DUTRA MATERIALS

San Rafael Rock Quarry

Blasting Operations
Safety Plan

REV. 2
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1. INTRODUCTION
San Rafael Rock Quarry is committed to providing a safe workplace for its employees and all others at or near our work sites. Our goal is to conduct blasting operations in the safest manner possible while minimizing the risk of injuries and damage to property. This blasting safety plan defines our company policy regarding all work in which explosives are stored, transported, and used. This safety policy will be committed to our employees, contractors, and suppliers through on-site training and regular safety meetings. These policies do not supersede any federal, state, or local regulations regarding explosives and blasting work. Compliance with these policies and all applicable federal, state, and local regulations will be strictly enforced.

Many policy guidelines refer to the “blast site.” For the purposes of this safety plan, and federal regulations, the blast site is defined as:

The area where explosive material is handled during loading including an area extending 50 feet in all directions from loaded blast holes or explosives materials.

2. BLASTER IN CHARGE
The designated Blaster-in-charge shall have complete authority over all personnel within the blast site and is responsible for all blasting activities that occur at the project. The blaster-in-charge holds all required blasting licenses, has appropriate experience and training, and responsible for:

2.1 Maintaining an explosives storage and transportation system that is safe and in compliance with all applicable regulations.
2.2 Implementing the specific blast plans that have been approved for the quarry.
2.3 Overseeing that all drilling and blasting work is done in a safe, correct and efficient manner.
2.4 Inspecting field equipment to ensure its safety readiness.
2.5 Blast clearing and guarding operations.
2.6 Continuously monitoring the work habits of the blasting crew, and providing corrective actions when necessary.
2.7 Ensuring that all appropriate blasting plans, reports, and explosive storage records are kept and submitted as required by the permits and regulatory agencies.

3. HAZARD AND RISK ASSESSMENT
The general and site specific blasting hazards and environmental impacts will be defined for each blasting site. Blasting plans and procedures will incorporate all reasonable measures necessary to eliminate negative impacts on persons and minimize negative impacts on property and the environment. The following general hazard areas shall be reviewed to help identify potential site-specific hazards and controls for each blast site.

3.1 Control public and commercial traffic and access.
3.2 Review vibration and air overpressure limits.
3.3 Notify County of Marin and public 36 hours prior to blast.
3.4 Know the location and condition of all nearby utilities that are above and below the ground or water surface.
3.5 Determine specific environmental impacts that might require special blasting control measures.
3.6 Potential for fly-rock shall be assessed through observation and profiles of the free face conditions, review of drill logs.

4. EXPLOSIVE STORAGE
The blaster-in-charge will ensure that full compliance with federal, state, and local regulations governing explosive storage and security are maintained.

4.1 The blaster-in-charge will comply with all regulations enforced by Federal Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) regulations, as described in the Organized Control Act of 1970, Title XI – Regulation of Explosives – Public Law 91-492 as amended by the SAFE EXPLOSIVES ACT on November 25, 2003 with regard to:
  4.1.1 Magazine construction requirements
  4.1.2 Locking requirements
  4.1.3 Inventory record keeping requirements
  4.1.4 Explosive loss reporting requirements. Immediately report by calling: 1-888-ATF-BOMB
  4.1.5 Table of distance requirements

Explosives are stored onsite in the ATF approved magazines and within table-of-distance requirements. Security is provided by access limitations (magazines are behind 2 locked gates) as well as having dual, shielded padlocks in compliance with ATF requirements.

Emergency action plans and contact info have been submitted to local emergency response agencies. Explosives storage onsite is in compliance with 27 CFR Subpart K 555.212 and local agency requirements. Local firefighters are familiar with the site, including:
  o Locations of stored explosives and other hazardous materials
  o Contact information for quarry personnel, including after-hours contact information
  o Gate access codes and Knox box locations

Appendix C contains emergency contacts and the emergency evacuation plan for SRRQ.

5. ON-SITE EXPLOSIVE TRANSPORTATION
The blaster-in-charge will ensure that:
All vehicles hauling explosives will be properly loaded and display adequate explosives warning signs as specified by OSHA and MSHA.
5.1 All vehicles will have appropriate safety equipment, as required by the state and federal regulations.
5.2 Equipment and other materials must never share the same cargo space with explosives.
5.3 Explosive vehicles, safety equipment, and day boxes shall be regularly inspected, maintained and cleaned.
5.4 All explosives, and any traces of explosives, must be removed from transportation equipment before it is serviced.
5.5 Explosives day boxes shall be properly built and marked as required by OSHA regulations.
5.6 When detonators and explosives are transported in a day box, they shall be separated by a four-inch hardwood, or equivalent, partition.
5.7 Only vehicles that are used for transporting or loading explosive shall be allowed on the blast site.
5.8 Proper shipping papers shall accompany explosives when they are delivered to and from the job site.
5.9 Explosive transportation must be undertaken under the supervision of a person who is familiar with the hazards involved, and the actions required in the event of fire or other abnormal occurrence.
5.10 Bulk explosives are not stored on site. Blast initiation supplies are stored on-site in small quantities. Detonators and primers are stored in separate magazines in compliance with OSHA, CalOSHA and ATF guidelines. Unused bulk explosives are hauled off-site by the explosives supplier, unused detonators and primers are returned to the magazines onsite.

6. BLAST DESIGN
In many blast applications, it is often impossible to fully satisfy all of the design objectives. Therefore, some sort of trade-off analysis is needed to balance design sacrifices based on priority. In blast design work, there are usually two general types of goals: 1) safety goals and 2) operational goals. Whenever safety goals conflict with operational goals, the safety concerns shall have the highest priority. For instance, producing minus 12-inch rock might be an operational objective while controlling flyrock is a safety goal. Since the safety goals must have the highest priority, the blast plan might specify the use of conservative amount of stemming to control rock movement, thus sacrificing rock fragmentation in the collar area. The following guidelines shall be used to evaluate all blast design choices:

General Blast Design Considerations:
6.1 Blast designs shall never compromise safety, and safety goals shall have the highest design priority. Blasts will be designed to maintain a minimum scaled distance of 52.8 ft/lb^1/2 as scaled from the closest residential structure, maximum peak velocity of .25 in/s beyond the Quarry property boundary and onsite air overpressure limit of 133 dbL as measured with 2-Hz monitoring equipment. Blasts will also be designed with at least 25 charge diameters of stemming length and burden distance to the nearest free face.
6.2 While satisfying all primary design objectives, blast designs shall be as simple as possible.
6.3 The blast designer(s) must have thorough knowledge and understanding of the blast requirements and constraints for each individual application. If the lead blaster is unfamiliar with a particular application, design, or product, outside help shall be obtained from a consultant or explosive-supplier representative who is familiar with the application or product.

6.4 Blast design geometry shall be appropriate for the application. The geology of the blast site and area control requirements must be considered when selecting hole size, explosive diameter, stemming height, and all other design dimensions.

6.5 Blasts designs for SRRQ will enlist all recommendations listed in the Revey Associates report in Appendix J of the combined FEIR, Volume III: Appendices, pp. 23-24 (Appendix B of this document).

Initiation System Guidelines:
6.6 Initiation systems must provide adequate protection against stray current hazards.
6.7 Delay timing schemes shall be as simple as possible, while providing adequate burden relief and sufficiently advanced in-hole energization to prevent surface cut-off failures.

7. BLAST PLANNING
Good advance planning and preparation work will improve blasting productivity and safety. Blast planners shall:
7.1 Determine the number, skill and experience requirements of drillers, blasters, and helpers required to perform the work.
7.2 Prepare a blasting work schedule that allows for unforeseen problems or delays.
7.3 Develop plans for dealing with special environmental conditions might occur during this work. Examples are floods, cold or hot weather, etc.
7.4 Define and obtain any special equipment that may be needed for the blasting work.
7.5 Plan to have back-up units to replace critical instruments like blasting machines and nonelectric initiating devices.
7.6 The functionality of all critical instruments like blasting machines, testers, and seismographs shall be tested the day before each scheduled blast.
7.7 Spare batteries and other essential parts for blasting instruments shall be kept at the job site.
7.8 Evaluate local services and carefully screen potential product and service provider.
7.9 Limit blasting to an annual (calendar year) average of two times per week (104 times per year) and a maximum of three times per week.
7.10 Limit blasting to the hours of 11:30 a.m. to 1:30 p.m. Monday through Friday. No blasting shall occur on State holidays or weekends.
7.11 Blaster in charge will confirm with quarry manager that the wind speed has not been equal to or greater than 25 miles per hour as measured by the on site weather station located at the top of the quarry bowl. In addition, blaster in charge will coordinate with quarry manager as to the weather forecast to ensure blasting is not scheduled on days with potential for high winds.
7.12 Prior to scheduling a blast, the blaster in charge and quarry manager will check the Bay Area Air Quality Management District website to determine if the proposed day is a spare the air day. Should a spare the air day be in affect, the blaster in charge will work with the quarry manager to reschedule the blast.

7.13 When planning a blast, the quarry manager/blaster in charge will check the NOAA website weather forecast for the potential of any lightening in the area. Should the blast be scheduled on a day with lightening in the forecast, the blast shall be rescheduled.

7.14 As part of the blast planning and design, the blaster in charge shall review drill logs with the driller to determine if any voids, crevices, mud, seams, or any other incompetent material was encountered while drilling. The blaster shall make appropriate adjustments to explosive loading based on this review.

8. DRILLING
8.1 All drillers must have adequate experience and operating knowledge about each drill before they operate it.
8.2 Drillers shall perform safety inspections and on all drills before they are operated. Any conditions that might cause unsafe operation shall be corrected before drill is put into service.
8.3 Drills must be routinely serviced and lubricated as specified by the manufacturer.
8.4 All safety equipment, like hose release guards, must be properly installed.
8.5 Drillers shall monitor bit wear and penetration rates, and they shall vary feed pressure, hammer rates, and other operating variables to achieve maximum bit life.
8.6 The blaster-in-charge shall establish a system for marking hole collar locations. Drillers shall collar holes as close as possible to the designed collar location and they shall carefully align the drill boom to guide the drill stem along the intended hole path.
8.7 The driller’s primary goal is to drill property aligned and clean holes. Driller should vary hole-flushing rates and determine which drill settings are producing the cleanest and most accurately placed holes.
8.8 Holes shall never be drilled in any positions where there is any chance they might intersect another live hole. Unless a specific variance is granted, the minimum collar distance from a loaded hole must be greater than the planned depth of the new hole.
8.9 For surface blasting, drillers shall note any unusual conditions or adjustments to the original plan. Drill log information shall be submitted to the blaster-in-charge at the end of each drilling shift.

9. BLAST ROUND CHARGING OPERATIONS

9.1.1. Protective head gear – hard hat
9.1.2. Protective footwear – hard toe boots
9.1.3. Protective eye wear – safety glasses

9.2 Safety Review Meetings:
The blaster-in-charge shall assemble all blast crew personnel to conduct a safety review meeting before explosive loading work begins. The following issues shall be addressed at each safety review meeting.

9.2.1 Identify the blaster-in-charge
9.2.2 Review personal safety responsibilities
9.2.3 Review site specific hazards
9.2.4 Review loading plans and procedures
9.2.5 Assign work responsibilities
9.2.6 Review equipment requirements and safe operation procedures
9.2.7 Review emergency and site security procedures
9.2.8 Review requirement that open flames or sparks must not occur on the blast site, and that smoking is absolutely prohibited.
9.2.9 Blaster in charge will review drill logs with crew and inform crew of any changes to loading as a result of voids, crevices, mud seams or any other incompetent rock.
9.2.10 Confirm that the crew has the proper tools to safely perform loading and site security tasks. Equipment not specifically approved for blasting work shall not be used. Check the following (tools requirements will vary):
   • Non-sparking loading poles, powder punches, knives, etc.
   • Blasting machines or non-electric starters
   • Measuring tapes with non-sparking weights
   • Radios, blasting area warning signs, first aid kit

9.3 Blast Site Inspection:
The blaster-in-charge and loading crew shall inspect the blast site before loading begins. Hazards or conditions that might expose explosives to excessive pressure, heat, or friction shall be corrected prior to loading. If the inspection reveals that blasthole re-drilling is required, the re-drilling shall be done before loading commences.

9.4 All needed explosives, stemming material and other supplies shall be brought to the blast site before commencing hole-charging operations. All mobile equipment, not expressly used and approved for hole-charging operations shall always be kept a safe distance away from blast holes once loading begins.

9.5 All equipment and all non-essentials equipment and people shall be removed from blast charging operations begin.

9.6 Blast holes will be inspected before holes are charged.

9.7 Primers shall be prepared just before they are loaded.
9.8 When column separation is suspected, a second primer using the same delay detonator as the first primer shall be loaded into the separated portion of the column.

9.9 If damage to an initiator lead is suspected, the hole shall be re-primed with a similar primer.

9.10 When it is necessary to operate mobile equipment on the blast site, the blaster-in-charge shall closely monitor every movement and setup. Extreme care must be taken to ensure that detonators, initiator leads, and explosives are not run over, snagged, or otherwise damaged by mobile equipment. No non-essentials vehicles shall be allowed on the blast site.

9.11 No sparking materials or loose rocks shall be allowed to enter blast holes after they contain explosives.

9.12 Crewmembers shall immediately report any dangerous conditions, such as overloaded holes, to the blaster-in-charge who will develop measures to safely control the condition.

9.13 Records detailing the quantities of explosives brought to the site and used each day shall be accurately kept.

9.14 Blasting Equipment List – Blasting equipment at SRRQ includes:
- Pickup with lined bed, compliant with 49 CFR Subpart B parts 177.834-177.837
- ATF Type 2 primer magazine #644
- ATF Type 2 initiation (cap) magazine #82L
- ATF Type 3 “day box” magazine
- Portable (towable) blasting shelter
- Model VMS 2000 Seismograph & 3 accompanying micromate seismographs

10. INITIATION SYSTEM HOOK-UP PROCEDURES

10.1 Blasting machines and non-electric starters must be stored away from the blast area while blasts are loaded and tied in.

10.2 Only persons designated by the blaster-in-charge shall participate in blast hookups. All other persons shall vacate the blast site.

10.3 Blast crews shall only use connections and hookups that are approved by the product manufacturer.

10.4 Blast hookup shall not begin until all holes have been loaded and stemmed, the blast site is clear of all vehicles and unnecessary people, and no hazards that might delay the blast exist in the blasting security zone.
10.5 The blaster-in-charge, and one other crewmember, shall independently inspect and double-check all hookups.

10.6 To prevent hook-up mistakes caused by rushing to meet a blasting time limit; blasting work schedules shall allow adequate time for careful blast hook-up work.

10.7 When blast hookups are completed more than one half hour before blast time, the hookup shall be inspected again just prior to detonation.

11. BLAST AREA CLEANING AND SECURITY PROCEDURES

11.1 Pre-blast Review Meeting:
Before blasting, the blaster-in-charge shall assemble all blast crew personnel to review the blast area security plant and blast emergency plan. The blaster-in-charge shall cover the following issues and responsibilities at each pre-blast meeting. Blast crew will place monitors for air overpressure and ground motion in accordance with ISEE guidelines included in appendix F. Results of these monitors will be provided to management and Marin County.

11.1.1 Acknowledge the shot is properly loaded, hooked up, secured, and ready for detonation

11.1.2 Review the blasting firing time schedule.

11.1.3 Review tagout procedures that will ensure all persons are in a safe location when the blast occurs.

11.1.4 The blaster-in-charge shall specify who shall fire the shot and define the safe shot initiation location.

11.1.5 Review the communication system that shall be used between the blaster-in-charge and all blast area security personnel.

11.1.6 Specify what signals shall be used to announce:
- Preblast Warnings
- Blast Time
- All Clear
- Blast Countdown Suspension

11.1.7 Outline general emergency plans that shall be used in the event of an accident or other unplanned event.

11.1.8 Review procedures for handling misfires.

11.2 Clearning and Guarding Procedures:
The Blaster-in-charge shall:
11.2.1 The Blaster-In-Charge shall coordinate blasts, with all concerned parties, on an approved blasting schedule.

11.2.2 When the area is secure, a primary initiating devise shall be connected to the shot approximately five minutes before the scheduled blasting time.

11.2.3 The Blaster-In-Charge shall then have the five-minute blast warning signal given to warn all in the area that a blast is impending.

11.2.4 Four minutes later, the one minute blast warning signal shall be given if all persons, including the shot-initiator, are in a safe location and all guards confirm that the blast area is still secure.

11.2.5 At blast time, if the blast area is secure, the blaster-in-charge shall fire or instruct the designated shot firer to fire the blast.

11.2.6 After the shot, the blaster-in-charge shall inspect the shot area. This examination shall look for:
   - Dangerous rock conditions
   - The presence of undetonated explosives and/or initiators
   - Abnormal blast conditions and any other hazards

11.2.7 If misfire or other hazards are present, the blaster-in-charge shall supervise the removal of the hazard by the most appropriate means available.

11.2.8 When the area is clear of hazards the blaster-in-charge shall give the all clear signal allowing work to resume in the area.

12. MISFIRE PROCEDURES
When blasting misfires occur, or are suspected, their existence and extent must be carefully established under the direction of the blaster-in-charge. Under these circumstances, the blaster-in-charge shall:

12.1 Ensure that no one enters the blast area, and it remains secured, for at least 30 minutes.

12.2 Develop a plan involving minimum people to safely re-fire, wash out, or recover un-shot explosives, before any other normal work resumes near the blast site.

12.3 Record the location of any potentially un-detonated explosives on the blast report

12.4 Expand the blast security area if flyrock potential is increased when misfires are re-blasted.
13. **BLAST EMERGENCY PLAN**

The current Emergency Evacuation Plan for SRRQ is contained in Appendix C – Emergency contacts and Emergency Evacuation Plan. The plan details the designated safe meeting areas for the site, as well as alternate locations if conditions require it.

If an emergency or accident occurs that requires notification of any nearby receptors, the following procedures will be followed:

- Community leaders and groups would be notified via phone and/or email
- County of Marin representatives would be notified via phone and/or email
- Dutra Materials truck marshals or other personnel will notify any receptors in person if necessary

Emergency plans shall:

13.1 Be clearly communicated to and understood by all site workers and supervisors

13.2 Define notification procedures for emergencies.

13.3 For each work site, the location of first aid kits and the identity of trained aid providers shall be known by all workers at the site.

14. **BLAST REPORTS**

Individual blast reports shall be prepared for each blast. Blast reports shall include the following:

14.1 Blast date, time, and location.

14.2 Blast geometry, including, but not limited to, hole size(s), hole depths, drill pattern, number of holes, bench height, and sub-drilling.

14.3 Blasthole loading summaries, including typical hole loads, explosive types, primers, detonator delays, stemming type and quantity, and total explosive consumption by product.

14.4 Shot volume and powder factor calculations.

14.5 Initiation timing scheme, including in-hole delays, surface delays, and planned hole firing times.

14.6 Blast effect monitoring data, including: ground vibration levels, air overpressure. All blast monitoring will be done in accordance with the most recent ISEE standards.

14.7 Notes and blast results, unusual conditions, occurrences, or special precautions.

14.8 Name and signature of the blaster-in-charge.
shall be equipped with a cutout, bypass, or similar device intended to thwart quieting.

77. Permittee shall fund an on-going noise monitoring program by the County to measure ambient and Quarry noise levels in the vicinity of the Quarry. Noise monitoring shall occur at the property line annually at the start of each season of reclamation work in the Northeast Quadrant and shall last the entire period of Northeast Quadrant activity. The noise monitoring program i.e., number of stations station locations, and other operational monitoring characteristics, shall be as required by the Public Works Director and performed by an acoustical consultant retained by the County. If the Permit noise levels are not met, the Permittee will have 15 days to correct the problem. If after 15 days the problem has not been corrected, the Permittee will only be allowed to operate compliant equipment, which will meet the permitted noise levels.

**Blasting**

78. Blasting shall be limited to an annual (calendar year) average of two times per week (104 times per year) and a maximum of three times per week. (Mitigation Measures P4.1-9, P4.2-6c, P4.2-7a, P4.2-7d, C4.2-9b & P4.6-6b)

79. Blasting shall be limited to the hours of 11:30 a.m. to 1:30 p.m. Monday through Friday. No blasting is to occur on State holidays or weekends.

80. The Permittee shall provide 36 hours advance notification of blasting to local residents and to the County of Marin by posting the date and approximate time of scheduled blasts on a publically accessible

81. The Permittee shall design blasts to maintain a minimum scaled distance of 52.8 ft/lb/1/2, as defined in the REVEY Associates, Inc. report in Appendix J of the Combine FEIR, Volume III: Appendices. The Permittee shall provide the County with a blast report providing charge weight, delay, and other information needed to confirm compliance with these conditions, with 24 hours following each blast.

82. All charges should be confined with clean crushed stone of height equal to or greater than 25 charge diameters, as defined on Page 21 of the REVEY Associates, Inc. report in Appendix J of the Combine FEIR, Volume III: Appendices.

83. All charges should be confined with rock burden equal to or greater than 25 charge diameters, as defined on Page 21 of the REVEY Associates, Inc. report in Appendix J of the Combine FEIR, Volume III: Appendices.

84. Air-overpressure measured near residential home should never exceed 133 dBL, as measured with 2-Hz monitoring equipment.

85. Blasting vibration beyond the Quarry property boundary shall be limited to a maximum peak velocity of 0.25 inches per second.
86. All blast monitoring of ground motion and air-overpressure effects done by either Permittee personnel or third-party service providers should be done in full conformance with ISEE guidelines provided in Attachment I of the REVEY Associates, Inc. report in Appendix J of the Combine FEIR, Volume III: Appendices. (All above in Blasting section, Mitigation Measures P4.7-7a, P4.7-7b)

87. No blasting shall take place when wind velocity equals or exceeds 25 miles per hour. The wind speed shall be measured at the top of the quarry bowl.

88. No blasting shall take place on days when 'Spare the Air Days' declared by Bay Area Air Quality Management District are in effect, provided the BAAQMD gives at least 48 hours notice.

89. Within 30 days of Permit approval Permittee shall prepare and provide to the County a graph showing distance (ft.) to nearest off site residence and charge weight per delay (lb) using the scale factor and detonation delay of individual charges of 8 milliseconds or greater.

90. Permittee shall fund an on-going blasting seismic and air overpressure monitoring program of up to 3 stations, as determined by the Marin County Public Works Director.

Biological Resources
91. The Permittee shall implement amended reclamation plan "Standards for Preserving Sensitive Habitat Areas." Implementation of these standards will protect specific areas of oak woodland and native grassland. (Mitigation Measure R4.3-2a)

92. The Permittee shall submit to the Marin County Department of Public Works a revised 'conforming reclamation plan' that includes the preservation of the small hill near the kilns, consistent with ARP82. Any plans for future alteration of the small hill for post-reclamation development may be proposed as part of the Development Plan, due to be submitted three years prior to the cessation of mining. The conforming reclamation plans shall continue to preserved areas originally described, including portions of South Hill, the Grassy Knoll, and the marsh areas (Mitigation Measures R4.3-2b R4.3-3a, R4.3-4a, R4.3-4b)

93. Prior to each reclamation phase and during the planning for post-reclamation development, presence/absence surveys for special-status plants will be conducted by an independent qualified botanist within areas to be disturbed. (Mitigation Measure R4.3-3b)

   a. Surveys will be conducted in accordance with CNPS and CDFG rare plant survey guidelines.
requirements of the Regional Water Quality Control Board that may be implemented to augment or supersede the requirements.

133. The Permittee shall maintain all erosion control measures and keep current and comply with all permits required by the RWQCB. Copies of all RWQCB permits for the Quarry property shall be provided to the Department of Public Works.

Revegetation
134. Within 30 days of Permit approval, Permittee shall revise the amended reclamation plan (ARP04) to incorporate the State Office of Mine Reclamation (OMR) "Resoiling and Revegetation" comments contained in OMR's December 14, 2009 comment letter to the County. The revisions shall be included in the Conforming Amended Reclamation Plan submitted to the County.

135. In areas to be reclaimed by secondary development uses, temporary Type I, II, or III vegetation shall be installed as soon as reclamation grading is complete.

Hazardous Materials/Public Health
136. Permittee shall maintain and periodically updated a Hazardous Material Business Plan that contains operator information, a hazardous material inventory, site maps, and an Emergency Response Action Plan. (Mitigation Measure R4.8-1a, R4.8-1b, & P4.8-3a)

137. The Permittee shall prepare and maintain a blasting plan that describes how the Quarry will consistently comply with applicable blasting regulations and standards of practice. The blasting plan will contain a complete description of clearing and guarding procedures; descriptions of how explosives will be safely transported, stored, and used at the site in accordance with applicable regulations; evacuation, security and fire prevention procedures; blasting equipment list, and procedures for notification of nearby receptors in the event of an accident or emergency involving explosives. The blasting plan shall incorporate the recommendations contained in the REVEY Associates, Inc. report in Appendix J of the Combine FEIR, Volume III: Appendices (pp. 23-24). The blasting plan shall be prepared and submitted within six months of approval of the Permit. The plan will be subject to review and approval by the County Department of Public Works. (Mitigation Measure P4.8-3b)

138. A potable water supply and adequate toilet facilities shall be provided for employees according to requirements of the Marin County Environmental Health Division.

139. Reporting Accidents: The Permittee shall immediately notify the Public Works Director by telephone, FAX, and/or voice mail of any incidents such as fires, explosions, spills, land or slope failures, or other conditions at the site, which could pose a hazard to life or property outside the Permit or Quarry area. Upon request of any County agency, the Permittee shall provide a written report of any incident within
APPENDIX B: Assessment of Blasting Practices (Revey Report) from FEIR
REVEY Associates, Inc.
PO Box 261219
Highlands Ranch, CO 80163-1219
Phone: (303) 470-0416
Fax: (303) 791-0140

ASSESSMENT OF ROCK BLASTING PRACTICES AND IMPACTS FOR PROPOSED AMMENDMENTS TO THE MINING PERMIT AT THE SAN RAFAEL ROCK QUARRY MARIN COUNTY, CALIFORNIA

JANUARY 2007

Prepared for:
ENVIRONMENTAL SCIENCE ASSOCIATES

Prepared by:
Gordon F. Revev, Principal, REVEY Associates, Inc.
Highlands Ranch, CO

REVEY Associates, Inc.
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ATTACHMENT I – ISEE INDUSTRY BLAST MONITORING STANDARDS
ATTACHMENT II – SUMMARY OF SRRQ MONITORING DATA (YEAR 2005)

1.0 INTRODUCTION AND SCOPE
San Rafael Rock Quarry (SRRQ) has submitted a proposal regarding amendments to its existing Surface Mining and Quarrying Permit, No. Q-72-03, issued by the County of Marin in 1972. The proposed amendments apply to SRRQ’s ongoing quarrying and related production operations. As required by California law (CEQA Guidelines § 15063), the potential for significant environmental impacts must be studied before mining permits are approved or amended. In response to this need, the County of Marin has retained Environmental Science Associates (ESA) to review potential environmental effects of the proposed project and determine whether identified impacts can be mitigated. These determinations will be the basis of preparing an informed decision regarding the need for an Environmental Impact Report (EIR).

Rock blasting work is an integral part of the proposed SRRQ mining operations. Ground vibration and blast noise (air-overpressure) generated by current and past rock blasting is felt by neighbors to the SRRQ operation. ESA has retained REVEY Associates, Inc. (RAI) to evaluate the impacts of vibration, noise and other potential effects that could result from the proposed amended mining plan. Hence, potential blasting impacts are identified in this report and practical mitigation measures are recommended.

On October 10, 2006, Gordon F. Revey (author) visited the SRRQ operation to: 1) study the topography of the site; 2) determine the proximity of neighboring property; and 3) observe current blasting practices. Messrs Paul Mitchell and Dan Sicural of ESA accompanied the author and pointed out where planned future mining excavations would be located at the site. References used in this evaluation include historical blasting and monitoring records and evaluations of SRRQ of the blasting by others (Redpath, 2000; Floyd, 2000). The general layout of the SRRQ operation is shown in Figure 1.1.

In order to acquaint the reader with the physical science of blast effects, including ground vibration and air-overpressure (noise), short technical summaries about physical blast effects are included in the body of this report.
1.2 Rock Excavation Methods

When blasting methods are used to fragment rock to facilitate excavations and mining work, neighbors to the work often wonder if other methods, including the use of hoe-rams and dozers with rippers or expansive chemicals placed in drilled holes, could be used in lieu of blasting.

If mechanical ho-rams were used to break rock, mined at a rate of 2,000,000 tons/year, a fleet of 30 or so ho-rams would be needed and the continuous noise made by the impact hammers would be more than unbearable to neighbors.

When expansive concrete products like Bristar® or equivalent agents are used, they are used in holes drilled in 10-foot lifts, spaced on 2-foot square patterns. After waiting 10 to 20 hours, hairline cracks appear in the rock and heavy mechanical equipment and/or impact hammers can then be used to excavate it. The cost of this form of breakage, compared to blasting with holes spaced 18 or so feet apart in 50-foot-high benches, would be hundreds of times greater.

Because of the cost and environmental (noise) limitations of these methods, conventional blasting is the only practical method of breaking large quantities (> 2,000,000 tons/year) of hard rock like the sandstone found at the SRRQ operation. Moreover, the author knows of no full-scale quarry or mining operations in the world that use methods other than blasting to break hard rock.
2.0 BLAST EFFECTS, DAMAGE CRITERIA AND HUMAN RESPONSE
Before analyzing potential impacts of the specific blasting operations proposed at the SRRQ site, the following pages and subsections 3.1 through 3.6 provide a general technical review of the physical effects of blasting, prediction methods, damage criteria, and human response.

When explosive charges detonate in rock, they are designed so that most of the energy is used in breaking and displacing the rock mass. However, some of the energy can also be released in the form of transient stress waves, which in turn cause temporary ground vibration. Detonating charges also create rock movement and release of high-pressure gas, which in turn induce air-overpressure (noise), airborne dust and audible blast noise.

In the very-near zone, crushing usually occurs in the rock around the charge. The extent of this compressive and shear failure zone is usually limited to one or two charge radii (half the diameter of the charge). Beyond the plastic crushing zone, the rock or ground is temporarily deformed by elastic strain waves. For some distance, tangential strain intensity exceeds the rock’s strength and new fractures are created. The magnitude of dynamic strain and particle motion decreases as distance from the charge increases. Radial cracks are created in rock around detonating charges as a result of induced strain that exceeds the rock’s tensile strength. These cracks generally do not extend farther than 26 charge radii (Siskind, 1983). For instance, if the diameter of the charge is 5 inches, radial cracks might extend 65 (5/2 x 26) inches into adjacent rock.

2.1 Vibration Ground Waves
Within and beyond the cracking zone, stress waves spread through the rock mass and along the ground surface. Some waves pass through the “body” of the rock mass. Primary compression waves and shear waves are examples of body waves. Other surface vibration waves travel along the ground surface similar to the way waves travel along the surface of water. In an ideal isotropic and homogenous rock mass, wave energy would travel evenly in all directions. However, most rock masses are far from ideal, so wave energy is reflected, refracted and attenuated by various geological and topographical conditions. The elastic properties of rock greatly influence vibration magnitude and attenuation rate. When seismic waves pass through the ground, ground particles oscillate within three-dimensional space. Soon after blasting has stopped, vibration energy dissipates and the ground particles become still.
Abbreviations:
SH = Shear wave, horizontal
SV = Shear wave, vertical
R  = Rayleigh wave
P  = Compressional wave

Figure 2.1 – Typical Vibration Waves

Figure 2.2 – Idealized Vibration or Air Overpressure Time—Intensity History Plot

The intensity of ground motion can be measured in several ways. These measures include:

- Particle displacement
- Particle velocity
- Particle acceleration
- Vibration frequency
Displacement is a measure of ground particle travel distance or location with respect to time. Particle velocity measures the speed of movement and acceleration is the rate of velocity changes. Vibration frequency is a measure of ground particle oscillations occurring per second of time. Frequency is reported in units of Hertz (Hz), which is equivalent to cycles per second.

Standard industry damage criteria and "safe levels" of ground motion are generally based on particle velocity and frequency of motion. The response of humans to ground motion is primarily influenced by ground motion velocity and duration of the motion. Vibration intensity is expressed as Peak Particle Velocity (PPV) or the maximum particle velocity of the ground. Since ground-shaking speeds are generally quite low, it is measured in inches per second (in/s).

Persons not familiar with vibration science often confuse particle velocity values with ground displacement. For instance, if a measured peak or maximum particle velocity is 0.25 inches, the ground has NOT moved a quarter of an inch. The actual temporary particle movement or displacement would be much less because in one second of time ground particles disturbed by blast vibration waves will oscillate back and forth many times in a second. This is why frequency of motion is important because, unlike earthquakes where frequency of motion is quite low, cycles of ground particle shaking (frequency) caused by blasting usually occurs at 10 to 50 hertz. Since the ground particles are shaking back and forth or up and down so quickly, similar to running in place, they do not move very far. In fact, all of the actual temporary ground motions near residential structures caused by blasting at SRRQ have been less than the thickness of a human hair (= 0.008 in). It should also be understood that one particle of ground moving say 0.005 inches has not been separated by that much from ground particles beside it; because, like ballroom dancers, oscillating particles of ground are just slightly out of step so the actual separation and strain between them is much smaller.

2.2 Vibration Perception and Damage Criteria
The average person is quite sensitive to ground motion. Levels of motion as low as 0.50 mm/s (0.02 in/s) can be detected by the human body when background noise and vibration levels are low.

In Report of Investigations RI 8507, the US Bureau of Mines (Siskind, 1980) recommended the safe ground motion limits defined by the curves shown in Figure 2.3. These limits, ranging from 0.5 to 2.0 in/s, are the basis for most regulatory blast-induced vibration levels in most State and federal jurisdictions throughout the United States, are specifically intended to prevent cosmetic crack damage in plaster or drywall in typical wood frame homes. Significantly higher PPV limits, ranging from 5.0 to 20 in/s (Oriard, 1980; Siskind, 1993; Revey, 2006), are used to protect concrete, steel structures, buried pipes and other structural elements of buildings.
Vibration data evaluated in this report includes hundreds of monitoring records measured from October 25, 2004 to November 1, 2006. These measurements were made with seismographs operated by SRRQ and by Vibra-Tech – a firm contracted to do independent monitoring by Marin County. An audit of all printed seismic monitoring reports indicates that these measurements are accurate. Equipment was calibrated by the manufacturer within the industry standard 12 month period before time of use. Ground motion and air-overpressure plots conform to expected intensities, durations and energy arrival times consistent with the blast designs and locations to which they are related. The intensity range of ground motions, measured near residential property during this time, based on frequency of motion and intensity is indicated in the circled range overlying the safe levels recommended by USBM, shown in Figure 2.3. Since the range of measured motions near residential properties near SRRQ are well below the very cautious USBM limits, it is reasonable to conclude that blast-induced motion has caused no new damage or even the extension of existing cosmetic cracks in plaster or drywall at any property near SRRQ.

2.3 Blast Vibration Intensity Predictions and Site-Specific SRRQ PPV Curve

It is standard practice to use scaling relationships to predict vibration intensities at various distances. These relationships, based on similitude theory, are used to develop empirical relationships between ground vibration particle velocity, charge weight, and distance. Distance is scaled by dividing it by the square root of the maximum charge weight firing at any time within a blast. This single scaled distance variable can than be used to predict vibration intensity (PPV).
The scaling relationship between peak-particle-velocity (PPV) and scaled distance (D_s) is shown below in Equation 2.1.

\[ PPV = K \left( \frac{D}{\sqrt{W}} \right)^m \quad \text{or} \quad PPV = K \left( D_s \right)^m \]  \hspace{1cm} \text{Equation 2.1}

Where: PPV = Peak Particle Velocity (in/s)
D = Distance (ft)
W = Maximum Charge-weight-per-delay (lb)
K = Rock Energy Transfer Constant (K-Factor)
m = Decay Constant (curve slope)
D_s = Scaled Distance (ft-lb\(^{-0.5}\))

Site-specific constants, K and m, can be determined by performing a regression analysis of historical peak particle velocity (PPV) and D_s data pairs. In simple terms, for any given site, K is a measure of how much vibration energy is transferred to the ground near the explosive charge and m defines how fast the energy attenuates with distance. For practical prediction purposes, standard statistical methods can be used to develop upper-envelope and 95% probability curves that can be used to make “worst-case” predictions of vibration intensities occurring at any location around data-specific location.

When plotted in log-log scale, the exponential relationship between scaled distance and PPV generally follows a straight line with a negative slope (m) – ranging from -1.0 to -1.6; and Y-intercept (K) values varying between 24 and 605, as defined by Oriard (1972) – see Figure 2.4. The K value (amount of energy at the source) is higher when charges are more confined and/or rock has a high stiffness ratio (Young’s modulus of elasticity). Site constants K and m are also influenced by ground water, topography and other in situ ground conditions.

Vibration data from measurements made by Vibra-Tech during year 2005 is plotted in Figure 2.5. This data, which include 181 points, all falls well within the expected range defined by Oriard for bench blasting – the method used at SRRQ. Considering that there are 181 data points, the data also plots with very good linear correlation. In this case, the coefficient of correlation is 0.796; a correlation of 1.0 would indicate all data fits the curve perfectly.

For prediction purposes, the maximum intensity of ground motion at any locations around the SRRQ operation can be calculated using Equation 2.2. This equation is based on the upper boundary of the data, located about two standard deviations above the best fit curve where the K factor = 18.8. Statistically, predictions of vibration intensity made with this formula will be greater than measured vibrations 95% of the time; In effect, these are “worst case” predictions.

\[ 95\% \, Upper\,Envelope \, SRRQ \, PPV = 40.1 \left( \frac{D}{\sqrt{W}} \right)^{-1.28} \]  \hspace{1cm} \text{Equation 2.2}
Figure 2.4 -- Oriard PPV Curves

Figure 2.5 -- SRRQ Vibration Data (Vibra-Tech - 2005) and PPV Attenuation Curves
2.4 Human Response to Blast-Induced Vibrations

In addition to concerns about vibration damage, under certain conditions, humans and animals can be startled or annoyed by blast-induced ground vibration. Research has also shown that the human response to transient vibration--like those caused by blasting--varies depending on exposure time and the intensity of the motion. Response curves defining how humans respond to transient vibrations based on these variables are shown in Figure 2.6.

Based on the experience of the author and other experts including Oriard, as rigorously explained in his definitive text regarding vibrations and environmental forces (1999), when occupants of residential structures hear it or feel vibrations caused by blasting, they often sincerely believe that damage may have occurred. Upon hearing any sound or feeling any motion, some people will look around and they invariably find defects or damages caused by environmental forces if they look closely enough. No house is entirely without such environmental damage, but it might not have been noticed previously. Unfortunately, in cases like the SRRQ blasting where the intensities of ground motions and air-overpressure are well below levels that could cause damage, people often come to the false conclusion that this environmental damage was caused by the vibration they heard or felt regardless of how miniscule the vibration might have been.
Based on historical data indicating that the intensities of peak ground motions near residential properties around SRRQ have approached 0.25 in/s, it is reasonable to conclude that occupants of homes are feeling the vibrations. As shown in Table 2.1, complaints are likely when the intensity of ground motions exceed 0.2 in/s. While motions have reached levels where complaints are likely, they have not reached the 0.39 in/s level that would be disturbing.

