Chapter 34

MINING, TUNNELING AND BLASTING OPERATIONS

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Chapter 34-A

BLASTER'S LICENSES

Policy Statement: It is the policy of the Division of Occupational Safety and Health (DOSH), also known as Cal/OSHA or the Division, to require that any person who uses explosives, as defined in Labor Code Section 6710(b), during the course of any type of employment shall obtain a license from the Division in order to ensure that blasters possess an adequate level of knowledge about blasting safety, to restrict the use of explosives by blasters to those categories about which they have knowledge and experience, and to establish and maintain a list of licensed blasters.

Authority: DOSH will administer this policy in compliance with all applicable laws, rules, and guidance:

- California Labor Code, Sections 6710, 6711, 7990 through 7995 and Title 8 California Code of Regulations Sections 344.20 through 344.22.

PROCEDURES:

A. BLASTER'S LICENSE PROGRAM ADMINISTRATOR

1. Designation

   The Principal Engineer of the Mining and Tunneling Unit, or his or her designee, shall administer the Blaster's License Program and shall be known as the Blaster's License Program Administrator (BPA).

2. Duties
   a. Coordinate updates and changes in the blaster's license examination to include equal consideration of all blasting disciplines.
   b. Oversee the selection of qualified Blaster's License Examiners.
   c. Prepare a summary every July of the previous year's blaster's licensing activities for review by the Deputy Chief for Field Operations.
   d. Act as a contact with representatives of the explosives industry, law enforcement agencies and other state agencies in matters regarding the licensing of blasters.

e. Represent the Division for standards promulgation and coordinate and assist other federal, state and local governmental agencies on standards development.

B. BLASTER'S LICENSE EXAMINERS

1. Qualifications

   a. Experience in and knowledge of blasting regulations and enforcement;

   b. Knowledge of and experience with blasting operations and blasting materials;

   NOTE: To the extent possible, compliance personnel from District Offices which have compliance jurisdiction over the particular activity which the blaster's licenses covers shall be selected as examiners, e.g., avalanche control.

   a. Ability to act independently in arranging and conducting Blaster's examinations; and
   b. Approval by blaster license examiner's immediate and upper management level supervisors.

   NOTE: If a blaster's license examiner cannot provide blaster's license examinations without adversely affecting the effective performance of his or her other mandated work, then their supervisor, after giving consideration to the importance of the blaster's licensing examination program and the availability of other qualified examiners in the area, may curtail an individual examiner's assigned blasting examination workload after reviewing with the BPA the availability of acceptable replacement examiner.

2. Location

   The BPA shall ensure that an adequate number of qualified Blaster's License Examiners are trained and strategically located throughout the state in geographical proximity to blaster's license Applicants so that blaster's licensing examinations can be administered without causing undue hardship on blaster license Applicants.

3. List of Blaster's License Examiners

   The BPA shall establish and maintain a List of Blaster's License Examiners and provide a copy of the List to each Regional, District and Area Office in the Division.

C. EXAMINATION DEVELOPMENT

1. The written Blaster's License Examination shall be developed by the BPA in conjunction with the following sources:
    a. Explosives industry representatives;
    b. Construction and mining industry explosives users;
    c. Limited category explosives users;
    d. Professional societies such as the Society of Explosive Engineers;
    e. Private explosive consultants; and
    f. Division Blaster's License Examiners.
2. The BPA shall meet with all Blaster's License Examiners at least once each year for the purpose of reviewing, updating and revising the Blaster's License examinations and procedures.
3. Oral examination outlines may be developed by the BPA and Blaster's License examiners as necessary to supplement the written examination process.

D. APPLICATION PROCEDURES

1. Scheduling

    Blaster's license examinations shall be administered by appointment only.

2. Location

    Blaster's license examinations shall be conducted at the examiner's office.

    EXCEPTION: If at least three blaster's license Applicants from a location which is geographical remote from any examiner's office can be gathered together at one time, the examiner may travel to that location to administer the examination. However, arrangements to administer the blaster's license examination shall be agreed to by the BPA and the examiner's immediate supervisor.

3. Blaster's License Application Form Completion
    a. The examiner shall have the license Applicant complete the Blaster's License Application Form.
    b. The examiner shall identify the license Applicant through a photo ID.
    c. The examiner shall have the license Applicant describe on the reverse side of the Blaster's Application Form the following:
        1. Type of blasting work previously performed, for whom and when;
        2. Initiation system used; and
        3. Kinds of explosives previously used (by name or type), for whom and when
    d. The examiner shall inform the license Applicant that the applicant may attach a resume to the Application Form.

e. The examiner shall determine if the Applicant possesses three years qualifying experience in blasting.
    1. The Applicant may qualify to take the limited examination, which will qualify the Applicant for a limited license, if the Applicant can demonstrate three (3) years equivalent experience as follows:
        i. Two (2) years experience plus twenty (20) hours of explosives training course acceptable to the Division; or
        ii. One (1) year experience plus forty (40) hours of explosives training course acceptable to the Division.
    2. If the examiner determines that the applicant lacks the required amount of qualifying experience, the examiner shall send the Application Form (with examiner's notation) to the BPA without the fee.

4. Type of License
    a. After the applicant completes the Blaster's Application Form, the examiner shall determine the type of license for which the Applicant is qualified and base a determination on the Applicant's experience and training as documented by the Applicant on the Blaster's License Application Form.
    b. The examiner shall limit the Applicant's license, where appropriate, by type of work done and by initiation system (electric, cap & fuse or non- electric shocktube).
    c. The examiner shall indicate which of the following types of licenses for which the applicant is qualified:

CLASS CATEGORY	DESCRIPTION
A. Unlimited	All categories.
B. General Above Ground	All phases of blasting operations in quarries, open pit mines, and above ground construction.
C. General Underground	All phases of blasting operations in underground mines, shafts, tunnels, and drifts.
D. Demolition	All phases of demolition.
E. Limited	Specific blasting operations indicated on the License, such as small scale (less than 10 caps/rounds), avalanche control (hand-placed or propelled), geophysical exploration, oil/water well services, aerospace/propulsion, law enforcement and ordnance disposal, logging and others.

