast holes with delay intervals and spacing burden and stemming; and
- (iv) Controlled blasting techniques.
- (3) Loading boreholes:
 - (i) Priming and boosting; and
 - (ii) Decking.
- (4) Initiation systems:
 - (i) Electric;
 - (ii) Detonating cord;
 - (iii) Shock tube;
 - (iv) Gas detonation; and
 - (v) Additional initiation systems, as developed.
- (5) Ground vibrations, air blast and fly rock monitoring and control.
 - (i) Monitoring and control.
- (6) Secondary blasting.
- (7) Current Federal and State blasting regulations.
- (8) Such other matters as the State or the Office may require.

(c) Examinations for blaster learners shall be those prescribed and utilized in the introductory blasting course required by the Office and the Mine Health and Safety Administration. {41935}

PART 851 – MINIMUM REQUIREMENTS FOR CERTIFICATION OF BLASTERS

Section

851.1	Scope.
851.11	Certification procedures.
851.12	Terms and conditions of certification.
851.13	Recertification.
851.14	Restrictions.
851.15	Appeals.

Authority: Sections 102, 201, 501(b), 515, and 719 of Pub. L. 95 87, 91 Stat. 448, 449, 468, 486 and 526 (30 U.S.C. 1202, 1211, 1251, 1265 and 1309).

SECTION 851.1 - SCOPE.

This Part sets forth the minimum requirements that a person responsible for conducting blasting or use of explosives on surface coal mining and reclamation operations shall meet in order to become certified as a blaster by the State regulatory authority or the Office. It also provides a basic description of the terms and conditions of certification, the requirements for recertification, the minimum restriction on a Blaster's Certification and the procedures for appealing a decision with regard to suspension or revocation of a Blaster's Certification.

SECTION 851.11 - CERTIFICATION PROCEDURES.

(a) Each applicant for Blaster's certification shall be required to pass a qualifying examination established by the Office according to the requirements of 30 CFR 850.12. Each applicant may use one of the following conditions as a prerequisite for taking the certification examination: {41936}

- (1) A signed notarized statement from the applicant's employer or other responsible person's certifying that the applicant is experienced in blasting; or
- (2) Completion of a course in blasting approved by the Office, according to the requirements of 30 CFR 850.11.

(b) Applicants failing to qualify in the examination may reapply for examination by submitting a new application to the examining authority.

(c) Each applicant for blaster's certification must show proof of completion of the Mine Health and Safety training as required by the Mine Health and Safety Administration prior to being certified.

(d) Each applicant for blaster's certification shall have at least two years experience in blasting as applicable to surface coal mining operation.

(e) Each applicant for a Blaster's certification shall be notified in writing whether they have qualified or failed to qualify in the examination for Blaster's certification, within 30 days from the date of the examination.

(f) If the applicant qualifies in the examination, the State regulatory authority or the Office may grant certification if the application shows that all other requirements are met.

SECTION 851.12 - TERMS AND CONDITIONS OF CERTIFICATION.

(a) Certification shall be for a period of 3 years.

(b) A certificate of certification shall be issued only to an individual qualified in accordance with the requirements of section 850.12(c) of this part and shall bear his name, address, photograph, and signature.

(c) Each blaster or blaster learner shall, upon request, exhibit his certificate of certification to any duly authorized representative of the regulatory authority or the Office.

(d) After appropriate notice and an opportunity for an appeal, according to the requirements in section 851.15, the regulatory authority of the Office may suspend or revoke the certification of a blaster or blaster learner for any of the following reasons:

- (1) Non-compliance with any order of the regulatory authority;
- (2) Violation of the provisions of any State or Federal explosive law or regulation, or proof that false information was willfully given or a misrepresentation was willfully made to obtain the certification; or
- (3) The Blaster or learner is an unlawful user of, or is addicted to, alcohol, narcotics, or other dangerous drugs.

SECTION 851.13 - RECERTIFICATION.

(a) Each blaster or blaster learner may apply for recertification every three (3) years to the regulatory authority or the Office. Before being recertified, blasters must complete an 8 hour refresher course required by the Office.

(b) Each blaster or blaster learner who fails to obtain recertification every 3 years may be required to apply for re-examination by submitting proper application accompanied by the appropriate fee, if required. In any event, re-examination is required every six years.

(c) Any individual whose certification has been suspended shall be required to pass a qualifying examination before being recertified.

SECTION 851.14 - RESTRICTIONS.

(a) A blaster or blaster learner certification shall not be assigned or transferred.

(b) A blaster shall not delegate their responsibility to any individual who is not a certified blaster.

(c) The certified blaster-in-charge shall fire all blasts. When more than one certified blaster is engaged in the preparation for a blast, the operation's management shall designate the blaster-in-charge.

(d)(1) The blaster-in-charge shall be on the actual site of the blasting operation and shall directly supervise each blasting crew which may not exceed 6 learners per crew. The blaster-in-charge shall not be responsible for nor supervise more than one crew at any one time.

(2) The blaster-in-charge may authorize learners to perform general blasting operations, to load and unload explosives, prepare explosives for use in blasting, transport explosives at or near the job site, charge explosives into drill holes, tamp, or otherwise prepare explosives for detonation. However, each of these duties shall be performed only after instructions from and under the direct supervision of the blaster-in-charge. The blaster-in-charge has the full responsibility for all blasting including keeping of blasting logs and records, the blasting related activities of the learners in his charge, and for ensuring that all persons under his supervision have the necessary training to safely perform their duties.

SECTION 851.15 - APPEALS.

(a) Any person whose certification has been suspended or revoked may, within 30 days from the date of notice of this action, appeal the decision to the Director, The appeal shall contain a statement of the decision being appealed and facts upon which the requested reversal or modification of the decision is based.

(b) The Director shall take appropriate action on the appeal within 30 days from receipt of the appeal.

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