<table>
<thead>
<tr>
<th>Peak Particle Velocity Threshold</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>(in/s) (mm/s)</td>
<td></td>
</tr>
<tr>
<td>23.62 600</td>
<td>New cracks form in rock</td>
</tr>
<tr>
<td>11.81 300</td>
<td>Falls of rock in unlined tunnels</td>
</tr>
<tr>
<td>7.48 190</td>
<td>Falls of plaster and serious cracking in buildings</td>
</tr>
<tr>
<td>5.51 140</td>
<td>Minor new cracks, opening of old cracks</td>
</tr>
<tr>
<td>3.94 100</td>
<td>Safe limit for lined tunnels, reinforced concrete</td>
</tr>
<tr>
<td>1.97 50</td>
<td>Safe limit for residential buildings</td>
</tr>
<tr>
<td>1.18 30</td>
<td>Feels severe</td>
</tr>
<tr>
<td>0.39 10</td>
<td>Disturbing to people</td>
</tr>
<tr>
<td>0.20 5</td>
<td>Some complaints likely</td>
</tr>
<tr>
<td>0.04 1</td>
<td>Vibrations are noticeable</td>
</tr>
<tr>
<td>&lt; 0.04 &lt;1</td>
<td>Barely perceptible vibrations</td>
</tr>
</tbody>
</table>

Table 2.1 – Vibration Effects Threshold Values (Hendron and Oriard, 1982)

2.5 Earthquake Shaking Versus Blasting Vibrations
In northern California, an active seismic zone, it would be quite normal for occupants of homes to express concern that vibrations caused by rock blasting might cause damage like that of an earthquake. Blast-induced vibration measurements in ground near residential structures around the SRRQ operation have generally not exceeded 0.25 in/s. The typical frequency of ground motion has been around 45 Hz. While this motion would be perceptible to the occupant, the physical characteristics of the measured motions were very different from those of a typical earthquake. It is important to understand that unlike earthquakes where the ground may physically move several inches, the total amount of temporary ground displacement near homes, caused by SRRQ blasting have been extremely small.

For terms of comparison, the seismic design criteria for dam structures typically specify a 2% chance that a 0.18g earthquake event might occur in a 50-yr period. The resulting PPV caused by an earthquake occurring at a typical frequency of 1 Hz would be 11.0 in/s [(0.18 x 32.2 x 12) / (2 x 3.14 x 1)]. The particle displacement (vibratory ground movement) would be 1.75 inches! [11.0 / (2 x 3.14 x 1)]. In this case, assuming typical sinusoidal motion, the maximum measured ground displacement in ground near residential structures caused by SRRQ blasting would be around 0.0009 inches (nine ten thousandths of inch) [0.25 / (2 x 3.14 x 45)]. For perspective, this displacement is about nine times less than the thickness of a human hair (0.008 in).
For purposes of comparison, a scaled comparison of the ground motions created by a typical blast at SRRQ quarry and the Loma Prieta earthquake of 1989 are shown in Figure 2.7.

![Graph of Loma Prieta Quake - 1989](image)

Duration = 38 Seconds  
Maximum PPV = 13.0 in/s  
Frequency = 0.8 Hz  
Displacement = 2.5 Inches

![Graph of Typical Peak Motion of SRRQ Blast](image)

Duration = 2 Seconds  
PPV = 0.25 in/s  
Frequency = 45 Hz  
Displacement = 0.0009 inches

Displacement of Earthquake is 2,777 Times greater than that caused by SRRQ blasting and Duration is much longer

Figure 2.7 – Comparison of Ground Vibration Caused by Earthquakes and SRRQ Blasting

2.6 Effects of Environmental Forces versus Blast Vibration

In order to establish an objective measurement of actual blasting impacts on residential homes, an Autonomous Crack Monitoring (ACM) system was developed by the Infrastructure Technology Institute (ITI). This system has been used to measure and compare the actual dilations of existing cracks caused by blast vibrations and by longer term changes in weather and environmental conditions.

In a specific study for the Franklin County Court (Judge Roger Crittenden), the author contracted Dr. Charles H. Dowding of Northwestern University, the developer of this system, to install crack gauges and other instrumentation that measured movements of existing cracks in various building materials of a home located near an operating limestone quarry where rock blasting occurred about three times a week.

The Autonomous Crack Monitoring project measures total crack width but more importantly, as shown in Figure 2.8, it measures changes in crack width. The crack displacement measured by the sensors may be driven by any combination of the following factors: differential thermal expansion; structural overloading; chemical changes in mortar, bricks, plaster, and stucco; shrinkage and swelling of wood with temperature and humidity changes; Fatigue and aging of wall coverings; and differential foundation settlement.
In Figure 2.9, an ITI technician pounds a wall to demonstrate the dynamic displacement caused in a crack through a brick. The resulting crack dilations are shown in Figure 2.10.
Figure 2.10 – Dynamic Displacement of a Crack in a Brick Caused by Pounding Wall

Three cracks were monitored were monitored in the test home. Gauges were installed on a crack in an outside brick wall, an interior crack in a concrete block wall, and on a drywall crack above a doorway opening. The crack sensor locations are shown in Figure 2.11.
Figure 2.11 – Locations of Crack Monitoring Gauges
This overview includes measurements made from mid January through February 24th, 2005. During that period ground motions and crack responses from 10 blast events were recorded by the system between 18 January and 22 February. The single axis Peak Particle Velocities (PPV's) ranged between 0.04 ips on 22 February and 0.14 ips on January 20th. The ground motions were recorded by a velocity transducer buried in the back yard near the home.

A comparison of the ground motion and corresponding dilation of the outside crack in the brick wall resulting from a February-16 blast is shown in Figure 2.12.

Figure 2.12 – Comparison of Simultaneous Ground Motion and Crack Response
As shown in Figure 2.13 on the following page, where blast-induced movements are superimposed as red bars over the crack movements caused by long term (weather and environmental) crack response, it is very clear that the environmental effects are far greater than are the blast-induced effects to date. For instance, blasting caused a peak dilation of 200 micro inches in the concrete basement crack, whereas temperature and humidity changes caused a 6000 micro inch dilation which is 30 times greater. The relative magnitudes of crack and environmental responses are tabulated in Table 2.2. All changes in crack width are reported for their zero to peak values which are roughly 1/2 of the peak to peak values.

Short term monitoring such as this will not reveal the much larger effects of longer-term effects such as seasonal changes in ground water table, drought, slope instability, seasonal changes in heating and air conditioning, settling ground, poor drainage, so on and so forth. Therefore the weather/environmental effects observed in this report are unlikely to be the maxima. Data in this report support this caution. Suppose the house would have been instrumented in the beginning of February rather than January. The 6000 micro inch change in crack width would not have been observed. Seasonal weather changes occurring from winter to spring will create even greater dilations in existing cracks. The fact that crack dilations, caused by changing environmental conditions, are as much 30 times higher than those caused by blast vibrations indicates that weather effects are causing far greater levels of stresses in all building materials. If levels of blast-induced energy do not increase substantially above the levels measured in this study, the strain they create in building materials is essentially lost within the much higher strain created by weather effects; thus it is extremely unlikely that blast induced motions similar to those measured in this study could cause any new cracks.

<table>
<thead>
<tr>
<th>Crack Location (Wall Material)</th>
<th>Comparative Changes in Crack Width (micro inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside (Brick wall)</td>
<td>400</td>
</tr>
<tr>
<td>Inside Basement (Concrete Block)</td>
<td>250</td>
</tr>
<tr>
<td>Inside Bedroom (Dry Wall)</td>
<td>200</td>
</tr>
</tbody>
</table>

Table 2.2 – Summary of Crack Dilations Caused by Various Forces

Effect

- Occupant Activity
  - light adjacent pounding

- Wind
  - 50

- Weather/Environmental
  - (10,000)
  - 6000
  - (750) (daily)
  - (750)

- Blasting maximum
  - 200
  - 200
  - 50

- 0.14 ips
Figure 2.13 — Crack Displacements Caused by Blasting and Temperature/Humidity Changes
Crack monitoring studies similar to the one done in Kentucky have been done in various structures at least ten other locations in varying climates throughout the United States. The results have all been similar to findings documented by Oriard (1999) and Dowding (1996), in which stresses in building materials caused by environmental forces are less than those caused by ground motions with intensities less than 2.0 in/s. If a similar study were done in a home near the SRRQ operation, the author is certain the finding would be the same.

2.7 Practical Vibration Limitation Method for Future SRRQ Blasting

The SRRQ operation has committed to managing blasting to ensure motion measured in ground near residential structures does not exceed 0.5 in/s. From a damage control perspective, this is a very cautious limit. However, as indicated in Table 2.1, complaints typically result when the intensity of ground motion exceeds 0.2 in/s. More importantly, the motion becomes disturbing when intensity reaches 0.39 in/s. To ensure that motions caused by future blasting at the SRRQ operation are not overly disturbing, it would be wise for SRRQ to consider designing future blasts so peak ground motion does not exceed 0.25 in/s. Current blasting has been meeting this limit, and intensities of ground motion caused by all future blasting would likely not exceed 0.25 in/s if SRRQ commits to using a minimum scaled distance of 52.8 to limit charge weight-per-delay.

Based on the SRRQ 95% upper limit PPV formula (Equation 2.2), where the K factor is 40.1 and the slope is -1.28, the limiting scaled distance of 52.8 is determined as shown in the following calculation.

\[
D_s = \left( \frac{PPV \text{ -in/s}}{40.1} \right)^{1/1.280} = 52.8 \text{ft-lb}^{1/2}
\]

Note that a minimum scaled distance value is used to determine charge-weight-per-delay based on distance to the nearest residential structure as shown in Equation 2.3.

\[W = \left( \frac{D}{D_s} \right)^2 \]

Equation 2.3

Where:
- \(D\) = Distance (ft)
- \(W\) = Maximum Charge-weight-per-delay (lb)
- \(D_s\) = Scaled Distance (ft/lb^{1/2}) = 52.8 recommended for SRRQ

When blasts are closer to homes, charge weights are reduced. For instance if a blast was 2,000 feet from a home, the maximum charge-per-delay would be 1,434 pounds \([(2,000 / 52.8)^2]\). If the distance reduces to 1,500 feet the charge drops significantly to 807 pounds \([(1,500 / 52.8)^2]\).
3.0 BLAST NOISE (AIR-OVERPRESSURE)

The term “Blast noise” is a misleading because the largest component of blast-induced noise occurs at frequencies below the threshold-of-hearing for humans (16 to 20 Hz). Hence, the common industry term for blast-induced noise is “air-overpressure”. As its name implies, air-overpressure is a measure of the transient pressure changes. These low-intensity pulsating pressure changes, above and below ambient atmospheric pressure, are manifested in the form of acoustical waves traveling through the air. The speed of sound varies in different materials, depending on the density of the medium. For instance, pressure waves travel at the speed of 4,920 ft/s (1,500 m/s) in water, whereas, in air they travel at only 1,100 ft/s (335 m/s) because air has a lower density.

When calculating maximum overpressure values, the absolute value of the greatest pressure change is used — regardless of whether it is a positive or negative change. The frequency of the overpressure (noise) is determined by measuring how many up-and-down pressure changes occur in one second of time. Blast noise occurs at a broad range of frequencies and the highest-energy blast noise usually occurs at frequencies below that of human hearing (<20 Hz).

3.1 Air-Overpressure Measurement Scales

When measurements include low frequency noise (2 Hz and higher) with a flat response, they are called "linear scale" measurements. Air-overpressure measurements are typically expressed in decibels (dB) units and when the scale is linear, the unit designation is “dBL.” Regular acoustical noise measurements taken for the purpose of monitoring compliance with local noise ordinances almost always use weighted scales that discriminate against low frequency noise. Thus for a similar noise source, A-weighted and C-weighted scales will usually record significantly lower levels of noise. Differences between decibel scale measurements for individual blasts will vary depending on their unique frequency-intensity spectrums. Since full-range recording of blast-induced noise can only be done with linear (2-Hz response) instruments, it is imperative that all compliance specifications for blast-induced noise be expressed in “Linear” scale decibels (dBL).

In a study by USBM, researchers measured blast-induced noise a common location using A-weighted, C-weighted and Linear Microphones. The comparable measurements taken about 800 feet from a blast, shown in Figure 3.1, show that a linear peak noise of 120 dBL equates to only 112 dBC and 85 dBA.

Note that differences for individual blasts will vary depending on their unique frequency-intensity spectrums. Since full-range recording of blast-induced noise can only be done with linear scale instruments, it is imperative that all compliance specifications be expressed in linear scale (dBL).
3.2 Safe Air-Overpressure Limit and Control

The regulatory limit defined by USBM, and used in almost all blasting regulations throughout the United States, for air-overpressure measured with 2-Hz response seismographs is 133-dBL (0.014 psi). Damage to old or poorly glazed windows does not occur until air-overpressure reaches about 150 dBL. More importantly, since the decibel scale is a logarithmic ratio, the actual overpressure at 150 dBL is 0.092 psi, versus 0.013 psi at 133 dBL. Therefore, the actual pressure at the 133 dBL limit, is over seven times (0.0917/0.0129) lower than the threshold damage level at 150 dBL. The relationships between actual overpressure expressed in psi and decibel scale measurements are shown in the following Equations. NOTE: Due to the logarithmic ratios used to decibel values, seemingly small changes in decibel readings can equate to large changes in absolute overpressure (psi).

\[ dB = 20 \log_{10} \left( \frac{P}{P_0} \right) \quad \text{or} \quad P = P_0 \ 10^{\left(\frac{dB}{20}\right)} \]

Equation 3.1

Where: \( dB \) = decibels, \( P \) = overpressure (psi), \( P_0 \) = Threshold of Human Hearing Pressure (2.9 \times 10^{-4} \text{ psi}).

At the SRRQ operation, all historical monitoring records indicate that air-overpressures are well below the safe 133-dBL limit. This is not unexpected because most of the mining has occurred in deep benches so air-overpressure waves have been deflected or otherwise shielded by the quarry walls.
In the amended SRRQ mine plan, rock at higher elevations in the Southwest Quadrant will have much more line-of-site exposure to area residences. Because of this exposure, careful blasting design and execution practices must be rigorously applied to ensure that all charges are properly confined and stemmed. In the blast observed by the author on October 10, 2006, all charges 6.75-inch diameter holes were stemmed with 17 to 30 feet of clean crushed stone stemming. As a general rule, very adequate confinement is maintained when the height of stemming equals or exceeds 25-charge-diameters, which in this case would be 169 inches or 14 feet. [25 x 6.75]. Since actual stemming (17 to 30 ft) was greater than 14 feet, the charges were well confined and there was no evidence of premature stemming releases or venting.

In many instances, overpressure waves in air cause secondary window and wall rattling and home owners often mistakenly believe the noise and shaking is caused entirely by ground vibration. At SRRQ, levels of air-overpressure not exceeding 130 dBL have created less strain in walls than a 30-mph wind gust so there is no concern that damage is occurring.

4.0 CONTROL OF ROCK MOVEMENT
The amount of confining rock (burden) between all parts of charges placed in holes drilled near open rock faces is also extremely important. If charges are under-confined excessive rock movement, gas venting and high air-overpressure events can result. As shown in Figure 4.1, rock walls are rarely vertical; they often dip as much as 45% from vertical.

When vertical blast holes are drilled, the burden on front row holes varies from wall bottom to top. Toe burdens are usually greatest and burden decreases steadily towards wall crests. Blasters often position front row collars very close to wall crests to minimize the burden at the bottom of the holes. If extra stemming is not used in front-row holes, excessive rock movement will occur in the crest area. For the blast witnessed by the author on October, 10, 2006, Delon Lopes, the blaster-in-charge, clearly understood this principle and increased stemming accordingly to as much as 30 feet in front-row holes.

Proper charge confinement of all charges can be achieved if blasters carefully inspect all open faces and all bench surfaces before holes are drilled. These inspections should be done from lower benches where the walls are visible and in cases where walls are uneven, it is wise to use laser surveying equipment to determine wall profiles before holes are drilled. This practice should be part of the SRRQ standard operating procedures for any future blasting is done adjacent to any open rock walls with any exposure to neighboring homes.

At the SRRQ operation, similar to stemming confinement, the author recommends that all front row holes be positioned and charged to ensure that no part of any charge has less than 25 charge-diameters of confining burden in rock to the nearest open face. For 6.75 inch diameter charges, the minimum burden distance would be 14 feet. If smaller diameter charges are used, the burden and stemming should be scaled accordingly.
5.0 GENERAL BLASTING PRACTICES AND RECORD KEEPING

In course of the on-site visit to SRRQ on October 10, 2006, the author observed blast charging, hook-up, and execution practices. During subsequent reviews of historical blast reports and monitoring records filed with the County, the author has audited them for completeness and accuracy. All practices observed in the field were done safely and in full conformance with regulations and industry standards. Blast reports and monitoring records were complete and accurate.

The author understands that SRRQ has retained John Floyd of Blast Dynamics to provide blasting safety, productivity, and risk management services. The results of this training and consultations are evident and the author rarely visits quarry operations where the practices and record keeping are as good as those observed and found at the SRRQ operation.
6.0 FINDINGS AND CONCLUSIONS
Based on all technical evaluations done herein and site observations, the author finds no issues that could prevent safe and environmentally compliant blasting in all areas defined in the amended SRRQ mining plan.

Based on a thorough review of blast reports and monitoring records, and observations of actual blasting work, the author finds that the methods and practices in use at the SRRQ operation meet or exceed best industry practices. In fact, having audited scores of quarry and mining records over the last 20 years, none have been as thorough and complete as those kept at this quarry.

Due to the hardness of the Franciscan sandstone formation and the large production volumes at the SRRQ operation, there are no feasible mechanical or chemical rock-breaking methods that could be applied as an alternative to controlled blasting.

As explained in the body of this report, owners of property located near the SRRQ operation will inevitably continue to feel ground motions caused by rock blasting. The intensity of ground motions caused by past blasting has not reached levels that could cause damage of any kind. Moreover, when compared to normal environmental forces and motions caused by earthquakes, the effects of blasting are much less.

All homes, even newer homes, contain cracks in drywall caused by thermal effects. Other forms of damage like concrete shrinkage cracks and other deteriorations caused by swelling or collapsing soils are quite common. While the author has not observed condition at home near the SRRQ operation, the presence of these conditions it expected since they are found in virtually all homes.

If needed, to assure neighbors that effects of vibration are much less than normal environmental effects, equipment that can measure and compare the actual impacts of blast-induced vibration and environmental effects on existing cracks could be installed in a residence near the SRRQ operation.

To ensure that all blasting done in the amended SRRQ blasting plan is: 1) done without damage, 2) done with minimal annoyance to neighbors, and 3) monitored in full conformance with industry standards, the author recommends the following specific controls and practices.

7.0 RECOMMENDATIONS
1) Blasts should be designed to maintain a minimum scaled distance of 52.8 ft/lb$^{1/2}$, as defined in Page 18. As already adopted by SRRQ, peak ground motions should never exceed 0.5 in/s in ground adjacent to residential buildings.
2) All charges should be confined with clean crushed stone of height equal to or greater than 25 charge diameters, as defined on Page 21. Air-overpressure measured near residential home should never exceed 133 dBL, as measured with 2-Hz monitoring equipment.

3) All charges should be confined with rock burden equal to or greater than 25 charge diameters, as defined on Page 21.

4) All blast monitoring of ground motion and air-overpressure effects done by either SRRQ personnel or third-party service providers should be done in full conformance to ISEE guidelines provided in Attachment I. Based on printed monitoring record and results, all past monitoring appears to be in conformance.

8.0 REFERENCES


Revey, G.F., 2005, “Assessment of Blast-Induced Ground Motion at Homes Involved In: James P. Melton III et al vs. Harrod Concrete & Stone Co.,” Report sanctioned for Franklin County Court, Kentucky (Judge Roger Crittenden).


ATTACHMENT I

ISEE BLAST MONITORING STANDARDS
INDUSTRY BLAST MONITORING STANDARDS

The following standards should be applied when measuring blast-induced vibration and air-overpressure (noise). These standards are based on the best practices recommended by The Vibration Section of the International Society of Explosives Engineers – 1999.

Part 1. General Guidelines

1. **Operators**: Only personnel who have successfully completed a proper training course should operate monitoring equipment.

2. **Calibration**: The instrument manufacturer should annually calibrate recording units and sensors. Documenting certificates should be kept on file and copies should be provided to appropriate persons upon request.

3. **Event Record Keeping**: Hard copy reports and electronic file-copies of all event-monitoring records should be maintained for all blasts. Operating notes should be programmed into the instruments, which should be printed monitoring records. These notes at a minimum should include the operator’s name, date, time, place and other pertinent data specific to the monitoring location.

4. **Trigger Levels**: When employing instruments to operate in auto-trigger-mode, trigger levels should be set low enough to record blast effects. If expected levels of blast noise or vibration do not exceed minimum trigger levels, the instrument should be attended by an operator and turned on manually.

5. **Documenting Monitor Location**: In addition to event reports, an accurate method should be used to determine the monitoring location for later reference. Acceptable methods are 1) plotting numbered locations on scaled maps; 2) defining location with GPS northing, easting and elevation values; and 3) noting the name of the structure and the measured distance (+/- 1 ft) where the seismograph was placed relative to at least two identifiable reference points. Any person should be able to locate and identify the exact monitoring location at a future date.

6. **Distance to Blast**: The horizontal distance from the seismograph to the blast should be known to at least two significant digits. For example, a blast within 1000 feet would be nearest tens of feet and a blast within 10,000 feet would be measured to the nearest hundreds of feet. Where the vertical-to-horizontal ground slope ratio exceeds 2.5 to 1, slant distances or true distance should be used and recorded in the monitoring records.

7. **Processing Time**: When instruments are used in auto-trigger and continuous-recording mode to record the effects of multiple blasts, the time between successive blasts shall be at least one (1) minute and seismographs shall be set to NOT automatically print out event records. These procedures should ensure that instruments have adequate time to save event data for each blast and reset to monitoring mode before subsequent blasts occur.
8. **Memory Management:** The instrument operator should know the memory or record capacity of the seismograph and ensure that adequate memory is available to store the event data from the blast(s) planned during that operating day.

9. **Waveform Data:** Instruments shall be set to save full waveform data for all monitored blast and digitally saved event files shall contain this data for use in further analyses if needed.

10. **Instrument Setup Time:** Equipment operators should allow ample time for proper setup of the seismograph, transducers and microphones. At least 15 minutes of time should be allotted for each setup location.

11. **Securing cables:** In order to prevent false triggering caused by wind-blown cables, the operator should secure suspended or freely moving cables from the wind or other extraneous sources.

**Part II. Ground Vibration Monitoring**

**A. Sensor Placement**

The sensor should be placed on or in the ground on the side of the structure towards the blast. A structure can be a house, pipeline, telephone pole, etc. Measurements on driveways, walkways, and slabs are to be avoided where possible.

1. **Location relative to the structure:** The sensor should be placed within 10 feet of the structure or less than 10% of the distance from the blast, whichever is less.

2. **Soil density evaluation:** The operator should avoid placing velocity transducers in loose or low-density soils. The density of the ground should be greater than or equal to the sensor density.

3. **Sensor Level:** Transducers should be placed so they are level or nearly level.

4. **Sensor Orientation:** Sensor blocks should be oriented so the arrow indicating the longitudinal direction is aimed at the blast location.

5. **Monitoring when Access to Nearest Structure is not Accessible:** Where access to a structure is not available, the transducers should placed at the accessible location closest the structure of concern and in line with the blast.

**B. Sensor coupling**

1. **Sensor Coupling Methods:** Based on expected acceleration determined from Chart 1, to avoid decoupling errors, the operator shall use the following methods to couple vibration transducers to the ground or structure.

   a. **Less than 0.2 g:** No burial or attachment is necessary.
b. **Between 0.2 and 1.0 g:** Transducer should be attached to the ground with a spike or covered with a sand bag.

c. **Greater than 1.0 g:** Transducer should be buried, bonded to the ground or structure with stiff clay or putty, or some other method that should achieve firm attachment.

| TABLE 1 – Acceleration intensity (g’s) based on estimated particle velocities and frequencies |
|---|---|---|---|---|---|---|---|---|---|---|
| PPV (in/s) at Acc. (g) ≥ 0.2 | 4 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 100 | 150 | 200 |
| | 3.08 | 1.23 | 0.82 | 0.62 | 0.49 | 0.41 | 0.31 | 0.25 | 0.12 | 0.08 | 0.06 |
| PPV (in/s) at Acc. (g) ≥ 1.0 | 15.38 | 6.15 | 4.10 | 4.08 | 2.46 | 2.05 | 1.54 | 1.23 | 0.62 | 0.41 | 0.31 |

2. **Sensor Burial:** When velocity transducers are buried the operator should employ the following methods.

   a. Excavate a hole that is no less than three times the height of the sensor (ANSI S2.47-1990, R1997).

   b. If possible, spike the sensor to the bottom of the hole.

   c. Firmly compact soil around and over the sensor.

3. **Attaching Sensors to bedrock or hard Structural Surfaces:**

   a. Bolt, clamp or use epoxy or putty to firmly couple the sensor to the hard surface.

   b. The sensor may be attached to the foundation of the structure if it is located within +/- 1-foot of ground level (USBM RI 8969). This should only be used if burial, spiking or and bagging is not practical.

4. **Other sensor placement methods:** Use other methods as described below if disturbance of the ground is not possible.

   a. Cover transducers with sand bags loosely filled with about 10 pounds of sand. When placed over the sensor the sandbag profile should be as low and wide as possible with a maximum amount of firm contact with the ground.

   b. A combination of both spiking and sandbagging gives even greater assurance that good coupling is obtained.

**C. Programming considerations**

Site conditions dictate certain actions when programming the seismograph.

1. **Ground motion trigger level:** The PPV-trigger-level should be programmed low enough to trigger the unit from blast vibrations and high enough to minimize the occurrence of false events. The level should be slightly above the expected background vibrations for the area. A good starting level is 0.05 in/s.
2. **Dynamic range and resolution:** If PPV is expected to exceed 10 in/s or frequency is expected to exceed 250 Hz, special sensors approved by the Vibration Specialist should be used to measure blast effects. In these cases, the Vibration Specialist should also determine a digital sampling rate that should provide accurate recordings.

3. **Recording duration:** Set the record time for 2 seconds longer than the blast duration plus 1 second for each 1100 feet from the blast.

**Part III Air-overpressure Monitoring**

The following procedures should be used as possible when setting up instruments to measure blast-induced noise.

**A. Microphone placement**

The microphone should be placed along the side of the structure nearest the blast.

1. The microphone should be covered with a windscreen and mounted near the velocity transducers.

2. The preferred microphone height is 3 feet above the ground or within 1.2 inches of the ground. Other heights may be acceptable for practical reasons. (ANSI S12.18-1994, ANSI S12.9-1992/Part2) (USBM RI 8508)

3. If practical, the microphone should not be shielded from the blast by nearby buildings, vehicles or other large barriers. If such shielding cannot be avoided, the horizontal distance between the microphone and shielding object should be greater than the height of the shielding object above the microphone.

4. If placed too close to a structure, the airblast may reflect from the house surface and record higher amplitudes. Structure response noise may also be recorded. Placing the microphone near a corner of the structure can minimize reflection of over-pressure energy. (RI 8508)

**B. Programming considerations**

Site conditions dictate certain actions when programming the seismograph to record air-overpressure.

1. **Trigger level:** When only an airblast measurement is desired, the trigger level should be low enough to trigger the unit from the airblast and high enough to minimize the occurrence of false events. The level should be slightly above the expected background noise for the area. A good starting level is 120 dB.

2. **Recording duration:** When only recording airblast, set the recording time for at least 2 seconds more than the blast duration. When ground vibrations and air-overpressure measurements are desired on the same record, follow the guidelines for ground vibration programming (Part II C.3).
ATTACHMENT II

SRRQ VIBRATION MONITORING DATA YEAR 2005 (Source – Vibra-Tech)
### SRRQ VIBRATION MONITORING DATA SUMMARY YR-2005

* Source: Independent Monitoring Data from Vibratech

#### Page 1 of 4

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## SRRQ VIBRATION MONITORING DATA SUMMARY YR-2005

* Source: Independent Monitoring Data from Vibratech

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APPENDIX C: Emergency Contacts & Emergency Evacuation Plan
<table>
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<tr>
<th>Name</th>
<th>Phone Number</th>
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<tr>
<td>Marin Cty. Fire/Sheriff Dispatch</td>
<td>415-453-1515</td>
</tr>
<tr>
<td>Fire Station #5 (Peacock Gap)</td>
<td>415-485-3143</td>
</tr>
<tr>
<td>Marin General Hospital</td>
<td>415-925-7000</td>
</tr>
<tr>
<td>Plant Manager - Daryle McLaughlin</td>
<td>707-974-9265</td>
</tr>
<tr>
<td>Public Relations - Aimi Krause</td>
<td>415-458-5473</td>
</tr>
<tr>
<td>Blaster-in-Charge - Deron Lopes</td>
<td>707-374-4334</td>
</tr>
<tr>
<td>Truck Marshall - Dan Bennett</td>
<td>415-990-5961</td>
</tr>
<tr>
<td>Alpha Explosives - Bob Heller</td>
<td>916-645-3377</td>
</tr>
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</table>
SAN RAFAEL ROCK QUARRY
EMERGENCY EVACUATION PLAN

Emergency Evacuation Procedures for Red Area:

Do Not Leave Site
Assemble at Scalehouse
Wait for Further Instructions From a Responsible Person

Red Area Includes Scale, Incoming Road, South Hill & Main Office

If Red Meeting Area is Unsafe, go to Yellow Area

Emergency Evacuation Procedures for Yellow Area:

Do Not Leave Site
Assemble at Lunchroom
Wait for Further Instructions From a Responsible Person

Yellow Area Includes Secondary, Primary, Dock, AC Plant, Shops, QC Lab, Main Pit & Production Office

If Yellow Meeting Area is Unsafe, go to Red Area
APPENDIX D: Federal Explosives Permit
DEPARTMENT OF THE TREASURY - BUREAU OF ALCOHOL, TOBACCO AND FIREARMS

LICENSE/PERMIT (18 U.S.C. CHAPTER 40, EXPLOSIVES)

In accordance with the provisions of Title XI, Organized Crime Control Act of 1970, and the regulations issued thereunder (27 CFR Part 555) you may engage in the activity specified in this license/permit within the limitations of Chapter 40, Title 10, United States Code and the regulations issued thereunder, until the expiration date shown. See “WARNING” and “NOTICES” on back.

**DIRECT ATG CORRESPONDENCE TO**
Christopher R. Reeves  
Chief, Federal Explosives Licensing Center (FELC)  
Bureau of Alcohol, Tobacco, Firearms and Explosives  
244 Needy Road  
Martinsburg, West Virginia 25405  
Telephone: 1-877-283-3352  Fax: 1-540-216-4401

**LICENSE/PERMIT NUMBER**  
9-CA-041-33-3B-00872

**EXPIRATION DATE**  
February 1, 2013

**NAME**  
DUTRA MATERIALS

**TYPE OF LICENSE OR PERMIT**  
33-USER OF HIGH EXPLOSIVES

**PREMISES ADDRESS/CHAIRMAN**  
You must notify the FELC at least 10 days before the change  
1000 POINT SAN PEDRO ROAD  
SAN RAFAEL, CA 94901

**SIGNATURE OF LICENSEE/PERMITTEE**

Christopher R. Reeves

**PURCHASING CERTIFICATION**  
I certify that this is a true copy of a license/permit issued to me to engage in the activity specified.

**MAILING ADDRESS/CHAIRMAN**  
You must notify the FELC at least 10 days before the change  
SAN RAFAEL ROCK QUARRY  
DUTRA MATERIALS  
1000 POINT SAN PEDRO ROAD  
SAN RAFAEL, CA 94901

**SIGNATURE OF LICENSEE/PERMITTEE**

Christopher R. Reeves

ATF F5400.14/5400.15, Part 1 (8/69)
APPENDIX E: County of Marin Explosives Permit
EXPLOSIVE/BLASTING APPLICATION AND PERMIT

Application and Permit No.: 005-10

Fee: $2.00  □ 100 lbs or less (12105 H&S)
      $10.00  □ more than 100 lbs (12105 H&S)  (min. 7 day waiting period -- 12105.1 H&S)

Application Date: 11/02/10
Permit Date: 11/13/10
Date Mailed to DOJ: 11/14/10

1. Permitee:
   Name: Daryl Robert McLaughlin
   Address: c/o Dutra Materials, 1000 Point Pedro Rd., San Rafael, Ca. 94901
   Age: 37 (min. 21)  Hgt: 5'03"  Wgt: 280  Eyes: blu  Hair: b/n  Sex: M  CDL: A4376549
   Representing: San Rafael Rock Quarry
   California State Blaster's License Number: 9CA041337B00672

2. Vehicles for Transportation:
   Make: N/A  Model: _  Yr: __________
   License #:   State of Registration: __________
   Travel Route/Safe Stopping Places: __________

3. Activity:
   Manufacture □  Store □  Receive and/or Transport □  Use □  Sell or Dispose □  Park Veh. □

4. Material:
   Type of Explosive: 40%  Quantity: 3,000 lbs.
   How and/or where stored: APPROVED MAGAZINES
   How and/or where used: BLAST HOLES IN QUARRY
   Number of times purchases may be made vario Frequency of Purchases (ie daily) as require
   Purpose: MINE ROCK

I, the undersigned, certify that I understand and will abide by all Federal, State and Local laws, ordinances, rules or orders to perform those acts noted herein. I also understand that all unused inventory covered by the permit on or before the expiration date will be disposed of in the following manner:

□ Return to source  □ Totally destroy  □ Turnover to the authority issuing permit or reapply for a new permit.

Signature of Applicant: __________________________

APPROVAL

This permit is granted on 11/13/2010 to perform those activities noted above, and will expire 11/13/2011. (5 year maximum from date of issue)

The permittee is limited to perform these activities (indicate number) unltld times or during the tenure of the permit, subject to the conditions noted below. This permit is not transferable and must be in possession when transporting or using explosives.

By: D. Martin  #2284

Sheriff of Marin County
APPENDIX F: ISEE Field Practice Guidelines for Blasting Seismographs
ISEE Field Practice Guidelines for Blasting Seismographs

Published by
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Cleveland, Ohio USA 44139-2295
http://www.isee.org

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Douglas Bartley, DBA Consulting
Steven DelloRusso, Simpson Gumpertz & Heger Inc.
Alastair Grogan, Davey Bickford Canada, Inc.
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Douglas Rudenko, Vibra-Tech Engineers, Inc.
Mark Svinkin, Vibraconsult
Robert Turnbull, Instanetl
Randall Wheeler, White Industrial Seismology
Board Liaison, John Wiegand, Vibronics, Inc.

*This list represents the membership at the time the Committee was ballotced on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

Committee Scope: This Committee shall have primary responsibility for documents on the manufacture, transportation, storage, and use of explosives and related materials. This Committee does not have responsibility for documents on consumer and display fireworks, model and high power rockets and motors, and pyrotechnic special effects.
ISEE Field Practice Guidelines for Blasting Seismographs
ISEE Field Practice Guidelines for Blasting Seismographs

International Society of Explosives Engineers

ISEE Field Practice Guidelines
For
Blasting Seismographs
2009 Edition

This edition of *ISEE Field Practice Guidelines for Blasting Seismographs* was revised by the ISEE Standards Committee on February 4, 2008 and supersedes all previous editions. It was approved by the Society’s Board of Directors in its role of Secretariat of the Standards at its February 5, 2009 meeting.

Origin and Development of
ISEE Field Practice Guidelines for Blasting Seismographs

In 1994, questions were raised about the accuracy, reproducibility and defensibility of data from blasting seismographs. To address this issue, the International Society of Explosives Engineers (ISEE) established a Seismograph Standards Subcommittee at its annual conference held in February 1995. The committee was comprised of seismograph manufacturers, researchers, regulatory personnel and seismograph users.

In 1997, the Committee became the Blast Vibrations and Seismograph Section. The Guidelines were drafted and approved by the Section in December of 1999. The Section completed two standards in the year 2000: 1) ISEE Field Practice Guidelines for Blasting Seismographs; and 2) Performance Specifications for Blasting Seismographs.

In 2002, the Society established the ISEE Standards Committee. A review of the ISEE Field Practice Guidelines and the Performance Specifications for Blasting Seismographs fell within the scope of the Committee. Work began on a review of the Field Practice Guidelines in January of 2006 and was completed in February of 2008 with this edition.

One of the goals of the ISEE Standards Committee is to develop uniform and technically appropriate standards for blasting seismographs. The intent is to improve accuracy and consistency in ground and air vibration measurements. Blasting seismograph performance is affected by how the blasting seismograph is built and how it is placed in the field.

The ISEE Standards Committee takes on the role of keeping the standards up to date. These standards can be obtained by contacting the International Society of Explosives Engineers located at 30325 Bainbridge Road, Cleveland, Ohio 44139 or by visiting our website at www.isee.org.
Part I. General Guidelines

Disclaimer: These field practice recommendations are intended to serve as general guidelines, and cannot describe all types of field conditions. It is incumbent on the operator to evaluate these conditions and to obtain good coupling between monitoring instrument and the surface to be monitored. In all cases, the operator should describe the field conditions and setup procedures in the permanent record of each blast.

Preface: Blasting seismographs are used to establish compliance with Federal, state and local regulations and evaluate explosive performance. Laws and regulations have been established to prevent damage to property and injury to people. The disposition of the rules is strongly dependant on the accuracy of ground vibration and air overpressure data. In terms of explosive performance the same holds true. One goal of the ISEE Standards Committee is to ensure consistent recording of ground vibrations and air overpressure between all blasting seismographs.
Blasting seismographs are deployed in the field to record the levels of blast-induced ground vibration and air overpressure. Accuracy of the recordings is essential. These guidelines define the user’s responsibilities when deploying blasting seismographs in the field and assume that the blasting seismographs conform to the ISEE “Performance Specifications for Blasting Seismographs”.

1. Read the instruction manual and be familiar with the operation of the instrument. Every seismograph comes with an instruction manual. Users are responsible for reading the appropriate sections and understanding the proper operation of the instrument before monitoring a blast.

2. Seismograph calibration. Annual calibration of the seismograph is recommended.

3. Keep proper blasting seismograph records. A user’s log should note: the user’s name, date, time, place and other pertinent data.

4. Document the location of the seismograph. This includes the name of the structure and where the seismograph was placed on the property relative to the structure. Any person should be able to locate and identify the exact monitoring location at a future date.

5. Know and record the distance to the blast. The horizontal distance from the seismograph to the blast should be known to at least two significant digits. For example, a blast within 1000 meters or feet would be measured to the nearest tens of meters or feet respectively and a blast within 10,000 meters or feet would be measured to the nearest hundreds of feet or meters respectively. Where elevation changes exceed 2.5h:1v, slant distances or true distance should be used.

6. Record the blast. When seismographs are deployed in the field, the time spent deploying the unit justifies recording an event. As practical, set the trigger levels low enough to record each blast.

7. Record the full time history waveform. Summary or single peak value recording options available on many seismographs should not be used for monitoring blast-generated vibrations. Operating modes that report peak velocities over a specified time interval are not recommended when recording blast-induced vibrations.

8. Set the sampling rate. The blasting seismograph should be programmed to record the entire blast event in enough detail to accurately reproduce the vibration trace. In general the sample rate should be at least 1000 samples per second.