5. Duration of License

A Blaster's License is non-transferable and is valid for five years with renewal privileges.

E. FEE COLLECTION

1. After completing the Application process, the examiner shall collect the $15.00 blaster's license application and examination fee from the Applicant in the form of a check or money order from the Applicant.
2. Only one fee applies regardless of the number of parts of the written examination that are administered to the Applicant at one time.
3. The examiner shall not collect a fee from governmental agency employees who are applying in order to conduct governmental business and so note this on the Blaster's License Application Form.
4. The examiner shall prepare a fee receipt for the Applicant and hold it until the end of the examination for the notation of license limitations and, if appropriate, the notation "temporary license."

F. WRITTEN EXAMINATION

1. The examiner shall assemble the written examination(s) which shall include Parts I and II, and those specialty parts for each initiation system and Part III for each category for which Applicant wishes to qualify.

   NOTE: Examiners shall only administer examinations for the types of licenses for which they have been approved by the BPA to administer. If an applicant wishes to be examined for a type of license for which the examiner has not been approved to administer, the examiner shall refer the applicant to an examiner on the List of Examiners who has been approved by the BPA to conduct the particular type of examination sought.

2. The examiner shall give the examination(s) to the Applicant and ensure that the Applicant puts his or her full name on the examination.

   NOTE: The examiner shall ensure that the Applicant does not bring any books or other aids into the examination area.

3. The examiner shall collect the examination(s) when applicant has completed all parts.

   NOTE: The applicant shall be allowed sufficient time to complete the examination, but in no case more than three (3) hours.

4. The examiner shall review the examination(s) with the Applicant, discuss missed questions and any misunderstandings of language or intent and grade accordingly.

5. The examiner shall indicate number of right and wrong answers on each examination and determine the proportion of correct answers and express as a percentage from 0 to 100%. The passing score is 70% for each examination.

   NOTE: Where appropriate, the examiner may give additional weight to parts of exam related to applicant's specialty.

G. ORAL EXAMINATION

1. After administering the written examination(s), the examiner shall administer an oral examination to those Applicants who achieved a passing score on the written examination(s).
2. The oral examination shall include questions pertaining to any area pertinent to applicant's knowledge or ability.
3. After administering the oral examination, the examiner shall determine a "Pass" or "Fail" and thoroughly document the reasoning for the decision.

H. GRADING

1. After completing the written and oral examinations, the examiner shall integrate the written and oral results to determine if the Applicant achieved a passing score. If the Applicant did not pass, the examiner shall record "Did not Pass" on the Evaluation Form.
2. If the Applicant achieved a passing score, the examiner shall note the results, determine the limitations, complete the receipt and the Evaluation Form, and forward the following documents to the BPA:
   a. Blaster's License Application Form and any attachments;
   b. All parts of the examination, including those which the Applicant did not pass.
   c. Evaluation Form;
   d. Fee and the yellow and blue copies of fee receipt.

      NOTE: The pink copy of the receipt shall be maintained in the examiner's office file.

I. PROCEDURE FOR REVIEW

1. The BPA shall review the examiner's recommendation and discuss with the examiner any proposed change to the examination outcome. If the BPA disagrees with the examiner's determination, the BPA shall make a written record of the reasons for nonconcurrence.
2. When the BPA determines that an Applicant "Did Not Pass", the BPA shall write a letter to the Applicant informing him or her of the findings and offer the Applicant a

chance for reexamination after ninety (90) days, but before 180 days, for no additional fee.
3. After 180 days from the original examination, the Applicant must pay another $15 licensing and examination fee.

J. OFFICE PROCEDURES

1. Blaster's License Examiners shall send all blaster's license application and examination materials to the BPA's Office.
2. Office Support Staff at the BPA's Office shall check files and/or computer for a previous license for the Applicant and any records of disqualification or "Did Not Pass."
3. The BPA shall review all files and exams and assign a license number. If previous license exists, previous license numbers shall be used for the same Applicant. If there is no previous number for a particular Applicant, assign a new number in the license sequence.
4. Office Support Staff shall type the Blaster's License as follows.
    a. Use all "CAPS" for the Blaster's name and type of license.
    b. Date the license is mailed, or date of temporary license was issued (stipulated on the receipt) to an applicant is the date of issuance.
    c. Date of expiration is five years from date of issuance.
    d. For limited licenses, type limitation on back of license.
5. After BPA signs the license, Office Support Staff shall make a copy of the front and back for Blaster's License file.
6. Office Support Staff shall make a copy of the method of payment (check or money order) and receipt.
7. Office Support Staff shall mail the completed License to Applicant.
8. Office Support Staff shall arrange the Blaster License file as follows:
    a. Application, resume, and other documents.
    b. Examination (all parts).
    c. Copy of method of payment and receipt.
    d. Copy of License.
    e. Staple all documents together and place in file folder.
9. Office Support Staff shall type the mailing label and use the Blaster's full name and license number on the filing label.
10. Office Support Staff shall enter pertinent information from the Application Form to the computer database.
11. Office Support Staff shall mail the Blaster's License fee to Accounting Unit.

K. SUSPENSION OR REVOCATION OF BLASTER'S LICENSE

1. Suspension Conditions
    a. The Division shall suspend a Blaster's License when in the opinion of the

Division the Blaster has not complied with requirements, safety orders, or rules of the Division.

NOTE: Any person holding a Blaster's License from the Division who is convicted of violating any Safety Order involving the use or handling of explosives shall have his or her Blaster's License suspended for not less than thirty (30) days after a hearing by the Division (Labor Code Section 7993).

b. The Division may suspend a Blaster's License when in the opinion of the Division there is any question or doubt as to the competency of the Blaster's License Holder.

2. Revocation Conditions
   a. The Division shall revoke a Blaster's License when in the opinion of the Division the Blaster has not complied with requirements, safety orders, or rules of the Division.

      NOTE: Any person holding a Blaster's License from the Division who is convicted of violating Safety Orders involving the use or handling of explosives in which the violation is judged to be responsible for an accident involving serious injuries or death shall have his or her license revoked for at least one (1) year (Labor Code Section 7994).

   b. The Division may revoke a Blaster's License when in the opinion of the Division there is any question or doubt as to the competency of the Blaster's License Holder.
   c. Any person who has had his or her Blaster's License revoked may apply for a new license after a period of six (6) months.
   d. Any person who has had his or her Blaster's License revoked who is subsequently convicted of violations of a Safety Order involving the use of handling of explosives shall have his or her license permanently revoked.

3. Suspension or Revocation Hearing Procedures
   a. A hearing shall be held to determine whether a Blaster's License should be revoked or suspended. Written notice shall be provided by the BPA to the License Holder of the date, time, and place of the hearing at least 72 hours in advance. The hearing notice must specify the reasons for the contemplated revocation or suspension action so that the License Holder is adequately able to prepare for the hearing.
   b. The BPA, or his or her designee, shall serve as the hearing officer and electronically record the entire hearing.
   c. The Division's case shall be presented by either the safety engineer who initiated the suspension or revocation proceeding or by the blaster's licensing examiner, unless the Legal Unit determines that a staff attorney shall present the Division's case.

d. The hearing officer shall preside at the hearing and shall
e. The hearing officer shall make a judgement whether the License should be revoked or suspended based on the evidence presented at the hearing. If the hearing officer decides not to revoke or suspend the License, then the hearing officer shall inform the License Holder of the decision as soon as possible after the conclusion of the hearing, but in no case more than 24 hours after the hearing.
f. If the hearing officer concludes that the License should be revoked or suspended, then the hearing officer shall forward that recommendation as soon as possible to the Deputy Chief for Field Operations for review and a final decision.
g. The Deputy Chief for Field Operations shall render a final written decision as soon as possible, but in no case more than 24 hours after receipt of the hearing officer's recommendation. The Deputy Chief may consult with the Chief as appropriate prior to reaching a decision.
h. The Deputy Chief shall notify the hearing officer, the License Holder, and parties who attended the hearing, of the Division's final decision.

Chapter 34-B

CERTIFICATION OF SAFETY REPRESENTATIVES FOR UNDERGROUND MINES AND TUNNELS

Policy Statement: It is the policy of the Division of Occupational Safety and Health (DOSH), also known as Cal/OSHA or the Division, to examine and certify Safety Representatives by the Mining and Tunneling Unit to promote the safe operation of underground mines and tunnels and to ensure that Safety Representatives possess adequate knowledge and competence in underground work safety and health.

Authority: DOSH will administer this policy in compliance with all applicable laws, rules, and guidance:

- California Labor Code, Sections 7962, 7998, and 7999, and in Title 8, California Code of Regulations, 6967(a) and 8406(f).

PROCEDURE:

A. CONDITIONS FOR WHICH CERTIFICATION IS REQUIRED

Certification is required for all underground mine and tunnel operations.

NOTE: Underground mine and tunnel operations classified as "gassy" or "extra hazardous," or operations having 5 of more employees underground at one time, require a full-time safety representative.

B. CERTIFICATION EXAMINATION ELIGIBILITY CRITERIA

An applicant for the Safety Representative's examination must meet all of the following eligibility criteria:

1. Possess a minimum of two years of experience in underground mine or tunnel work related to the type of certification the applicant seeks;
2. Satisfy the eligibility criteria to obtain a valid California Gas Tester's Certificate (see Chapter 34-C);
3. Be able to issue understandable orders, and maintain required written records;
4. Possess adequate knowledge of explosives, basic formulas, methods, practices, equipment, instruments, personal protective equipment, engineering controls,

management practices and procedures, and regulations to safely perform underground operations under conditions which may pose a threat to an employee's safety and health; and

5. Possess adequate knowledge of relevant statutory codes, standards and regulations pertaining to underground mines and/or tunnels related to the certification requested.

C. APPLICATION FOR SAFETY REPRESENTATIVE'S CERTIFICATION EXAMINATION

1. Each applicant for the Safety Representative's Certification Examination shall complete and submit a Safety Representative Form prior to scheduling an examination. Examinations may be scheduled prior to submission of a completed application at the discretion of the Senior Safety Engineer Mining and Tunneling (SSEMT).
2. Each applicant's eligibility shall be verified by the SSEMT according to the criteria listed in the Certification Examination Eligibility Criteria.
3. When it is determined by the SSEMT that an applicant is not qualified to take the Safety Representative's Certification Examination because of an inability to meet one or more eligibility criteria, the SSEMT shall notify the applicant of this determination within 14 days of the decision and shall request that the applicant contact the SSEMT. A notation shall be made on the application of the SSEMT's decision and the date the letter was sent to the disqualified applicant.
4. When contacted by the disqualified applicant, the SSEMT shall discuss the failed eligibility criteria and suggest ways the applicant can meet the eligibility criteria. A note shall be made on the application of this discussion, and a copy of the letter sent to the disqualified applicant shall also be attached and forwarded to the Principal Safety Engineer Mining and Tunneling (Principal Engineer).

   NOTE: Training in safety for underground mines and tunnels is available from the Mining and Tunneling Unit on an as-needed basis in accordance with Labor Code §6350 and §6352.

5. A determination shall be made of the applicant's qualifications for Safety Representative's Certification Examination in the following specialty areas:
   a. Underground Mining and Tunneling;
   b. Underground Mining;
   c. Tunneling;
   d. Pipejacking and Boring; and
   e. Limited.
6. Applicants can be advised at the time they submit an application that, based on their training and/or experience, a determination may be made by the SSEMT that a "Limited Safety Representative Certification" shall be issued. Limited Certifications shall be noted on the application and the Certification. Limited Certifications include the following:
   a. Excluding gassy/extra hazardous classified operations;

b. Excluding diesel operations;
c. Excluding blasting operations;
d. Limited to oxygen deficiency in mines;
e. Limited to nongassy/potentially gassy operations; and/or
f. Limited to tunnel maintenance operations.