9. Know the data processing time of the seismograph. Some units take up to 5 minutes to process and print data. If another blast occurs within this time the second blast may be missed.
10. Know the memory or record capacity of the seismograph. Enough memory must be available to store the event. The full waveform should be saved for future reference in either digital or analog form.

11. Know the nature of the report that is required. For example, provide a hard copy in the field, keep digital data as a permanent record or both. If an event is to be printed in the field, a printer with paper is needed.

12. Allow ample time for proper setup of the seismograph. Many errors occur when seismographs are hurriedly set-up. Generally, more than 15 minutes for set-up should be allowed from the time the user arrives at the monitoring location until the blast.

13. Know the temperature. Seismographs have varying manufacturer specified operating temperatures.

14. Secure cables. Suspended or freely moving cables from the wind or other extraneous sources can produce false triggers due to microphonics.

Part II. Ground Vibration Monitoring

Placement and coupling of the vibration sensor are the two most important factors to ensure accurate ground vibration recordings.

A. Sensor Placement

The sensor should be placed on or in the ground on the side of the structure towards the blast. A structure can be a house, pipeline, telephone pole, etc. Measurements on driveways, walkways, and slabs are to be avoided where possible.

1. Location relative to the structure. Sensor placement should ensure that the data obtained adequately represents the ground-borne vibration levels received at the structure. The sensor should be placed within 3.05 meters (10 feet) of the structure or less than 10% of the distance from the blast, whichever is less.

2. Soil density evaluation. The soil should be undisturbed or compacted fill. Loose fill material, unconsolidated soils, flower-bed mulch or other unusual mediums may have an adverse influence on the recording accuracy.

3. The sensor must be nearly level.

4. The longitudinal channel should be pointing directly at the blast and the bearing should be recorded.

5. Where access to a structure and/or property is not available, the sensor should be placed closer to the blast in undisturbed soil.
B. Sensor coupling
If the acceleration exceeds 1.96 m/s² (0.2 g), decoupling of the sensor may occur. Depending on the anticipated acceleration levels spiking, burial, or sandbagging of the geophone to the ground may be appropriate.

1. If the acceleration is expected to be:
   a. less than 1.96 m/s² (0.2 g), no burial or attachment is necessary
   b. between 1.96 m/s² (0.2 g), and 9.81 m/s² (1.0 g), burial or attachment is preferred. Spiking may be acceptable.
   c. greater than 9.81 m/s² (1.0 g), burial or firm attachment is required (RI 8506).

The following table exemplifies the particle velocities and frequencies where accelerations are 1.96 m/s² (0.2 g) and 9.81 m/s² (1.0 g).

<table>
<thead>
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<th>Frequency, Hz</th>
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<th>10</th>
<th>15</th>
<th>20</th>
<th>25</th>
<th>30</th>
<th>40</th>
<th>50</th>
<th>100</th>
<th>200</th>
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<tr>
<td>Particle Velocity mm/s (in/s) at 1.96 m/s² (0.2 g)</td>
<td>78.0 (3.07)</td>
<td>31.2 (1.23)</td>
<td>20.8 (0.82)</td>
<td>15.6 (0.61)</td>
<td>12.5 (0.49)</td>
<td>10.4 (0.41)</td>
<td>7.8 (0.31)</td>
<td>6.2 (0.25)</td>
<td>3.1 (0.12)</td>
<td>1.6 (0.06)</td>
</tr>
<tr>
<td>Particle Velocity mm/s (in/s) at 9.81 m/s² (1.0 g)</td>
<td>390 (15.4)</td>
<td>156 (6.14)</td>
<td>104 (4.10)</td>
<td>78.0 (3.07)</td>
<td>62.4 (2.46)</td>
<td>52.0 (2.05)</td>
<td>39.0 (1.54)</td>
<td>31.2 (1.23)</td>
<td>15.6 (0.61)</td>
<td>7.8 (0.31)</td>
</tr>
</tbody>
</table>

2. Burial or attachment methods.
   a. The preferred burial method is excavating a hole that is no less than three times the height of the sensor (ANSI S2.47), spiking the sensor to the bottom of the hole, and firmly compacting soil around and over the sensor.

   b. Attachment to bedrock is achieved by bolting, clamping or adhering the sensor to the rock surface.

   c. The sensor may be attached to the foundation of the structure if it is located within +/- 0.305 meters (1-foot) of ground level (RI 8969). This should only be used if burial, spiking or sandbagging is not practical.

3. Other sensor placement methods.
   a. Shallow burial is anything less than described at 2a above.

   b. Spiking entails removing the sod, with minimal disturbance of the soil and firmly pressing the sensor with the attached spike(s) into the ground.
c. Sand bagging requires removing the sod with minimal disturbance to the soil and placing the sensor on the bare spot with a sand bag over top. Sand bags should be large and loosely filled with about 4.55 kilograms (10 pounds) of sand. When placed over the sensor the sandbag profile should be as low and wide as possible with a maximum amount of firm contact with the ground.

d. A combination of both spiking and sandbagging gives even greater assurance that good coupling is obtained.

C. Programming considerations
Site conditions dictate certain actions when programming the seismograph.

1. Ground vibration trigger level. The trigger level should be programmed low enough to trigger the unit from blast vibrations and high enough to minimize the occurrence of false events. The level should be slightly above the expected background vibrations for the area. A good starting level is 1.3 mm/s (0.05 in/s).

2. Dynamic range and resolution. If the seismograph is not equipped with an auto-range function, the user should estimate the expected vibration level and set the appropriate range. The resolution of the printed waveform should allow verification of whether or not the event was a blast.

3. Recording duration - Set the record time for 2 seconds longer than the blast duration plus 1 second for each 335 meters (1100 feet) from the blast.

Part III Air Overpressure Monitoring
Placement of the microphone relative to the structure is the most important factor.

A. Microphone placement
The microphone should be placed along the side of the structure, nearest the blast.

1. The microphone should be mounted near the geophone with the manufacturer’s wind screen attached.

2. The microphone may be placed at any height above the ground. (ISEE 2005)

3. If practical, the microphone should not be shielded from the blast by nearby buildings, vehicles or other large barriers. If such shielding cannot be avoided, the horizontal distance between the microphone and shielding object should be greater than the height of the shielding object above the microphone.
4. If placed too close to a structure, the airblast may reflect from the house surface and record higher amplitudes. Structure response noise may also be recorded. Reflection can be minimized by placing the microphone near a corner of the structure. (RI 8508)

5. The orientation of the microphone is not critical for air overpressure frequencies below 1,000 Hz (RI 8508).

B. Programming considerations
Site conditions dictate certain actions when programming the seismograph to record air overpressure.

1. Trigger level. When only an air overpressure measurement is desired, the trigger level should be low enough to trigger the unit from the air overpressure and high enough to minimize the occurrence of false events. The level should be slightly above the expected background noise for the area. A good starting level is 20 Pa (0.20 millibars or 120 dB).

2. Recording duration. When only recording air overpressure, set the recording time for at least 2 seconds more than the blast duration. When ground vibrations and air overpressure measurements are desired on the same record, follow the guidelines for ground vibration programming (Part II C.3).
ISEE Field Practice Guidelines for Blasting Seismographs

References:


APPENDIX G: Blasting Misfire Procedures
Austin Powder Company's Misfire Procedures

When a misfire occurs, use the one-half hour waiting time to clear your mind and think about the condition that has been created. Document the hole or area that contains the misfire completely, while this is still fresh in your mind.

Do not permit any work in the misfire area. "Danger" off the area. Notify the permittee of the misfire. Contact your supervisor for assistance. We recommend that prior to refiring a misfire, another blaster familiar with the mine/ quarry be brought in to assist with the decision to fire or render inert the explosive.

Proper misfire handling should be conducted by experienced individuals familiar with the initiation systems and explosives used, as well as the proper techniques to handle, neutralize and render safe the explosive materials. Specific recommendations cannot be made concerning misfires as every misfire is unique and very site specific. Each misfire must be handled individually.

All information regarding the misfire must be analyzed completely and a plan of action established with a method to "Make Safe" the area. Specific Federal/State or Local laws may also dictate additional procedures.

When a misfire occurs, the power source used to initiate the blast must be disconnected, the firing line shunted or made safe before entering the blast area to inspect the misfire. All personnel must stay out of the blast area for at least 1/2 (30 minutes) hour. Access to the blast area must remain blocked and guarded.

Once a determination is made by the blaster in charge and another blaster familiar with the area of the stability of the area, such as adequate burdens, spacing, stemming, etc., a decision may be made to refire the misfire. Refiring a misfire is usually the safest and best way to eliminate the danger. Extra care must be taken, as the designed pattern HAS changed.

Once a determination has been made to refire, the blast area must be cleared to double the initial perimeter (at a minimum). If this is not possible, alternate methods of handling should be considered.

The Federal Mine Safety and Health Administration (MSHA)

IN 30 CFR (CODE OF FEDERAL REGULATIONS), PART 57.6000, DEFINES A MISFIRE AS:

"The complete or partial failure of explosive material to detonate as planned. The term also is used to describe the explosive material itself that has failed to detonate.

A misfire is described as the failure of an explosive charge to detonate. The best advice that can be given regarding the handling of misfires is to take every precaution to prevent their occurrence.

Anytime misfired holes, portions of a misfired hole, or unexploded explosive material remains after a blast is fired, a dangerous situation is created that will exist until the proper handling of unfired explosive material. A misfire requires sound judgement and a comprehensive understanding of explosives. Most misfires occur because of improper techniques or short cuts, and sometimes because of the geological formation.

It is important that any investigation into a misfire be conducted with a fair and open mind. Any preconceived idea of the cause may mask the true cause, and prevent a future occurrence."

MSHA - 30 CFR. PART 57.6311 ADDRESSES THE HANDLING OF MISFIRES AS:

(a) Faces and muck piles shall be examined for misfires after each blasting operation.

(b) Only work necessary to remove a misfire and protect the safety of miners engaged in the removal shall be permitted in the affected area until the misfire is disposed of in a safe manner.

(c) When a misfire cannot be disposed of safely, each approach to the area affected by the misfire shall be posted with a warning sign at a conspicuous location to prohibit entry, and the condition shall be reported immediately to mine management.

(d) Misfires occurring during the shift shall be reported to mine management not later than the end of the shift.

MSHA - 30 CFR. PART 57.6310 DEFINES THE MISFIRE WAITING PERIOD AS:

When a misfire is suspected, persons shall not enter the blast area until:

(a) For 30 minutes if safety fuse and blasting caps are used; or

(b) For 15 minutes if any other type detonators are used.

The Occupational Safety and Health Administration (OSHA)

(a) If a misfire is found, the blaster shall provide proper safeguards for excluding all employees from the danger zone.

(b) No other work shall be done except that necessary to remove the hazard of the misfire and only those employees necessary to do the work shall remain in the danger zone.

(c) No attempt shall be made to extract explosives from any charged or misfired hole; a new primer shall be put in and the hole reblasted. If refiring of the misfired hole presents a hazard, the explosives may be removed by washing out with water or, where the misfire is under water, blown out with air.
(d) If there are any misfires while using cap and fuse, all employees shall remain away from the charge for at least 1 hour. Misfires shall be handled under the direction of the person in charge of the blasting. All wires shall be carefully traced and a search made for unexploded charges.

(e) No drilling, digging, or picking shall be permitted until all missed holes have been detonated or the authorized representative has approved that work can proceed.

OSHA Regulations (Standards - 29 CFR) Misfires.

- Standard Number: 1926.911
- Standard Title: Misfires.
- SubPart Number: U
- SubPart Title: Blasting and the Use of Explosives

---

REFERENCES


APPENDIX II: Sample Blasting & Vibration Report
## SAN RAFAEL ROCK CRRY BLAST REPORT

### BASE DATA:
- **Location:**
- **Designed Bench Height (ft):**
- **Date:**
- **Northing:**
- **Rock Density (lb/ft^3):**
- **Time:**
- **Easting:**
- **Relative Rock Hardness:**
- **Blast Number:**

### DESIGN DATA:
- **Number of Holes Shot:**
- **Hole Dia. (in.):**
- **Stemming (ft):**
- **Loading Time Required (man hrs):**
- **Deck Type:**
- **Ave. Hole Depth (ft):**
- **Burden (ft):**
- **Stem Type:**
- **Staggered Pattern (y or n):**
- **Length (ft):**
- **Relative Confinement:**
- **Spacing (ft):**
- **Subdrill (ft):**
- **Number of Lost Holes:**
- **Tons Shot:**

### EXPLOSIVES DATA:

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<th>Bulk Explosive</th>
<th>Weight</th>
<th>Boosters</th>
<th>Units</th>
<th>Delays</th>
<th>Units</th>
<th>Misc.</th>
<th>Units</th>
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<tr>
<td>Max (lb/hole):</td>
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<td></td>
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<td>Blast Duration (sec):</td>
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<td>Total Charge Wt.:</td>
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### VIBRATION DATA:
- **Nearest Structure:**
- **Seismograph Loc.:**
- **Temperature:**
- **Max. Chrg. (lb/8ms):**
- **Northing:**
- **Northing:**
- **Sky Condition:**
- **RPPV:**
- **Easting:**
- **Easting:**
- **Wind Direction:**
- **Frequency:**
- **Distance Away:**
- **Distance Away:**
- **Wind Speed:**
- **Airblast:**

### PERFORMANCE DATA:
- **Powder Factor (lb/ton):**
- **Displacement:**
- **Crushability:**
- **Lb/yrdf^3:**
- **Vibration:**
- **Fines:**
- **Fragmentation:**
- **Dig ability:**
- **Comments:**
- **Blaster in Charge:**
# SAN RAFAEL ROCK QUARRY VIBRATION REPORT

## BLAST INFORMATION:
- Location:
- Northing:
- Easting:
- Max. Charge Weight:
- Date of Blast:
- Blast Duration:
- Time of Blast:
- Blast Number:

## SEISMOGRAPH INFORMATION:
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## LOCATION INFORMATION:
- Location
- Northing
- Easting
- Distance from Blast
- Scaled Distance

## VIBRATION INFORMATION:
- Longitudinal Peak Particle Velocity (ips)
- Longitudinal Peak Frequency (Hz)
- Transverse Peak Particle Velocity (ips)
- Transverse Peak Frequency (Hz)
- Vertical Peak Particle Velocity (ips)
- Vertical Peak Frequency (Hz)
- Peak Vector Sum (ips)
- Peak Air Overpressure (db)

## GENERAL COMMENTS:

Seismograph Operator: ____________________________  Signature: ____________________________
APPENDIX I: Scaled Distance Chart to Nearest Residence
Charge Weight vs. Scaled Distance Value: San Rafael Rock Quarry
Nearest Residence - 1,350 feet

MAXIMUM SCALED DISTANCE PER CONDITION #81 (52.8)
APPENDIX J: Loading Factors for Various Drillhole Sizes
 Values not found in the above table can be found using the following equation.

\[
L_F = 0.3405 \ d^2 \ \rho
\]

Where:
- \(L_F\) = Loading Factor in Lbs/Ft
- \(d\) = Explosives column diameter in Inches
- \(\rho\) = Specific Gravity of Explosives

(Source: Kentucky Department of Mines and Minerals Study Guide)
APPENDIX K: Table of Stemming Lengths for Various Drillhole Sizes
### Charge Diameters of Stemming Material

#### Stemming Length (Feet)

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APPENDIX L: Table of CY/Tons per Foot of Borehole for Various Burdens/Spacings
<table>
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<th>BURDEN (feet)</th>
<th>CUBIC YARDS OF ROCK PER FOOT OF BOREHOLE</th>
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Note: The table above represents the cubic yards of rock per foot of borehole for various burdens (in feet). The values in the table indicate the amount of cubic yards of rock per foot of borehole at different burdens.
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APPENDIX M: ATF Federal Explosives Law & Regulations
ATF
Federal Explosives Law and Regulations

2007
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Dear Federal Explosives Licensee or Permittee:

We are pleased to provide you with the latest edition of the Federal Explosives Law and Regulations. This edition incorporates the regulations developed in response to the Safe Explosives Act of 2002, which was the most sweeping revision of the Federal explosives laws since the original enactment of Title XI of the Organized Crime Control Act of 1970.

The Safe Explosives Act is a reflection of how the explosives industry and the regulation of the explosives industry continue to evolve. The underlying goals of the Safe Explosives Act and the Federal regulations remain the same -- the safe storage and security of all explosive materials.

Safety is accomplished through proper magazine construction, adherence to the Tables of Distances, and housekeeping. However, safety is not strictly limited to the regulations. Effective employee training on safety, the safe handling of explosive materials, and compliance with all State and local requirements for safety also contribute to the safe storage of explosive materials.

Security of all explosive materials is an essential tool in the war against terrorism. Verifying required records, ensuring the use of approved locking systems, and conducting background checks on industry applicants and their employees are all means by which ATF makes certain that explosive materials are not diverted or criminally misused. However, your own internal controls and industry-created security publications also support the secure and safe storage of explosive materials.

The most effective means of safety and security remains, quite simply, your continued vigilance! As always, we seek your assistance to meet our goals of safety and security. We appreciate your continued cooperation and look forward to working with you in the future.

Sincerely yours,

[Signature]

Michael J. Sullivan
Acting Director
Organized Crime Control Act of 1970, Title XI

Regulation of Explosives
Public Law 91-452, Approved October 15, 1970 (as Amended)


Purpose

SEC. 1101. The Congress hereby declares that the purpose of this title is to protect interstate and foreign commerce against interference and interruption by reducing the hazard to persons and property arising from misuse and unsafe or insecure storage of explosive materials. It is not the purpose of this title to place any undue or unnecessary Federal restrictions or burdens on law-abiding citizens with respect to the acquisition, possession, storage, or use of explosive materials for industrial, mining, agricultural, or other lawful purposes, or to provide for the imposition by Federal regulations of any procedures or requirements other than those reasonably necessary to implement and effectuate the provisions of this title.

Sec. 1102. Title 18, United States Code, is amended by adding after chapter 39 the following chapter:

Chapter 40. Importation, Manufacture, Distribution and Storage of Explosive Materials

Editor’s Note: The sections of law set out herein were added by Public Law 91-452, Title XI, §1102(a), Oct. 15, 1970, 84 Stat. 952-959, and remain un-changed unless otherwise footnoted.

Sec.

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§ 841. Definitions

As used in this chapter
(a) “Person” means any individual, corporation, company, association, firm, partnership, society, or joint stock company.
(b) “Interstate or foreign commerce” means commerce between any place in a State and any place outside of that State, or within any possession of the United States (not including the Canal Zone) or the District of Columbia, and commerce between places within the same State but through any place outside of that State. “State” includes the District of Columbia, the Commonwealth of Puerto Rico, and the possessions of the United States (not including the Canal Zone).
(c) “Explosive materials” means explosives, blasting agents, and detonators.
(d) Except for the purposes of subsections (d), (e), (f), (g), (h), (i), and (j) of section 844 of this title, “explosives” means any chemical compound mixture, or device, the primary or common purpose of which is to function by explosion; the term includes, but is not limited to, dynamite and other high explosives, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, and igniters. The Attorney General shall publish and revise at least annually in the Federal Register a list of these and any additional explosives which he determines to be within the coverage of this chapter. For the purposes of subsections (d), (e), (f), (g), (h), and (i) of section 844 of this title, the term “explosive” is defined in subsection (j) of such section 844.
(e) “Blasting agent” means any material or mixture, consisting of fuel and oxidizer, intended for blasting, not otherwise defined as an explosive; Provided, That the finished product, as mixed for use or shipment, cannot be detonated by means of a numbered 8 test blasting cap when unconfined.
(f) “Detonator” means any device containing a detonating charge that is used for initiating detonation in an explosive; the term includes, but is not limited to, electric blasting caps of instantaneous and delay types, blasting caps for use with safety fuses and detonating-cord delay connectors.
(g) "Importer" means any person engaged in the business of importing or bringing explosive materials into the United States for purposes of sale or distribution.

(h) "Manufacturer" means any person engaged in the business of manufacturing explosive materials for purposes of sale or distribution for his own use.

(i) "Dealer" means any person engaged in the business of distributing explosive materials at wholesale or retail.

(j) "Permittee" means any user of explosives for a lawful purpose, who has obtained either a user permit or a limited permit under the provisions of this chapter.

(k) "Attorney General" means the Attorney General of the United States.

(l) "Crime punishable by imprisonment for a term exceeding one year" shall not mean (1) any Federal or State offenses pertaining to antitrust violations, unfair trade practices, restraints of trade, or other similar offenses relating to the regulation of business practices as the Attorney General may be regulation designate, or (2) any State offense (other than one involving a firearm or explosive) classified by the laws of the State as a misdemeanor and punishable by a term of imprisonment of two years or less.

(m) "Licensee" means any importer, manufacturer, or dealer licensed under the provisions of this chapter.

(n) "Distributor" means sell, issue, give, transfer, or otherwise dispose of.


(p) "Detection agent" means any one of the substances specified in this subsection when introduced into a plastic explosive or formulated in such explosive as a part of the manufacturing process in such a manner as to achieve homogenous distribution in the finished explosive, including—

(1) Ethylene glycol dinitrate (EGDN), C2H4(NO3)[2], molecular weight 152, when the minimum concentration in the finished explosive is 0.2 percent by mass;

(2) 2,3-Dimethyl-2,3-dinitrotoluene (DMNB), C6H12(NO2)[2], molecular weight 176, when the minimum concentration in the finished explosive is 0.1 percent by mass;

(3) Para-Mononitrotoluene (p-MNT), C7H7(NO2)[2], molecular weight 137, when the minimum concentration in the finished explosive is 0.5 percent by mass;

(4) Ortho-Mononitrotoluene (o-MNT), C7H7(NO2)[2], molecular weight 137, when the minimum concentration in the finished explosive is 0.5 percent by mass; and

(5) any other substance in the concentration specified by the Attorney General, after consultation with the Secretary of State and the Secretary of Defense, that has been added to the table in part 2 of the Technical Annex to the Convention on the Marking of Plastic Explosives.

(q) "Plastic explosive" means an explosive material in flexible or elastic sheet form formulated with one or more high explosives which in their pure form has a vapor pressure less than 10^{-4} Pa at a temperature of 25 degrees C., is formulated with a binder material, and is as a mixture malleable or flexible at normal room temperature.

(r) "Alien" means any person who is not a citizen or national of the United States.

(s) "Responsible person" means an individual who has the power to direct the management and policies of the applicant pertaining to explosive materials.


§ 842. Unlawful acts

(a) It shall be unlawful for any person—

(1) to engage in the business of importing, manufacturing or dealing in explosive materials without a license issued under this chapter;

(2) knowingly to withhold information or to make any false or fictitious oral or written statement or to furnish or exhibit any false, fictitious, or misrepresented identification, intended or likely to deceive for the purpose of obtaining explosive materials, or a license, permit, exemption, or relief from disability under the provisions of this chapter;

(3) other than a licensee or permittee knowingly—

(A) to transport, ship, cause to be transported, or receive any explosive materials; or

(B) to distribute explosive materials to any person other than a licensee or permittee; or

(4) who is a holder of a limited permit—

(A) to transport, ship, cause to be transported, or receive in interstate or foreign commerce any explosive materials; or

(B) to receive explosive materials from a licensee or permittee, whose premises are located outside the State of residence of the limited permit holder, or on more than 6 separate occasions, during the period of the permit, to receive explosive materials from 1 or more licensees or permittees whose premises are located within the State of residence of the limited permit holder.

(b) It shall be unlawful for any licensee or permittee to knowingly distribute any explosive materials to any person other than—
(1) a licensee;
(2) a holder of a user permit; or
(3) a holder of a limited permit who is a resident of the State where distribution is made and in which the premises of the transferor are located.

(c) It shall be unlawful for any licensee to distribute explosive materials to any person who the licensee has reason to believe intends to transport such explosive materials into a State where the purchase, possession, or use of explosive materials is prohibited or which does not permit its residents to transport or ship explosive materials into it or to receive explosive materials in it.

(d) It shall be unlawful for any person knowingly to distribute explosive materials to any individual who:
(1) is under twenty-one years of age;
(2) has been convicted in any court of a crime punishable by imprisonment for a term exceeding one year;
(3) is under indictment for a crime punishable by imprisonment for a term exceeding one year;
(4) is a fugitive from justice;
(5) is an unlawful user of or addicted to any controlled substance (as defined in section 102 of the Controlled Substances Act);
(6) has been adjudicated a mental defective or who has been committed to a mental institution;
(7) is an alien, other than an alien who—
(A) is lawfully admitted for permanent residence (as defined in section 101(a)(20) of the Immigration and Nationality Act);
(B) is in lawful nonimmigrant status, is a refugee admitted under section 207 of the Immigration and Nationality Act or is in asylum status under section 208 of the Immigration and Nationality Act and—
(i) is a foreign law enforcement officer of a friendly foreign government, as determined by the Secretary in consultation with the Secretary of State, entering the United States on official law enforcement business, and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of this official law enforcement business; or
(ii) is a person having the power to direct or cause the direction of the management and policies of a corporation, partnership, or association licensed pursuant to section 843(a), and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of such power;
(C) is a member of a North Atlantic Treaty Organization (NATO) or other friendly foreign military force, as determined by the Attorney General in consultation with the Secretary of Defense, who is present in the United States under military orders for training or other military purpose authorized by the United States and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of the authorized military purpose; or
(D) is lawfully present in the United States in cooperation with the Director of Central Intelligence, and the shipment, transportation, receipt, or possession of the explosive materials is in furtherance of such cooperation;
(8) has been discharged from the armed forces under dishonorable conditions;
(9) having been a citizen of the United States, has renounced the citizenship of that person.

(e) It shall be unlawful for any licensee knowingly to distribute any explosive materials to any person in any State where the purchase, possession, or use by such person of such explosive materials would be in violation of any State law or any published ordinance applicable at the place of distribution.

(f) It shall be unlawful for any licensee or permittee willfully to manufacture, import, purchase, distribute, or receive explosive materials without making such records as the Attorney General may by regulation require, including, but not limited to, a statement of intended use, the name, date, place of birth, social security number or taxpayer identification number, and place of residence of any natural person to whom explosive materials are distributed. If explosive materials are distributed to a corporation or other business entity, such records shall include the identity and principal and local places of business and the name, date, place of birth, and place of residence of the natural person acting as agent of the corporation or other business entity in arranging the distribution.

(g) It shall be unlawful for any licensee or permittee knowingly to make any false entry in any record which he is required to keep pursuant to this section or regulations promulgated under section 847 of this title.

(h) It shall be unlawful for any person to receive, possess, transport, ship, conceal, store, barter, sell, dispose of, or pledge or accept as security for a loan, any stolen explosive materials which are moving as, which are part of, which constitute, or which have been shipped or transported in, interstate or foreign commerce, either before or after such materials were stolen, knowing or having reasonable cause to believe that the explosive materials were stolen.

(i) It shall be unlawful for any person—
(1) who is under indictment for, or who has been convicted in any court of, a crime punishable by imprisonment for a term exceeding one year;
(2) who is a fugitive from justice;
(3) who is an unlawful user of or addicted to any controlled substance (as defined in section 102 of the Controlled Substances Act);
(4) who has been adjudicated as a mental defective or who has been committed to a mental institution;
(5) who is an alien, other than an alien who—
(A) is lawfully admitted for permanent residence (as that term is defined in section 101(a)(20) of the Immigration and Nationality Act);

(B) is in lawful nonimmigrant status, is a refugee admitted under section 207 of the Immigration and Nationality Act or is in asylum status under section 208 of the Immigration and Nationality Act and--

(i) is a foreign law enforcement officer of a friendly foreign government, as determined by the Secretary in consultation with the Secretary of State, entering the United States on official law enforcement business, and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of this official law enforcement business; or

(ii) is a person having the power to direct or cause the direction of the management and policies of a corporation, partnership, or association licensed pursuant to section 843(a), and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of such power;

(C) is a member of a North Atlantic Treaty Organization (NATO) or other friendly foreign military force, as determined by the Attorney General in consultation with the Secretary of Defense, who is present in the United States under military orders for training or other military purpose authorized by the United States and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of such military purpose; or

(D) is lawfully present in the United States in cooperation with the Director of Central Intelligence, and the shipment, transportation, receipt, or possession of the explosive materials is in furtherance of such cooperation;

(6) who has been discharged from the armed forces under dishonorable conditions;

(7) who, having been a citizen of the United States, has renounced the citizenship of that person; to ship or transport any explosive in or affecting interstate or foreign commerce or to receive or possess any explosive which has been shipped or transported in or affecting interstate or foreign commerce.

(J) It shall be unlawful for any person to store any explosive material in a manner not in conformity with regulations promulgated by the Attorney General. In promulgating such regulations, the Attorney General shall take into consideration the class, type, and quantity of explosive materials to be stored, as well as the standards of safety and security recognized in the explosives industry.

(K) It shall be unlawful for any person who has knowledge of the theft or loss of any explosive materials from his stock, to fail to report such theft or loss within twenty-four hours of discovery thereof, to the Attorney General and to appropriate local authorities.

(L) It shall be unlawful for any person to manufacture any plastic explosive that does not contain a detection agent.

(m) (1) It shall be unlawful for any person to import or bring into the United States, or export from the United States, any plastic explosive that does not contain a detection agent.

(2) This subsection does not apply to the importation or bringing into the United States, or the exportation from the United States, of any plastic explosive that was imported or brought into, or manufactured in the United States prior to the date of enactment of this subsection [enacted April 24, 1996] by or on behalf of any agency of the United States performing military or police functions (including any military reserve component) or by or on behalf of the National Guard of any State, not later than 15 years after the date of entry into force of the Convention on the Marking of Plastic Explosives, with respect to the United States.

(n) (1) It shall be unlawful for any person to ship, transport, transfer, receive, or possess any plastic explosive that does not contain a detection agent.

(2) This subsection does not apply to—

(A) the shipment, transportation, transfer, receipt, or possession of any plastic explosive that was imported or brought into, or manufactured in the United States prior to the date of enactment of this subsection [enacted April 24, 1996] by any person during the period beginning on that date and ending 3 years after that date of enactment; or

(B) the shipment, transportation, transfer, receipt, or possession of any plastic explosive that was imported or brought into, or manufactured in the United States prior to the date of enactment of this subsection [enacted April 24, 1996] by or on behalf of any agency of the United States performing a military or police function (including any military reserve component) or by or on behalf of the National Guard of any State, not later than 15 years after the date of entry into force of the Convention on the Marking of Plastic Explosives, with respect to the United States.

(o) It shall be unlawful for any person, other than an agency of the United States (including any military reserve component) or the National Guard of any State, possessing any plastic explosive on the date of enactment of this subsection [enacted April 24, 1996], to fail to report to the Attorney General within 120 days after such date of enactment the quantity of such explosives possessed, the manufacturer or importer, any marks of identification on such explosives, and such other information as the Attorney General may prescribe by regulation.

(p) Distribution of information relating to explosives, destructive devices, and weapons of mass destruction.

(1) Definitions. In this subsection—

(A) the term "destructive device" has the same meaning as in section 921(a)(4);

(B) the term "explosive" has the same meaning as in section 844(j); and

(C) the term "weapon of mass destruction" has the same meaning as in section 2332a(d)(2).
(A) to teach or demonstrate the making or use of an explosive, a destructive device, or a weapon of mass destruction, or to distribute by any means information pertaining to, in whole or in part, the manufacture or use of an explosive, destructive device, or weapon of mass destruction, with the intent that the teaching, demonstration, or information be used for, or in furtherance of, an activity that constitutes a Federal crime of violence; or

(B) to teach or demonstrate to any person the making or use of an explosive, a destructive device, or a weapon of mass destruction, or to distribute to any person, by any means, information pertaining to, in whole or in part, the manufacture or use of an explosive, destructive device, or weapon of mass destruction, knowing that such person intends to use the teaching, demonstration, or information for, or in furtherance of, an activity that constitutes a Federal crime of violence.


§ 843. Licenses and user permits

(a) An application for a user permit or limited permit or a license to import, manufacture, or deal in explosive materials shall be in such form and contain such information as the Attorney General shall by regulation prescribe, including the names of and appropriate identifying information regarding all employers who will be authorized by the applicant to possess explosive materials, as well as fingerprints and a photograph of each responsible person. Each applicant for a license or permit shall pay a fee to be charged as set by the Attorney General, said fee not to exceed § 50 for a limited permit and § 200 for any other license or permit. Each license or user permit shall be valid for not longer than 3 years from the date of issuance and each limited permit shall be valid for not longer than 1 year from the date of issuance. Each license or permit shall be renewable upon the same conditions and subject to the same restrictions as the original license or permit, and upon payment of a renewal fee not to exceed one-half of the original fee.

(b) Upon the filing of a proper application and payment of the prescribed fee, and subject to the provisions of this chapter and other applicable laws, the Attorney General shall issue to such applicant the appropriate license or permit if:

(1) the applicant (or, if the applicant is a corporation, partnership, or association, each responsible person with respect to the applicant) is not a person described in section 842(f);

(2) the applicant has not willfully violated any of the provisions of this chapter or regulations issued hereunder;

(3) the applicant has in a State premises from which he conducts or intends to conduct business;

(4) (A) the Secretary verifies by inspection or, if the application is for an original limited permit or the first or second renewal of such a permit, by such other means as the Secretary determines appropriate, that the applicant has a place of storage for explosive materials which meets such standards of public safety and security against theft as the Attorney General by regulations shall prescribe; and

(B) subparagraph (A) shall not apply to an applicant for the renewal of a limited permit if the Secretary has verified, by inspection within the preceding 3 years, the matters described in subparagraph (A) with respect to the applicant; and

(5) the applicant has demonstrated and certified in writing that he is familiar with all published State laws and local ordinances relating to explosive materials for the location in which he intends to do business;

(6) none of the employees of the applicant who will be authorized by the applicant to possess explosive materials is any person described in section 842(i); and

(7) in the case of a limited permit, the applicant has certified in writing that the applicant will not receive explosive materials on more than 6 separate occasions during the 12-month period for which the limited permit is valid.

(c) The Attorney General shall approve or deny an application within a period of 90 days for licenses and permits beginning on the date such application is received by the Attorney General.

(d) The Attorney General may revoke any license or permit issued under this section if in the opinion of the Attorney General the holder thereof has violated any provision of this chapter or any rule or regulation prescribed by the Attorney General under this chapter, or has become ineligible to acquire explosive materials under section 842(d). The Attorney General’s action under this subsection may be reviewed only as provided in subsection (c)(2) of this section.

(e) (1) Any person whose application is denied or whose license or permit is revoked shall receive a written notice from the Attorney General stating the specific grounds upon which such denial or revocation is based. Any notice of a revocation of a license or permit shall be given to the holder of such license or permit prior to or concurrently with the effective date of the revocation.

(2) If the Attorney General denies an application for, or revokes a license, or permit, he shall, upon request by the aggrieved party, promptly hold a hearing to review his denial or revocation. In the case of a revocation, the Attorney General may upon a request of the holder stay the effective date of the revocation. A hearing under this section shall be at a location convenient to the aggrieved party. The Attorney General shall give written notice of his decision to the aggrieved party within a reasonable time after the hearing. The aggrieved party may, within sixty days
after receipt of the Secretary’s written decision, file a petition with the United States court of appeals for the district in which he resides or has his principal place of business for a judicial review of such denial or revocation, pursuant to sections 701-706 of title 5, United States Code.

(f) Licensees and holders of user permits shall make available for inspection at all reasonable times their records kept pursuant to this chapter or the regulations issued hereunder, and licensees and permittees shall submit to the Attorney General such reports and information with respect to such records and the contents thereof as he shall by regulations prescribe. The Attorney General may enter during business hours the premises (including places of storage) of any licensee or holder of a user permit, for the purpose of inspecting or examining (1) any records or documents required to be kept by such licensee or permittee under the provisions of this chapter or regulations issued hereunder, and (2) any explosive materials kept or stored by such licensee or permittee at such premises. Upon the request of any State or any political subdivision thereof, the Attorney General may make available to such State or any political subdivision thereof, any information which he may obtain by reason of the provisions of this chapter with respect to the identification of persons within such State or political subdivision thereof, who have purchased or received explosive materials, together with a description of such explosive materials. The Attorney General may inspect the places of storage for explosive materials of an applicant for a limited permit or, at the time of renewal of such permit, a holder of a limited permit, only as provided in subsection (b)(4).

(g) Licensees and user permits issued under the provisions of subsection (b) of this section shall be kept posted and kept available for inspection on the premises covered by the license and permit.

(h) (1) If the Secretary receives, from an employer, the name and other identifying information of a responsible person or an employee who will be authorized by the employer to possess explosive materials in the course of employment with the employer, the Secretary shall determine whether the responsible person or employee is one of the persons described in any paragraph of section 842(i). In making the determination, the Secretary may take into account a letter or document issued under paragraph (2).

(2) (A) If the Secretary determines that the responsible person or the employee is not one of the persons described in any paragraph of section 842(i), the Secretary shall notify the employer in writing or electronically of the determination and issue to the responsible person or the employee, as the case may be, a document that—

(i) confirms the determination;
(ii) explains the grounds for the determination;
(iii) provides information on how the disability may be relieved; and
(iv) explains how the determination may be appealed.

(i) Furnishing of samples.

(1) In general. Licensed manufacturers and licensed importers and persons who manufacture or import explosive materials or ammonium nitrate shall, when required by letter issued by the Secretary, furnish—

(A) samples of such explosive materials or ammonium nitrate;

(B) information on chemical composition of those products; and

(C) any other information that the Secretary determines is relevant to the identification of the explosive materials or to identification of the ammonium nitrate.

(2) Reimbursement. The Secretary shall, by regulation, authorize reimbursement of the fair market value of samples furnished pursuant to this subsection, as well as the reasonable costs of shipment.


§ 844. Penalties

(a) Any person who—

(1) violates any of subsections (a) through (i) or (l) through (o) of section 842 shall be fined under this title, imprisoned for not more than 10 years, or both; and

(2) violates subsection (p)(2) of section 842, shall be fined under this title, imprisoned not more than 20 years, or both.

(b) Any person who violates any other provision of section 842 of this chapter shall be fined under this title or imprisoned not more than one year, or both.

(c) (1) Any explosive materials involved or used or intended to be used in any violation of the provisions of this chapter or any other rule or regulation promulgated thereunder or any violation of any criminal law of the United States shall be subject to seizure and forfeiture, and all provisions of the Internal Revenue Code of 1986 relating to the seizure, forfeiture, and disposition of firearms, as defined in section 5845(a) of that Code, shall, so far as applicable, extend to seizures and forfeitures under the provisions of this chapter.

(2) Notwithstanding paragraph (1), in the case of the seizure of any explosive materials for any offense for which the materials would be subject to forfeiture in which it would be
impracticable or unsafe to remove the materials to a place of storage or would be unsafe to store them, the seizing officer may destroy the explosive materials forthwith. Any destruction under this paragraph shall be in the presence of at least 1 credible witness. The seizing officer shall make a report of the seizure and take samples as the Attorney General may by regulation prescribe.

(3) Within 60 days after any destruction made pursuant to paragraph (2), the owner of (including any person having an interest in) the property so destroyed may make application to the Attorney General for reimbursement of the value of the property. If the claimant establishes to the satisfaction of the Attorney General that—

(A) the property has not been used or involved in a violation of law; or

(B) any unlawful involvement or use of the property was without the claimant’s knowledge, consent, or willful blindness, the Attorney General shall make an allowance to the claimant not exceeding the value of the property destroyed.