7. Each applicant shall pay a $15.00 examination fee in the form of a check or a money order made out to the State of California. Attach the examination fee to the application.
    a. No fee shall be required for applicants applying for Safety

        Representative's Certification Examination from the following exempt agencies:

        1. Governmental entities, e.g., Federal, State, County, City or District.
        2. Public utilities subject to the jurisdiction of the Public Utilities Commission (PUC).

D. CERTIFICATION EXAMINATION

1. General
    a. To obtain a Safety Representative's Certificate, the applicant shall pass a Certification Examination developed and administered by the Mining and Tunneling Unit and composed of two components: written and oral. The examination shall include questions related to the type of underground mine and/or tunnel work for which a certificate is requested.

        NOTE: More than one version of the written component of the Certification Examination shall be developed and rotated from examinee to examinee. All Mining and Tunneling Unit personnel are responsible for ensuring the physical security of copies of the Safety Representative's Certification Examination.

    b. The examination shall be administered by a SSEMT or by an Associate Safety Engineer in the Mining and Tunneling Unit who has been expressly designated by the Principal Engineer to administer the examination.

        NOTE: No examiner shall administer the Certification Examination in a manner contrary to P&P A-3, pertaining to activities incompatible with State service.

    c. The examination shall only be given at a Mining and Tunneling Unit Office. In order to give the examination at another location, approval shall be obtained, through the Principal Engineer, from the Deputy Chief for Field Operations.
    d. Each applicant's identity shall be determined by the examiner by means of a photograph I.D., such as a valid Driver's License, prior to beginning the

examination.

2. Written Examination Component

   When administering the written examination, the examiner shall:

   a. Ensure that the written examination component is administered in a quiet and secure area to ensure that the integrity of the examination process is not compromised.
   b. Assemble the appropriate sections of the written examination component and instruct the applicant to write his or her name on the first page of each examination section.
   c. Give appropriate instructions to the applicant for completing the examination and instruct the applicant that calculators, reference books, or other instructional aids are not allowed in the examination area.
   d. Allow the applicant enough time to complete the examination, but in no case, more than four hours.
   e. Correct the examination by use of the key developed for the administered examination.
   f. Indicate on the front page of the examination the percentage (from 0 to 100%) of the questions successfully answered by the applicant. An overall score of at least 70% is required to pass the written component of the examination. If a score of at least 70% is not achieved, the applicant has failed the examination. Applicants who fail the written component of the examination shall not be allowed to take the oral component of the Certification Examination.

      NOTE: See CERTIFICATION ISSUANCE AND DOCUMENTATION for further guidance on applicants who fail to pass the written component.

3. Oral Examination Component

   Applicants who achieve at least an overall score of 70% on the written examination are permitted to take the oral examination.

   The examiner shall upon successful completion of the written examination:

   a. Discuss with applicant the questions which the applicant answered incorrectly. Listen carefully to the applicant's rationale for answering the question as the applicant did, and pursue other relative lines of questioning to determine the applicant's understanding of the equipment, techniques, purpose and procedures, and how their explanation relates to testing underground environments for hazardous and explosive gases.
   b. Discuss with the applicant the questions which the applicant answered correctly to determine the scope of the applicant's knowledge. Pursue and discuss other relative lines of questioning relative to each examination

question.

c. Continue the oral examination by the use of oral examination questions developed for this purpose (see SSEMT). Ask the applicant to respond to hypothetical situations or simulated instrument readings based on the subject areas appropriate for the industry and scope of the Safety Representative's Certificate being sought.
d. Determine a "Pass" or "Fail" grade for the oral examination of the Certification Examination and thoroughly document the reasoning for the grade.

NOTE: See CERTIFICATION ISSUANCE AND DOCUMENTATION for further guidance on applicants who fail to pass the oral component.

E. CERTIFICATE ISSUANCE AND DOCUMENTATION

1. For Applicants Who Pass the Certification Examination

   The examiner shall:

   a. Complete the Safety Representative's Evaluation Form including the examiner's name and the date.
   b. Indicate the "Type of Certificate" on the application based on the written and oral examination results.
   c. Give the Applicant the original (white) receipt copy after the examination fee is received. Fill out the Applicant's name as it will appear on the certificate, determine the correct mailing address, and list the appropriate wording for the Safety Representative's Certificate. Indicate that the receipt shall act as their temporary certificate, and the permanent certificate should be received in approximately 30 days pending review of the examination results and approval by the Principal Engineer.
   d. Where an employer or other person issues a check or money order to pay for the examination fee of more than one applicant, each applicant shall receive an individual receipt to act as a "Temporary Certificate."
   e. Forward the following documents to the Principal Engineer, through the SSEMT:
      1. All parts of the examination including those portions failed.
      2. Fee paid and the yellow and blue copies of the receipt.
      3. Application, Evaluation Sheet, surrendered license, and any additional documentation or information.
   f. Each Safety Representative's Certificate issued by the Division shall be valid for a period of five years. After five years, the Safety Representative Certificate Holder must reapply for a certificate and pass both the written and oral components of the Certification Examination.
2. For Applicants Who Fail the Certification Examination

If an applicant fails the Certification Examination, indicate their name, address, and "Safety Representative's Examination -- Failed" on the receipt. Explain to the applicant that the applicant must wait a minimum of three months before he or she may retake the Certification Examination. If the applicant retakes the Certification Examination within six months from the date of the failed examination, the examination fee shall be waived.

3. Renewal and Upgrading Certification

   Application and examination for a renewal or upgraded Certificate shall be administered in the same manner as the original Certificate.

F. OFFICE PROCEDURES

Follow the office procedures in Chapter 34-A under "Clerical Procedures for Issuance of Blaster's License."

Chapter 34-C

CERTIFICATION OF GAS TESTERS FOR UNDERGROUND MINES AND TUNNELS

Policy Statement: It is the policy of the Division of Occupational Safety and Health (DOSH), also known as Cal/OSHA or the Division, to examine and certify Gas Testers by the Mining and Tunneling Unit to promote the safe operation of underground mines and tunnels and to ensure that Gas Testers possess adequate knowledge and competence in underground gas testing.

Authority: DOSH will administer this policy in compliance with all applicable laws, rules, and guidance:

- California Labor Code, Sections 7998 and 7999, and in Title 8, California Code of Regulations 7104(c) and 8424(a).

NOTE: See Chapter 34-B for procedures pertaining to the certification of Safety Representatives for Underground Mines and Tunnels.

PROCEDURES:

A. CONDITIONS FOR WHICH CERTIFICATION IS REQUIRED

Certification is required for all:

1. Underground mine and tunnel operations classified as "gassy," "extra hazardous" or "potentially gassy;"
2. Underground mine and tunnel operations whenever diesel equipment or explosives are used; and
3. Underground mine and tunnel operations whenever hazardous gas is likely to be encountered.

B. CERTIFICATION EXAMINATION ELIGIBILITY CRITERIA

An applicant for the Gas Tester's examination must meet all the following eligibility criteria:

1. Possess a minimum of one year of experience in underground mine or tunnel work related to the type of gas testing certification the applicant seeks, or at least one year of experience in underground mine or tunnel work with at least four hours training on gas testing instruments and eight hours of training on toxic and

combustible gases, sponsored by the Division, or deemed acceptable to the Division;
2. Be able to issue understandable orders, and maintain adequate written records;
3. Possess adequate knowledge of basic formulas, methods, equipment, instruments, engineering controls, work practices, and protective equipment and devices to safely perform gas testing under hazardous conditions;
4. Possess adequate knowledge of relevant statutory codes, standards and regulations pertaining to underground mines and tunnels; and
5. Understand gas testing and ventilation measuring instrument operation, calibration, and maintenance, and instrument limitations; understand how to troubleshoot instrument problems; and understand how to correctly interpret instrument readings.

C. APPLICATION FOR GAS TESTER'S CERTIFICATION EXAMINATION

1. Each applicant for the Gas Tester's Certification Examination shall complete and submit a Gas Tester Application Form prior to scheduling an examination. Examinations may be scheduled prior to submission of a completed application at the discretion of the Senior Safety Engineer Mining and Tunneling (SSEMT).
2. Each applicant's eligibility shall be verified by any SSEMT according to the criteria listed in the Certification Examination Eligibility Criteria.
3. When it is determined by the SSEMT that an applicant is not qualified to take the Gas Tester's Certification Examination because of an inability to meet one or more eligibility criteria, the SSEMT shall notify the applicant of this determination by letter within 14 days of the decision and shall request that the applicant contact the SSEMT. A notation shall be made on the application of the SSEMT's decision and the date the letter was sent to the disqualified applicant.
4. When contacted by the disqualified applicant, the SSEMT shall discuss the failed eligibility criteria and suggest ways the applicant can meet the eligibility criteria. A note will be made on the application of this discussion, and a copy of the letter sent to the disqualified applicant shall also be attached and forwarded to the Principal Safety Engineer Mining and Tunneling (Principal Engineer).

   NOTE: Training in gas testing is available from the Mining and Tunneling Unit on an as-needed basis in accordance with Labor Code §6350 and §6352.

5. A determination shall be made of the applicant's qualifications for Gas Tester's Certification Examination in the following specialty areas:
   a. Underground Mining and Tunneling;
   b. Underground Mining;
   c. Tunneling;
   d. Pipejacking and Boring; and
   e. Limited.
6. Applicants can be advised at the time they submit an application that, based on their training and/or experience, a determination may be made by the SSEMT that a "Limited Gas Tester Certification" shall be issued. The limited designation shall

be noted on the application and the Certification. Limited Certifications include the following:

a. Excluding gassy/extra hazardous classified operations;
b. Excluding diesel operations;
c. Excluding blasting operations;
d. Limited to oxygen deficiency in mines;
e. Limited to nongassy/potentially gassy operations; and/or
f. Limited to tunnel maintenance operations.

7. Each applicant shall pay a $15.00 examination fee in the form of a check or a money order made out to the State of California. Attach the examination fee to the application.
    a. No fee shall be required for applicants applying for Gas Tester's Certification Examination from the following exempt agencies:
        1. Governmental entities, e.g., Federal, State, County, City or District.
        2. Public utilities subject to the jurisdiction of the Public Utilities Commission (PUC).

D. CERTIFICATION EXAMINATION

1. General
    a. To obtain a Gas Tester's Certificate, the applicant shall pass a certification examination developed and administered by the Mining and Tunneling Unit and composed of three components: written, oral and practicuum. The examination shall include questions related to the type of underground mine and/or tunnel work for which the Certification is requested.

        NOTE: More than one version of the written certification examination will be developed and rotated from examinee to examinee. All Mining and Tunneling Unit personnel are responsible for ensuring the physical security of copies of the Gas Tester's Certification Examination.

    b. The examination shall be administered by a SSEMT, or by an Associate Safety Engineer in the Mining and Tunneling Unit who has been expressly designated by the Principal Engineer to administer the examination.

        NOTE: No examiner shall administer the certification examination in a manner contrary to P&P A-3, pertaining to activities incompatible with State service.

    c. The examination shall only be given at a Mining and Tunneling Unit Office. In order to give the examination at another location, approval shall be obtained, through the Principal Engineer, from the Deputy Chief for Field Operations.
    d. Prior to the examination, arrangements shall be made with the applicant to bring the gas testing instrument(s) they are currently using to the

examination, including any instrument operations, maintenance, and service manuals, and any written programs, such as air testing procedures, calibration logs, and gas testing or ventilation report log forms.

e. Each applicant's identity shall be determined by the examiner by means of a photographic I.D., such as a valid Driver's License, prior to beginning the examination.