(d) Whoever transports or receives, or attempts to transport or receive, in interstate or foreign commerce any explosive with the knowledge or intent that it will be used to kill, injure, or intimidate any individual or unlawfully to damage or destroy any building, vehicle, or other real or personal property, shall be imprisoned for not more than 10 years, or fined under this title, or both; and if personal injury results to any person, including any public safety officer performing duties as a director or proximate result of conduct prohibited by this subsection, shall be imprisoned for not more than twenty years or fined under this title, or both; and if death results to any person, including any public safety officer performing duties as a direct or proximate result of conduct prohibited by this subsection, shall be subject to imprisonment for any term of years, or to the death penalty or to life imprisonment.

(e) Whoever, through the use of the mail, telephone, telegraph, or other instrument of interstate or foreign commerce, or in or affecting interstate or foreign commerce, willfully makes any threat, or maliciously conveys false information knowing the same to be false, concerning an attempt or alleged attempt being made, or to be made, to kill, injure, or intimidate any individual or unlawfully to damage or destroy any building, vehicle, or other real or personal property by means of fire or an explosive shall be imprisoned for not more than 10 years or fined under this title, or both.

(f) (1) Whoever maliciously damages or destroys, or attempts to damage or destroy, by means of fire or an explosive, any building, vehicle, or other personal or real property in whole or in part owned or possessed by, or leased to, the United States, or any department or agency thereof, or any institution or organization receiving Federal financial assistance, shall be imprisoned for not less than 5 years and not more than 20 years, fined under this title, or both.

(2) Whoever engages in conduct prohibited by this subsection, and as a result of such conduct, directly or proximately causes personal injury or creates a substantial risk of injury to any person, including any public safety officer performing duties, shall be imprisoned for not less than 7 years and not more than 40 years, fined under this title, or both.

(3) Whoever engages in conduct prohibited by this subsection, and as a result of such conduct directly or proximately causes the death of any person, including any public safety officer performing duties, shall be subject to the death penalty, or imprisoned for not less than 20 years or for life, fined under this title, or both.

(g) (1) Except as provided in paragraph (2), whoever possesses an explosive in an airport that is subject to the regulatory authority of the Federal Aviation Administration, or in any building in whole or in part owned, possessed, or used by, or leased to, the United States or any department or agency thereof, except with the written consent of the agency, department, or other person responsible for the management of such building or airport, shall be imprisoned for not more than five years, or fined under this title, or both.

(2) The provisions of this subsection shall not be applicable to—

(A) the possession of ammunition (as that term is defined in regulations issued pursuant to this chapter) in an airport that is subject to the regulatory authority of the Federal Aviation Administration if such ammunition is either in checked baggage or in a closed container; or

(B) the possession of an explosive in an airport if the packaging and transportation of such explosive is exempt from, or subject to and in accordance with, regulations of the Pipeline and Hazardous Materials Safety Administration for the handling of hazardous materials pursuant to chapter 51 of title 49.

(h) Whoever—

(1) uses fire or an explosive to commit any felony which may be prosecuted in a court of the United States, or

(2) carries an explosive during the commission of any felony which may be prosecuted in a court of the United States, including a felony which provides for an enhanced punishment if committed by the use of a deadly or dangerous weapon or device shall, in addition to the punishment provided for such felony, be sentenced to imprisonment for 10 years. In the case of a second or subsequent conviction under this subsection, such person shall be sentenced to imprisonment for 20 years. Notwithstanding any other provision of law, the court shall not place on probation or suspend the sentence of any person convicted of a violation of this subsection, or shall the term of imprisonment imposed under this subsection run concurrently with any other term of imprisonment including that imposed for the felony in which the explosive was used or carried.
¶ 845. Exceptions; relief from disabilities

(a) Except in the case of subsections (f), (n), (n), or (o) of section 842 and subsections (d), (e), (f), (g), (h), and (i) of section 844 of this title, this chapter shall not apply to:

(1) aspects of the transportation of explosive materials via railroad, water, highway, or air that pertain to safety, including security, and are regulated by the United States Department of Transportation or the Department of Homeland Security;

(2) the use of explosive materials in medicines and medicinal agents in the forms prescribed by the official United States Pharmacopeia, or the National Formulary;

(3) the transportation, shipment, receipt, or importation of explosive materials for delivery to any agency of the United States or to any State or political subdivision thereof;

(4) small arms ammunition and components thereof;

(5) commercially manufactured black powder in quantities not to exceed fifty pounds, percussion caps, safety and pyrotechnic fuses, quills, quick and slow matches, and friction primers, intended to be used solely for sporting, recreational, or cultural purposes in antique firearms as defined in section 921(a)(16) of title 18 of the United States Code, or in antique devices as exempted from the term "destructive device" in section 921(a)(4) of title 18 of the United States Code; and

(6) the manufacture under the regulation of the military department of the United States of explosive materials for, or their distribution to or storage or possession by the military or naval services or other agencies of the United States; or to arsenals, navy yards, depots, or other establishments owned by, or operated by or on behalf of, the United States.
§ 846. Additional powers of the Attorney General

(a) The Attorney General is authorized to inspect the site of any accident, or fire, in which there is reason to believe that explosive materials were involved, in order that if any such incident has been brought about by accidental means, precautions may be taken to prevent similar accidents from occurring. In order to carry out the purpose of this subsection, the Attorney General is authorized to enter into or upon any property where explosive materials have been used, are suspected of having been used, or have been found in an otherwise unauthorized location. Nothing in this chapter shall be construed as modifying or otherwise affecting in any way the investigative authority of any other Federal agency. In addition to any other investigatory authority they have with respect to violations of provisions of this, the Federal Bureau of Investigation, together with the Bureau of Alcohol, Tobacco, Firearms, and Explosives, shall have authority to conduct investigations with respect to violations of subsection (d), (e), (f), (g), (h), or (i) of section 844 of this title.

(b) The Attorney General is authorized to establish a national repository of information on incidents involving arson and the suspected criminal misuse of explosives. All Federal agencies having information concerning such incidents shall report the information to the Attorney General pursuant to such regulations as deemed necessary to carry out the provisions of this subsection. The repository shall also contain information on incidents voluntarily reported to the Attorney General by State and local authorities.


§ 847. Rules and regulations

The administration of this chapter shall be vested in the Attorney General. The Attorney General may prescribe such rules and regulations as he deems reasonably necessary to carry out the provisions of this chapter. The Attorney General shall give reasonable public notice, and afford to interested parties opportunity for hearing, prior to prescribing such rules and regulations.


§ 848. Effect on State Law

No provision of this chapter shall be construed as indicating an intent on the part of the Congress to occupy the field in which such provision operates to the exclusion of the law of any State on the same subject matter, unless there is a direct and positive conflict between such provision and the law of the State so that the two cannot be reconciled or consistently stand together.

Title 27, Code of Federal Regulations
Part 555—Commerce in Explosives

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Source: T.D. ATF—87, 46 FR 40384, Aug. 7, 1981, unless otherwise noted.

Editor's Note: There are several name changes for titles referenced in the regulations, 27 CFR Part 555. The title “Chief, Firearms and Explosives Licensing Center” has been changed to “Chief, National Explosives Licensing Center”. Also, the title “Regional director (compliance)” has been changed to “Director, Industry Operations” within the respective ATF Field Divisions. All regulations and rulings contained within this publication were current as of 1/26/07. For more recent information, please refer to the ATF website at www.atf.gov.
Subpart A—Introduction

§ 555.1 Scope of regulations.

(b) Procedural and substantive requirements. This part contains the procedural and substantive requirements relative to:

(1) The interstate or foreign commerce in explosive materials;
(2) The licensing of manufacturers and importers of, and dealers in, explosive materials;
(3) The issuance of permits;
(4) The conduct of business by licensees and operations by permittees;
(5) The storage of explosive materials;
(6) The records and reports required of licensees and permittees;
(7) Relief from disabilities under this part;
(8) Exemptions, unlawful acts, penalties, seizures, and forfeitures; and

(9) The marking of plastic explosives.


§ 555.2 Relation to other provisions of law.
The provisions in this part are in addition to, and are not in lieu of, any other provision of law, or regulations, respecting commerce in explosive materials. For regulations applicable to commerce in firearms and ammunition, see Part 478 of this chapter. For regulations applicable to traffic in machine guns, destructive devices, and certain other firearms, see Part 479 of this chapter. For statutes applicable to the registration and licensing of persons engaged in the business of manufacturing, importing or exporting arms, ammunition, or implements of war, see section 38 of the Arms Export Control Act (22 U.S.C. 2778), and regulations of Part 447 of this chapter and in Parts 121 through 128 of Title 22, Code of Federal Regulations. For statutes applicable to nonmailable materials, see 18 U.S.C. 1716 and implementing regulations. For statutes applicable to water quality standards, see 33 U.S.C. 1341.

Subpart B—Definitions

§ 555.11 Meaning of terms.
When used in this part, terms are defined as follows in this section. Words in the plural form include the singular, and vice versa, and words indicating the masculine gender include the feminine. The terms “includes” and “including” do not exclude other things not named which are in the same general class or are otherwise within the scope of the term defined.


Adjudicated as a mental defective. (a) A determination by a court, board, commission, or other lawful authority that a person, as a result of marked subnormal intelligence, or mental illness, incompetency, condition, or disease:
(1) Is a danger to himself or to others; or
(2) Lacks the mental capacity to contract or manage his own affairs.

(b) The term will include—
(1) A finding of insanity by a court in a criminal case; and
(2) Those persons found incompetent to stand trial or found not guilty by reason of lack of mental responsibility by any court or pursuant to articles 50a and 76b of the Uniform Code of Military Justice, 10 U.S.C. 850a, 876b.

Alien. Any person who is not a citizen or national of the United States.

Ammunition. Small arms ammunition or cartridge cases, primers, bullets, or smokeless propellants designed for use in small arms, including percussion caps, and 3/32 inch and other external burning pyrotechnic hobby fuses. The term does not include black powder.

Appropriate identifying information. The term means, in relation to an individual:
(a) The full name, date of birth, place of birth, sex, race, street address, State of residence, telephone numbers (home and work), country or countries of citizenship, and position at the employer’s business or operations of responsible persons and employees authorized to possess explosive materials;
(b) The business name, address, and license or permit number with which the responsible person or employee is affiliated;
(c) If an alien, INS-issued alien number or admission number; and
(d) Social security number, as optional information (this information is not required but is helpful in avoiding misidentification when a background check is conducted).

Approved storage facility. A place where explosive materials are stored, consisting of one or more approved magazines, conforming to the requirements of this part and covered by a license or permit issued under this part.
Articles pyrotechnic. Pyrotechnic devices for professional use similar to consumer fireworks in chemical composition and construction but not intended for consumer use. Such articles meeting the weight limits for consumer fireworks but not labeled as such and classified by U.S. Department of Transportation regulations in 49 CFR 172.101 as UN0431 or UN0432.

Artificial barricade. An artificial mound or revetted wall of earth of a minimum thickness of three feet, or any other approved barricade that offers equivalent protection.

ATF (a) Prior to January 24, 2003. The Bureau of Alcohol, Tobacco and Firearms, Department of the Treasury, Washington, DC.

(b) On and after January 24, 2003. The Bureau of Alcohol, Tobacco, Firearms and Explosives, Department of Justice, Washington, DC.

ATF officer. (a) Prior to January 24, 2003. An officer or employee of the Bureau of Alcohol, Tobacco and Firearms (ATF) authorized to perform any function relating to the administration or enforcement of this part.

(b) On and after January 24, 2003. An officer or employee of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) authorized to perform any function relating to the administration or enforcement of this part.

Authority having jurisdiction for fire safety. The fire department having jurisdiction over sites where explosives are manufactured or stored.

Barricaded. The effective screening of a magazine containing explosive materials from another magazine, a building, a railway, or a highway, either by a natural barricade or by an artificial barricade. To be properly barricaded, a straight line from the top of any sidewall of the magazine containing explosive materials to the eave line of any other magazine or building, or to a point 12 feet above the center of a railway or highway, will pass through the natural or artificial barricade.

Blasting agent. Any material or mixture, consisting of fuel and oxidizer, that is intended for blasting and not otherwise defined as an explosive; if the finished product, as mixed for use or shipment, cannot be detonated by means of a number 8 test blasting cap when unconfined. A number 8 test blasting cap is one containing 2 grams of a mixture of 80 percent mercury fulminate and 20 percent potassium chlorate, or a blasting cap of equivalent strength. An equivalent strength cap comprises 0.40–0.45 grams of PETN base charge pressed in an aluminum shell with bottom thickness not to exceed to 0.03 of an inch, to a specific gravity of not less than 1.4 g/cc, and primed with standard weights of primer depending on the manufacturer.

Bulk salutes. Salute components prior to final assembly into aerial shells, and finished salute shells held separately prior to being packed with other types of display fireworks.

Bullet-sensitive explosive materials. Explosive materials that can be exploded by 150-grain M2 ball ammunition having a nominal muzzle velocity of 2700 fps (824 mps) when fired from a .30 caliber rifle at a distance of 100 ft (30.5 m), measured perpendicular. The test material is at a temperature of 70 to 75 degrees F (21 to 24 degrees C) and is placed against a ½ inch (12.4 mm) steel backing plate.

Bureau. (a) Prior to January 24, 2003. The Bureau of Alcohol, Tobacco and Firearms, Department of the Treasury, Washington, DC.

(b) On and after January 24, 2003. The Bureau of Alcohol, Tobacco, Firearms and Explosives, Department of Justice, Washington, DC.

Business premises. When used with respect to a manufacturer, importer, or dealer, the property on which explosive materials are manufactured, imported, stored or distributed. The premises include the property where the records of a manufacturer, importer, or dealer are kept if different than the premises where explosive materials are manufactured, imported, stored or distributed. When used with respect to a user of explosive materials, the property on which the explosive materials are received or stored. The premises include the property where the records of the users are kept if different than the premises where explosive materials are received or stored.

Chief, Firearms and Explosives Licensing Center. The ATF official responsible for the issuance and renewal of licenses and permits under this part.

Committed to a mental institution. A formal commitment of a person to a mental institution by a court, board, commission, or other lawful authority. The term includes a commitment to a mental institution involuntarily. The term includes commitment for mental defectiveness or mental illness. It also includes commitments for other reasons, such as for drug use. The term does not include a person in a mental institution for observation or a voluntary admission to a mental institution.

Common or contract carrier. Any individual or organization engaged in the business of transporting passengers or goods.

Consumer fireworks. Any small fireworks device designed to produce visible effects by combustion and which must comply with the construction, chemical composition, and labeling regulations of the U.S. Consumer Product Safety Commission, as set forth in title 16, Code of Federal Regulations, parts 1500 and 1507. Some small devices designed to produce audible effects are included, such as whistling devices, ground devices containing 50 mg or less of explosive materials, and aerial devices containing 130 mg or less of explosive materials. Consumer fireworks are classified as fireworks UN0036, and UN0037 by the U.S. Department of Transportation at 49 CFR 172.101. This term does not include fused setpieces containing components which together exceed 50 mg of salute powder.

Controlled substance. A drug or other substance, or immediate precursor, as defined in section 102 of the Controlled Substances Act, 21 U.S.C. 802. The term includes, but is not limited to, marijuana, depressants, stimulants, and narcotic drugs. The term does not include distilled spirits, wine, malt beverages, or tobacco, as those terms are defined or used in Subtitle E of the Internal Revenue Code of 1986, as amended.
Crime punishable by imprisonment for a term exceeding one year. Any offense for which the maximum penalty, whether or not imposed, is capital punishment or imprisonment in excess of one year. The term does not include (a) any Federal or State offenses pertaining to antitrust violations, unfair trade practices, restraints of trade, or (b) any State offense (other than one involving a firearm or explosive) classified by the laws of the State as a misdemeanor and punishable by a term of imprisonment of two years or less.

Customs officer. Any officer of the Customs Service or any commissioned, warrant, or petty officer of the Coast Guard, or any agent or other person authorized to perform the duties of an officer of the Customs Service.

Dealer. Any person engaged in the business of distributing explosive materials at wholesale or retail.

Detonator. Any device containing a detonating charge that is used for initiating detonation in an explosive. The term includes, but is not limited to, electric blasting caps of instantaneous and delay types, blasting caps for use with safety fuses, detonating-cord delay connectors, and nonelectric instantaneous and delay blasting caps.

Director. (a) Prior to January 24, 2003. The Director, Bureau of Alcohol, Tobacco and Firearms, Department of the Treasury, Washington, DC. (b) On and after January 24, 2003. The Director, Bureau of Alcohol, Tobacco, Firearms and Explosives, Department of Justice, Washington, DC.

Discharged under dishonorable conditions. Separation from the U.S. Armed Forces resulting from a dishonorable discharge or dismissal adjudged by general court-martial. The term does not include any separation from the Armed Forces resulting from any other discharge, e.g., a bad conduct discharge.

Display fireworks. Large fireworks designed primarily to produce visible or audible effects by combustion, deflagration, or detonation. This term includes, but is not limited to, salutes containing more than 2 grains (130 mg) of explosive materials, aerial shells containing more than 40 grams of pyrotechnic compositions, and other display pieces which exceed the limits of explosive materials for classification as "consumer fireworks." Display fireworks are classified as fireworks UN0333, UN0334 or UN0335 by the U.S. Department of Transportation at 49 CFR 172.101. This term also includes fused setpieces containing components which together exceed 50 mg of salute powder.

Distribute. To sell, issue, give, transfer, or otherwise dispose of. The term does not include a mere change of possession from a person to his agent or employee in connection with the agency or employment.

Executed under penalties of perjury. Signed with the required declaration under the penalties of perjury as provided on or with respect to the return, form, or other document or, where no form of declaration is required, with the declaration:

"I declare under the penalties of perjury that this—[insert type of document, such as, statement, application, request, certificate], including the documents submitted in support thereof, has been examined by me and, to the best of my knowledge and belief, is true, correct, and complete."

Explosive actuated device. Any tool or special mechanized device which is actuated by explosives, but not a propellant actuated device.

Explosive materials. Explosives, blasting agents, water gels and detonators. Explosive materials include, but are not limited to, all items in the "List of Explosive Materials" provided for in §555.23.

Explosives. Any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion. The term includes, but is not limited to, dynamite and other high explosives, black powder, pellet powder, initiating explosives, detonators, safety fuses, squibs, detonating cord, igniter cord, and igniters.

Fireworks. Any composition or device designed to produce a visible or an audible effect by combustion, deflagration, or detonation, and which meets the definition of "consumer fireworks" or "display fireworks" as defined by this section.

Fireworks mixing building. Any building or area used for mixing and blending pyrotechnic compositions except wet sparkler mix.

Fireworks nonprocess building. Any office building or other building or area in a fireworks plant where no fireworks, pyrotechnic compositions or explosive materials are processed or stored.

Fireworks plant. All land and buildings thereon used for or in connection with the assembly or processing of fireworks, including warehouses used with or in connection with fireworks plant operations.

Fireworks plant warehouse. Any building or structure used exclusively for the storage of materials which are neither explosive materials nor pyrotechnic compositions used to manufacture or assemble fireworks.

Fireworks process building. Any mixing building; any building in which pyrotechnic compositions or explosive materials is pressed or otherwise prepared for finished and assembly; or any finishing or assembly building.

Fireworks shipping building. A building used for the packing of assorted display fireworks into shipping cartons for individual public displays and for the loading of packaged displays for shipment to purchasers.

Flash powder. An explosive material intended to produce an audible report and a flash of light when ignited which includes but is not limited to oxidizers such as potassium chlorate or potassium perchlorate, and fuels such as sulfur or aluminum powder.

Fugitive from justice. Any person who has fled from the jurisdiction of any court of record to avoid prosecution for any crime or to avoid giving testimony in any criminal proceeding. The term also includes any person who has been convicted of any crime and has fled to avoid imprisonment.
Hardwood. Oak, maple, ash, hickory, or other hard wood, free from loose knots, spaces, or similar defects.

Highway. Any public street, public alley, or public road, including a privately financed, constructed, or maintained road that is regularly and openly traveled by the general public.

Identification document. A document containing the name, residence address, date of birth, and photograph of the holder and which was made or issued by or under the authority of the United States Government, a State, political subdivision of a State, a foreign government, a political subdivision of a foreign government, an international governmental or an international quasi-governmental organization which, when completed with information concerning a particular individual, is of a type intended or commonly accepted for the purpose of identification of individuals.

Importer. Any person engaged in the business of importing or bringing explosive materials into the United States for purposes of sale or distribution.

Indictment. Includes an indictment or information in any court under which a crime punishable by imprisonment for a term exceeding one year may be prosecuted.

Inhabited building. Any building regularly occupied in whole or in part as a habitation for human beings, or any church, schoolhouse, railroad station, store, or other structure where people are accustomed to assemble, except any building occupied in connection with the manufacture, transportation, storage, or use of explosive materials.

Interstate or foreign commerce. Commerce between any place in a State and any place outside of that State, or within any possession of the United States or the District of Columbia, and commerce between places within the same State but through any place outside of that State.

Licensed dealer. A dealer licensed under this part.

Licensed importer. An importer licensed under this part.

Licensed manufacturer. A manufacturer licensed under this part to engage in the business of manufacturing explosive materials for purposes of sale or distribution or for his own use.

Licensee. Any importer, manufacturer, or dealer licensed under this part.

Limited permit. A permit issued to a person authorizing him to receive for his use explosive materials from a licensee or permittee in his state of residence on no more than 6 occasions during the 12-month period in which the permit is valid. A limited permit does not authorize the receipt or transportation of explosive materials in interstate or foreign commerce.

Magazine. Any building or structure, other than an explosives manufacturing building, used for storage of explosive materials.

Manufacturer. Any person engaged in the business of manufacturing explosive materials for purposes of sale or distribution or for his own use.

Mass detonation (mass explosion). Explosive materials mass detonate (mass explode) when a unit or any part of a larger quantity of explosive material explodes and causes all or a substantial part of the remaining material to detonate or explode.

Mental institution. Includes mental health facilities, mental hospitals, sanitariums, psychiatric facilities, and other facilities that provide diagnoses by licensed professionals of mental retardation or mental illness, including a psychiatric ward in a general hospital.

Natural barricade. Natural features of the ground, such as hills, or timber of sufficient density that the surrounding exposures which require protection cannot be seen from the magazine when the trees are bare of leaves.

Number 8 test blasting cap. (See definition of “blasting agent.”)

Permittee. Any user of explosives for a lawful purpose who has obtained either a user permit or a limited permit under this part.

Person. Any individual, corporation, company, association, firm, partnership, society, or joint stock company.

Plywood. Exterior, construction grade (laminated wood) plywood.

Propellant actuated device. Any tool or special mechanized device or gas generator system which is actuated by a propellant or which releases and directs work through a propellant charge.

Pyrotechnic compositions. A chemical mixture which, upon burning and without explosion, produces visible, brilliant displays, bright lights, or sounds.

Railway. Any steam, electric, or other railroad or railway which carries passengers for hire.

Region. A geographical region of the Bureau of Alcohol, Tobacco and Firearms.

Regional director (compliance). The principal regional official responsible for administering regulations in this part.

Renounced U.S. citizenship. (a) A person has renounced his U.S. citizenship if the person, having been a citizen of the United States, has renounced citizenship either—

(1) Before a diplomatic or consular officer of the United States in a foreign state pursuant to 8 U.S.C. 1481(a)(5); or

(2) Before an officer designated by the Attorney General when the United States is in a state of war pursuant to 8 U.S.C. 1481(a)(6).

(b) The term will not include any renunciation of citizenship that has been reversed as a result of administrative or judicial appeal.

Responsible person. An individual who has the power to direct the management and policies of the applicant pertaining to explosive materials. Generally, the term includes partners, sole proprietors, site managers, corporate officers and directors, and majority shareholders.
Salute. An aerial shell, classified as a display firework, that contains a charge of flash powder and is designed to produce a flash of light and a loud report as the pyrotechnic effect.

Screen barricade. Any barrier that will contain the embers and debris from a fire or deflagration in a process building, thus preventing propagation of fire to other buildings or areas. Such barriers shall be constructed of metal roofing, ¼ to ½ inch (6 to 13 mm) mesh screen, or equivalent material. The barrier extends from floor level to a height such that a straight line from the top of any side wall of the donor building to the eave line of any exposed building intercepts the screen at a point not less than 5 feet (1.5 m) from the top of the screen. The top 5 feet (1.5 m) of the screen is inclined towards the donor building at an angle of 30 to 45 degrees.

Softwood. Fir, pine, or other soft wood, free from loose knots, spaces, or similar defects.


State of residence. The State in which an individual regularly resides or maintains his home. Temporary stay in a State does not make the State of temporary stay the State of residence.

Theatrical flash powder. Flash powder commercially manufactured in premeasured kits not exceeding 1 ounce and mixed immediately prior to use and intended for use in theatrical shows, stage plays, band concerts, magic acts, thrill shows, and clown acts in circuses.

Unlawful user of or addicted to any controlled substance. A person who uses a controlled substance and has lost the power of self-control with reference to the use of a controlled substance; and any person who is a current user of a controlled substance in a manner other than as prescribed by a licensed physician. Such use is not limited to the use of drugs on a particular day, or within a matter of days or weeks before possession of the explosive materials, but rather that the unlawful use has occurred recently enough to indicate that the individual is actively engaged in such conduct. A person may be an unlawful current user of a controlled substance even though the substance is not being used at the precise time the person seeks to acquire explosive materials or receives or possesses explosive materials. An inference of current use may be drawn from evidence of a recent use or possession of a controlled substance or a pattern of use or possession that reasonably covers the present time, e.g., a conviction for use or possession of a controlled substance within the past year; multiple arrests for such offenses within the past 5 years if the most recent arrest occurred within the past year; or persons found through a drug test to use a controlled substance unlawfully, provided that the test was administered within the past year. For a current or former member of the Armed Forces, an inference of current use may be drawn from recent disciplinary or other administrative action based on confirmed drug use, e.g., court-martial conviction, nonjudicial punishment, or an administrative discharge based on drug use or drug rehabilitation failure.


User-limited permit. A user permit valid only for a single purchase transaction, a new permit being required for a subsequent purchase transaction.

User permit. A permit issued to a person authorizing him (a) to acquire for his own use explosive materials from a licensee in a State other than the State in which he resides or from a foreign country, and (b) to transport explosive materials in interstate or foreign commerce.

Water gels. Explosives or blasting agents that contain a substantial proportion of water.
§ 555.21 Forms prescribed.

(a) The Director is authorized to prescribe all forms required by this part. All of the information called for in each form shall be furnished as indicated by the headings on the form and the instructions on or pertaining to the form. In addition, information called for in each form shall be furnished as required by this part.

(b) Requests for forms should be mailed to the ATF Distribution Center, 7943 Angus Court, Springfield, Virginia 22153.


§ 555.22 Alternate methods or procedures; emergency variations from requirements.

(a) Alternate methods or procedures. The permittee or licensee, on specific approval by the Director as provided by this paragraph, may use an alternate method or procedure in lieu of a method or procedure specifically prescribed in this part. The Director may approve an alternate method or procedure, subject to stated conditions, when he finds that:

(1) Good cause is shown for the use of the alternate method or procedure;

(2) The alternate method or procedure is within the purpose of, and consistent with the effect intended by, the specifically prescribed method or procedure and that the alternate method or procedure is substantially equivalent to that specifically prescribed method or procedure; and

(3) The alternate method or procedure will not be contrary to any provision of law and will not result in an increase in cost to the Government or hinder the effective administration of this part.

Where the permittee or licensee desires to employ an alternate method or procedure, he shall submit a written application to the regional director (compliance), for transmittal to the Director. The application shall specifically describe the proposed alternate method or procedure and shall set forth the reasons for it. Alternate methods or procedures may not be employed until the application is approved by the Director. The permittee or licensee shall, during the period of authorization of an alternate method or procedure, comply with the terms of the approved application. Authorization of any alternate method or procedure may be withdrawn whenever, in the judgment of the Director, the effective administration of this part is hindered by the continuation of the authorization. As used in this paragraph, alternate methods or procedures include alternate construction or equipment.

(b) Emergency variations from requirements. The Director may approve construction, equipment, and methods of operation other than as specified in this part, where he finds that an emergency exists and the proposed variations from the specified requirements are necessary and the proposed variations:

(1) Will afford security and protection that are substantially equivalent to those prescribed in this part;

(2) Will not hinder the effective administration of this part; and

(3) Will not be contrary to any provisions of law.

Variations from requirements granted under this paragraph are conditioned on compliance with the procedures, conditions, and limitations set forth in the approval of the application. Failure to comply in good faith with the procedures, conditions, and limitations shall automatically terminate the authority for the variations and the licensee or permittee shall fully comply with the prescribed requirements of regulations from which the variations were authorized. Authority for any variation may be withdrawn whenever, in the judgment of the Director, the effective administration of this part is hindered by the continuation of the variation. Where the licensee or permittee desires to employ an emergency variation, he shall submit a written application to the regional director (compliance) for transmittal to the Director. The application shall describe the proposed variation and set forth the reasons for it. Variations may not be employed until the application is approved, except when the emergency requires immediate action to correct a situation that is threatening to life or property. Corrective action may then be taken concurrent with the filing of the application and notification of the Director via telephone.

(c) Retention of approved variations. The licensee or permittee shall retain, as part of his records available for examination by ATF officers, any application approved by the Director under this section.

§ 555.23 List of explosive materials.

The Director shall compile a list of explosive materials, which shall be published and revised at least annually in the Federal Register. The "List of Explosive Materials" (ATF Publication 5400.8) is available at no cost upon request from the ATF Distribution Center, 7943 Angus Court, Springfield, Virginia 22153.


§ 555.24 Right of entry and examination.

(a) Any ATF officer may enter during business hours the premises, including places of storage, of any licensee or holder of a user permit for the purpose of inspecting or examining any records or documents required to be kept under this part, and any facilities in which explosive materials are kept or stored.

(b) Any ATF officer may inspect the places of storage for explosive materials of an applicant for a limited permit or, in the case of a holder of a limited permit, at the time of renewal of such permit.
The provisions of paragraph (b) of this section do not apply to an applicant for the renewal of a limited permit if an ATF officer has, within the preceding 3 years, verified by inspection that the applicant's place of storage for explosive materials meets the requirements of subpart K of this part.

[ATF No. 1, 68 FR 13781, Mar. 20, 2003]

§ 555.25 Disclosure of information.

Upon receipt of written request from any State or any political subdivision of a State, the regional director (compliance) may make available to the State or political subdivision any information which the regional director (compliance) may obtain under the Act with respect to the identification of persons within the State or political subdivision, who have purchased or received explosive materials, together with a description of the explosive materials.

§ 555.26 Prohibited shipment, transportation, receipt, possession, or distribution of explosive materials.

(a) General. No person, other than a licensee or permittee knowingly may transport, ship, cause to be transported, or receive any explosive materials: Provided, That the provisions of this paragraph (a) do not apply to the lawful purchase by a nonlicensee or nonpermittee of commercially manufactured black powder in quantities not to exceed 50 pounds, if the black powder is intended to be used solely for sporting, recreational, or cultural purposes in antique firearms as defined in 18 U.S.C. 921(a)(16), or in antique devices as exempted from the term "destructive device" in 18 U.S.C. 921(a)(4).

(b) Holders of a limited permit. No person who is a holder of a limited permit may—

(1) Transport, ship, cause to be transported, or receive in interstate or foreign commerce any explosive materials;

(2) Receive explosive materials from a licensee or permittee, whose premises are located outside the State of residence of the limited permit holder; or

(3) Receive explosive materials on more than 6 separate occasions, during the period of the permit, from one or more licensees or permittees whose premises are located within the State of residence of the limited permit holder. (See §555.105(b) for the definition of "6 separate occasions.")

(c) Possession by prohibited persons. No person may ship or transport any explosive material in or affecting interstate or foreign commerce or receive or possess any explosive materials which have been shipped or transported in or affecting interstate or foreign commerce who:

(1) Is under indictment or information for, or who has been convicted in any court of, a crime punishable by imprisonment for a term exceeding one year;

(2) Is a fugitive from justice;

(3) Is an unlawful user of or addicted to any controlled substance (as defined in section 102 of the Controlled Substance Act (21 U.S.C. 802) and §555.11);

(4) Has been adjudicated as a mental defective or has been committed to a mental institution;

(5) Is an alien, other than an alien who—

(i) Is lawfully admitted for permanent residence (as that term is defined in section 101(a)(20) of the Immigration and Nationality Act (8 U.S.C. 1101)); or

(ii) Is in lawful nonimmigrant status, is a refugee admitted under section 207 of the Immigration and Nationality Act (8 U.S.C. 1157), or is in asylum status under section 208 of the Immigration and Nationality Act (8 U.S.C. 1158), and—

(A) Is a foreign law enforcement officer of a friendly foreign government, as determined by the Attorney General in consultation with the Secretary of State, entering the United States on official law enforcement business, and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of such official law enforcement business;

(B) Is a person having the power to direct or cause the direction of the management and policies of a corporation, partnership, or association licensed pursuant to section 843(a) of the Act, and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of such power;

(C) Is a member of a North Atlantic Treaty Organization (NATO) or other friendly foreign military force, as determined by the Attorney General in consultation with the Secretary of Defense, (whether or not admitted in a nonimmigrant status) who is present in the United States under military orders for training or other military purpose authorized by the United States, and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of the military purpose; or

(D) Is lawfully present in the United States in cooperation with the Director of Central Intelligence, and the shipment, transportation, receipt, or possession of the explosive materials is in furtherance of such cooperation;

(6) Has been discharged from the armed forces under dishonorable conditions; or

(7) Having been a citizen of the United States, has renounced citizenship.

(d) Distribution to prohibited persons. No person may knowingly distribute explosive materials to any individual who:

(1) Is under twenty-one years of age;

(2) Is under indictment or information for, or who has been convicted in any court of, a crime punishable by imprisonment for a term exceeding one year;

(3) Is a fugitive from justice;

(4) Is an unlawful user of or addicted to any controlled substance (as defined in section 102 of the Controlled Substance Act (21 U.S.C. 802) and §555.11);
§ 555.27 Out-of-State disposition of explosive materials.

(a) No nonlicensee or nonpermittee may distribute any explosive materials to any other nonlicensee or nonpermittee who the distributor knows or who has reasonable cause to believe does not reside in the State in which the distributor resides.

(b) The provisions of this section do not apply on and after May 24, 2003.
[ATF No. 1, 68 FR 13782, Mar. 20, 2003]

§ 555.28 Stolen explosive materials.

No person shall receive, conceal, transport, ship, store, barter, sell, or dispose of any stolen explosive materials knowing or having reasonable cause to believe that the explosive materials were stolen.

§ 555.29 Unlawful storage.

No person shall store any explosive materials in a manner not in conformity with this part.

§ 555.30 Reporting theft or loss of explosive materials.

(a) Any licensee or permittee who has knowledge of the theft or loss of any explosive materials from his stock shall, within 24 hours of discovery, report the theft or loss by telephoning 1–800–800–3855 (nationwide toll free number) and on ATF F 5400.5 (formerly Form 4712) in accordance with the instructions on the form. Theft or loss of any explosive materials shall also be reported to appropriate local authorities.

(b) Any other person, except a carrier of explosive materials, who has knowledge of the theft or loss of any explosive materials from his stock shall, within 24 hours of discovery, report the theft or loss by telephoning 1–800–800–3855 (nationwide toll free number) and in writing to the nearest ATF office. Theft or loss shall be reported to appropriate local authorities.

(c) Reports of theft or loss of explosive materials under paragraphs (a) and (b) of this section must include the following information, if known:

(1) The manufacturer or brand name.

(2) The manufacturer’s marks of identification (date and shift code).

(3) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, etc.).

(4) Description (dynamite, blasting agents, detonators, etc.) and United Nations (UN) identification number, hazard division number, and classification letter, e.g., 1.1D, as classified by the U.S. Department of Transportation at 49 CFR 172.101 and 173.52.

(5) Size (length and diameter).

(d) A carrier of explosive materials who has knowledge of the theft or loss of any explosive materials shall, within 24 hours of discovery, report the theft or loss by telephoning 1–800–800–3855 (nationwide toll free number). Theft or loss shall also be reported to appropriate local authorities. Reports of theft or loss of explosive materials by carriers shall include the following information, if known:

(1) The manufacturer or brand name.

(2) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, etc.).
§ 555.31 Inspection of site accidents or fires; right of entry.

Any ATF officer may inspect the site of any accident or fire in which there is reason to believe that explosive materials were involved. Any ATF officer may enter into or upon any property where explosive materials have been used, are suspected of having been used, or have been found in an otherwise unauthorized location.

§ 555.32 Special explosive devices.

The Director may exempt certain explosive actuated devices, explosive actuated tools, or similar devices from the requirements of this part. A person who desires to obtain an exemption under this section for any special explosive device, which as designed does not constitute a public safety or security hazard, shall submit a written request to the Director. Each request shall be executed under the penalties of perjury and contain a complete and accurate description of the device, the name and address of the manufacturer or importer, the purpose of and use for which it is intended, and any photographs, diagrams, or drawings as may be necessary to enable the Director to make a determination. The Director may require that a sample of the device be submitted for examination and evaluation. If it is not possible to submit the device, the person requesting the exemption shall advise the Director and designate the place where the device will be available for examination and evaluation.

§ 555.33 Background checks and clearances (effective May 24, 2003).

(a) Background checks.

(1) If the Director receives from a licensee or permittee the names and appropriate identifying information of responsible persons and employees who will be authorized by the employer to possess explosive materials in the course of employment with the employer, the Director will conduct a background check in accordance with this section.

(2) The Director will determine whether the responsible person or employee is one of the persons described in any paragraph of section 842(i) of the Act (see §555.26). In making such determination, the Director may take into account a letter or document issued under paragraph (a)(3) of this section.

(3)(i) If the Director determines that the responsible person or the employee is not one of the persons described in any paragraph of section 842(i) of the Act (see §555.26), the Director will notify the employer in writing or electronically of the determination and issue, to the responsible person or employee, as the case may be, a letter of clearance which confirms the determination.

(ii) If the Director determines that the responsible person or employee is one of the persons described in any paragraph of section 842(i) of the Act (see §555.26), ATF will notify the employer in writing or electronically of the determination and issue to the responsible person or the employee, as the case may be, a document that confirms the determination; explains the grounds for the determination; provides information on how the disability may be relieved; and explains how the determination may be appealed. The employer will retain the notification as part of his permanent records in accordance with §555.121. The employer will take immediate steps to remove the responsible person from his position directing the management or policies of the business or operations as they relate to explosive materials or, as the case may be, to remove the employee from a position requiring the possession of explosive materials. Also, if the employer has listed the employee as a person authorized to accept delivery of explosive materials, as specified in §555.103 or §555.105, the employer must remove the employee from such list and immediately, and in no event later than the second business day after such change, notify distributers of such change.