2. Written Examination Component

When administering the written examination, the examiner shall:

a. Ensure that the written examination component is administered in a quiet and secure area to ensure that the integrity of the examination process is not compromised.
b. Assemble the appropriate sections of the written examination component and instruct the applicant to write his or her name on the first page of each examination section.
c. Give appropriate instructions to the applicant for completing the examination and instruct the applicant that calculators, reference books, or other instructional aids are not allowed in the examination area.
d. Allow the applicant enough time to complete the examination, but in no case, more than three hours.
e. Correct the examination by use of an examination key developed for the administered examination.
f. Indicate on the front page of the examination the percentage (from 0 to 100%) of the questions successfully answered by the applicant. An overall score of at least 70% is required to pass the written component of the examination. If a score of at least 70% is not achieved, the applicant has failed the examination. Applicants who fail the written component of the examination shall not be allowed to take the oral and practicuum components of the certification examination.

NOTE: See CERTIFICATION ISSUANCE AND DOCUMENTATION for further guidance on applicants who fail the written component.

3. Oral Examination Component

Applicants who achieved at least an overall score of 70% on the written examination are permitted to take the oral examination.

The examiner shall upon successful completion of the written examination:

a. Discuss with applicant the questions which the applicant answered incorrectly. Listen carefully to the applicant's rationale for answering the question as the applicant did, and pursue other relative lines of questioning to determine the applicant's understanding of the equipment, techniques, purpose and procedures, and how their explanation relates to testing

underground environments for hazardous and explosive gases.

b. Discuss with the applicant the questions which the applicant answered correctly to determine the scope of the applicant's knowledge. Pursue and discuss other relative lines of questioning relative to each examination question.
c. Continue the oral examination by asking questions which are relevant based on a review of the instrument(s) and written materials brought to the examination site by the applicant. Use oral examination guidelines developed for this purpose. Ask the applicant to respond to hypothetical situations or simulated instrument readings based on the subject areas appropriate for the industry and scope of the Gas Tester's Certificate being sought.
d. Determine a "Pass" or "Fail" grade for the oral examination and thoroughly document the reasoning for the grade.

NOTE: See CERTIFICATION ISSUANCE AND DOCUMENTATION for further guidance on applicants who fail the oral component.

4. Practicuum Examination Component

In order to pass the practicuum examination component of the Gas Tester's Certification Examination, the applicant is required to satisfactorily:

a. Provide the examiner general information, precautions for the type of gas testing instrument(s) brought to the practicuum examination, and relevant details about the particular unit;
b. Activate the instrument and provide ambient calibration. Calibration adjustments should be altered by the examiner and correctly reset by the applicant;
c. Calibrate the instrument using a gas of a known concentration (fraction) in accordance with the manufacturer's recommendations, perform a change in the alarm settings, conduct a span calibration, explain the alarm settings, i.e., high and low level alarms and battery failure, perform the removal and replacement of sensors, batteries, and other wear components.

Failure of the applicant to satisfactorily perform any of the aforementioned elements of the practicuum component shall constitute failure by the applicant of the certification examination irrespective of the applicant's score on the written and oral components.

NOTE: See CERTIFICATE ISSUANCE AND DOCUMENTATION for further guidance on applicants who fail the practicuum component.

E. CERTIFICATE ISSUANCE AND DOCUMENTATION

1. For Applicants Who Pass the Certification Examination

The examiner shall:

a. Complete the Gas Tester's Evaluation Sheet, including the examiner's name and date.
b. Indicate the "Type of Certificate" on the application based on the written and oral examination results.
c. Give the Applicant the original (white) receipt copy of the examination fee received. Fill out the Applicant's name as it will appear on the Certification, determine the correct mailing address, and list the appropriate wording for the Gas Tester's Certification. Indicate that the receipt will act as their Temporary Certification, and the permanent Certification should be received in approximately 30 days, pending review of the examination results by the Principal Engineer.
d. Where an employer or other person issues a check or money order to pay for the examination fee of more than one applicant, each applicant shall receive an individual receipt to act as a "Temporary Certificate."
e. Forward the following documents to the Principal Engineer through the SSEMT:
    1. All parts of the examination including those portions failed.
    2. Fee paid and the yellow and blue copies of the receipt.
    3. Application, Evaluation Sheet, surrendered license, and any additional documentation or information.
f. Each Gas Tester's Certification issued by the Division of Occupational Safety and Health shall be valid for a period of five years. After five years, the Gas Tester Certification Holder must reapply for Certification and pass both the written and oral components of the Certification Examination.

2. For Applicants Who Fail the Certification Examination

   If an applicant fails the Certification Examination, the examiner shall indicate his or her name, address, and "Gas Tester's Examination --Failed" on the receipt. Explain to the applicant that the applicant must wait a minimum of three months before they can retake the Certification Examination. If the applicant retakes the Certification Examination within six months from the date of the failed examination, the examination fee will be waived.

3. Renewal and Upgrading Certification
   Application and examination for a renewal or upgraded Certification shall be administered in the same manner as the original Certification.

F. OFFICE PROCEDURES

The office procedures in Chapter 34-A under "Clerical Procedures for Issuance of Blaster's License," shall be followed.

Chapter 34-D

BLASTING INSPECTIONS

Policy Statement: It is the policy of the Division of Occupational Safety and Health (DOSH), also known as Cal/OSHA or the Division, to conduct accurate and thorough blasting-related inspections involving the transportation, storage or use of explosive materials, (1) which assure the safety of DOSH personnel and (2) which gather sufficient evidence to determine whether employers are citable for violative conditions and whether the Licensed Blaster's performance should be reviewed for possible suspension or revocation of their Blaster's License.

Authority: DOSH will administer this policy in compliance with all applicable laws, rules, and guidance:

- California Labor Code, Sections 6710, 6711, 7992, 7993, 7994 and Title 8 California Code of Regulations Sections 5236 through 5374, 340.40 through 340.52, and 344.20 through 344.22.

PROCEDURES:

A. BLASTING PROGRAM ADMINISTRATOR

1. Designation

The Principal Engineer of the Mining and Tunneling Unit, or his/her designee, shall administer the Blasting Program for the State of California and shall be known as the Blasting Program Administrator (BPA).

2. Responsibilities

The BPA shall be responsible for all Blaster's Licensing activities (including suspensions and revocations), the Alternate Explosive Loading and Safety Program, and shall act as advisor on all blasting-related inspections by DOSH employees, with approval authority for the technical aspects of each blasting-related inspection. See other duties in Chapter 34-A.

B. BLASTING INCIDENTS AND INSPECTIONS

1. Upon learning of any blasting incident (explosion, accident, near miss, complaint, theft of explosives, magazine or explosive storage issues, fly rock event, etc.), the District Manager shall notify the Blasting Program Administrator.

2. When conducting a blasting-related inspection, the District Manager, after obtaining sufficient preliminary information to understand the basic facts of the case, shall review the case with the Blasting Program Administrator and determine if (1) additional experienced personnel should assist or be present during the inspection, and (2) whether additional equipment or supplies are necessary to perform an accurate and thorough inspection.

Note: Blasting Inspections may be initiated as a programmed inspection or an unprogrammed inspection involving an accident, complaint, incident, near-miss or other valid concern.

3. During the inspection, the District Manager shall request assistance from the BPA, and shall seek additional technical advice as may be required to effectively gather, evaluate and document evidence.

4. Completed inspections are to be reviewed for technical content by the Blasting Program Administrator, or his/her designee, and then approved by the District Manager.

5. A copy of each completed blasting-related inspection shall be provided to the BPA, who shall maintain statewide records of such inspections.

6. Each completed blasting-related inspection shall be reviewed by the BPA to determine if there is sufficient justification to convene a hearing to suspend or revoke the Blaster's License. See Chapter 34A and T8CCR 340.40 through 340.52 for detailed procedures.

C. APPEALS

The BPA is responsible for providing technical support to the Division on all appeals involving citations for violations of Title 8 blasting orders.

Chapter 34-E

UNDERGROUND DIESEL ENGINE PERMITS

Policy Statement: It is the policy of the Division of Occupational Safety and Health (DOSH), also known as Cal/OSHA or the Division, to ensure through its permit procedures that specified hazardous activities proceed safely. The issuance of a permit by the Mining and Tunneling Unit for the use of diesel-powered engines or equipment underground provides the Division with an opportunity to determine that employers are aware before they commence work involving the use of diesel engines underground that they must comply with all applicable Title 8 Safety Orders, including any special requirements which the Mining and Tunneling Unit deems necessary, and to identify the location of hazardous activities which are most likely to pose a risk of employee injury or illness.

Authority: DOSH will administer this policy in compliance with all applicable laws, rules, and guidance:

- California Labor Code, Sections 6500 through 6510 and Title 8 California Code of Regulations Sections 341, 8470 and 7068 through 7071.

PROCEDURES:

A. DIESEL PERMIT REQUIREMENT

Whenever an employer plans to use a diesel engine in any underground worksite, a Permit to Use Diesel Engines Underground (Diesel Engine Permit) shall be obtained by the employer from the Mining and Tunneling Unit (M&T Unit).

NOTE: No fuel burning or internal combustion engine, other than diesel engines, are permitted to operate in any underground worksite, i.e., mines, tunnels or other similar subterranean workplace.

B. TYPES OF UNDERGROUND DIESEL ENGINE PERMITS

1. Annual Permit

The Division of Occupational Safety and Health does not issue Annual Permits for the use of diesel engines underground.

2. Diesel Engine Permit

    a. Application Requirements
        1. A Permit for the use of diesel engines underground shall be obtained prior to commencement of any activity involving the use of diesel engines underground by each employer directly involved in the operation of the diesel engine.
        2. A Permit Applicant who plans to operate a diesel engine underground shall complete a Diesel Permit Application, M&T Form DPA and submit a Permit Application Fee of $50.00.
        3. A Permit Applicant working at a multi- employer worksite shall submit with the Diesel Permit Application a written statement or letter from the entity who controls the main ventilation system for the underground worksite that the worksite will receive at least the minimum amount of fresh air required for safe operation of the diesel equipment.
        4. The Permit Application shall also be supplemented by the following items:
            i. Specifications for the diesel engine and exhaust conditioning devices;
            ii. Type of underground classification;
            iii. An underground map;
            iv. Detailed ventilation plans and ventilation calculations;
            v. Injury and Illness Prevention (IIP) Program;
            vi. Code of Safe Practices;
            vii. Emergency Plan and Safety Instructions for Employees;
            viii. List of General Safety Precautions and availability of emergency medical services, including personnel certified in first aid; and
            ix. A written plan for gas testing, ventilation controls and measurements, and exhaust conditioner inspection and records.

    b. Issuance
        1. A Diesel Engine Permit (M&T Form DEP) shall be issued listing each diesel engine operating at a single, contiguous worksite. Each separately ventilated underground work area shall have a separate listing on the Permit if the ventilation substantially differs between areas.

            NOTE: If page one of the Diesel Engineer Permit does not contain enough space for all of the listings, enter additional listings on additional pages of the Permit.

        2. A Diesel Engine Permit shall be issued by the Senior Safety Engineer of the M&T Unit Office responsible for the geographical area in which the equipment is to be used, or his or her designee.

3. Any special conditions for the Permit shall be specified on the Diesel Engine Permit. These conditions can include the following, when applicable:
    a. Only equipment approved by the Mine Safety and Health Administration (MSHA) or equipment accepted by the Division and maintained in good condition shall be allowed in underground areas classified as gassy; and
    b. Ventilation systems and diesel equipment exhaust conditioning systems shall not be modified after permit issuance, unless modified in accordance with the amendment procedures found in Section E of this chapter.

3. Temporary Permit

   The Division of Occupational Safety and Health does not issue temporary permits to Use Diesel Engines Underground.

C. PERMIT FEES

The fee for a Diesel Engine Permit shall be $50.00 per Diesel Engine Permit.