(b) Appeals and correction of erroneous system information—

(1) In general. A responsible person or employee may challenge the adverse determination set out in the letter of denial, in writing and within 45 days of issuance of the determination, by directing his or her challenge to the basis for the adverse determination, or to the accuracy of the record upon which the adverse determination is based, to the Director. The appeal request must include appropriate documentation or record(s) establishing the legal and/or factual basis for the challenge. Any record or document of a court or other government entity or official furnished in support of an appeal must be certified by the court or other government entity or official as a true copy. In the case of an employee, or responsible person who did not submit fingerprints, such appeal must be accompanied by two properly completed FBI Forms FD-258 (fingerprint card). The Director will advise the individual in writing of his decision and the reasons for the decision.

(2) Employees. The letter of denial, among other things, will advise an employee who elects to challenge an adverse determination to submit the fingerprint cards as described above. The employee also will be advised of the agency name and address that originated the record containing the information causing the adverse determination ("originating agency"). At that time, and where appropriate, an employee is encouraged to apply to the originating agency to challenge the accuracy of the record(s) upon which the denial is based. The originating agency may respond to the individual's application by addressing the individual's specific reasons for the challenge, and by indicating
whether additional information or documents are required. If the
record is corrected as a result of the application to the originating
agency, the individual may so notify ATF which will, in turn,
verify the record correction with the originating agency and take
all necessary steps to contact the agency responsible for the
record system and correct the record. The employee may provide
to ATF additional and appropriate documentation or record(s)
establishing the legal and/or factual basis for the challenge to
ATF’s decision to uphold the initial denial. If ATF does not
receive such additional documentation or record(s) within 45 days
of the date of the decision upholding the initial denial, ATF will
close the appeal.

(3) Responsible persons. The letter of denial, among other
things, will advise a responsible person of the agency name and
address which originated the record containing the information
causing the adverse determination (“originating agency”). A
responsible person who elects to challenge the adverse determi-
ation, where appropriate, is encouraged to apply to the originating
agency to challenge the accuracy of the record(s) upon which the
denial is based. The originating agency may respond to the
individual’s application by addressing the individual’s specific
reasons for the challenge, and by indicating whether additional
information or documents are required. If the record is corrected
as a result of the application to the originating agency, the
individual may so notify ATF which will, in turn, verify the
record correction with the originating agency and take all
necessary steps to contact the agency responsible for the record
system and correct the record. A responsible person may provide
additional documentation or records as specified for employees in
paragraph (b)(2) of this section.

(Approved by the Office of Management and Budget under
control number 1140–0081)
[ATF No. 1, 68 FR 13783, Mar. 20, 2003]

§ 555.34 Replacement of stolen or lost ATF Form
5400.30 (Intrastate Purchase of Explosives
Coupon (IPEC)).

When any Form 5400.30 is stolen, lost, or destroyed, the person
losing possession will, upon discovery of the theft, loss, or
destruction, immediately, but in all cases before 24 hours have
elapsed since discovery, report the matter to the Director by
telephoning 1–888–ATF-BOMB (nationwide toll free number).
The report will explain in detail the circumstances of the theft,
loss, or destruction and will include all known facts that may
serve to identify the document. Upon receipt of the report, the
Director will make such investigation as appears appropriate and
may issue a duplicate document upon such conditions as the
circumstances warrant.

(Approved by the Office of Management and Budget under
control number 1140–0077)
[ATF No. 1, 68 FR 13783, Mar. 20, 2003]

Subpart D—Licenses and Permits

§ 555.41 General.

(a) Licenses and permits issued prior to May 24, 2003.

(1) Each person intending to engage in business as an
importer or manufacturer of, or a dealer in, explosive materials,
including black powder, must, before commencing business,
obtain the license required by this subpart for the business to be
operated. Each person who intends to acquire for use explosive
materials from a licensee in a State other than the State in which
he resides, or from a foreign country, or who intends to transport
explosive materials in interstate or foreign commerce, must
obtain a permit under this subpart; except that it is not necessary
to obtain a permit if the user intends to lawfully purchase:

(I) Explosive materials from a licensee in a State
contiguous to the user’s State of residence and the user’s State of
residence has enacted legislation, currently in force, specifically
authorizing a resident of that State to purchase explosive materi-
als in a contiguous State; or

(II) Commercially manufactured black powder in
quantities not to exceed 50 pounds, intended to be used solely for
sporting, recreational, or cultural purposes in antique firearms or
antique devices.

(2) Each person intending to engage in business as an
explosive materials importer, manufacturer, or dealer must file an
application, with the required fee (see §555.42), with ATF in
accordance with the instructions on the form (see §555.45). A
license will, subject to law, entitle the licensee to transport, ship,
and receive explosive materials in interstate or foreign commerce,
and to engage in the business specified by the license, at the
location described on the license. A separate license must be
obtained for each business premises at which the applicant is to
manufacture, import, or distribute explosive materials except
under the following circumstances:

(i) A separate license will not be required for storage
facilities operated by the licensee as an integral part of one
business premises or to cover a location used by the licensee
solely for maintaining the records required by this part.

(ii) A separate license will not be required of a
licensed manufacturer with respect to his on-site manufacturing.

(iii) It will not be necessary for a licensed importer or
licensed manufacturer (for purposes of sale or distribution) to
also obtain a dealer’s license in order to engage in business on his
licensed premises as a dealer in explosive materials.

(iv) A separate license will not be required of licensed
manufacturers with respect to their on-site manufacture of
theatrical flash powder.

(3) Except as provided in paragraph (a)(1) of this section,
each person intending to acquire explosive materials from a
licensee in a State other than a State in which he resides, or from
a foreign country, or who intends to transport explosive materials

in interstate or foreign commerce, must file an application, with
the required fee (see §555.43), with ATF in accordance with the
instructions on the form (see §555.45). A permit will, subject to
law, entitle the permittee to acquire, transport, ship, and receive
in interstate or foreign commerce explosive materials. Only one
permit is required under this part.

(b) Licenses and permits issued on and after May 24, 2003—

(1) In general.

(i) Each person intending to engage in business as an
importer or manufacturer of, or a dealer in, explosive materials,
including black powder, must, before commencing business,
obtain the license required by this subpart for the business to be
operated.

(ii) Each person who intends to acquire for use
explosive materials within the State in which he resides on no
more than 6 separate occasions during the 12-month period in
which the permit is valid must obtain a limited permit under this
subpart. (See §555.105(b) for definition of “6 separate occa-
sions.”)

(iii) Each person who intends to acquire for use
explosive materials from a licensee or permittee in a State other
than the State in which he resides, or from a foreign country, or
who intends to transport explosive materials in interstate or
foreign commerce, or who intends to acquire for use explosive
materials within the State in which he resides on more than 6
separate occasions during a 12-month period, must obtain a user
permit under this subpart.

(iv) It is not necessary to obtain a permit if the user
intends only to lawfully purchase commercially manufactured
black powder in quantities not to exceed 50 pounds, intended to
be used solely for sporting, recreational, or cultural purposes in
antique firearms or in antique devices.

(2) Importers, manufacturers, and dealers. Each person
intending to engage in business as an explosive materials
importer, manufacturer, or dealer must file an application, with
the required fee (see §555.42), with ATF in accordance with the
instructions on the form (see §555.45). A license will, subject to
law, entitle the licensee to transport, ship, and receive explosive
materials in interstate or foreign commerce, and to engage in the
business specified by the license, at the location described on the
license. A separate license must be obtained for each business
premises at which the applicant is to manufacture, import, or
distribute explosive materials except under the following circum-
cstances:

(i) A separate license will not be required for storage
facilities operated by the licensee as an integral part of one
business premises or to cover a location used by the licensee
solely for maintaining the records required by this part.

(ii) A separate license will not be required of a
licensed manufacturer with respect to his on-site manufacturing.

(iii) It will not be necessary for a licensed importer or
a licensed manufacturer (for purposes of sale or distribution) to,
also obtain a dealer’s license in order to engage in business on it.
licensed premises as a dealer in explosive materials. No licensees
will be required to obtain a user permit to lawfully transport, ship,
or receive explosive materials in interstate or foreign commerce.

(iv) A separate license will not be required of licensed
manufacturers with respect to their on-site manufacture of
theatrical flash powder.

(3) Users of explosive materials.

(i) A limited permit will, subject to law, entitle the
holder of such permit to receive for his use explosive materials
from a licensee or permittee in his state of residence on no more
than 6 separate occasions during the 12-month period in which
the permit is valid. A limited permit does not authorize the receipt
or transportation of explosive materials in interstate or foreign
commerce. Holders of limited permits who need to receive
explosive materials on more than 6 separate occasions during a
12-month period must obtain a user permit in accordance with
this subpart.

(ii) Each person intending to acquire explosive
materials from a licensee in a State other than a State in which he
resides, or from a foreign country, or who intends to transport
explosive materials in interstate or foreign commerce, must file
an application for a user permit, with the required fee (see
§555.43), with ATF in accordance with the instructions on the
form (see §555.45). A user permit will, subject to law, entitle the
permittee to transport, ship, and receive in interstate or foreign
commerce explosive materials. Only one user permit per person is
required under this part, irrespective of the number of locations
relating to explosive materials operated by the holder of the user
permit.

(Approved by the Office of Management and Budget under
control number 1140–0083)
[ATF No. 1, 68 FR 13783, Mar. 20, 2003, as amended by ATF 5F, 70 FR 30533,
May 27, 2005]

§ 555.42 License fees.

(a) Each applicant shall pay a fee for obtaining a three year
license, a separate fee being required for each business premises,
as follows:

(1) Manufacturer—$200.

(2) Importer—$200.

(3) Dealer—$200.

(b) Each applicant for a renewal of a license shall pay a fee for a
three year license as follows:

(1) Manufacturer—$100.

(2) Importer—$100.

(3) Dealer—$100.

[TD. ATF–400, 63 FR 45002, Aug. 24, 1998]
§ 555.43 Permit fees.

(a) Each applicant must pay a fee for obtaining a permit as follows:

(1) User—$100 for a three-year period.
(2) User-limited (nonrenewable)—$75.
(3) Limited—$25 for a one-year period.

(b) (1) Each applicant for renewal of a user permit must pay a fee of $50 for a three-year period.
(2) Each applicant for renewal of a limited permit must pay a fee of $12 for a one-year period.

[ATF No. 1, 68 FR 13785, Mar. 20, 2003]

§ 555.44 License or permit fee not refundable.

No refund of any part of the amount paid as a license or permit fee will be made where the operations of the licensee or permittee are, for any reason, discontinued during the period of an issued license or permit. However, the license or permit fee submitted with an application for a license or permit will be refunded if that application is denied, withdrawn, or abandoned, or if a license is cancelled subsequent to having been issued through administrative error.

§ 555.45 Original license or permit.

(a) Licenses issued prior to May 24, 2003. Any person who intends to engage in business as an explosive materials importer, manufacturer, or dealer, or who has not timely submitted application for renewal of a previous license issued under this part, shall file with ATF an application for License, Explosives, ATF F 5400.13 with ATF in accordance with the instructions on the form. The application must be executed under the penalties of perjury and the penalties imposed by 18 U.S.C. 844(a). The application is to be accompanied by the appropriate fee in the form of a money order or check made payable to the Bureau of Alcohol, Tobacco and Firearms. ATF F 5400.16 and ATF F 5400.21 may be obtained from any ATF office. The Chief, Firearms and Explosives Licensing Center, will not approve an application postmarked on or after March 20, 2003, unless it is submitted with a Responsible Person Questionnaire, ATF Form 5400.28. Form 5400.28 must be completed in accordance with the instructions on the form.

(b) Permits issued prior to May 24, 2003. Any person, except as provided in §555.41(a), who intends to acquire explosive materials from a licensee in a state other than the State in which that person resides, or from a foreign country, or who intends to transport explosive materials in interstate or foreign commerce, or who has not timely submitted application for renewal of a previous permit issued under this part, shall file an application for Permit, Explosives, ATF F 5400.16 or Permit, User Limited Special Fireworks, ATF F 5400.21 with ATF in accordance with the instructions on the form. The application must be executed under the penalties of perjury and the penalties imposed by 18 U.S.C. 844(a). The application is to be accompanied by the appropriate fee in the form of a money order or check made payable to the Bureau of Alcohol, Tobacco, Firearms and Explosives.

(c) Licenses and permits issued on and after May 24, 2003—

(1) License. Any person who intends to engage in the business as an importer of, manufacturer of, or dealer in explosive materials, or who has not timely submitted an application for renewal of a previous license issued under this part, must file an application for License, Explosives, ATF F 5400.13, with ATF in accordance with the instructions on the form. ATF Form 5400.13 may be obtained by contacting any ATF office. The application must:

(i) Be executed under the penalties of perjury and the penalties imposed by 18 U.S.C. 844(a);
(ii) Include appropriate identifying information concerning each responsible person;
(iii) Include a photograph and fingerprints for each responsible person;
(iv) Include the names of and appropriate identifying information regarding all employees who will be authorized by the applicant to possess explosive materials by submitting ATF F 5400.28 for each employee; and
(v) Include the appropriate fee in the form of money order or check made payable to the Bureau of Alcohol, Tobacco, Firearms and Explosives.

(2) User permit and limited permit. Except as provided in §555.41(b)(1)(iv), any person who intends to acquire explosive materials in the State in which that person resides or acquire explosive materials from a licensee or holder of a user permit in a State other than the State in which that person resides, or from a foreign country, or who intends to transport explosive materials in interstate or foreign commerce, or who has not timely submitted an application for renewal of a previous permit issued under this part, must file an application for Permit, Explosives, ATF F 5400.16 or Permit, User Limited Display Fireworks, ATF F 5400.21 with ATF in accordance with the instructions on the form. ATF Form 5400.16 and ATF Form 5400.21 may be obtained by contacting any ATF office. The application must:

(i) Be executed under the penalties of perjury and the penalties imposed by 18 U.S.C. 844(a);
(ii) Include a photograph, fingerprints, and appropriate identifying information for each responsible person;
(iii) Include the names of and appropriate identifying information regarding all employees who will be authorized by the applicant to possess explosive materials by submitting ATF F 5400.28 for each employee; and
§ 555.46 Renewal of license or permit.

(a) If a licensee or permittee intends to continue the business or operation described on a license or permit issued under this part after the expiration date of the license or permit, he shall, unless otherwise notified in writing by the Chief, Firearms and Explosives Licensing Center, execute and file prior to the expiration of his license or permit an application for license renewal, ATF F 5400.14 (Part III), or an application for permit renewal, ATF F 5400.15 (Part III), accompanied by the required fee, with ATF in accordance with the instructions on the form. In the event the licensee or permittee does not timely file a renewal application, he shall file an original application as required by §555.45, and obtain the required license or permit in order to continue business or operations.

(b) A user-limited permit is not renewable and is valid for a single purchase transaction. Applications for all user-limited permits must be filed on ATF F 5400.16 or ATF F 5400.21, as required by §555.45.

§ 555.47 Insufficient fee.

If an application is filed with an insufficient fee, the application and fee submitted will be returned to the applicant.

§ 555.48 Abandoned application.

Upon receipt of an incomplete or improperly executed application, the applicant will be notified of the deficiency in the application. If the application is not corrected and returned within 30 days following the date of notification, the application will be considered as having been abandoned and the license or permit fee returned.

§ 555.49 Issuance of license or permit.

(a) Issuance of license or permit prior to May 24, 2003. (1) The Chief, Firearms and Explosives Licensing Center, will issue a license or permit if—

(i) A properly executed application for the license or permit is received; and

(ii) Through further inquiry or investigation, or otherwise, it is found that the applicant is entitled to the license or permit.

(2) The Chief, Firearms and Explosives Licensing Center, will approve a properly executed application for a license or permit, if:

(i) The applicant is 21 years of age or over;

(ii) The applicant (including, in the case of a corporation, partnership, or association, any individual possessing, directly or indirectly, the power to direct or cause the direction of the management and policies of the corporation, partnership, or association) is not a person to whom distribution of explosive materials is prohibited under the Act;

(iii) The applicant has not willfully violated any provisions of the Act or this part;

(iv) The applicant has not knowingly withheld information or has not made any false or fictitious statement intended or likely to deceive, in connection with his application;

(v) The applicant has in a State, premises from which he conducts business or operations subject to license or permit under the Act or from which he intends to conduct business or operations;

(vi) The applicant has storage for the class (as described in §555.202) of explosive materials described on the application, unless he establishes to the satisfaction of the Chief, Firearms and Explosives Licensing Center, that the business or operations to be conducted will not require the storage of explosive materials;

(vii) The applicant has certified in writing that he is familiar with and understands all published State laws and local ordinances relating to explosive materials for the location in which he intends to do business; and

(viii) The applicant for a license has submitted the certificate required by section 21 of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1341).

(3) The Chief, Firearms and Explosives Licensing Center, will approve or the regional director (compliance) will deny any application for a license or permit within the 45-day period beginning on the date a properly executed application was received. However, when an applicant for license or permit renewal is a person who is, under the provisions of §§555.83 or §§555.142, conducting business or operations under a previously issued license or permit, action regarding the application will be held in abeyance pending the completion of the proceedings against the
applicant's existing license or permit, or renewal application, or
final action by the Director on an application for relief submitted
under §§555.142, as the case may be.

(4) The license or permit and one copy will be forwarded to
the applicant, except that in the case of a user-limited permit, the
original only will be issued.

(5) Each license or permit will bear a serial number and this
number may be assigned to the licensee or permittee to whom
issued for as long as he maintains continuity of renewal in the
same region.

(b) Issuance of license or permit on and after May 24, 2003.

(1) The Chief, Firearms and Explosives Licensing Center,
will issue a license or permit if:

(i) A properly executed application for the license or
permit is received; and

(ii) Through further inquiry or investigation, or
otherwise, it is found that the applicant is entitled to the license or
permit.

(2) The Chief, Firearms and Explosives Licensing Center,
will approve a properly executed application for a license or
permit, if:

(i) The applicant (or, if the applicant is a corporation,
partnership, or association, each responsible person with respect
to the applicant) is not a person described in any paragraph of
section 842(i) of the Act;

(ii) The applicant has not willfully violated any
provisions of the Act or this part;

(iii) The applicant has not knowingly withheld
information or has not made any false or fictitious statement
intended or likely to deceive, in connection with his application;

(iv) The applicant has in a State, premises from which
he conducts business or operations subject to license or permit
under the Act or from which he intends to conduct business or
operations;

(v) The applicant has storage for the class (as
described in §555.202) of explosive materials described on the
application;

(vi) The applicant has certified in writing that he is
familiar with and understands all published State laws and local
ordinances relating to explosive materials for the location in
which he intends to do business;

(vii) The applicant for a license has submitted the
certificate required by section 21 of the Federal Water Pollution
Control Act, as amended (33 U.S.C. 1341);

(viii) None of the employees of the applicant who will
be authorized by the applicant to possess explosive materials is a
person described in any paragraph of section 842(i) of the Act; and

(ix) In the case of an applicant for a limited permit, the
applicant has certified in writing that the applicant will not
receive explosive materials on more than 6 separate occasions
during the 12-month period for which the limited permit is valid.

(3) The Chief, Firearms and Explosives Licensing Center,
will approve or the regional director (compliance) will deny any
application for a license or permit within the 90-day period
beginning on the date a properly executed application was
received. However, when an applicant for license or permit
renewal is a person who is, under the provisions of §§555.83 or
§§555.142, conducting business or operations under a previously
issued license or permit, action regarding the application will be
held in abeyance pending the completion of the proceedings
against the applicant's existing license or permit, or renewal
application, or final action by the Director on an application for
relief submitted under §555.142, as the case may be.

(4) The license or permit and one copy will be forwarded to
the applicant, except that in the case of a user-limited permit, the
original only will be issued.

(5) Each license or permit will bear a serial number and
this number may be assigned to the licensee or permittee to
whom issued for as long as he maintains continuity of renewal in the
same region.

(Approved by the Office of Management and Budget under
control number 1140–0082)
[68 FR 13785, Mar. 20, 2003]

§ 555.50 Correction of error on license or permit.

(a) Upon receipt of a license or permit issued under this part,
each licensee or permittee shall examine the license or permit to
insure that the information on it is accurate. If the license or
permit is incorrect, the licensee or permittee shall return the
license or permit to the Chief, Firearms and Explosives Licensing
Center, with a statement showing the nature of the error. The
Chief, Firearms and Explosives Licensing Center, shall correct
the error, if the error was made in his office, and return the
license or permit. However, if the error resulted from information
contained in the licensee's or permittee's application for the
license or permit, the Chief, Firearms and Explosives Licensing
Center, shall require the licensee or permittee to file an amended
application setting forth the correct information and a statement
explaining the error contained in the application. Upon receipt of
the amended application and a satisfactory explanation of the
error, the Chief, Firearms and Explosives Licensing Center, shall
make the correction on the license or permit and return it to the
licensee or permittee.

(b) When the Chief, Firearms and Explosives Licensing Center,
finds through any means other than notice from the licensee or
permittee that an incorrect license or permit has been issued, (1)
the Chief, Firearms and Explosives Licensing Center, may require
the holder of the incorrect license or permit to return the license
or permit for correction, and (2) if the error resulted from
information contained in the licensee's or permittee's application
for the license or permit, the Chief, Firearms and Explosives
Licensing Center, shall require the licensee or permittee to file an
amended application setting forth the correct information, and a

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statement satisfactorily explaining the error contained in the application. The Chief, Firearms and Explosives Licensing Center, then shall make the correction on the license or permit and return it to the licensee or permittee.


§ 555.51 Duration of license or permit.

(a) Prior to May 24, 2003. An original license or permit is issued for a period of three years. A renewal license or permit is issued for a period of three years. However, a user-limited permit is valid only for a single purchase transaction.

(b) On and after May 24, 2003.

(1) An original license or user permit is issued for a period of three years. A renewal license or user permit is also issued for a period of three years. However, a user-limited permit is valid only for a single purchase transaction.

(2) A limited permit is issued for a period of one year. A renewal limited permit is also issued for a period of one year.

[ATF No. 1, 68 FR 13786, Mar. 20, 2003]

§ 555.52 Limitations on license or permit.

(a) The license covers the business of explosive materials specified in the license at the licensee’s business premises (see §555.41(b)).

(b) The permit is valid with respect to the type of operations of explosive materials specified in the permit.


§ 555.53 License and permit not transferable.

Licenses and permits issued under this part are not transferable to another person. In the event of the lease, sale, or other transfer of the business or operations covered by the license or permit, the successor must obtain the license or permit required by this part before commencing business or operations. However, for rules on right of succession, see §555.59.

§ 555.54 Change of address.

(a) During the term of a license or permit, a licensee or permittee may move his business or operations to a new address at which he intends to regularly carry on his business or operations, without procuring a new license or permit. However, in every case, the licensee or permittee shall—

(1) Give notification of the new location of the business or operations to the Chief, Firearms and Explosives Licensing Center at least 10 days before the move; and

(2) Submit the license or permit to the Chief, Firearms and Explosives Licensing Center. The Chief, Firearms and Explosives Licensing Center will issue an amended license or permit, which will contain the new address (and new license or permit number, if any).

(b) Licensees and permittees whose mailing address will change must notify the Chief, Firearms and Explosives Licensing Center at least 10 days before the change.

(Paragraph (b) approved by the Office of Management and Budget under control number 1140–0080)


§ 555.56 Change in trade name.

A licensee or permittee continuing to conduct business or operations at the location shown on his license or permit is not required to obtain a new license or permit by reason of a mere change in trade name under which he conducts his business or operations. However, the licensee or permittee shall furnish his license or permit and any copies furnished with the license or permit for endorsement of the change to the Chief, Firearms and Explosives Licensing Center, within 30 days from the date the licensee or permittee begins his business or operations under the new trade name.


§ 555.57 Change of control, change in responsible persons, and change of employees.

(a) In the case of a corporation or association holding a license or permit under this part, if actual or legal control of the corporation or association changes, directly or indirectly, whether by reason of change in stock ownership or control (in the corporation holding a license or permit or in any other corporation), by operation of law, or in any other manner, the licensee or permittee shall, within 30 days of the change, give written notification executed under the penalties of perjury, to the Chief, Firearms and Explosives Licensing Center. Upon expiration of the license or permit, the corporation or association shall file an ATF F 5400.13 or an ATF F 5400.16 as required by §555.45, and pay the fee prescribed in §555.42(b) or §555.43(b).

(b) For all licenses or permits issued on and after May 24, 2003, each person holding the license or permit must report to the Chief, Firearms and Explosives Licensing Center, any change in responsible persons or employees authorized to possess explosive materials. Such report must be submitted within 30 days of the change and must include appropriate identifying information for each responsible person. Reports relating to newly hired employees authorized to possess explosive materials must be submitted on ATF F 5400.28 for each employee.

(c) Upon receipt of a report, the Chief, Firearms and Explosives Licensing Center, will conduct a background check, if appropriate, in accordance with §555.33.

(d) The reports required by paragraph (b) of this section must be retained as part of a licensee’s or permittee's permanent records, for the period specified in §555.121.
§ 555.58 Continuing partnerships.
Where, under the laws of the particular State, the partnership is not terminated on death or insolvency of a partner, but continues until the winding up of the partnership affairs is completed, and the surviving partner has the exclusive right to the control and possession of the partnership assets for the purpose of liquidation and settlement, the surviving partner may continue to conduct the business or operations under the license or permit of the partnership. If the surviving partner acquires the business or operations on completion of settlement of the partnership, he shall obtain a license or permit in his own name from the date of acquisition, as provided in §555.45. The rule set forth in this section will also apply where there is more than one surviving partner.

§ 555.59 Right of succession by certain persons.
(a) Certain persons other than the licensee or permittee may secure the right to carry on the same explosive materials business or operations at the same business premises for the remainder of the term of license or permit. These persons are:
   (1) The surviving spouse or child, or executor, administrator, or other legal representative of a deceased licensee or permittee; and
   (2) A receiver or trustee in bankruptcy, or an assignee for benefit of creditors.
(b) In order to secure the right of succession, the person or persons continuing the business or operations shall submit the license or permit and all copies furnished with the license or permit for endorsement of the succession to the Chief, Firearms and Explosives Licensing Center, within 30 days from the date on which the successor begins to carry on the business or operations. [T.D. ATF—87, 46 FR 40384, Aug. 7, 1981, as amended by T.D. ATF—290, 54 FR 53054, Dec. 27, 1989]

§ 555.60 Certain continuances of business or operations.
A licensee or permittee who furnishes his license or permit to the Chief, Firearms and Explosives Licensing Center, for correction, amendment, or endorsement, as provided in this subpart, may continue his business or operations while awaiting its return. [T.D. ATF—87, 46 FR 40384, Aug. 7, 1981, as amended by T.D. ATF—290, 54 FR 53054, Dec. 27, 1989]

§ 555.61 Discontinuance of business or operations.
Where an explosive materials business or operations is either discontinued or succeeded by a new owner, the owner of the business or operations discontinued or succeeded shall, within 30 days, furnish notification of the discontinuance or succession and submit his license or permit and any copies furnished with the license or permit to the Chief, Firearms and Explosives Licensing Center. (See also §555.128.) [T.D. ATF—87, 46 FR 40384, Aug. 7, 1981, as amended by T.D. ATF—290, 54 FR 53054, Dec. 27, 1989]

§ 555.62 State or other law.
A license or permit issued under this part confers no right or privilege to conduct business or operations, including storage, contrary to State or other law. The holder of a license or permit issued under this part is not, by reason of the rights and privileges granted by that license or permit, immune from punishment for conducting an explosive materials business or operations in violation of the provisions of any State or other law. Similarly, compliance with the provisions of any State or other law affords no immunity under Federal law or regulations.

§ 555.63 Explosives magazine changes.
(a) General.
   (1) The requirements of this section are applicable to magazines used for other than temporary (under 24 hours) storage of explosives.
   (2) A magazine is considered suitable for the storage of explosives if the construction requirements of this part are met during the time explosives are stored in the magazine.
   (3) A magazine is considered suitable for the storage of explosives if positioned in accordance with the applicable table of distances as specified in this part during the time explosives are stored in the magazine.
   (4) For the purposes of this section, notification of the regional director (compliance) may be by telephone or in writing. However, if notification of the regional director (compliance) is in writing it must be at least three business days in advance of making changes in construction to an existing magazine or constructing a new magazine, and at least five business days in advance of using any reconstructed magazine or added magazine for the storage of explosives.
(b) Exception. Mobile or portable type 5 magazines are exempt from the requirements of paragraphs (c) and (d) of this section, but must otherwise be in compliance with paragraphs (a) (2) and (3) of this section during the time explosives are stored in such magazines.
(c) Changes in magazine construction. A licensee or permittee who intends to make changes in construction of an existing magazine shall notify the regional director (compliance) describing the proposed changes prior to making any changes. Unless otherwise advised by the regional director (compliance), changes in construction may commence after explosives are removed from the magazine. Explosives may not be stored in a reconstructed magazine before the regional director (compliance) has been notified in accordance with paragraph (a)(4) of this section that the changes have been completed.
Subpart E—License and Permit Proceedings

§ 555.71 Opportunity for compliance.

Except in cases of willfulness or those in which the public interest requires otherwise, and the regional director (compliance) so alleges in the notice of denial of an application or revocation of a license or permit, no license or permit will be revoked or renewal application denied without first calling to the attention of the licensee or permittee the reasons for the contemplated action and affording him an opportunity to demonstrate or achieve compliance with all lawful requirements and to submit facts, arguments, or proposals of adjustment. The notice of contemplated action, ATF F 5400.12, will afford the licensee or permittee 15 days from the date of receipt of the notice to respond. If no response is received within the 15 days, or if after consideration of relevant matters presented by the licensee or permittee, the regional director (compliance) finds that the licensee or permittee is not likely to abide by the law and regulations, he will proceed as provided in §555.74.


§ 555.72 Denial of initial application.

Whenever the regional director (compliance) has reason to believe that an applicant for an original license or permit is not eligible to receive a license or permit under the provisions of §555.49, he shall issue a notice of denial on ATF F 5400.11. The notice will set forth the matters of fact and law relied upon in determining that the application should be denied, and will afford the applicant 15 days from the date of receipt of the notice in which to request a hearing to review the denial. If no request for a hearing is filed within that time, a copy of the application, marked “Disapproved”, will be returned to the applicant.

§ 555.73 Hearing after initial application is denied.

If the applicant for an original license or permit desires a hearing, he shall file a request with the regional director (compliance) within 15 days after receipt of the notice of denial. The request should include a statement of the reasons for a hearing. On receipt of the request, the regional director (compliance) shall refer the matter to an administrative law judge who shall set a time and place (see §555.77) for a hearing and shall serve notice of the hearing upon the applicant and the regional director (compliance) at least 10 days in advance of the hearing date. The hearing will be conducted in accordance with the hearing procedures prescribed in part 71 of this chapter (see §555.82).

Within a reasonable time after the conclusion of the hearing, and as expeditiously as possible, the administrative law judge shall render his recommended decision. He shall certify to the complete record of the proceedings before him and shall immediately forward the complete certified record, together with four copies of his recommended decision, to the regional director (compliance) for decision.

§ 555.74 Denial of renewal application or revocation of license or permit.

If following the opportunity for compliance under §555.71, or without opportunity for compliance under §555.71, as circumstances warrant, the regional director (compliance) finds that the licensee or permittee is not likely to comply with the law or regulations or is otherwise not eligible to continue operations authorized under his license or permit, the regional director (compliance) shall issue a notice of denial of the renewal application or revocation of the license or permit, ATF F 5400.11 or ATF F 5400.10, as appropriate. In either case, the notice will set forth the matters of fact constituting the violations specified, dates, places, and the sections of law and regulations violated. The notice will, in the case of revocation of a license or permit, specify the date on which the action is effective, which date will be on or after the date the notice is served on the licensee or permittee. The notice will also advise the licensee or permittee that he may, within 15 days after receipt of the notice, request a hearing and, if applicable, a stay of the effective date of the revocation of his license or permit.

§ 555.75 Hearing after denial of renewal application or revocation of license or permit.

If a licensee or permittee whose renewal application has been denied or whose license or permit has been revoked desires a hearing, he shall file a request for a hearing with the regional director (compliance). In the case of the revocation of a license or permit, he may include a request for a stay of the effective date of the revocation. On receipt of the request the regional director (compliance) shall advise the licensee or permittee whether the stay of the effective date of the revocation is granted. If the stay of the effective date of the revocation is granted, the regional director (compliance) shall refer the matter to an administrative law judge who shall set a time and place (see §555.77) for a hearing and shall serve notice of the hearing upon the licensee or...
permittee and the regional director (compliance) at least 10 days in advance of the hearing date. If the stay of the effective date of the revocation is denied, the licensee or permittee may request an immediate hearing. In this event, the regional director (compliance) shall immediately refer the matter to an administrative law judge who shall set a date and place for a hearing, which date shall be no later than 10 days from the date the licensee or permittee requested an immediate hearing. The hearing will be held in accordance with the applicable provisions of part 71 of this chapter. Within a reasonable time after the conclusion of the hearing, and as expeditiously as possible, the administrative law judge shall render his decision. He shall certify to the complete record of the proceeding before him and shall immediately forward the complete certified record, together with two copies of his decision, to the regional director (compliance), serve one copy of his decision on the licensee or permittee or his counsel, and transmit a copy to the attorney for the Government.

§ 555.76 Action by regional director (compliance).

(a) Initial application proceedings. If, upon receipt of the record and the recommended decision of the administrative law judge, the regional director (compliance) decides that the license or permit should be issued, the regional director (compliance) shall cause the application to be approved, briefly stating, for the record, his reasons. If he contemplates that the denial should stand, he shall serve a copy of the administrative law judge's recommended decision on the applicant, informing the applicant of his contemplated action and affording the applicant not more than 10 days in which to submit proposed findings and conclusions or exceptions to the recommended decision with supporting reasons. If the regional director (compliance), after consideration of the record of the hearing and of any proposed findings, conclusions, or exceptions filed with him by the applicant, approves the findings, conclusions and recommended decision of the administrative law judge, the regional director (compliance) shall cause the license or permit to be issued or disapproved the application accordingly. If he disapproves the findings, conclusions, and recommendation of the administrative law judge, in whole or in part, he shall by order make such findings and conclusions as in his opinion are warranted by the law and the facts in the record. Any decision of the regional director (compliance) ordering the disapproval of an initial application for a license or permit shall state the findings and conclusions upon which it is based, including his ruling upon each proposed finding, conclusion, and exception to the administrative law judge's recommended decision, together with a statement of his findings and conclusions, and reasons or basis for his findings and conclusions, upon all material issues of fact, law or discretion presented on the record. A signed duplicate original of the decision will be served upon the applicant and the original copy containing certificate of service will be placed in the official record of the proceedings. If the decision of the regional director (compliance) is in favor of the applicant, he shall issue the license or permit, to be effective on issuance.

(b) Renewal application and revocation proceedings. Upon receipt of the complete certified records of the hearing, the regional director (compliance) shall enter an order confirming the revocation of the license or permit, or disapproving the application, in accordance with the administrative law judge's findings and decision, unless he disagrees with the findings and decision. A signed duplicate original of the order, ATF F 5400.9, will be served upon the licensee or permittee and the original copy containing certificate of service will be placed in the official record of the proceedings. If the regional director (compliance) disagrees with the findings and decision of the administrative law judge, he shall file a petition with the Director for review of the findings and decision, as provided in §555.79. In either case, if the renewal application denial is sustained, a copy of the application marked "Disapproved" will be returned to the applicant. If the renewal application denial is reversed, a license or permit will be issued to become effective on expiration of the license or permit being renewed, or on the date of issuance, whichever is later. If the proceedings involve the revocation of a license or permit which expired before a decision is in favor of the licensee or permittee, the regional director (compliance) shall:

1) If renewal application was timely filed and a stay of the effective date of the revocation was granted, cause to be issued a license or permit effective on the date of issuance;

2) If renewal application was not timely filed but a stay of the effective date of the revocation had been granted, request that a renewal application be filed and, following that, cause to be issued a license or permit to be effective on issuance; or

3) If a stay of the effective date of the revocation had not been granted, request that an application be filed as provided in §555.45, and process it in the same manner as for an application for an original license or permit.

(c) Curtailment of stay of revocation effective date. If, after approval of a request for a stay of the effective date of an order revoking a license or permit but before actions are completed under this subpart, the regional director (compliance) finds that it is contrary to the public interest for the licensee or permittee to continue the operations or activities covered by his license or permit, the regional director (compliance) may issue a notice of withdrawal of the approval, effective on the date of issuance. Notice of withdrawal will be served upon the licensee or permittee in the manner provided in §555.81.

§ 555.77 Designated place of hearing.
The designated place of hearing set as provided in §555.73 or §555.75, will be at the location convenient to the aggrieved party.

§ 555.78 Representation at a hearing.
An applicant, licensee, or permittee may be represented by an attorney, certified public accountant, or other person recognized to practice before the Bureau of Alcohol, Tobacco and Firearms as provided in 31 CFR Part 8, if he has otherwise complied with the applicable requirements of 26 CFR 601.521 through 601.527. The regional director (compliance) shall be represented in proceedings under §§555.73 and 555.75 by an attorney in the office of the chief counsel or regional counsel who is authorized to execute and file motions, briefs, and other papers in the proceedings, on behalf of the regional director (compliance), in his own name as "Attorney for the Government".


§ 555.79 Appeal on petition to the Director.
An appeal to the Director is not required prior to filing an appeal with the U.S. Court of Appeals for judicial review. An appeal may be taken by the applicant, licensee, or permittee to the Director from a decision resulting from a hearing under §§555.73 or §555.75. An appeal may also be taken by a regional director (compliance) from a decision resulting from a hearing under §555.73 as provided in §555.76(b). The appeal shall be taken by filing a petition for review on appeal with the Director within 15 days of the service of an administrative law judge's decision or an order. The petition will set forth facts tending to show (a) action of an arbitrary nature, (b) action without reasonable warrant in fact, or (c) action contrary to law and regulations. A copy of the petition will be filed with the regional director (compliance) or served on the applicant, licensee, or permittee, as the case may be. In the event of appeal, the regional director (compliance) shall immediately forward the complete original record, by certified mail, to the Director for his consideration, review, and disposition as provided in subpart I of part 71 of this chapter. When, on appeal, the Director affirms the initial decision of the regional director (compliance) or the administrative law judge, as the case may be, the initial decision will be final.

§ 555.80 Court review.
An applicant, licensee, or permittee may, within 60 days after receipt of the decision of the administrative law judge or the final order of the regional director (compliance) or the Director, file a petition for a judicial review of the decision, with the U.S. Court of Appeals for the district in which he resides or has his principal place of business. The Director, upon notification that a petition has been filed, shall have prepared a complete transcript of the record of the proceedings. The regional director (compliance) or the Director, as the case may be, shall certify to the correctness of the transcript of the record, forward one copy to the attorney for the Government in the review of the case, and file the original record of the proceedings with the original certificate in the U.S. Court of Appeals.

§ 555.81 Service on applicant, licensee, or permittee.
All notices and other formal documents required to be served on an applicant, licensee, or permittee under this subpart will be served by certified mail or by personal delivery. Where service is by personal delivery, the signed duplicate original copy of the formal document will be delivered to the applicant, licensee, or permittee, or, in the case of a corporation, partnership, or association, by delivering it to an officer, manager, or general agent, or to its attorney of record.

§ 555.82 Provisions of part 200 made applicable.
The provisions of part 200 of this chapter, as well as those provisions of part 71 relative to failure to appear, withdrawal of an application or surrender of a permit, the conduct of hearings before an administrative law judge, and record of testimony, are hereby made applicable to application, license, and permit proceedings under this subpart to the extent that they are not contrary to or incompatible with this subpart.