NOTE: No additional fees shall be assessed by the Division for the amendments and the writing and sending of any letters required by Chapter 34-E.

D. SAFETY PERMIT CONFERENCE

1. The M&T Unit Senior Safety Engineer, or his or her designee, shall hold a Safety Permit Conference with the Permit Applicant prior to issuing an Diesel Engine Permit and shall summarize the results of the Safety Permit Conference in the Permit File using Attachments F and G of Chapter 35, or the equivalent.

   NOTE: When the Permit Applicant has demonstrated to the M&T Unit through recent experience with a previous Diesel Engine Permit that an in-person Safety Permit Conference is not necessary, the M&T Unit Senior Safety Engineer, or his or her designee, may hold a telephonic Safety Permit Conference with the Permit Applicant and document key elements in the file.

2. The Safety Permit Conference shall be attended by the Permit Applicant who shall be knowledgeable about, and in a position of authority and responsibility with respect to, the permitted activity. The Safety Permit Conference may also include any other parties involved with the operation whose presence is necessary for a proper evaluation of the hazards associated with the use of diesel engines underground, e.g., the representatives of the owner or the contracting agency, the general contractor, any employer whose employees may be exposed to the hazards, and employees or their representatives.
3. At the Safety Permit Conference, the potential risks of the operation shall be discussed and the employer shall identify the specific measures that will be taken to minimize these risks to employees.

4. During the Permit Safety Conference, the applicant must provide enough detail to allow a reasonable determination to be made that the project will proceed in a safe manner. Therefore, the applicant shall be prepared to provide to the M&T Unit all components of the Permit Application, including supplemental materials as referenced in Section B.2.a.(4).i. through ix.
5. The Permit Applicant shall discuss any unique risks of the jobsite affecting safety and health and provide evidence that the Applicant's IIP Program addresses these features.
6. Details of the project shall be reviewed along with the most important safety and health issues and Safety Orders applicable to the type of work the Permit Applicant is going to perform.
7. At multi-employer worksites, a single Safety Permit Conference may be held by the M&T Unit Senior Safety Engineer with all Applicants who are seeking a Diesel Engine Permit, if appropriate.
8. At the Safety Permit Conference, the Permit Applicant shall be informed that the permitted activity is subject to inspection by the Division at any time during the performance of the permitted activity.

E. AMENDMENTS TO DIESEL PERMIT ACTIVITY CONDITIONS

1. The Permit Holder shall notify the M&T Unit Office which issued the Diesel Engine Permit of any significant change in the conditions referred to on the Diesel Engine Permit Application Form or any change in the representations made at the Permit Safety Conference.
2. When the M&T Unit Office is notified of changes in the information provided at the time of permit application was first completed, it may determine that a safety conference or other action is necessary to determine the impact of the change on the safety of the job.

F. DENIAL, REVOCATION OR SUSPENSION OF ACTIVITY PERMITS

If the M&T Unit decides that a Permit Applicant is to be denied a Diesel Engine Permit, or a Permit Holder is to have his or her Permit suspended or revoked as provided by 8 CCR §8470(d) or 7070(e), the Denial, Revocation or Suspension Procedures found in Chapter 36 shall be followed.

G. RESTRAINING ORDER AND ORDER PROHIBITING USE

If a contractor has been denied a Diesel Engine Permit, or the contractor's Permit has been revoked or suspended, or the contractor has been cited by the Division for failure to obtain a Permit, and the contractor continues to engage in work which requires a valid Diesel Engine Permit, a request for a restraining order shall be made by the Senior Safety Engineer, through the Principal Engineer, to the Legal Unit (See 6510).

H. ENFORCEMENT OF PERMITTED AND UNPERMITTED ACTIVITIES

An inspection shall be scheduled for all Diesel Engine Permits which were issued after a telephonically conducted Safety Permit Conference, and all Permits involving equipment which was not evaluated during the Safety Permit Conference.

I. OFFICE PROCEDURES

1. Diesel Engine Permits shall be logged in the Diesel Permit Log and be identified by being sequentially numbered starting with 001 at the beginning of each fiscal year. The number shall constitute the first three digits of the log number, followed by the IMIS assigned engineer's area code for the county where the project is located. The third series of numbers shall indicate the fiscal year in which the permit is issued, followed by an "M" or "T" to indicate a mine or tunnel. The various Permit Codes used for completing the logging process are listed in Permit Codes attachment.

   EXAMPLE: The second Diesel Engine Permit issued for a tunnel in area 2 for fiscal year 1994 would be assigned log number 002-02-94-T. If at a later date, this permit is amended three times, the third amendment would be assigned log number 002- 02-94-T-(3).

2. Once the Permit Fee is collected from the Permit Applicant, the Permit shall be issued to the Applicant. All checks and money orders shall be made payable to the State of California. If cash is received, send a money order or personal check for the amount of the Permit Fee, made payable to the State of California, to Accounting. Attach a copy of the Diesel Permit to the check.
3. After the Senior Safety Engineer, of his or her designee, prepares a draft of the Diesel Engine Permit, the M&T Unit Office Support Staff shall type a final version of the Diesel Engine Permit on a new Form B and enter the log number on the permit. After typing the final version of the Diesel Engineer Permit, the Permit shall be given, along with any other relevant information, to the Senior Safety Engineer for review, signature and date.
4. A letter of transmittal shall be prepared and signed by the Senior Safety Engineer and sent with the Diesel Permit to the Applicant.
5. After the Permit and letter are signed, make four copies of each to be distributed as follows:
   a. Original to the Permit Applicant.
   b. Copy to the M&T Unit Principal Engineer.
   c. Copy to the field safety engineer.
   d. Copy for the employer's case file (together with any other relevant information including a copy of the check).
   e. Copy for Diesel Engine Permit file for current fiscal year.
6. A copy of the Diesel Permit Log shall be sent to the Permit Unit at Division Headquarters at the end of each month. If no Permits are issued in a particular month, note the same on the Log and forward a copy to the Division's Permit Unit Office.