§ 555.83 Operations by licensees or permittees after notice of denial or revocation.
In any case where a notice of revocation has been issued and a request for a stay of the effective date of the revocation has not been granted, the licensee or permittee shall not engage in the activities covered by the license or permit pending the outcome of the proceedings under this subpart. In any case where notice of revocation has been issued but a stay of the effective date of the revocation has been granted, the licensee or permittee may continue to engage in the activities covered by his license or permit unless, or until, formally notified to the contrary: Provided, That in the event the license or permit would have expired before proceedings under this subpart are completed, timely renewal application must have been filed to continue the license or permit beyond its expiration date. In any case where a notice of denial of a renewal application has been issued, the licensee or permittee may continue to engage in the activities covered by the existing license or permit after the date of expiration of the license or permit until proceedings under this subpart are completed.
§ 555.102 Authorized operations by permittees.

(a) In general. A permit issued under this part does not authorize the permittee to engage in the business of manufacturing, importing, or dealing in explosive materials. Accordingly, if a permittee’s operations bring him within the definition of manufacturer, importer, or dealer under this part, he shall qualify for the appropriate license.

(b) Distributions of surplus stocks—

1. Distributions of surplus stocks prior to May 24, 2003. Permittees are not authorized to engage in the business of sale or distribution of explosive materials. However, permittees may dispose of surplus stocks of explosive materials to other licensees or permittees in accordance with §555.103, and to nonlicensees or to nonpermittees in accordance with §555.105(a)(4).

2. Distributions of surplus stocks on and after May 24, 2003. Permittees are not authorized to engage in the business of sale or distribution of explosive materials. However, permittees may dispose of surplus stocks of explosive materials to other licensees or permittees in accordance with §555.103 and §555.105.

§ 555.103 Transactions among licensees/permittees and transactions among licensees and holders of user permits.

(a) Transactions among licensees/permittees prior to May 24, 2003—

1. General.

(i) A licensed importer, licensed manufacturer or licensed dealer selling or otherwise distributing explosive materials (or a permittee disposing of surplus stock to a licensee or another permittee) must verify the license or permit status of the distributee prior to the release of explosive materials ordered, as required by this section.

(ii) Licensees or permittees desiring to return explosive materials to a licensed manufacturer may do so without obtaining a certified copy of the manufacturer’s license.

(iii) Where possession of explosive materials is transferred at the distributor’s premises, the distributor must in all instances verify the identity of the person accepting possession on behalf of the distributee before relinquishing possession. Before the delivery at the distributor’s premises of explosive materials to an employee of a licensee or permittee, or to an employee of a common or contract carrier transporting explosive materials to a licensee or permittee, the distributor delivering explosive materials must obtain an executed ATF F 5400.8, Explosives Delivery Record, from the employee before releasing the explosive materials. The ATF F 5400.8 must contain all of the information required on the form and required by this part.

Example 1. An ATF F 5400.8 is required when:

a. An employee of the purchaser takes possession at the distributor’s premises.

b. An employee of a common or contract carrier hired by the purchaser takes possession at the distributor’s premises.

Example 2. An ATF F 5400.8 is not required when:

a. An employee of the distributor takes possession of the explosives for the purpose of transport to the purchaser.

b. An employee of a common or contract carrier hired by the distributor takes possession of the explosives for the purpose of transport to the purchaser.

2. License/permit verification of individuals.

(i) The distributor must furnish a certified copy (or, in the case of a user-limited, the original) of the license or permit. The certified copy need be furnished only once during the current term of the license or permit. Also, a licensee need not furnish certified copies of licenses to other licensed locations operated by such licensee.

(ii) The distributor may obtain any additional verification as the distributor deems necessary.

3. License/permit verification of business organizations.

(i) A business organization may (in lieu of furnishing a certified copy of a license) furnish the distributor a certified list which contains the name, address, license number and date of license expiration of each licensed location. The certified list need be furnished only once during the current term of the license or permit. Also, a business organization need not furnish a certified list to other licensed locations operated by such business organization.

(ii) A business organization must, prior to ordering explosive materials, furnish the licensee or permittee a current certified list of the representatives or agents authorized to order
explosive materials on behalf of the business organization showing the name, address, and date and place of birth of each representative or agent. A licensee or permittee may not distribute explosive materials to a business organization on the order of a person who does not appear on the certified list of representatives or agents and, if the person does appear on the certified list, the licensee or permittee must verify the identity of such person.

(4) Licensee/permittee certified statement.

(i) A licensee or permittee ordering explosive materials from another licensee or permittee must furnish a current, certified statement of the intended use of the explosive materials, e.g., resale, mining, quarrying, agriculture, construction, sport rocketry, road building, oil well drilling, seismographic research, to the distributor.

(ii) For individuals, the certified statement of intended use must specify the name, address, date and place of birth, and social security number of the distributee.

(iii) For business organizations, the certified statement of intended use must specify the taxpayer identification number, the identity and the principal and local places of business.

(iv) The licensee or permittee purchasing explosive materials must revise the furnished copy of the certified statement only when the information is no longer current.

(5) User-limited permit transactions. A user-limited permit issued under the provisions of this part is valid for only a single purchase transaction and is not renewable (see §555.51).

Accordingly, at the time a user-limited permittee orders explosive materials, the licensed distributor must write on the front of the user-limited permit the transaction date, his signature, and the distributor’s license number prior to returning the permit to the user-limited permittee.

(b) Transactions among licensees/permittees on and after May 24, 2003—

(1) General.

(i) A licensed importer, licensed manufacturer or licensed dealer selling or otherwise distributing explosive materials (or a holder of a user permit disposing of surplus stock to a licensee; a holder of a user permit; or a holder of a limited permit who is within the same State as the distributor) who has the certified information required by this section may sell or distribute explosive materials to a licensee or permittee for not more than 45 days following the expiration date of the distributee’s license or permit, unless the distributor knows or has reason to believe that the distributee’s authority to continue business or operations under this part has been terminated.

(ii) A licensed importer, licensed manufacturer or licensed dealer selling or otherwise distributing explosive materials (or a holder of a user permit disposing of surplus stock to another licensee or permittee) must verify the license or permit status of the distributee prior to the release of explosive materials ordered, as required by this section.

(iii) Licensees or permittees desiring to return explosive materials to a licensed manufacturer may do so without obtaining a certified copy of the manufacturer’s license.

(2) Verification of license/user permit.

(i) Prior to or with the first order of explosive materials, the distributee must provide the distributor certified copy (or, in the case of a user-limited, the original) of the distributee’s license or user permit. However, licensees or holders of user permits that are business organizations may (in lieu of a certified copy of a license or user permit) provide the distributor with a certified list that contains the name, address, license or user permit number, and date of the license or user permit expiration of each location.

(ii) The distributee must also provide the distributor with a current list of the names of persons authorized to accept delivery of explosive materials on behalf of the distributee. The distributee ordering explosive materials must keep the list current and provide updated lists to licensees and holders of user permits on a timely basis. A distributor may not transfer possession of explosive materials to any person whose name does not appear on the current list of names of persons authorized to accept delivery of explosive materials on behalf of the distributee. Except as provided in paragraph (b)(3) of this section, in all instances the distributor must verify the identity of the distributee, or the employee of the distributee accepting possession of explosive materials on behalf of the distributee, by examining an identification document (as defined in §555.11) before relinquishing possession.

(iii) A licensee or holder of a user permit ordering explosive materials from another licensee or permittee must provide to the distributor a current, certified statement of the intended use of the explosive materials, e.g., resale, mining, quarrying, agriculture, construction, sport rocketry, road building, oil well drilling, seismographic research, etc.

(A) For individuals, the certified statement of intended use must specify the name, address, date and place of birth, and social security number of the distributee.

(B) For business organizations, the certified statement of intended use must specify the taxpayer identification number, the identity and the principal and local places of business.

(C) The licensee or holder of a user permit purchasing explosive materials must revise the furnished copy of the certified statement only when the information is no longer current.

(3) Delivery of explosive materials by common or contract carrier. When a common or contract carrier will transport explosive materials from a distributor to a distributee who is a licensee or holder of a user permit, the distributor must take the following actions before relinquishing possession of the explosive materials:
(I) Verify the identity of the person accepting possession for the common or contract carrier by examining such person's valid, unexpired driver's license issued by any State, Canada, or Mexico; and

(II) Record the name of the common or contract carrier (i.e., the name of the driver's employer) and the full name of the driver. This information must be maintained in the distributor's permanent records in accordance with §555.121.

(4) User-limited permit transactions. A user-limited permit issued under the provisions of this part is valid for only a single purchase transaction and is not renewable (see §555.51). Accordingly, at the time a user-limited permittee orders explosive materials, the licensed distributor must write on the front of the user-limited permit the transaction date, his signature, and the distributor's license number prior to returning the permit to the user-limited permittee.

(Approved by the Office of Management and Budget under control number 1140-0079)

[ATF No. 1, 68 FR 13787, Mar. 20, 2003, as amended by ATF No. 2, 68 FR 53512, Sept. 11, 2003]

§ 555.104 Certified copy of license or permit.

Except as provided in §555.49(a), each person issued a license or permit under this part shall be furnished together with his license or permit a copy for his certification. If a person desires an additional copy of his license or permit for certification and use under §555.103, he shall:

(a) Make a reproduction of the copy of his license or permit and execute the certification on it;

(b) Make a reproduction of his license or permit, enter on the reproduction the statement: "I certify that this is a true copy of a (insert the word license or permit) issued to me to engage in the specified business or operations", and sign his name next to the statement; or

(c) Submit a request, in writing, for certified copies of his license or permit to the Chief, Firearms and Explosives Licensing Center. The request will show the name, trade name (if any), and address of the licensee or permittee and the number of copies of the license or permit desired. There is a fee of $1 for each copy of a license or permit issued by the Chief, Firearms and Explosives Licensing Center under this paragraph. Fee payment must accompany each request for additional copies of a license or permit. The fee must be paid by (1) cash, or (2) money order or check made payable to the Bureau of Alcohol, Tobacco and Firearms.


§ 555.105 Distributions to nonlicensees, nonpermittees, and limited permittees.

(a) Distributions to nonlicensees and nonpermittees prior to May 24, 2003.

(1) This section will apply in any case where distribution of explosive materials to the distributee is not otherwise prohibited by the Act or this part.

(2) Except as provided in paragraph (a)(3) of this section, a licensed importer, licensed manufacturer, or licensed dealer may distribute explosive materials to a nonlicensee or nonpermittee if the nonlicensee or nonpermittee is a resident of the same State in which the licensee's business premises are located, and the nonlicensee or nonpermittee furnishes to the licensee the explosives transaction record, ATF F 5400.4, required by §555.126. Disposition of ATF F 5400.4 will be made in accordance with §555.126.

(3) A licensed importer, licensed manufacturer, or licensed dealer may sell or distribute explosive materials to a resident of a State contiguous to the State in which the licensee's place of business is located if the purchaser's State of residence has enacted legislation, currently in force, specifically authorizing a resident of that State to purchase explosive materials in a contiguous State and the purchaser and the licensee have, prior to the distribution of the explosive materials, complied with all the requirements of paragraphs (a)(2), (a)(3), (a)(5), and (a)(6) of this section applicable to intrastate transactions occurring on the licensee's business premises.

(4) A permittee may dispose of surplus stocks of explosive materials to a nonlicensee or nonpermittee if the nonlicensee or nonpermittee is a resident of the same State in which the permittee's business premises or operations are located, or is a resident of a State contiguous to the State in which the permittee's place of business or operations are located, and if the requirements of paragraphs (a)(2), (a)(3), (a)(5), and (a)(6) of this section are fully met.

(5) A licensed importer, licensed manufacturer, or licensed dealer selling or otherwise distributing explosive materials to a business entity must verify the identity of the representative or agent of the business entity who is authorized to order explosive materials on behalf of the business entity. Each business entity ordering explosive materials must furnish the distributing licensee prior to or with the first order of explosive materials a current certified list of the names of representatives or agents authorized to order explosive materials on behalf of the business entity. The business entity ordering explosive materials is responsible for keeping the certified list current. A licensee may not distribute explosive materials to a business entity on the order of a person whose name does not appear on the certified list.

(6) Where the possession of explosive materials is transferred at the distributor's premises, the distributor must in all instances verify the identity of the person accepting possession on behalf of the distributee before relinquishing possession. Before the delivery at the distributor's premises of explosive materials to an employee of a nonlicensee or nonpermittee, or to an employee of a common or contract carrier transporting explosive materials to a nonlicensee or nonpermittee, the distributor
delivering explosive materials must obtain an executed
ATF Form 5400.8 from the employee before releasing the explosive
materials. The ATF Form 5400.8 must contain all of the information
required on the form and by this part. (See examples in
§555.103(a)).

(7) A licensee or permittee disposing of surplus stock may
sell or distribute commercially manufactured black powder in
quantities of 50 pounds or less to a nonlicensee or nonpermittee if
the black powder is intended to be used solely for sporting,
recreational, or cultural purposes in antique firearms as defined in
18 U.S.C. 921(a)(16), or in antique devices as exempted from the

(b) Distributions to holders of limited permits on and after

(1) This section will apply in any case where distribution of
explosive materials to the distributee is not otherwise prohibited
by the Act or this part.

(2) A licensed importer, licensed manufacturer or a licensed
dealer may distribute explosive materials to a holder of a limited
permit if such permittee is a resident of the same State in which
the licensee’s business premises are located, the holder of the
limited permit presents in person or by mail ATF Form 5400.4,
Limited Permittee Transaction Report (LPTR), and the licensee
completes Form 5400.4 in accordance with §555.126(b). In no event
will a licensee distribute explosive materials to a holder of a
limited permit unless the holder presents a Form 5400.4 with an
original unaltered and unexpired IntraState Purchase of Explosives
Coupon (IPEC), ATF Form 5400.30, affixed. The coupon must
bear the name, address, permit number, and the coupon number of
the limited permittee seeking distribution of the explosives.

(3) A holder of a limited permit is authorized to receive
explosive materials from a licensee or permittee whose premises
are located in the same State of residence in which the premises
of the holder of the limited permit are located on no more than 6
separate occasions during the one-year period of the permit. For
purposes of this section, the term “6 separate occasions” means
six deliveries of explosive materials. Each delivery must—

(i) Relate to a single purchase transaction made on
one ATF F 5400.4;

(ii) Be referenced on one commercial invoice or
purchase order; and

(iii) Be delivered to the holder of the limited permit in
one shipment delivered at the same time.

(4) A holder of a user permit may dispose of surplus stocks
of explosive materials to a licensee or holder of a user permit, or a
holder of a limited permit who is a resident of the same State in
which the premises of the holder of the user permit are located. A
holder of a limited permit may dispose of surplus stocks of
explosive materials to another holder of a limited permit who is a
resident of the same State in which the premises of the distributor
are located, if the transaction complies with the requirements of
paragraph (b)(2) of this section and §555.126(b). A holder of a
limited permit may also dispose of surplus stocks of explosive
materials to a licensee or holder of a user permit if the disposi-
tion occurs in the State of residence of the holder of the limited
permit. (See §555.103.)

(5) Each holder of a limited permit ordering explosive
materials must furnish the distributing licensee prior to or with
the first order of the explosive materials a current list of the
names of employees authorized to accept delivery of explosive
materials on behalf of the limited permittee. The distributee
ordering explosive materials must keep the list current and
provide updated lists to licensees and holders of user permits on a
timely basis. A licensed importer, licensed manufacturer, licensed
dealer, or permittee, selling or otherwise distributing explosive
materials to a holder of a limited permit must, prior to delivering
the explosive materials, obtain from the limited permittee a
current list of persons who are authorized to accept deliveries of
explosive materials on behalf of the limited permittee. A licensee
or permittee may not deliver explosive materials to a person
whose name does not appear on the list.

(6)(I) Delivery at the distributor’s premises. Where
possession of explosive materials is transferred directly to the
distributee at the distributor’s premises, the distributor must
obtain an executed Form 5400.4 in accordance with §555.126(b)
and must in all instances verify the identity of the person accept-
ing possession on behalf of the distributee by examining an
identification document (as defined in §555.11) before reli-
quishing possession.

(ii) Delivery by distributor. Where possession of
explosive materials is transferred by the distributor to the distribu-
tee away from the distributor’s premises, the distributor must
obtain an executed Form 5400.4 in accordance with §555.126(b)
and must in all instances verify the identity of the person accept-
ing possession on behalf of the distributee by examining an
identification document (as defined in §555.11) before reli-
quishing possession.

(iii) Delivery by common or contract carrier hired by
the distributor. Where a common or contract carrier hired by the
distributor will transport explosive materials from the distributor
to a holder of a limited permit:

(A) The limited permittee must, prior to delivery
of the explosive materials, complete the appropriate section on
Form 5400.4, affix to the Form 5400.4 one of the six IPECS he
has been issued, and provide the form to the distributor in person
or by mail.

(B) The distributor must, before relinquishing
possession of the explosive materials to the common or contract
carrier:

(I) Verify the identity of the person accepting
possession for the common or contract carrier by examining the
person’s valid, unexpired driver’s license issued by any State,
Canada, or Mexico; and
(2) Record the name of the common or contract carrier (i.e., the name of the driver's employer) and the full name of the driver. This information must be maintained in the distributor's permanent records in accordance with §555.121.

(C) At the time of delivery of the explosive materials, the common or contract carrier, as agent for the distributor, must verify the identity of the person accepting delivery on behalf of the distributee, note the type and number of the identification document (as defined in §555.11) and provide this information to the distributor. The distributor must enter this information in the appropriate section on Form 5400.4.

(iv) Delivery by common or contract carrier hired by the distributee. Where a common or contract carrier hired by the distributee will transport explosive materials from the distributor to a holder of a limited permit:

(A) The limited permittee must, prior to delivery of the explosive materials, complete the appropriate section on Form 5400.4, affix to the Form 5400.4 one of the six IPECs he has been issued, and provide the form to the distributor in person or by mail.

(B) Before the delivery at the distributor's premises to the common or contract carrier who will transport explosive materials to the holder of a limited permit, the distributor must:

(1) Verify the identity of the person accepting possession for the common or contract carrier by examining such person's valid, unexpired driver's license issued by any State, Canada, or Mexico; and

(2) Record the name of the common or contract carrier (i.e., the name of the driver's employer) and the full name of the driver. This information must be maintained in the distributor's permanent records in accordance with §555.121.

(7) A licensee or permittee disposing of surplus stock may sell or distribute commercially manufactured black powder in quantities of 50 pounds or less to a holder of a limited permit, nonlicensee, or nonpermittee if the black powder is intended to be used solely for sporting, recreational, or cultural purposes in antique firearms as defined in 18 U.S.C. 921(a)(16), or in antique devices as exempted from the term “destructive device” in 18 U.S.C. 921(a)(4).

(Approved by the Office of Management and Budget under control number 1140–0075)
[ATF No. 1, 68 FR 13788, Mar. 20, 2003, as amended by ATF No. 2, 68 FR 53513, Sept. 11, 2003]

§ 555.106 Certain prohibited distributions.

(a) A licensee or permittee may not distribute explosive materials to any person except—

(1) A licensee;

(2) A holder of a user permit; or

(3) A holder of a limited permit who is a resident of the State where distribution is made and in which the premises of the transferor are located.

(b) A licensee shall not distribute any explosive materials to any person:

(1) Who the licensee knows is less than 21 years of age;

(2) In any State where the purchase, possession, or use by a person of explosive materials would be in violation of any State law or any published ordinance applicable at the place of distribution;

(3) Who the licensee has reason to believe intends to transport the explosive materials into a State where the purchase, possession, or use of explosive materials is prohibited or which does not permit its residents to transport or ship explosive materials into the State or to receive explosive materials in the State;

(4) Who the licensee has reasonable cause to believe intends to use the explosive materials for other than a lawful purpose.

(c) A licensee shall not distribute any explosive materials to any person knowing or having reason to believe that the person:

(1) Is, except as provided under §555.142 (d) and (e), under indictment or information for, or was convicted in any court of, a crime punishable by imprisonment for a term exceeding 1 year;

(2) Is a fugitive from justice;

(3) Is an unlawful user of marijuana, or any depressant or stimulant drug, or narcotic drug (as these terms are defined in the Controlled Substances Act, 21 U.S.C. 802);

(4) Was adjudicated as a mental defective or was committed to a mental institution;

(5) Is an alien, other than an alien who—

(i) Is lawfully admitted for permanent residence (as that term is defined in section 101(a)(20) of the Immigration and Nationality Act (8 U.S.C. 1101));

(ii) Is in lawful nonimmigrant status, is a refugee admitted under section 207 of the Immigration and Nationality Act (8 U.S.C. 1157), or is in asylum status under section 208 of the Immigration and Nationality Act (8 U.S.C. 1158), and—

(A) Is a foreign law enforcement officer of a friendly foreign government, as determined by the Attorney General in consultation with the Secretary of State, entering the United States on official law enforcement business, and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of this official law enforcement business;

(B) Is a person having the power to direct or cause the direction of the management and policies of a corporation, partnership, or association licensed pursuant to section 843(a), and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of such power;

(C) Is a member of a North Atlantic Treaty Organization (NATO) or other friendly foreign military force, as determined by the Attorney General in consultation with the Secretary of Defense, (whether or not admitted in a nonimmigrant status) who is present in the United States under military orders.
for training or other military purpose authorized by the United States, and the shipping, transporting, possession, or receipt of explosive materials is in furtherance of the military purpose; or

(D) Is lawfully present in the United States in cooperation with the Director of Central Intelligence, and the shipment, transportation, receipt, or possession of the explosive materials is in furtherance of such cooperation;

(6) Has been discharged from the armed forces under dishonorable conditions; or

(7) Having been a citizen of the United States, has renounced citizenship.

(d) The provisions of this section do not apply to the purchase of commercially manufactured black powder in quantities not to exceed 50 pounds, intended to be used solely for sporting, recreational, or cultural purposes in antique firearms or in antique devices, if the requirements of § 555.105(a)(7) or (b)(7) are fully met.


§ 555.107 Record of transactions.

Each licensee and permittee shall keep records of explosive materials as required by subpart G of this part.

§ 555.108 Importation.

(a) Explosive materials imported or brought into the United States by a licensed importer or holder of a user permit may be released from customs custody to the licensed importer or holder of a user permit upon proof of his status as a licensed importer or holder of a user permit. Proof of status must be made by the licensed importer or holder of a user permit furnishing to the customs officer a certified copy of his license or permit (see § 555.103).

(b) A nonlicensee or nonpermittee may import or bring into the United States commercially manufactured black powder in quantities not to exceed 50 pounds. Upon submitting to the customs officer completed ATF F 5400.3, certifying that the black powder is intended to be used solely for sporting, recreational, or cultural purposes in antique firearms or in antique devices, black powder may be released from customs custody. The disposition of the executed ATF F 5400.3 will be in accordance with the instructions on the form.

(c) The provisions of this section are in addition to, and are not in lieu of, any applicable requirement under 27 CFR Part 447.

(d) For additional requirements relating to the importation of plastic explosives into the United States on or after April 24, 1997, see § 555.183.

(e) For requirements relating to the marking of imported explosive materials, see § 555.109.


§ 555.109 Identification of explosive materials.

(a) General. Explosive materials, whether manufactured in the United States or imported, must contain certain marks of identification.

(b) Required marks

(1) Licensed manufacturers. Licensed manufacturers who manufacture explosive materials for sale or distribution must place the following marks of identification on explosive materials at the time of manufacture:

(i) The name of the manufacturer; and

(ii) The location, date, and shift of manufacture.

Where a manufacturer operates his plant for only one shift during the day, he does not need to show the shift of manufacture.

(2) Licensed importers.

(i) Licensed importers who import explosive materials for sale or distribution must place the following marks of identification on the explosive materials they import:

(A) The name and address (city and state) of the importer; and

(B) The location (city and country) where the explosive materials were manufactured, date, and shift of manufacture. Where the foreign manufacturer operates his plant for only one shift during the day, he does not need to show the shift of manufacture.

(ii) Licensed importers must place the required mark on all explosive materials imported prior to distribution or shipment for use, and in no event later than 15 days after the date of release from Customs custody.

(c) General requirements.

(1) The required marks prescribed in this section must be permanent and legible.

(2) The required marks prescribed in this section must be in the English language, using Roman letters and Arabic numerals.

(3) Licensed manufacturers and licensed importers must place the required marks on each cartridge, bag, or other immediate container of explosive materials that they manufacture or import, as well as on any outside container used for the packaging of such explosive materials.

(4) Licensed manufacturers and licensed importers may use any method, or combination of methods, to affix the required marks to the immediate container of explosive materials, or outside containers used for the packaging thereof, provided the identifying marks are legible, permanent, show all the required information, and are not rendered unreadable by extended periods of storage.

(5) If licensed manufacturers or licensed importers desire to use a coding system and omit printed markings on the container that show all the required information specified in paragraphs (b)(1) and (2) of this section, they must file with ATF a letterhead application displaying the coding that they plan to use and explaining the manner of its application. The Director must approve the application before the proposed coding can be used.


(d) Exceptions —

(1) Blasting caps. Licensed manufacturers or licensed importers are only required to place the identification marks prescribed in this section on the containers used for the packaging of blasting caps.

(2) Alternate means of identification. The Director may authorize other means of identifying explosive materials, including fireworks, upon receipt of a letter application from the licensed manufacturer or licensed importer showing that such other identification is reasonable and will not hinder the effective administration of this part.

(Paragraph (b)(2) approved by the Office of Management and Budget under control number 1140–0055)

[ATF 56, 70 FR 30633, May 27, 2005]

§ 555.110 Furnishing of samples (Effective on and after January 24, 2003).

(a) In general. Licensed manufacturers and licensed importers and persons who manufacture or import explosive materials or ammonium nitrate must, when required by letter issued by the Director, furnish —

Subpart G—Records and Reports

§ 555.121 General.

(a) (1) Licensees and permittees shall keep records pertaining to explosive materials in permanent form (i.e., commercial invoices, record books) and in the manner required in this subpart.

(2) Licensees and permittees shall keep records required by this part on the business premises for five years from the date a transaction occurs or until discontinuance of business or operations by the licensee or permittee. (See also §555.128 for discontinuance of business or operations.)

(b) ATF officers may enter the premises of any licensee or holder of a user permit for the purpose of examining or inspecting any record or document required by or obtained under this part (see §555.24). Section 843(f) of the Act requires licensees and holders of user permits to make all required records available for examination or inspection at all reasonable times. Section 843(f) of the Act also requires licensees and permittees (including holders of limited permits) to submit all reports and information relating to all required records and their contents, as the regulations in this part prescribe.

(c) Each licensee and permittee shall maintain all records of importation, production, shipment, receipt, sale, or other disposition, whether temporary or permanent, of explosive materials as the regulations in this part prescribe. Sections 842(f) and 842(g) of the Act make it unlawful for any licensee or permittee knowingly to make any false entry in, or fail to make entry in, any record required to be kept under the Act and the regulations in this part.

(1) Samples of such explosive materials or ammonium nitrate;

(2) Information on chemical composition of those products; and

(3) Any other information that the Director determines is relevant to the identification of the explosive materials or to identification of the ammonium nitrate.

(b) Reimbursement. The Director will reimburse the fair market value of samples furnished pursuant to paragraph (a) of this section, as well as reasonable costs of shipment.

(Approved by the Office of Management and Budget under control number 1140–0073)

[ATF No. 1, 68 FR 13790, Mar. 20, 2003]

§ 555.122 Records maintained by licensed importers.

(a) Each licensed importer shall take true and accurate physical inventories which will include all explosive materials on hand required to be accounted for in the records kept under this part. The licensed importer shall take a special inventory —

(1) At the time of commencing business, which is the effective date of the license issued upon original qualification under this part;

(2) At the time of changing the location of his business to another region;

(3) At the time of discontinuing business; and

(4) At any time the regional director (compliance) may in writing require. Each special inventory is to be prepared in duplicate, the original of which is submitted to the regional director (compliance), and the duplicate retained by the licensed importer. If a special inventory specified by paragraphs (a) (1) through (4) of this section has not been taken during the calendar year, at least one physical inventory will be taken. However, the record of the yearly inventory, other than a special inventory required by paragraphs (a) (1) through (4) of this section, will remain on file for inspection instead of being sent to the regional director (compliance). (See also §555.127.)
(b) Each licensed importer shall, not later than the close of the next business day following the date of importation or other acquisition of explosive materials, enter the following information in a separate record:

(1) Date of importation or other acquisition.
(2) Name or brand name of manufacturer and country of manufacture.
(3) Manufacturer's marks of identification.
(4) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of display fireworks, etc.).
(5) Description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc.) and size (length and diameter or diameter only of display fireworks).

(e) Each licensed importer shall, not later than the close of the next business day following the date of distribution of any explosive materials to another licensee or a permittee, enter in a separate record the following information:

(1) Date of disposition.
(2) Name or brand name of manufacturer and country of manufacture.
(3) Manufacturer's marks of identification.
(4) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of display fireworks, etc.).
(5) Description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc.) and size (length and diameter or diameter only of display fireworks).
(6) License or permit number of licensee or permittee to whom the explosive materials are distributed.

(d) The regional director (compliance) may authorize alternate records to be maintained by a licensed importer to record his distribution of explosive materials when it is shown by the licensed importer that alternate records will accurately and readily disclose the information required by paragraph (e) of this section. A licensed importer who proposes to use alternate records shall submit a letter application to the regional director (compliance) and shall describe the proposed alternate records and the need for them. Alternate records are not to be employed by the licensed importer until approval is received from the regional director (compliance).

(e) Each licensed importer shall maintain separate records of the sales or other distribution made of explosive materials to nonlicensees or nonpermittees. These records are maintained as prescribed by §555.126.

(Approved by the Office of Management and Budget under control number 1512-0373)

§555.123 Records maintained by licensed manufacturers.

(a) Each licensed manufacturer shall take true and accurate physical inventories which will include all explosive materials on hand required to be accounted for in the records kept under this part. The licensed manufacturer shall take a special inventory:

(1) At the time of commencing business, which is the effective date of the license issued upon original qualification under this part;
(2) At the time of changing the location of his premises to another region;
(3) At the time of discontinuing business; and
(4) At any other time the regional director (compliance) may in writing require. Each special inventory is to be prepared in duplicate, the original of which is submitted to the regional director (compliance), and the duplicate retained by the licensed manufacturer. If a special inventory required by paragraphs (a) (1) through (4) of this section has not been taken during the calendar year, at least one physical inventory will be taken. However, the record of the yearly inventory, other than a special inventory required by paragraphs (a) (1) through (4) of this section, will remain on file for inspection instead of being sent to the regional director (compliance). (See also §555.127.)

(b) Each licensed manufacturer shall not later than the close of the next business day following the date of manufacture or other acquisition of explosive materials, enter the following information in a separate record:

(1) Date of manufacture or other acquisition.
(2) Manufacturer's marks of identification.
(3) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of display fireworks, etc.).
(4) Name, brand name or description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc.) and size (length and diameter or diameter only of display fireworks).

(c) Each licensed manufacturer shall, not later than the close of the next business day following the date of distribution of any explosive materials to another licensee or a permittee, enter in a separate record the following information:

(1) Date of disposition.
(2) Name or brand name of manufacturer or name of importer, as applicable, if acquired other than by his own manufacture.
(3) Manufacturer's marks of identification.
(4) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of display fireworks, etc.).
(5) Description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc.) and size (length and diameter or diameter only of display fireworks).

(6) License or permit number of licensee or permittee to whom the explosive materials are distributed.

(d) Each licensed manufacturer who manufactures explosive materials for his own use shall, not later than the close of the next business day following the date of use, enter in a separate record the following information:

(1) Date of use.

(2) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of special fireworks, etc.).

(3) Description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc.) and size (length and diameter or diameter only of display fireworks).

Exception: A licensed manufacturer is exempt from the recordkeeping requirements of this subsection if the explosive materials are manufactured for his own use and used within a 24 hour period at the same site.

(e) The regional director (compliance) may authorize alternate records to be maintained by a licensed manufacturer to record his distribution or use of explosive materials when it is shown by the licensed manufacturer that alternate records will accurately and readily disclose the information required by paragraph (c) of this section. A licensed manufacturer who proposes to use alternate records shall submit a letter application to the regional director (compliance) and shall describe the proposed alternate records and the need for them. Alternate records are not to be employed by the licensed manufacturer until approval is received from the regional director (compliance).

(f) Each licensed manufacturer shall maintain separate records of the sales or other distribution made of explosive materials to nonlicensees or nonpermittees. These records are maintained as prescribed by §555.126.

(Approved by the Office of Management and Budget under control number 1512–0373)


§555.124 Records maintained by licensed dealers.

(a) Each licensed dealer shall take true and accurate physical inventories which will include all explosive materials on hand required to be accounted for in the records kept under this part. The licensed dealer shall take a special inventory

(1) At the time of commencing business, which is the effective date of the license issued upon original qualification under this part;

(2) At the time of changing the location of his premises to another region;

(3) At the time of discontinuing business; and

(4) At any other time the regional director (compliance) may in writing require. Each special inventory is to be prepared in duplicate, the original of which is submitted to the regional director (compliance), and the duplicate retained by the licensed dealer. If a special inventory required by paragraphs (a)(1) through (4) of this section has not been taken during the calendar year, at least one physical inventory will be taken. However, the record of the yearly inventory, other than a special inventory required by paragraphs (a)(1) through (4) of this section, will remain on file for inspection instead of being sent to the regional director (compliance). (See also §555.127.)

(b) Each licensed dealer shall, not later than the close of the next business day following the date of purchase or other acquisition of explosive materials (except as provided in paragraph (d) of this section), enter the following information in a separate record:

(1) Date of acquisition.

(2) Name or brand name of manufacturer and name of importer (if any).

(3) Manufacturer’s marks of identification.

(4) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of display fireworks, etc.).

(5) Description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc.) and size (length and diameter or diameter only of display fireworks).

(6) Name, address, and license or permit number of the person from whom the explosive materials are received.

(e) Each licensed dealer shall, not later than the close of the next business day following the date of use (if the explosives are used by the dealer) or the date of distribution of any explosive materials to another licensee or a permittee (except as provided in paragraph (d) of this section), enter in a separate record the following information:

(1) Date of disposition.

(2) Name or brand name of manufacturer and name of importer (if any).

(3) Manufacturer’s marks of identification.

(4) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of display fireworks, etc.).

(5) Description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc.) and size (length and diameter or diameter only of display fireworks).

(6) License or permit number of licensee or permittee to whom the explosive materials are distributed.

(d) When a commercial record is kept by a licensed dealer showing the purchase or other acquisition information required for the permanent record prescribed by paragraph (b) of this section, or showing the distribution information required for the permanent record prescribed by paragraph (c) of this section, the licensed dealer acquiring or distributing the explosive materials
may, for a period not exceeding seven days following the date of acquisition or distribution of the explosive materials, delay making the required entry into the permanent record of acquisition or distribution. However, until the required entry of acquisition or disposition is made in the permanent record, the commercial record must be (1) kept by the licensed dealer separate from other commercial documents kept by the licensee, and (2) readily available for inspection on the licensed premises.

(e) The regional director (compliance) may authorize alternate records to be maintained by a licensed dealer to record his acquisition or disposition of explosive materials, when it is shown by the licensed dealer that alternate records will accurately and readily disclose the required information. A licensed dealer who proposes to use alternate records shall submit a letter application to the regional director (compliance) and shall describe the proposed alternate records and the need for them. Alternate records are not to be employed by the licensed dealer until approval is received from the regional director (compliance).

(f) Each licensed dealer shall maintain separate records of the sales or other distribution made of explosive materials to nonlicensees or nonpermittees. These records are maintained as prescribed by §555.126.

(Approved by the Office of Management and Budget under control number 1512–0373)

§ 555.125 Records maintained by permittees.

(a) Records maintained by permittees prior to May 24, 2003.

(1) Each permittee must take true and accurate physical inventories that will include all explosive materials on hand required to be accounted for in the records kept under this part.

The permittee must take a special inventory—

(i) At the time of commencing business, which is the effective date of the permit issued upon original qualification under this part;

(ii) At the time of changing the location of his premises to another region;

(iii) At the time of discontinuing business; and

(iv) At any other time the regional director (compliance) may in writing require. Each special inventory is to be prepared in duplicate, the original of which is submitted to the regional director (compliance) and the duplicate retained by the permittee. If a special inventory required by paragraphs (a)(1)(i) through (iv) of this section has not been taken during the calendar year, a permittee is required to take at least one physical inventory. However, the record of the yearly inventory, other than a special inventory required by paragraphs (a)(1)(i) through (iv) of this section, will remain on file for inspection instead of being sent to the regional director (compliance). (See also §555.127.)

(2) Each permittee must, not later than the close of the next business day following the date of acquisition of explosive materials, enter the following information in a separate record:

(i) Date of acquisition;

(ii) Name or brand name of manufacturer;

(iii) Manufacturer's marks of identification;

(iv) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, number of display fireworks, etc.);

(v) Description (dynamite (dyn), blasting agents (ba), detonators (det), display fireworks (df), etc., and size (length and diameter or diameter only of display fireworks)); and

(vi) Name, address, and license number of the persons from whom the explosive materials are received.

(b) Records maintained by permittees on and after May 24, 2003.

(1) Each holder of a user permit must take true and accurate physical inventories that will include all explosive materials on hand required to be accounted for in the records kept under this part. The permittee must take a special inventory—

(i) At the time of commencing business, which is the effective date of the permit issued upon original qualification under this part;

(ii) At the time of changing the location of his premises;

(iii) At the time of discontinuing business; and

(iv) At any other time the regional director (compliance) may in writing require. Each special inventory is to be prepared in duplicate, the original of which is submitted to the regional director (compliance) and the duplicate retained by the permittee. If a special inventory required by paragraphs (b)(1)(i) through (iv) of this section has not been taken during the calendar year, a permittee is required to take at least one physical inventory.

(a) Explosives transaction record for distribution of explosive materials prior to May 24, 2003.

(1) A licensee or permittee shall not temporarily or permanently distribute explosive materials to any person, other than another licensee or permittee, unless he records the transaction on an explosives transaction record, ATF F 5400.4.

(2) Before the distribution of explosive materials to a nonlicensee or nonpermittee who is a resident of the State in which the licensee or permittee maintains his business premises, or to a nonlicensee or nonpermittee who is not a resident of the State in which the licensee or permittee maintains his business premises and is acquiring explosive materials under §555.105(a)(3), the licensee or permittee distributing the explosive materials shall obtain an executed ATF F 5400.4 from the distributee which contains all of the information required on the form and by the regulations in this part.

(3) Completed ATF F 5400.4 is to be retained by the licensee or permittee as part of his permanent records in accordance with paragraph (a)(4) of this section.

(4) Each ATF F 5400.4 is retained in numerical (by transaction serial number) order commencing with "1" and continuing in regular sequence. When the numbering of any series reaches "1,000,000," the licensee or permittee may recommence the series. The recommenced series is to be given an alphabetical prefix or suffix. Where there is a change in proprietorship, or in the individual, firm, corporate name or trade name, the series in use at the time of the change may be continued.

(5) The requirements of this section are in addition to any other recordkeeping requirement contained in this part.


(1) A licensee or permittee may not distribute explosive materials to any person who is not a licensee or permittee. A licensee or permittee may not distribute explosive materials to a limited permittee unless the distributor records the transaction on ATF Form 5400.4, Limited Permittee Transaction Report.

(2) Before distributing explosive materials to a limited permittee, the licensee or permittee must obtain an executed Form 5400.4 from the limited permittee with an original unaltered and unexpired Intrastate Purchase of Explosives Coupon (IPEC) affixed. Except when delivery of explosive materials is made by a common or contract carrier who is an agent of the limited permittee, the licensee, permittee, or an agent of the licensee or permittee, must verify the identity of the holder of the limited permit by examining an identification document.
(as defined in §555.11) and noting on the Form 5400.4 the type of document presented. The licensee or permittee must complete the appropriate section on Form 5400.4 to indicate the type and quantity of explosive materials distributed, the license or permit number of the seller, and the date of the transaction. The licensee or permittee must sign and date the form and include any other information required by the instructions on the form and the regulations in this part.

(3) One copy of Form 5400.4 must be retained by the distributor as part of his permanent records in accordance with paragraph (b)(4) of this section and for the period specified in §555.121. The distributor must mail the other copy of Form 5400.4 to the Bureau of Alcohol, Tobacco, Firearms and Explosives in accordance with the instructions on the form.

(4) Each Form 5400.4 must be retained in chronological order by date of disposition, or in alphabetical order by name of limited permittee. A licensee may not, however, use both methods in a single recordkeeping system. Where there is a change in proprietorship by a limited permittee, the forms may continue to be filed together after such change.

(5) The requirements of this section are in addition to any other recordkeeping requirement contained in this part.

(Approved by the Office of Management and Budget under control number 1140–0078)


§ 555.127 Daily summary of magazine transactions.

In taking the inventory required by §§555.122, 555.123, 555.124, and 555.125, a licensee or permittee shall enter the inventory in a record of daily summary transactions to be kept at each magazine of an approved storage facility; however, these records may be kept at one central location on the business premises if separate records of daily transactions are kept for each magazine. Not later than the close of the next business day, each licensee and permittee shall record by manufacturer’s name or brand name, the total quantity received in and removed from each magazine during the day, and the total remaining on hand at the end of the day. Quantity entries for display fireworks may be expressed as the number and size of individual display fireworks in a finished state or as the number of packaged display segments or packaged displays. Information as to the number and size of display fireworks contained in any one packaged display segment or packaged display shall be provided to any ATF officer on request. Any discrepancy which might indicate theft or loss of explosive materials is to be reported in accordance with §555.30.


§ 555.128 Discontinuance of business.

Where an explosive materials business or operations is discontinued and succeeded by a new licensee or new permittee, the records prescribed by this subpart shall appropriately reflect such facts and shall be delivered to the successor. Where discontinuance of the business or operations is absolute, the records required by this subpart must be delivered within 30 days following the business or operations discontinuance to any ATF office located in the region in which the business was located, or to the ATF Out-of-Business Records Center, Spring Mills Office Park, 882 T.J. Jackson Drive, Falling Waters, West Virginia 25439. Where State law or local ordinance requires the delivery of records to other responsible authority, the Chief, Firearms and Explosives Licensing Center may arrange for the delivery of the records required by this subpart to such authority. (See also, §555.61.)


§ 555.129 Exportation.

Exportation of explosive materials is to be in accordance with the applicable provisions of section 38 of the Arms Export Control Act (22 U.S.C. 2778) and implementing regulations. However, a licensed importer, licensed manufacturer, or licensed dealer exporting explosive materials shall maintain records showing the manufacture or acquisition of explosive materials as required by this part and records showing the quantity, the manufacturer’s name or brand name of explosive materials, the name and address of the foreign consignee of the explosive materials, and the date the explosive materials were exported. See §555.180 for regulations concerning the exportation of plastic explosives.


§ 555.130 [Reserved]
Subpart H—Exemptions

§ 555.141 Exemptions.

(a) General. Except for the provisions of §§555.180 and 555.181, this part does not apply to:

(1) Any aspect of the transportation of explosive materials via railroad, water, highway, or air which is regulated by the U.S. Department of Transportation and its agencies, and which pertains to safety. For example, regulations issued by the Department of Transportation addressing the security risk of aliens transporting explosives by commercial motor or railroad carrier from Canada preclude the enforcement of 18 U.S.C. 842(i)(5) against persons shipping, transporting, receiving, or possessing explosives incident to and in connection with the commercial transportation of explosives by truck or rail from Canada into the United States. Questions concerning this exception should be directed to ATF’s Public Safety Branch in Washington, DC.


(3) The transportation, shipment, receipt, or importation of explosive materials for delivery to any agency of the United States or to any State or its political subdivision.

(4) Small arms ammunition and components of small arms ammunition.

(5) The manufacture under the regulation of the military department of the United States of explosive materials for, or their distribution to or storage or possession by, the military or naval services or other agencies of the United States.

(6) Arsenals, navy yards, depots, or other establishments owned by, or operated by or on behalf of, the United States.

(7) The importation, distribution, and storage of fireworks classified as UN0336, UN0337, UN0431, or UN0432 explosives by the U.S. Department of Transportation at 49 CFR 172.101 and generally known as “consumer fireworks” or “articles pyrotechnic.”

(8) Gasoline, fertilizers, propellant actuated devices, or propellant actuated industrial tools manufactured, imported, or distributed for their intended purposes.

(9) Industrial and laboratory chemicals which are intended for use as reagents and which are packaged and shipped pursuant to U.S. Department of Transportation regulations, 49 CFR Parts 100 to 177, which do not require explosives hazard warning labels.

(10) Model rocket motors that meet all of the following criteria—

(i) Consist of ammonium perchlorate composite propellant, black powder, or other similar low explosives;

(ii) Contain no more than 62.5 grams of total propellant weight; and

(iii) Are designed as single-use motors or as reload kits capable of reloading no more than 62.5 grams of propellant into a reusable motor casing.

(b) Black powder. Except for the provisions applicable to persons required to be licensed under subpart D, this part does not apply with respect to commercially manufactured black powder in quantities not to exceed 50 pounds, percussion caps, safety and pyrotechnic fuses, quills, quick and slow matches, and friction primers, if the black powder is intended to be used solely for sporting, recreational, or cultural purposes in antique firearms, as defined in 18 U.S.C. 921(a)(16) or antique devices, as exempted from the term “destructive devices” in 18 U.S.C. 921(a)(4).


§ 555.142 Relief from disabilities (effective January 24, 2003).

(a) Any person prohibited from shipping or transporting any explosive in or affecting interstate or foreign commerce or from receiving or possessing any explosive which has been shipped or transported in or affecting interstate or foreign commerce may make application for relief from disabilities under section 845(b) of the Act.

(b) An application for relief from disabilities must be filed with the Director by submitting ATF Form 5400.29, Application for Restoration of Explosives Privileges, in accordance with the instructions on the form. The application must be supported by appropriate data, including the information specified in paragraph (f) of this section. Upon receipt of an incomplete or improperly executed application for relief, the applicant will be notified of the deficiency in the application. If the application is not corrected and returned within 30 days following the date of notification, the application will be considered abandoned.

(c) (1) The Director may grant relief to an applicant if it is established to the satisfaction of the Director that the circumstances regarding the disability and the applicant’s record and reputation are such that the applicant will not be likely to act in a manner dangerous to public safety and that the granting of such relief is not contrary to the public interest.

(2) Except as provided in paragraph (c)(3) of this section, the Director will not grant relief if the applicant—

(i) Has not been discharged from parole or probation for a period of at least 2 years;
(ii) Is a fugitive from justice;
(iii) Is a prohibited alien;
(iv) Is an unlawful user of or addicted to any controlled substance;
(v) Has been adjudicated a mental defective or committed to a mental institution, unless the applicant was subsequently determined by a court, board, commission, or other lawful authority to have been restored to mental competency; to be no longer suffering from a mental disorder, and to have had all rights restored; or
(vi) Is prohibited by the law of the State where the applicant resides from receiving or possessing explosive materials.

(3)(i) The Director may grant relief to aliens who have been lawfully admitted to the United States or to persons who have not been discharged from parole or probation for a period of at least 2 years if he determines that the applicant has a compelling need to possess explosives, such as for purposes of employment.

(ii) The Director may grant relief to the persons identified in paragraph (e)(2) of this section in extraordinary circumstances where the granting of such relief is consistent with the public interest.

(d) A person who has been granted relief under this section is relieved of all disabilities imposed by the Act for the disabilities disclosed in the application. The granting of relief will not affect any disabilities incurred subsequent to the date the application was filed. Relief from disabilities granted to aliens will be effective only so long as the alien retains his or her lawful immigration status.

(e)(1) A licensee or permittee who is under indictment or information for, or convicted of, a crime punishable by imprisonment for a term exceeding one year during the term of a current license or permit, or while he has pending a license or permit renewal application, shall not be barred from licensed or permit operations for 30 days after the date of indictment or information or 30 days after the date upon which his conviction becomes final. Also, if he files his application for relief under this section within such 30 day period, he may further continue licensed or permit operations while his application is pending. A licensee or permittee who does not file an application within 30 days from the date of his indictment or information, or within 30 days from the date his conviction becomes final, shall not continue licensed or permit operations beyond 30 days from the date of his indictment or information or beyond 30 days from the date his conviction becomes final.

(2) In the event the term of a license or permit of a person expires during the 30 day period following the date of indictment of information of during the 30 day period after the date upon which his conviction becomes final or while his application for relief is pending, he shall file a timely application for renewal of his license or permit in order to continue licensed or permit operations. The license or permit application is to show that the applicant has been indicted or under information for, or convicted of, a crime punishable by imprisonment for a term exceeding one year.

(3) A licensee or permittee shall not continue licensed or permit operations beyond 30 days following the date the Director issues notification that the licensee's or permittee's application for renewal of the disabilities resulting from an indictment, information or conviction has been denied.

(4) When a licensee or permittee may no longer continue licensed or permit operations under this section, any application for renewal of license of permit filed by the licensee or permittee while his application for renewal of disabilities resulting from an indictment, information or conviction is pending, will be denied by the regional director (compliance).

(f)(1) Applications for relief from disabilities must include the following information:

(i) In the case of a corporation, or of any person having the power to direct or control the management of the corporation, information as to the absence of culpability in the offense for which the corporation, or any such person, was indicted, formally accused or convicted;

(ii) In the case of an applicant who is an individual, two properly completed FBI Forms FD-258 (fingerprint card), and a written statement from each of three references who are not related to the applicant by blood or marriage and have known the applicant for at least 3 years, recommending the granting of relief;

(iii) Written consent to examine and obtain copies of records and to receive statements and information regarding the applicant's background, including records, statements and other information concerning employment, medical history, military service, immigration status, and criminal record;

(iv) In the case of an applicant having been convicted of a crime punishable by imprisonment for a term exceeding one year, a copy of the indictment or information on which the applicant was convicted, the judgment of conviction or record of any plea of nolo contendere or plea of guilty or finding of guilt by the court;

(v) In the case of an applicant under indictment, a copy of the indictment or information;

(vi) In the case of an applicant who has been adjudicated a mental defective or committed to a mental institution, a copy of the order of a court, board, commission, or other lawful authority that made the adjudication or ordered the commitment, any petition that sought to have the applicant so adjudicated or committed, any medical records reflecting the reasons for commitment and diagnoses of the applicant, and any court order or finding of a court, board, commission, or other lawful authority showing the applicant's discharge from commitment, restoration of mental competency and the restoration of rights;
(vii) In the case of an applicant who has been discharged from the Armed Forces under dishonorable conditions, a copy of the applicant’s Certificate of Release or Discharge from Active Duty (Department of Defense Form 214), Charge Sheet (Department of Defense Form 458), and final court martial order;

(viii) In the case of an applicant who, having been a citizen of the United States, has renounced his or her citizenship, a copy of the formal renunciation of nationality before a diplomatic or consular officer of the United States in a foreign state or before an officer designated by the Attorney General when the United States was in a state of war (see 8 U.S.C. 1481(a)(5) and (6)); and

(ix) In the case of an applicant who is an alien, documentation that the applicant is an alien who has been lawfully admitted to the United States; certification from the applicant including the applicant’s INS-issued alien number or admission number, country/countries of citizenship, and immigration status, and certifying that the applicant is legally authorized to work in the United States, or other purposes for which possession of explosives is required; certification from an appropriate law enforcement agency of the applicant’s country of citizenship stating that the applicant does not have a criminal record; and, if applicable, certification from a Federal explosives licensee or permittee or other employer stating that the applicant is employed by the employer and must possess explosive materials for purposes of employment. These certifications must be submitted in English.

(2) Any record or document of a court or other government entity or official required by paragraph (f)(1) of this section must be certified by the court or other government entity or official as a true copy.

(Approved by the Office of Management and Budget under control number 1140-0076)

Subpart I—Unlawful Acts, Penalties, Seizures and Forfeitures

§ 555.161 Engaging in business without a license.
Any person engaging in the business of importing, manufacturing, or dealing in explosive materials without a license issued under the Act, shall be fined not more than $10,000 or imprisoned not more than 10 years, or both.

§ 555.162 False statement or representation.
Any person who knowingly withholds information or makes any false or fictitious oral or written statement or furnishes or exhibits any false, fictitious, or misrepresented identification, intended or likely to deceive for the purpose of obtaining explosive materials, or a license, permit, exempton, or relief from disability under the Act, shall be fined not more than $10,000 or imprisoned not more than 10 years, or both.

§ 555.163 False entry in record.
Any licensed importer, licensed manufacturer, licensed dealer, or permittee who knowingly makes any false entry in any record required to be kept under subpart G of this part, shall be fined not more than $10,000 or imprisoned not more than 10 years, or both.

§ 555.164 Unlawful storage.
Any person who stores any explosive material in a manner not in conformity with this part, shall be fined not more than $1,000 or imprisoned not more than one year, or both.

§ 555.165 Failure to report theft or loss.
(a) Any person who has knowledge of the theft or loss of any explosive materials from his stock and fails to report the theft or loss within 24 hours of discovery in accordance with §555.30, shall be fined not more than $1,000 or imprisoned not more than one year, or both.

(b) On and after January 24, 2003, any licensee or permittee who fails to report a theft of explosive materials in accordance with §555.30 will be fined under title 18 U.S.C., imprisoned not more than 5 years, or both.

§ 555.166 Seizure or forfeiture.
Any explosive materials involved or used or intended to be used in any violation of the Act or of this part or in any violation of any criminal law of the United States are subject to seizure and forfeiture, and all provisions of title 26, U.S.C. relating to the seizure, forfeiture, and disposition of firearms, as defined in 26 U.S.C. 5845(a), will, so far as applicable, extend to seizures and forfeitures under the Act. (See §72.27 of this title for regulations on summary destruction of explosive materials which are impracticable or unsafe to remove to a place of storage.)
Subpart J—Marking of Plastic Explosives

§ 555.180 Prohibitions relating to unmarked plastic explosives.

(a) No person shall manufacture any plastic explosive that does not contain a detection agent.

(b) No person shall import or bring into the United States, or export from the United States, any plastic explosive that does not contain a detection agent. This paragraph does not apply to the importation or bringing into the United States, or the exportation from the United States, of any plastic explosive that was imported or brought into, or manufactured in the United States prior to April 24, 1996, by or on behalf of any agency of the United States performing military or police functions (including any military reserve component) or by or on behalf of the National Guard of any State, not later than 15 years after the date of entry into force of the Convention on the Marking of Plastic Explosives with respect to the United States, i.e., not later than June 21, 2013.

(c) No person shall ship, transport, transfer, receive, or possess any plastic explosive that does not contain a detection agent. This paragraph does not apply to:

(1) The shipment, transportation, transfer, receipt, or possession of any plastic explosive that was imported or brought into, or manufactured in the United States prior to April 24, 1996, by any person during the period beginning on that date and ending on April 24, 1999; or

(2) The shipment, transportation, transfer, receipt, or possession of any plastic explosive that was imported or brought into, or manufactured in the United States prior to April 24, 1996, by or on behalf of any agency of the United States performing a military or police function (including any military reserve component) or by or on behalf of the National Guard of any State, not later than 15 years after the date of entry into force of the Convention on the Marking of Plastic Explosives with respect to the United States, i.e., not later than June 21, 2013.

(d) When used in this subpart, terms are defined as follows:


(3) Detection agent means any one of the substances specified in this paragraph when introduced into a plastic explosive or formulated in such explosive as a part of the manufacturing process in such a manner as to achieve homogeneous distribution in the finished explosive, including—

(i) Ethylene glycol dinitrate (EGDN), C\text{[2]}H\text{[4]}(NO\text{[3]})\text{[2]}, molecular weight 152, when the minimum concentration in the finished explosive is 0.2 percent by mass;

(ii) 2,3-Dimethyl-2,3-dinitrobutane (DMNB), C\text{[6]}H\text{[12]}(NO\text{[2]})\text{[2]}, molecular weight 176, when the minimum concentration in the finished explosive is 0.1 percent by mass;

(iii) Para-Mononitrotoluene (p-MNT), C\text{[7]}H\text{[7]}NO\text{[2]}, molecular weight 137, when the minimum concentration in the finished explosive is 0.5 percent by mass;

(iv) Ortho-Mononitrotoluene (o-MNT), C\text{[7]}H\text{[7]}NO\text{[2]}, molecular weight 137, when the minimum concentration in the finished explosive is 0.5 percent by mass; and

(v) Any other substance in the concentration specified by the Director, after consultation with the Secretary of State and Secretary of Defense, that has been added to the table in Part 2 of the Technical Annex to the Convention on the Marking of Plastic Explosives.

(4) Plastic explosive means an explosive material in flexible or elastic sheet form formulated with one or more high explosives which in their pure form has a vapor pressure less than 10^{-4} Pa at a temperature of 25 degrees C, is formulated with a binder material, and is as a mixture malleable or flexible at normal room temperature. High explosives, as defined in §555.202(a), are explosive materials which can be caused to detonate by means of a blasting cap when unconfined.


§ 555.181 Reporting of plastic explosives.

All persons, other than an agency of the United States (including any military reserve component) or the National Guard of any State, possessing any plastic explosive on April 24, 1996, shall submit a report to the Director no later than August 22, 1996. The report shall be in writing and mailed by certified mail (return receipt requested) to the Director at P.O. Box 50204, Washington, DC 20091–0204. The report shall include the quantity of plastic explosives possessed on April 24, 1996; any marks of identification on such explosives; the name and address of the manufacturer or importer; the storage location of such explosives, including the city and State; and the name and address of the person possessing the plastic explosives.

(Approved by the Office of Management and Budget under control number 1512–0535)


§ 555.182 Exceptions.

It is an affirmative defense against any proceeding involving §§555.180 and 555.181 if the proponent proves by a preponderance of the evidence that the plastic explosive—
(a) Consisted of a small amount of plastic explosive intended for
and utilized solely in lawful—
   (1) Research, development, or testing of new or modified
       explosive materials;
   (2) Training in explosives detection or development or
       testing of explosives detection equipment; or
   (3) Forensic science purposes; or

(b) Was plastic explosive that, by April 24, 1999, will be or is
    incorporated in a military device within the territory of the United
    States and remains an integral part of such military device, or is
    intended to be, or is incorporated in, and remains an integral part
    of a military device that is intended to become, or has become,
    the property of any agency of the United States performing
    military or police functions (including any military reserve
    component) or the National Guard of any State, wherever such
    device is located. For purposes of this paragraph, the term
    "military device" includes, but is not restricted to, shells, bombs,
    projectiles, mines, missiles, rockets, shaped charges, grenades,
    perforators, and similar devices lawfully manufactured exclu-
    sively for military or police purposes.

§ 555.183 Importation of plastic explosives on or after April 24, 1997.

Persons filing Form 6 applications for the importation of plastic
explosives on or after April 24, 1997, shall attach to the applica-
tion the following written statement, prepared in triplicate,
executed under the penalties of perjury:

(a) "I declare under the penalties of perjury that the plastic
    explosive to be imported contains a detection agent as required by
    27 CFR 555.180(b)"; or

(b) "I declare under the penalties of perjury that the plastic
    explosive to be imported is a "small amount" to be used for
    research, training, or testing purposes and is exempt from the
    detection agent requirement pursuant to 27 CFR 555.182."

§ 555.184 Statements of process and samples.

(a) A complete and accurate statement of process with regard to
    any plastic explosive or to any detection agent that is to be
    introduced into a plastic explosive or formulated in such plastic
    explosive shall be submitted by a licensed manufacturer or
    licensed importer, upon request, to the Director.

(b) Samples of any plastic explosive or detection agent shall be
    submitted by a licensed manufacturer or licensed importer, upon
    request, to the Director.

(Paragraph (a) approved by the Office of Management and
Budget under control number 1512–0539)

§ 555.185 Criminal sanctions.

Any person who violates the provisions of 18 U.S.C. 842(l)–(o)
shall be fined under title 18, U.S.C., imprisoned for not more than
10 years, or both.

§ 555.186 Seizure or forfeiture.

Any plastic explosive that does not contain a detection agent in
violation of 18 U.S.C. 842(l)–(n) is subject to seizure and forfei-
ture, and all provisions of 19 U.S.C. 1595a, relating to seizure,
forfeiture, and disposition of merchandise introduced or attempted
to be introduced into the U.S. contrary to law, shall extend to
seizures and forfeitures under this subpart. See §72.27 of this
chapter for regulations on summary destruction of plastic explo-
sives that do not contain a detection agent.

Subpart K—Storage

§ 555.201 General.

(a) Section 842(j) of the Act and §555.29 of this part require
that the storage of explosive materials by any person must be in
accordance with the regulations in this part. Further, section 846
of this Act authorizes regulations to prevent the recurrence of
accidental explosions in which explosive materials were involved.
The storage standards prescribed by this subpart confer no right
or privileges to store explosive materials in a manner contrary to
State or local law.

(b) The Director may authorize alternate construction for
explosives storage magazines when it is shown that the alternate
magazine construction is substantially equivalent to the standards
of safety and security contained in this subpart. Any alternate
explosive magazine construction approved by the Director prior
to August 9, 1982, will continue as approved unless notified in
writing by the Director. Any person intending to use alternate
magazine construction shall submit a letter application to the
regional director (compliance) for transmittal to the Director,
specifically describing the proposed magazine. Explosive
materials may not be stored in alternate magazines before the
applicant has been notified that the application has been
approved.

(c) A licensee or permittee who intends to make changes in his
magazines, or who intends to construct or acquire additional
magazines, shall comply with §555.63.

(d) The regulations set forth in §§555.221 through 555.224
pertain to the storage of display fireworks, pyrotechnic com-
positions, and explosive materials used in assembling fireworks and
articles pyrotechnic.
(e) The provisions of §555.202(a) classifying flash powder and bulk salutes as high explosives are mandatory after March 7, 1990: Provided, that those persons who hold licenses or permits under this part on that date shall, with respect to the premises covered by such licenses or permits, comply with the high explosives storage requirements for flash powder and bulk salutes by March 7, 1991.

(f) Any person who stores explosive materials shall notify the authority having jurisdiction for fire safety in the locality in which the explosive materials are being stored of the type, magazine capacity, and location of each site where such explosive materials are stored. Such notification shall be made orally before the end of the day on which storage of the explosive materials commenced and in writing within 48 hours from the time such storage commenced.

(Paragraph (f) approved by the Office of Management and Budget under control number 1512–0536)


§ 555.202 Classes of explosive materials.

For purposes of this part, there are three classes of explosive materials. These classes, together with the description of explosive materials comprising each class, are as follows:

(a) High explosives. Explosive materials which can be caused to detonate by means of a blasting cap when unconfined, (for example, dynamite, flash powders, and bulk salutes). See also §555.201(a).

(b) Low explosives. Explosive materials which can be caused to deflagrate when confined (for example, black powder, safety fuses, igniters, igniter cords, fuse lighters, and “display fireworks” classified as UN0333, UN0334, or UN0335 by the U.S. Department of Transportation regulations at 49 CFR 172.101, except for bulk salutes).

(c) Blasting agents. (For example, ammonium nitrate-fuel oil and certain water-gels (see also §555.11).)


§ 555.203 Types of magazines.

For purposes of this part, there are five types of magazines. These types, together with the classes of explosive materials, as defined in §555.202, which will be stored in them, are as follows:

(a) Type 1 magazines. Permanent magazines for the storage of high explosives, subject to the limitations prescribed by §§555.206 and 555.213. Other classes of explosive materials may also be stored in type 1 magazines.

(b) Type 2 magazines. Mobile and portable indoor and outdoor magazines for the storage of high explosives, subject to the limitations prescribed by §§555.206, 555.208(b), and 555.213. Other classes of explosive materials may also be stored in type 2 magazines.

(c) Type 3 magazines. Portable outdoor magazines for the temporary storage of high explosives while attended (for example a “day-box”), subject to the limitations prescribed by §§555.206 and 555.213. Other classes of explosive materials may also be stored in type 3 magazines.

(d) Type 4 magazines. Magazines for the storage of low explosives, subject to the limitations prescribed by §§555.206(b), 555.210(b), and 555.213. Blasting agents may be stored in type 4 magazines, subject to the limitations prescribed by §§555.206(c), 555.211(b), and 555.213. Detonators that will not mass detonate may also be stored in type 4 magazines, subject to the limitations prescribed by §§555.206(a), 555.210(b), and 555.213.

(e) Type 5 magazines. Magazines for the storage of blasting agents, subject to the limitations prescribed by §§555.206(c), 555.211(b), and 555.213.

§ 555.204 Inspection of magazines.

Any person storing explosive materials shall inspect his magazines at least every seven days. This inspection need not be an inventory, but must be sufficient to determine whether there has been unauthorized entry or attempted entry into the magazines, or unauthorized removal of the contents of the magazines.

§ 555.205 Movement of explosive materials.

All explosive materials must be kept in locked magazines meeting the standards in this subpart unless they are:

(a) In the process of manufacture;

(b) Being physically handled in the operating process of a licensee or user;

(c) Being used; or

(d) Being transported to a place of storage or use by a licensee or permittee or by a person who has lawfully acquired explosive materials under §555.106.

§ 555.206 Location of magazines.

(a) Outdoor magazines in which high explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which high explosives are stored, than the minimum distances specified in the table of distances for storage of explosive materials in §555.218.

(b) Outdoor magazines in which low explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which explosive materials are stored, than the minimum distances specified in the table of distances for storage of low explosives in §555.219, except that the table of distances in §555.224 shall apply to the storage of display fireworks. The distances shown in §555.219 may not be reduced by the presence of barricades.
(c)(1) Outdoor magazines in which blasting agents in quantities of more than 50 pounds are stored must be located no closer to inhabited buildings, passenger railways, or public highways than the minimum distances specified in the table of distances for storage of explosive materials in §555.218.

(2) Ammonium nitrate and magazines in which blasting agents are stored must be located no closer to magazines in which high explosives or other blasting agents are stored than the minimum distances specified in the table of distances for the separation of ammonium nitrate and blasting agents in §555.220. However, the minimum distances for magazines in which explosives and blasting agents are stored from inhabited buildings, etc., may not be less than the distances specified in the table of distances for storage of explosives materials in §555.218. [T.D. ATF-87, 46 FR 40384, Aug. 7, 1981, as amended by T.D. ATF-293, 55 FR 3722, Feb. 5, 1990; T.D. ATF-400, 63 FR 45003, Aug. 24, 1998]

§ 555.207 Construction of type 1 magazines.

A type 1 magazine is a permanent structure: a building, an igloo or "Army-type structure", a tunnel, or a dugout. It is to be bullet-resistant, fire-resistant, weather-resistant, thief-resistant, and ventilated.

(a) Buildings. All building type magazines are to be constructed of masonry, wood, metal, or a combination of these materials, and have no openings except for entrances and ventilation. The ground around building magazines must slope away for drainage or other adequate drainage provided.

(1) Masonry wall construction. Masonry wall construction is to consist of brick, concrete, tile, cement block, or cinder block and be not less than 6 inches in thickness. Hollow masonry units used in construction must have all hollow spaces filled with well-tamped, coarse, dry sand or weak concrete (at least a mixture of one part cement and eight parts of sand with enough water to dampen the mixture while tamping in place). Interior walls are to be constructed of, or covered with, a nonsparking material.

(2) Fabricated metal wall construction. Metal wall construction is to consist of sectional sheets of steel or aluminum not less than number 14-gauge, securely fastened to a metal framework. Metal wall construction is either lined inside with brick, solid cement blocks, hardwood not less than four inches thick, or will have at least a six inch sand fill between interior and exterior walls. Interior walls are to be constructed of, or covered with, a nonsparking material.

(3) Wood frame wall construction. The exterior of outer wood walls is to be covered with iron or aluminum not less than number 26-gauge. An inner wall of, or covered with nonsparking material will be constructed so as to provide a space of not less than six inches between the outer and inner walls. The space is to be filled with coarse, dry sand or weak concrete.

(4) Floors. Floors are to be constructed of, or covered with, a nonsparking material and shall be strong enough to bear the weight of the maximum quantity to be stored. Use of pallets covered with a nonsparking material is considered equivalent to a floor constructed of or covered with a nonsparking material.

(5) Foundations. Foundations are to be constructed of brick, concrete, cement block, stone, or wood posts. If piers or posts are used, in lieu of a continuous foundation, the space under the buildings is to be enclosed with metal.

(6) Roof. Except for buildings with fabricated metal roofs, the outer roof is to be covered with no less than number 26-gauge iron or aluminum, fastened to at least ¾ inch sheathing.

(7) Bullet-resistant ceilings or roofs. Where it is possible for a bullet to be fired directly through the roof and into the magazine at such an angle that the bullet would strike the explosives within, the magazine is to be protected by one of the following methods:

(i) A sand tray lined with a layer of building paper, plastic, or other nonporous material, and filled with not less than four inches of coarse, dry sand, and located at the tops of inner walls covering the entire ceiling area, except that portion necessary for ventilation.

(ii) A fabricated metal roof constructed of ⅛-inch plate steel lined with four inches of hardwood. (For each additional ¼ inch of plate steel, the hardwood lining may be decreased one inch.)

(8) Doors. All doors are to be constructed of not less than ¼ inch plate steel and lined with at least two inches of hardwood. Hinges and hasps are to be attached to the doors by welding, riveting or bolting (nuts on inside of door). They are to be installed in such a manner that the hinges and hasps cannot be removed when the doors are closed and locked.

(9) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlock fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a cashardened shackle of at least ¾ inch diameter. Padlocks must be protected with not less than ¼ inch steel hoods constructed so as to prevent saving or lever action on the locks, hasps, and staples. These requirements do not apply to magazine doors that are adequately secured on the side by means of a bolt, lock, or bar that cannot be actuated from the outside.

(10) Ventilation. Ventilation is to be provided to prevent dampness and heating of stored explosive materials. Ventilation openings must be screened to prevent the entrance of sparks. Ventilation openings in side walls and foundations must be offset or shielded for bullet-resistant purposes. Magazines having foundation and roof ventilators with the air circulating between the side walls and the floors and between the side walls and the ceiling must have a wooden lattice lining or equivalent to prevent the packages of explosive materials from being stacked against the side walls and blocking the air circulation.
(11) Exposed metal. No sparking material is to be exposed to contact with the stored explosive materials. All ferrous metal nails in the floor and side walls, which might be exposed to contact with explosive materials, must be blind-nailed, countersunk, or covered with a nonsparking lattice work or other nonsparking material.

(b) Igloos, "Army-type structure", tunnels, and dugouts. Igloo, "Army-type structure", tunnel, and dugout magazines are to be constructed of reinforced concrete, masonry, metal, or a combination of these materials. They must have an earthmound covering of not less than 24 inches on the top, sides and rear unless the magazine meets the requirements of paragraph (a)(7) of this section. Interior walls and floors must be constructed of, or covered with, a nonsparking material. Magazines of this type are also to be constructed in conformity with the requirements of paragraph (a)(4) and paragraphs (a)(8) through (11) of this section.

§ 555.208 Construction of type 2 magazines.

A type 2 magazine is a box, trailer, semitrailer, or other mobile facility.

(a) Outdoor magazines—

(1) General. Outdoor magazines are to be bullet-resistant, fire-resistant, weather-resistant, theft-resistant, and ventilated. They are to be supported to prevent direct contact with the ground and, if less than one cubic yard in size, must be securely fastened to a fixed object. The ground around outdoor magazines must slope away for drainage or other adequate drainage provided. When unattended, vehicular magazines must have wheels removed or otherwise effectively immobilized by kingpin locking devices or other methods approved by the Director.

(2) Exterior construction. The exterior and doors are to be constructed of not less than 1/4-inch steel and lined with at least two inches of hardwood. Magazines with top openings will have lids with water-resistant seals or which overlap the sides by at least one inch when in a closed position.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nails on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/4-inch diameter. Padlocks must be protected with not less than 1/4-inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door locked with a steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/4-inch diameter, if the door hinges and lock hasp are securely fastened to the magazine.

These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(b) Indoor magazines—

(1) General. Indoor magazines are to be fire-resistant and theft-resistant. They need not be bullet-resistant and weather-resistant if the buildings in which they are stored provide protection from the weather and from bullet penetration. No indoor magazine is to be located in a residence or dwelling. The indoor storage of high explosives must not exceed a quantity of 50 pounds. More than one indoor magazine may be located in the same building if the total quantity of explosive materials stored does not exceed 50 pounds. Detonators must be stored in a separate magazine (except as provided in §555.213) and the total quantity of detonators must not exceed 5,000.

(2) Exterior construction. Indoor magazines are to be constructed of wood or metal according to one of the following specifications:

(i) Wood indoor magazines are to have sides, bottoms and doors constructed of at least two inches of hardwood and are to be well braced at the corners. They are to be covered with sheet metal of not less than number 26-gauge (.0179 inches). Nails exposed to the interior of magazines must be countersunk.

(ii) Metal indoor magazines are to have sides, bottoms and doors constructed of not less than number 12-gauge (.1046 inches) metal and be lined inside with a nonsparking material. Edges of metal covers must overlap sides at least one inch.

(iii) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nails on inside of door) in a manner that prevents removal when the doors are closed and locked.

(iv) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/4-inch diameter. Padlocks must be protected with not less than 1/4-inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door locked with a steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/4-inch diameter, if the door hinges and lock hasp are securely fastened to the magazine.

These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(c) Detonator boxes. Magazines for detonators in quantities of 100 or less are to have sides, bottoms and doors constructed of not less than number 12-gauge (.1046 inches) metal and lined with a nonsparking material. Hinges and hasps must be attached so they cannot be removed from the outside. One steel padlock
(which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least \( \frac{3}{8} \)-inch diameter is sufficient for locking purposes.

§ 555.209 Construction of type 3 magazines.
A type 3 magazine is a "day-box" or other portable magazine. It must be fire-resistant, weather-resistant, and theft-resistant. A type 3 magazine is to be constructed of not less than number 12-gauge (.1046 inches) steel, lined with at least either \( \frac{1}{2} \)-inch plywood or \( \frac{1}{8} \)-inch Masonite-type hardboard.

Doors must overlap sides by at least one inch. Hinges and hasps are to be attached by welding, riveting or bolting (nuts on inside).

One steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least \( \frac{3}{8} \)-inch diameter is sufficient for locking purposes. Explosive materials are not to be left unattended in type 3 magazines and must be removed to type 1 or 2 magazines for unattended storage.

§ 555.210 Construction of type 4 magazines.
A type 4 magazine is a building, igloo or "Army-type structure", tunnel, dugout, box, trailer, or a semitrailer or other mobile magazine.

(a) Outdoor magazines—

(1) General. Outdoor magazines are to be fire-resistant, weather-resistant, and theft-resistant. The ground around outdoor magazines must slope away for drainage or other adequate drainage be provided. When unattended, vehicular magazines must have wheels removed or otherwise be effectively immobilized by kingpin locking devices or other methods approved by the Director.

(2) Construction. Outdoor magazines are to be constructed of masonry, metal-covered wood, fabricated metal, or a combination of these materials. Foundations are to be constructed of brick, concrete, cement block, stone, metal or wood posts. If piers or posts are used, in lieu of a continuous foundation, the space under the building is to be enclosed with fire-resistant material. The walls and floors are to be constructed of, or covered with, a nonsparking material or lattice work. The doors must be metal or solid wood covered with metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and case-hardened shackle of at least \( \frac{3}{8} \)-inch diameter. Padlocks must be protected with not less than \( \frac{1}{2} \)-inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples.

These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(b) Indoor magazine—

(1) General. Indoor magazines are to be fire-resistant and theft-resistant. They need not be weather-resistant if the buildings in which they are stored provide protection from the weather. No indoor magazine is to be located in a residence or dwelling. The indoor storage of low explosives must not exceed a quantity of 50 pounds. More than one indoor magazine may be located in the same building if the total quantity of explosive materials stored does not exceed 50 pounds. Detonators that will not mass detonate must be stored in a separate magazine and the total number of electric detonators must not exceed 5,000.

(2) Construction. Indoor magazines are to be constructed of masonry, metal-covered wood, fabricated metal, or a combination of these materials. The walls and floors are to be constructed of, or covered with, a nonsparking material. The doors must be metal or solid wood covered with metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and case-hardened shackle of at least \( \frac{3}{8} \)-inch diameter. Padlocks must be protected with not less than \( \frac{1}{2} \)-inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples.

§ 555.211 Construction of type 5 magazines.
A type 5 magazine is a building, igloo or "Army-type structure", tunnel, dugout, bin, box, trailer, or a semitrailer or other mobile facility.

(a) Outdoor magazines—

(1) General. Outdoor magazines are to be weather-resistant and theft-resistant. The ground around magazines must slope away for drainage or other adequate drainage be provided. When unattended, vehicular magazines must have wheels removed or otherwise be effectively immobilized by kingpin locking devices or other methods approved by the Director.
(2) Construction. The doors are to be constructed of solid wood or metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Trailers, semitrailers, and similar vehicular magazines may, for each door, be locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter, if the door hinges and lock hasps are securely fastened to the magazine and to the door frame.

These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(5) Placards. The placards required by Department of Transportation regulations at 49 CFR part 172, subpart F, for the transportation of blasting agents shall be displayed on all magazines.

(b) Indoor magazines—

(1) General. Indoor magazines are to be theft-resistant. They need not be weather-resistant if the buildings in which they are stored provide protection from the weather. No indoor magazine is to be located in a residence or dwelling. Indoor magazines containing quantities of blasting agents in excess of 50 pounds are subject to the requirements of §555.206 of this subpart.

(2) Construction. The doors are to be constructed of wood or metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter, if the door hinges and lock hasps are securely fastened to the magazine and to the door frame.

These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

§ 555.212 Smoking and open flames.

Smoking, matches, open flames, and spark producing devices are not permitted:

(a) In any magazine;

(b) Within 50 feet of any outdoor magazine; or

(c) Within any room containing an indoor magazine.

§ 555.213 Quantity and storage restrictions.

(a) Explosive materials in excess of 300,000 pounds or detonators in excess of 20 million are not to be stored in one magazine unless approved by the Director.

(b) Detonators are not to be stored in the same magazine with other explosive materials, except under the following circumstances:

(1) In a type 4 magazine, detonators that will not mass detonate may be stored with electric squibs, safety fuse, igniters, and igniter cord.

(2) In a type 1 or type 2 magazine, detonators may be stored with delay devices and any of the items listed in paragraph (b)(1) of this section.

§ 555.214 Storage within types 1, 2, 3, and 4 magazines.

(a) Explosive materials within a magazine are not to be placed directly against interior walls and must be stored so as not to interfere with ventilation. To prevent contact of stored explosive materials with walls, a nonsparking lattice work or other nonsparking material may be used.

(b) Containers of explosive materials are to be stored so that marks are visible. Stocks of explosive materials are to be stored so they can be easily counted and checked upon inspection.

(c) Except with respect to fiberboard or other nonmetal containers, containers of explosive materials are not to be unpacked or repacked inside a magazine or within 50 feet of a magazine, and must not be unpacked or repacked close to other explosive materials. Containers of explosive materials must be closed while being stored.

(d) Tools used for opening or closing containers of explosive materials are to be of nonsparking materials, except that metal slitters may be used for opening fiberboard containers. A wood wedge and a fiber, rubber, or wooden mallet are to be used for
opening or closing wood containers of explosive materials. Metal tools other than nonsparking transfer conveyors are not to be stored in any magazine containing high explosives.

§ 555.215 Housekeeping.
Magazines are to be kept clean, dry, and free of grit, paper, empty packages and containers, and rubbish. Floors are to be regularly swept. Brooms and other utensils used in the cleaning and maintenance of magazines must have no spark-producing metal parts, and may be kept in magazines. Floors stained by leakage from explosive materials are to be cleaned according to instructions of the explosives manufacturer. When any explosive material has deteriorated it is to be destroyed in accordance with the advice or instructions of the manufacturer. The area surrounding magazines is to be kept clear of rubbish, brush, dry grass, or trees (except live trees more than 10 feet tall), for not less than 25 feet in all directions. Volatile materials are to be kept a distance of not less than 50 feet from outdoor magazines. Living foliage which is used to stabilize the earthen covering of a magazine need not be removed.

§ 555.216 Repair of magazines.
Before repairing the interior of magazines, all explosive materials are to be removed and the interior cleaned. Before repairing the exterior of magazines, all explosive materials must be removed if there exists any possibility that repairs may produce sparks or flame. Explosive materials removed from magazines under repair must be
(a) placed in other magazines appropriate for the storage of those explosive materials under this subpart, or
(b) placed a safe distance from the magazines under repair where they are to be properly guarded and protected until the repairs have been completed.

§ 555.217 Lighting.
(a) Battery-activated safety lights or battery-activated safety lanterns may be used in explosives storage magazines.
(b) Electric lighting used in any explosives storage magazine must meet the standards prescribed by the “National Electrical Code,” (National Fire Protection Association, NFPA 70–81), for the conditions present in the magazine at any time. All electrical switches are to be located outside of the magazine and also meet the standards prescribed by the National Electrical Code.
(c) Copies of invoices, work orders or similar documents which indicate the lighting complies with the National Electrical Code must be available for inspection by ATP officers.
§ 555.218 Table of distances for storage of explosive materials.

<table>
<thead>
<tr>
<th>Quantity of Explosives</th>
<th>Distances in feet</th>
<th>Separation of magazines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pounds over</td>
<td>Pounds not over</td>
<td>Inhabited buildings</td>
</tr>
<tr>
<td>Barricaded</td>
<td>Unbarricaded</td>
<td>Barricaded</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>0</td>
<td>5</td>
<td>70</td>
</tr>
<tr>
<td>5</td>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
<td>110</td>
</tr>
<tr>
<td>15</td>
<td>30</td>
<td>125</td>
</tr>
<tr>
<td>20</td>
<td>40</td>
<td>140</td>
</tr>
<tr>
<td>25</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>30</td>
<td>60</td>
<td>170</td>
</tr>
<tr>
<td>35</td>
<td>70</td>
<td>190</td>
</tr>
<tr>
<td>40</td>
<td>80</td>
<td>200</td>
</tr>
<tr>
<td>45</td>
<td>90</td>
<td>215</td>
</tr>
<tr>
<td>50</td>
<td>100</td>
<td>235</td>
</tr>
<tr>
<td>60</td>
<td>120</td>
<td>250</td>
</tr>
<tr>
<td>70</td>
<td>140</td>
<td>270</td>
</tr>
<tr>
<td>80</td>
<td>160</td>
<td>290</td>
</tr>
<tr>
<td>90</td>
<td>180</td>
<td>310</td>
</tr>
<tr>
<td>100</td>
<td>200</td>
<td>330</td>
</tr>
<tr>
<td>110</td>
<td>220</td>
<td>350</td>
</tr>
<tr>
<td>120</td>
<td>240</td>
<td>370</td>
</tr>
<tr>
<td>130</td>
<td>260</td>
<td>390</td>
</tr>
<tr>
<td>140</td>
<td>280</td>
<td>410</td>
</tr>
<tr>
<td>150</td>
<td>300</td>
<td>430</td>
</tr>
<tr>
<td>160</td>
<td>320</td>
<td>450</td>
</tr>
<tr>
<td>170</td>
<td>340</td>
<td>470</td>
</tr>
<tr>
<td>180</td>
<td>360</td>
<td>490</td>
</tr>
<tr>
<td>190</td>
<td>380</td>
<td>510</td>
</tr>
<tr>
<td>200</td>
<td>400</td>
<td>530</td>
</tr>
<tr>
<td>210</td>
<td>420</td>
<td>550</td>
</tr>
<tr>
<td>220</td>
<td>440</td>
<td>570</td>
</tr>
<tr>
<td>230</td>
<td>460</td>
<td>590</td>
</tr>
<tr>
<td>240</td>
<td>480</td>
<td>610</td>
</tr>
<tr>
<td>250</td>
<td>500</td>
<td>630</td>
</tr>
<tr>
<td>260</td>
<td>520</td>
<td>650</td>
</tr>
<tr>
<td>270</td>
<td>540</td>
<td>670</td>
</tr>
<tr>
<td>280</td>
<td>560</td>
<td>690</td>
</tr>
<tr>
<td>290</td>
<td>580</td>
<td>710</td>
</tr>
<tr>
<td>300</td>
<td>600</td>
<td>730</td>
</tr>
</tbody>
</table>

Table: American Table of Distances for Storage of Explosives (December 1910), as Revised and Approved by the Institute of Makers of Explosives—July, 1991.
Notes to the Table of Distances for Storage of Explosives

(1) Terms found in the table of distances for storage of explosive materials are defined in §555.11.

(2) When two or more storage magazines are located on the same property, each magazine must comply with the minimum distances specified from inhabited buildings, railways, and highways, and, in addition, they should be separated from each other by not less than the distances shown for “Separation of Magazines,” except that the quantity of explosives contained in cap magazines shall govern in regard to the spacing of said cap magazines from magazines containing other explosives. If any two or more magazines are separated from each other by less than the specified “Separation of Magazines” distances, then such two or more magazines, as a group, must be considered as one magazine, and the total quantity of explosives stored in such

§ 555.219 Table of distances for storage of low explosives.

<table>
<thead>
<tr>
<th>Pounds</th>
<th>Over</th>
<th>Not over</th>
<th>From Inhabited building distance (feet)</th>
<th>From public railroad and highway distance (feet)</th>
<th>From above ground magazine (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0</td>
<td>1,000</td>
<td>75</td>
<td>75</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>1,000</td>
<td>5,000</td>
<td>115</td>
<td>115</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>5,000</td>
<td>10,000</td>
<td>150</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td>10,000</td>
<td>20,000</td>
<td>190</td>
<td>190</td>
<td>125</td>
</tr>
<tr>
<td></td>
<td>20,000</td>
<td>30,000</td>
<td>215</td>
<td>215</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>30,000</td>
<td>40,000</td>
<td>235</td>
<td>235</td>
<td>155</td>
</tr>
<tr>
<td></td>
<td>40,000</td>
<td>50,000</td>
<td>250</td>
<td>250</td>
<td>165</td>
</tr>
<tr>
<td></td>
<td>50,000</td>
<td>60,000</td>
<td>260</td>
<td>260</td>
<td>175</td>
</tr>
<tr>
<td></td>
<td>60,000</td>
<td>70,000</td>
<td>270</td>
<td>270</td>
<td>185</td>
</tr>
<tr>
<td></td>
<td>70,000</td>
<td>80,000</td>
<td>280</td>
<td>280</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td>80,000</td>
<td>90,000</td>
<td>295</td>
<td>295</td>
<td>195</td>
</tr>
<tr>
<td></td>
<td>90,000</td>
<td>100,000</td>
<td>300</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>100,000</td>
<td>200,000</td>
<td>375</td>
<td>375</td>
<td>250</td>
</tr>
<tr>
<td></td>
<td>200,000</td>
<td>300,000</td>
<td>450</td>
<td>450</td>
<td>300</td>
</tr>
</tbody>
</table>

Table: Department of Defense Ammunition and Explosives Standards, Table 5–4.1 Extract; 4145.27 M, March 1969
§ 555.220 Table of separation distances of ammonium nitrate and blasting agents from explosives or blasting agents.

<table>
<thead>
<tr>
<th>Donor weight (pounds)</th>
<th>Minimum separation distance of acceptor from donor when barricaded (feet)</th>
<th>Minimum thickness of artificial barricades (inches)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ammonium nitrate</td>
<td>Blasting agent</td>
</tr>
<tr>
<td>Over</td>
<td>Not over</td>
<td>Ammonium nitrate</td>
</tr>
<tr>
<td>0</td>
<td>100</td>
<td>3</td>
</tr>
<tr>
<td>100</td>
<td>300</td>
<td>4</td>
</tr>
<tr>
<td>300</td>
<td>600</td>
<td>5</td>
</tr>
<tr>
<td>600</td>
<td>1,000</td>
<td>6</td>
</tr>
<tr>
<td>1,000</td>
<td>1,600</td>
<td>7</td>
</tr>
<tr>
<td>1,600</td>
<td>2,000</td>
<td>8</td>
</tr>
<tr>
<td>2,000</td>
<td>3,000</td>
<td>9</td>
</tr>
<tr>
<td>3,000</td>
<td>4,000</td>
<td>10</td>
</tr>
<tr>
<td>4,000</td>
<td>6,000</td>
<td>11</td>
</tr>
<tr>
<td>6,000</td>
<td>8,000</td>
<td>12</td>
</tr>
<tr>
<td>8,000</td>
<td>10,000</td>
<td>13</td>
</tr>
<tr>
<td>10,000</td>
<td>12,000</td>
<td>14</td>
</tr>
<tr>
<td>12,000</td>
<td>16,000</td>
<td>15</td>
</tr>
<tr>
<td>16,000</td>
<td>20,000</td>
<td>16</td>
</tr>
<tr>
<td>20,000</td>
<td>25,000</td>
<td>18</td>
</tr>
<tr>
<td>25,000</td>
<td>30,000</td>
<td>19</td>
</tr>
<tr>
<td>30,000</td>
<td>35,000</td>
<td>20</td>
</tr>
<tr>
<td>35,000</td>
<td>40,000</td>
<td>21</td>
</tr>
<tr>
<td>40,000</td>
<td>45,000</td>
<td>22</td>
</tr>
<tr>
<td>45,000</td>
<td>50,000</td>
<td>23</td>
</tr>
<tr>
<td>50,000</td>
<td>55,000</td>
<td>24</td>
</tr>
<tr>
<td>55,000</td>
<td>60,000</td>
<td>25</td>
</tr>
<tr>
<td>60,000</td>
<td>65,000</td>
<td>26</td>
</tr>
<tr>
<td>65,000</td>
<td>70,000</td>
<td>27</td>
</tr>
<tr>
<td>70,000</td>
<td>75,000</td>
<td>28</td>
</tr>
<tr>
<td>75,000</td>
<td>80,000</td>
<td>29</td>
</tr>
<tr>
<td>80,000</td>
<td>85,000</td>
<td>30</td>
</tr>
<tr>
<td>85,000</td>
<td>90,000</td>
<td>31</td>
</tr>
<tr>
<td>90,000</td>
<td>100,000</td>
<td>32</td>
</tr>
<tr>
<td>100,000</td>
<td>120,000</td>
<td>34</td>
</tr>
<tr>
<td>120,000</td>
<td>140,000</td>
<td>37</td>
</tr>
<tr>
<td>140,000</td>
<td>160,000</td>
<td>40</td>
</tr>
<tr>
<td>160,000</td>
<td>180,000</td>
<td>44</td>
</tr>
<tr>
<td>180,000</td>
<td>200,000</td>
<td>48</td>
</tr>
<tr>
<td>200,000</td>
<td>220,000</td>
<td>52</td>
</tr>
<tr>
<td>220,000</td>
<td>250,000</td>
<td>56</td>
</tr>
<tr>
<td>250,000</td>
<td>275,000</td>
<td>60</td>
</tr>
<tr>
<td>275,000</td>
<td>300,000</td>
<td>64</td>
</tr>
</tbody>
</table>

Table: National Fire Protection Association (NFPA) Official Standard No. 492, 1968

Notes of Table of Separation Distances of Ammonium Nitrate and Blasting Agents from Explosives or Blasting Agents

(1) This table specifies separation distances to prevent explosion of ammonium nitrate and ammonium nitrate-based blasting agents by propagation from nearby stores of high explosives or blasting agents referred to in the table as the "donor." Ammonium nitrate, by itself, is not considered to be a donor when applying this table. Ammonium nitrate, ammonium nitrate-fuel oil or combinations thereof are acceptors. If stores of ammonium nitrate are located within the sympathetic detonation distance of explosives or blasting agents, one-half the mass of the ammonium nitrate is to be included in the mass of the donor.

(2) When the ammonium nitrate and/or blasting agent is not barricaded, the distances shown in the table must be multiplied by six. These distances allow for the possibility of high velocity metal fragments from mixers, hoppers, truck bodies, sheet metal structures, metal containers, and the like which may enclose the "donor." Where explosives storage is in bullet-resistant magazines or where the storage is protected by a bullet-resistant wall, distances and barricade thicknesses in excess of those prescribed in the table in §555.218 are not required.

(3) These distances apply to ammonium nitrate that passes the insensitivity test prescribed in the definition of ammonium nitrate fertilizer issued by the Fertilizer Institute. 1 Ammonium nitrate failing to pass the test must be stored at separation distances in accordance with the table in §555.218.

1 Definition and Test Procedures for Ammonium Nitrate Fertilizer, Fertilizer Institute 1015–18th St. N.W. Washington, DC 20036.

(4) These distances apply to blasting agents which pass the insensitivity test prescribed in regulations of the U.S. Department of Transportation (49 CFR part 173).
(5) Earth or sand dikes, or enclosures filled with the described minimum thickness of earth or sand are acceptable artificial barricades. Natural barricades, such as hills or timber of sufficient density that the surrounding exposures which require protection cannot be seen from the “donor” when the trees are bare of leaves, are also acceptable.

(6) For determining the distances to be maintained from inhabited buildings, passenger railways, and public highways, use the table in §555.218.

§ 555.221 Requirements for display fireworks, pyrotechnic compositions, and explosive materials used in assembling fireworks or articles pyrotechnic.

(a) Display fireworks, pyrotechnic compositions, and explosive materials used to assemble fireworks and articles pyrotechnic shall be stored at all times as required by this Subpart unless they are in the process of manufacture, assembly, packaging, or are being transported.

(b) No more than 500 pounds (227 kg) of pyrotechnic compositions or explosive materials are permitted at one time in any fireworks mixing building, any building or area in which the pyrotechnic compositions or explosive materials are pressed or otherwise prepared for finishing or assembly, or any finishing or assembly building. All pyrotechnic compositions or explosive materials not in immediate use will be stored in covered, non-ferrous containers.

(c) The maximum quantity of flash powder permitted in any fireworks process building is 10 pounds (4.5 kg).

(d) All dry explosive powders and mixtures, partially assembled display fireworks, and finished display fireworks shall be removed from fireworks process buildings at the conclusion of a day’s operations and placed in approved magazines.


§ 555.222 Table of distances between fireworks process buildings and between fireworks process and fireworks nonprocess buildings.

<table>
<thead>
<tr>
<th>Net weight of fireworks1 (pounds)</th>
<th>Display fireworks2 (feet)</th>
<th>Consumer fireworks3 (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-100</td>
<td>57</td>
<td>37</td>
</tr>
<tr>
<td>101-200</td>
<td>69</td>
<td>37</td>
</tr>
<tr>
<td>201-300</td>
<td>77</td>
<td>37</td>
</tr>
<tr>
<td>301-400</td>
<td>85</td>
<td>37</td>
</tr>
<tr>
<td>401-500</td>
<td>91</td>
<td>37</td>
</tr>
<tr>
<td>Above 500</td>
<td>Not permitted</td>
<td>Not permitted</td>
</tr>
</tbody>
</table>

1Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

2While consumer fireworks or articles pyrotechnic in a finished state are not subject to regulation, explosive materials used to manufacture or assemble such fireworks or articles are subject to regulation. Thus, fireworks process buildings where consumer fireworks or articles pyrotechnic are being processed shall meet these requirements.

3A maximum of 500 pounds of in-process pyrotechnic compositions, either loose or in partially-assembled fireworks, is permitted in any fireworks process building. Finished display fireworks may not be stored in a fireworks process building.

4A maximum of 10 pounds of flash powder, either in loose form or in assembled units, is permitted in any fireworks process building. Quantities in excess of 10 pounds must be kept in an approved magazine.


§ 555.223 Table of distances between fireworks process buildings and other specified areas.

<table>
<thead>
<tr>
<th>Net weight of fireworks1 (pounds)</th>
<th>Display fireworks2 (feet)</th>
<th>Consumer fireworks3 (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-100</td>
<td>200</td>
<td>25</td>
</tr>
<tr>
<td>101-200</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>201-300</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>301-400</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>401-500</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>Above 500</td>
<td>Not permitted</td>
<td>Not permitted</td>
</tr>
</tbody>
</table>

Distance from Passenger Railways, Public Highways, Fireworks Plant Buildings used to Store Consumer fireworks and Articles Pyrotechnic, Magazines and Fireworks Shipping Buildings, and Inhabited Buildings.

1Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

2While consumer fireworks or articles pyrotechnic in a finished state are not subject to regulation, explosive materials used to manufacture or assemble such fireworks or articles are subject to regulation. Thus, fireworks process buildings where consumer fireworks or articles pyrotechnic are being processed shall meet these requirements.

3This table does not apply to the separation distances between fireworks process buildings (see § 555.222) and between magazines (see §§ 555.218 and 555.224).

4The distances in this table apply with or without artificial or natural barricades or screen barricades. However, the use of barricades is highly recommended.

5No work of any kind, except to place or move items other than explosive materials from storage, shall be conducted in any building designated as a warehouse. A fireworks plant warehouse is not subject to § 555.222 or this section, tables of distances.

§ 555.224 Table of distances for the storage of display fireworks (except bulk salutes).

<table>
<thead>
<tr>
<th>Net weight of fireworks1 (pounds)</th>
<th>Distance between magazine and inhabited building, passenger railway, or public highway3 4 (feet)</th>
<th>Distance between magazines2 3 (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-1000</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>1,001-5,000</td>
<td>230</td>
<td>150</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>Above 10,000</td>
<td>Use Table § 55.218</td>
<td></td>
</tr>
</tbody>
</table>

1 Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

2 For the purposes of applying this table, the term “magazine” also includes fireworks shipping buildings for display fireworks.

3 For fireworks storage magazines in use prior to (30 days from the date of publication of the final rule in the Federal Register), the distances in this table may be halved if properly barricaded between the magazine and potential receptor sites.

4 This table does not apply to the storage of bulk salutes. Use table at § 555.218.

Questions and Answers (Revised 1/07)
18 U.S.C. Chapter 40 and 27 CFR Part 555

Introduction

The following list of Questions and Answers are intended to aid you in gaining a better understanding of:

18 U.S.C. Chapter 40 – Importation, Manufacture, Distribution and Storage of Explosive Materials and the implementing regulations issued within:

27 CFR Part 555 – Commerce in Explosives

This listing is not all-inclusive. However it contains some of the most frequently asked questions that ATF receives. These questions and answers are intended only as a general overview. To determine how the law and regulations apply to your specific circumstances, you must refer directly to the applicable law and regulation or contact your local ATF Office of Industry Operations. Also, please be aware that both the law and regulations are subject to change. Please contact your local ATF office for the most up-to-date information. You can also find the latest Federal explosives regulations on the ATF website: www.atf.gov.

Unless otherwise stated, these Questions and Answers apply only to Federal law and regulations. States and local jurisdictions have, in many cases, enacted their own requirements relating to explosives. Check with appropriate State or local authorities for information on those requirements. Compliance with Federal law and regulations does not exempt any person from compliance with any State or local requirements.

A Table of Contents and a Subject Index has been included for your convenience. The Index is located at the end of the Questions and Answers section.

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General Questions

1. Who is affected by the Federal explosives law?

The law affects all persons who import, manufacture, deal in, purchase, use, store, or possess explosive materials. It also affects those who ship, transport or cause to be transported, or receive explosive materials. Also, see 18 U.S.C. 845 and 27 CFR 555.141 for exemptions.

2. What changes were brought about by the Safe Explosives Act?

Among other things, the Act mandated that all persons who wish to receive or transport explosive materials must first obtain a Federal explosives license or permit. In addition, the act imposed new restrictions on who may lawfully receive and possess explosive materials (See question 4). All Federal explosive licensees and permittees and their responsible persons and employees authorized to possess explosives are affected by the new requirements and background checks mandated by the Act.

3. Can I obtain general information from ATF on the Internet?

Yes. ATF maintains a website on the Internet at www.atf.gov.

4. Does the law make some classes of persons ineligible to receive a Federal license to import, manufacture, or deal in explosive materials or to receive a Federal explosives permit?

Yes. A license or permit will not be issued to any person who:

(a) Is under indictment for, or who has been convicted in any court, of a crime punishable by imprisonment for a term exceeding one year;

(b) Is a fugitive from justice;

(c) Is an unlawful user of or addicted to any controlled substance (as defined in section 102 of the Controlled Substances Act (21 U.S.C. 802));

(d) Has been adjudicated a mental defective or who has been committed to a mental institution;

(e) Is an alien (with certain exceptions);

(f) Has been discharged from the armed forces under dishonorable conditions; or,

(g) Having been a citizen of the United States, has renounced his citizenship. [18 U.S.C. 842(i), 843(b)(1); 27 CFR 555.49(b)(2)(i)]

5. Are there classes of persons to whom the distribution of explosive materials by licensees is prohibited?

Yes. No person shall knowingly distribute explosive materials to any individual listed in Question 4, or to an individual who is under 21 years of age. [18 U.S.C. 842(d); 27 CFR 555.26(d)]

6. What other distributions of explosive materials by licensees and permittees are prohibited?

A licensee or permittee shall not knowingly distribute any explosive materials to any person who:

(a) Is not a licensee [18 U.S.C. 842(b), 27 CFR 555.105, 555.106];

(b) Is not a holder of a user permit [18 U.S.C. 842(b); 27 CFR 555.105, 555.106];

(c) Is not a holder of a limited permit who resides in the same State where distribution is made and in which premises of the transferor are located. [18 U.S.C. 842(b); 27 CFR 555.105, 555.106];

(d) The licensee has reason to believe intends to transport such explosive materials into a State where the purchase, possession, or use of explosive materials is prohibited or which does not permit its residents to transport or ship explosive materials into the State or to receive explosive materials in the State. [18 U.S.C. 842(c); 27 CFR 555.106]

(e) Is in any State where the purchase, possession, or use by such person of such explosive materials would be in violation of any State law or any published ordinance applicable at the place of distribution. [18 U.S.C. 842(e); 27 CFR 555.106(b)(2)]

7. Does Federal law prohibit certain persons from receiving or possessing explosive materials?

Yes. The law prohibits the receipt or possession of explosive materials by any person listed in question 4. [18 U.S.C. 842(i); 27 CFR 555.26, 555.49(b)]

8. May a licensed manufacturer, importer, or dealer distribute explosive materials to nonlicensees and nonpermittees?

No. Every person who receives explosive materials must first obtain a Federal explosives license or permit. Distribution of explosive materials to persons who do not hold a license or permit is unlawful. Also, see 18 U.S.C. 845 and 27 CFR 555.141 for exemptions. [18 U.S.C. 842(a), 842(b); 27 CFR 555.26(a), 555.106]

9. Does Federal law provide penalties for purchasers who give false information at the time of purchasing explosive materials?

Yes. The penalty for knowingly providing false information or misrepresented identification is a maximum 10 years imprisonment and/or a fine not exceeding $250,000. [18 U.S.C. 842(a)(2), 844(a)]
10. Is the theft of explosive materials, as well as the possession of stolen explosive materials, a federal crime?

Yes. It is a Federal crime for any person to steal any explosive materials. It is also a Federal crime for any person to receive, possess, transport, ship, conceal, store, barter, sell, dispose of, or pledge or accept as security for a loan any stolen explosive materials. [18 U.S.C. 842(h), 844(c)(3)]

11. Are thefts and losses of explosive materials required to be reported to ATF?

Yes. Any licensee or permittee who has knowledge of the theft or loss of any explosive materials from his or her stock shall, within 24 hours of discovery, report the theft or loss by telephoning 800-461-8841 (Monday-Friday 8:00 a.m. - 5:00 p.m. Eastern Time) or 888-283-2662 (after hours and weekends) (nationwide toll free number) and on ATF Form 5400.5, “Report of Theft or Loss – Explosive Materials”, in accordance with the instructions on the form. The theft or loss shall also be reported to appropriate local authorities. The same requirements are imposed upon persons other than licensees and permittees, except that nonlicensees and nonpermittees, other than carriers, need not report a theft or loss on Form 5400.5, but must report the theft or loss by telephone, using the same numbers: 800-461-8841 (Monday-Friday 8:00 a.m. - 5:00 p.m. Eastern Time) or 888-283-2662 (after hours and weekends) and in writing to the nearest ATF office. The theft or loss shall also be reported to appropriate local authorities. Carriers of explosive materials must report a theft or loss by telephone but need not make the report on the ATF form or in writing. See 27 CFR 555.30 for the specific information required to be reported in connection with a theft or loss. [18 U.S.C. 842(k), 844(p); 27 CFR 555.30]

12. My company holds a Federal explosives license and after conducting an inventory of our explosives on hand, we noticed one case of dynamite missing. After double-checking all Daily Summaries of Magazine Transactions, invoices, and delivery sheets, we still cannot reconcile the discrepancy. What are we required to do?

This should be considered a theft or loss of explosive materials. As stated in the answer to Question 11, you must report the theft or loss of explosive materials, within 24 hours of discovery, to ATF by telephone (toll free: 800-461-8841 (Monday-Friday 8:00 a.m. - 5:00 p.m. Eastern Time) or 888-283-2662 (after hours and weekends). ATF Form 5400.5, “Report of Theft or Loss – Explosive Materials”, must then be completed and forwarded in accordance with the instructions on the form. [18 U.S.C. 842(k); 27 CFR 555.30]

13. May ATF conduct warrantless inspections of licensees’ and permittees’ records of explosives materials, stocks of such materials, and magazines?

Except for limited permit holders, any ATF officer may, without a warrant, enter during business hours the premises, including places of storage, of any licensee or permittee for the purpose of inspecting or examining any records or documents required to be kept by the law and regulations and any explosive materials kept or stored at the premises. For inspection purposes, “business hours” includes hours during which business is actually conducted, not just those hours stated on license applications. Any licensee or permittee who refuses to permit the inspection or examination is subject to having his or her license or permit revoked, as well as to denial of an application to renew the license or permit. For limited permit holders, an ATF officer may inspect the places of storage for explosive materials of either an applicant for a limited permit or at the time of renewal of such permit, but in no event shall such inspection occur more than once every three years. [18 U.S.C. 843(b)(4), 18 U.S.C. 843(f)]

14. Will ATF investigate accidents involving explosive materials?

ATF is authorized to inspect the site of any accident or fire where there is reason to believe that explosive materials were involved. Other Federal agencies, or State or local agencies, may also investigate such incidents, depending on the circumstances. [18 U.S.C. 846(a); 27 CFR 555.31]

15. Is black powder subject to regulation under Federal explosives laws?

Black powder is an explosive material for purposes of Federal explosives laws and regulations. However, the law exempts from regulation commercially manufactured black powder in quantities not exceeding 50 pounds (as well as percussion caps, safety and pyrotechnic fuses, quills, quick and slow matches, and friction primers) intended to be used solely for sporting, recreational, or cultural purposes in antique firearms as defined in 18 U.S.C. 921(a)(16) or in antique devices exempted from the term “destructive device” in 18 U.S.C. 921(a)(4). However, persons engaged in the business of importing, manufacturing, or dealing in black powder in any quantity must have a Federal explosives license. [18 U.S.C. 841(c), 841(d), 845(a)(5); 27 CFR 555.11: definitions of “explosives” and “explosive materials”, 555.141(b)]

16. Is small arms ammunition subject to regulations under Federal explosives laws?

No. The law specifically exempts small arms ammunition and components therefrom. (See also Question 81.) [18 U.S.C. 845(a)(4)]
17. Are binary explosives subject to regulation under Federal explosives laws?

Until the compounds are mixed, they are not classified as explosives and, therefore, are not subject to control. However, once mixed, binary explosives are “explosive materials” and are subject to all applicable Federal requirements. A person who mixes or combines compounds of binary explosives for the purpose of sale or distribution or for the person’s own business use is a “manufacturer” of explosive materials and must be licensed as a manufacturer under the law. [18 U.S.C. 841(h); 27 CFR 555.11: definition of “manufacturer”]

18. Does ATF have any regulations governing the actual transportation of explosive materials?

Federal explosives laws and regulations generally prohibit any person from transporting explosive materials interstate or intrastate unless the person has a Federal explosives license or permit. Also, the transportation of stolen explosives materials is a Federal crime (see also Question 10). However, the law exempts from regulation under 18 U.S.C. Chapter 40 and 27 CFR Part 555 aspects of the transportation of explosive materials via railroad, water, highway, or air which are regulated by the United States Department of Transportation, and the Department of Homeland Security, and agencies thereof and which pertain to safety and security. [18 U.S.C. 842(a)(3), 842(h), 845(a)(1); 27 CFR 555.26, 555.28, 555.141(a)(1)]

19. Are common or contract carriers required to obtain a Federal explosives license or permit to transport explosive materials?

No. The actual transportation of explosive materials by carriers is subject to Department of Transportation or Department of Homeland Security regulations. [18 U.S.C. 845(a)(1); 27 CFR 555.141(a)(1)]

20. What is the “Explosives List”?

The Explosives List is a comprehensive (but not all-inclusive) listing of explosive materials which have been determined to be within the coverage of Chapter 40. The list is published annually by ATF (the most recent list can be found under the Explosives Laws and Regulations link on the ATF website). [18 U.S.C. 841(d); 27 CFR 555.23]

21. May a person under the age of 21 be lawfully employed by an explosives business and lawfully receive, possess, and use explosive materials on behalf of the business?

Yes. Federal explosives law prohibits any person from distributing explosive materials to persons under 21 years of age. However, it does not prohibit the delivery to or possession of explosive materials by persons under the age of 21 who are receiving or using the materials on behalf of their employers to whom the materials were lawfully sold. [18 U.S.C. 842(d), (i); 27 CFR 555.11 (definition of “distribute”), 555.26, 555.106(b)(1)]

22. ATF regulations require explosive materials to be stored at certain minimum distances from a “public highway”. What is a “public highway” for purposes of the regulations?

The term “highway” is defined in 27 CFR 555.11 as “any public street, public alley, or public road, including a privately financed, constructed, or maintained road that is regularly and openly traveled by the general public.” Privately financed, constructed, or maintained roads that are marked and barricaded in a manner that prevents access by the general public do not fall within the meaning of the term and would, therefore, be exempt from table of distance requirements. [27 CFR 555.11: definition of “highway”] (See also ATF Ruling 2005-2)

23. Is an airport runway or taxiway considered a public highway for purposes of the Table of Distances for storage of explosive materials?

No. However, airport terminals are considered inhabited buildings for Table of Distance requirements.

24. How is shock tube regulated by ATF?

Shock tube contains highly explosive material. However, it may be stored as a low explosive when not attached to a detonator. [27 CFR 555.202(b), 555.213]

25. What is an EX number?

An EX number is a number, preceded by the prefix “EX”, which is issued and used by the Department of Transportation (DOT) to identify an explosive which has been tested and classified by DOT. See U.S. Department of Transportation regulations at 49 CFR 171.8 and 49 CFR 173.56.

26. What is a UN number?

A UN (United Nations) number is used by DOT as a method of identification and classification of products for shipping purposes. UN numbers are different from the hazard class or division designations used by DOT (for example, 1.1, 1.2, 1.3, 1.4, and 1.5). ATF regulations in 27 CFR Part 555 also use UN numbers to help identify certain explosives. [27 CFR 555.11]

27. Can Federal explosives disabilities resulting from a conviction of a crime punishable by imprisonment for a term exceeding one year be removed if the conviction is expunged or set aside or the convicted person has received a pardon for the offense or has had his or her civil rights restored?

A person convicted of, or under indictment for, a “crime punishable by imprisonment for a term exceeding one year” may not lawfully receive or possess explosive materials or be issued a Federal explosives license or permit. The term “crime punishable by imprisonment for a term exceeding one year” does not include offenses pertaining to antitrust violations, unfair trade practices, restraints of trade, or any State offense (other than one involving a firearm or explosive) classified as a misdemeanor and...
punishable by imprisonment for 2 years or less. There are only 3
means by which Federal explosives disabilities resulting from a
\textcolor{red}{\textbf{crime punishable by imprisonment for a term exceeding one year}} can be removed:
(a) A decision of a court invalidating a conviction on the basis
that the conviction was unconstitutional;
(b) In the case of a Federal conviction, a presidential pardon; and
(c) The granting of relief from Federal explosives disabilities by
ATF pursuant to the filing of a relief application with the Director.
Information on how to apply for relief and contact information for
the Relief of Disabilities Section is available on the ATF website.
[18 U.S.C. 841(d), 842(d)(i), 845(b); 27 CFR 555.11: definition
of “crime punishable by imprisonment for a term exceeding one
year”, 555.26(o), 555.142]

\section*{Licenses and Permits}

\subsection*{28. Who needs a Federal explosives license or
permit?}
All persons who wish to transport, ship, cause to be transported,
or receive explosive materials must first obtain a Federal explo-
sives license or permit. Certain exemptions apply. [18 U.S.C.
842(b); 18 U.S.C. 845; 27 CFR 555.26(a), 27 CFR 555.141]

\subsection*{29. Who is eligible for a Federal explosives
license or permit?}
The Chief, Federal Explosives Licensing Center, will approve
a properly completed application for a license or permit on ATF
Form 5400.13/5400.16 if the applicant:
(a) Is not a person prohibited from possessing or receiving
explosive materials under 18 U.S.C. 842(i) and none of the
applicant’s “responsible persons” are prohibited under section
842(1); (see also Question 4 in General Q&A);
(b) Has not willfully violated any provision of Chapter 40 or the
regulations in 27 CFR Part 555;
(c) Has not knowingly withheld information or has not made any
false or fictitious statement intended or likely to deceive, in
connection with the application,
(d) Has premises in a State from which he intends to conduct
business or operations;
(e) Has storage for the class (as described in 27 CFR 555.202) of
explosive materials described on the application;
(f) Has certified in writing that he is familiar with and under-
stands all published State laws and local ordinances relating to
explosive materials for the location in which he intends to do
business;
(g) Has submitted the certificate required by section 21 of the
Federal Water Pollution Control Act, as amended (33 U.S.C.
1341) [18 U.S.C. 843(b); 27 CFR 555.49(b)];
(h) None of the applicant’s employees authorized to possess
explosives are prohibited persons under 18 U.S.C. 842(j); and
(i) In the case of an applicant for a limited permit, the applicant
has certified that the applicant will not receive explosive materi-
als on more than 6 occasions during the 12-month period for
which the limited permit is valid.

\subsection*{30. What activities are covered by licenses and
permits?}
Licenses allow persons to engage in the business of importing,
manufacturing, or dealing in explosive materials. Any individual
or business entity intending to engage in any of these activities
must first obtain a license. A user permit allows the receipt and
transportation of explosive materials. A limited permit allows the
receipt of explosive materials from a licensee or permittee within
the permittee’s state of residence only, and on no more than six
occasions in the 12-month period during which the limited permit
is valid. A limited permit does not authorize the receipt or
transportation of explosive materials in interstate or foreign
commerce. [27 CFR 555.11: definitions of “importer”, “manu-
ufacturer”, “dealer”, “limited permit”, and “user permit”, 555.41]
A separate license is needed for each business premises where
an explosives business or activity is conducted. Only a single user
permit is needed by a permittee who uses explosives in more than
one location. [27 CFR 555.41]

\subsection*{31. What is a Limited Permit?}
A limited permit is for persons who wish to transport, ship,
cause to be transported, or receive explosive materials in intra-
state commerce only. This permit is designed for the infrequent
receipt of explosive materials by interstate users. The limited
permit will allow a purchaser to receive explosive materials on no
more than six separate occasions from in-state licensees or
permittees during the 12-month period of the permit. The limited
permit does not allow the holder to transport, ship, cause to be
transported, or receive explosive materials in interstate
commerce.

\subsection*{32. What is the duration of a license or permit?}
(a) A user license or permit is valid for a period of 3 years.
(b) The user-limited permit is valid only for a single purchase
transaction.
(c) Limited permits are valid for no more than six separate
receipts of explosive materials during a 12-month period. [27
CFR 555.51]

\subsection*{33. What are the fees for licenses and permits?}
Each license applicant must pay a fee of $200 for obtaining a
3-year license, a separate license and fee being required for each
business premises. The fee for renewal of a license is $100 for a
3-year license. [27 CFR 555.42]
Each applicant for a user permit must pay a fee of $100 for a 3-year permit, and each applicant for a user-limited permit (nonrenewable) must pay a fee of $75. The fee for renewal of a user permit is $50 for a 3-year permit. [27 CFR 555.43]

Each applicant for a limited permit must pay a fee of $25 for a 1-year limited permit. The fee for renewal of a limited permit is $12 for a 1-year limited permit. [27 CFR 555.43]

34. Will the Government investigate an application for a license or permit?

ATF will investigate any applicant before issuing a license or permit. Additionally, ATF must inspect places of storage and conduct background checks on responsible persons and employee possessors authorized to possess explosives [18 U.S.C. 843(b); 18 U.S.C. 843(h); 27 CFR 555.33, 27 CFR 555.49(b)].

35. What may a licensed explosives dealer do?

A licensed dealer may engage in the business of distributing explosive materials at wholesale or retail [27 CFR 555.11; definition of “dealer”].

36. What may a licensed explosives importer do?

A licensed importer may engage in the business of importing or bringing explosive materials into the United States for purposes of sale or distribution. It is not necessary for a licensed importer to also obtain a dealer’s license to engage in business on his or her licensed premises as a dealer in explosive materials (see also Question 52 and 53) [27 CFR 555.11; definition of “importer”, 27 CFR 555.41(b)(2)].

37. When is a manufacturer’s license required?

A manufacturer’s license is required by persons engaged in the business of manufacturing explosive materials for sale, distribution, or for their own business use. For example, persons engaged in the business of providing a blasting service using explosives of their own manufacture would be required to have a manufacturer’s license. Persons who manufacture explosives for their personal, non-business use are not required to have a manufacturer’s license. However, no person may ship, transport, cause to be transported, or receive explosive materials unless such person holds a license or permit. [27 CFR 555.11; definition of “manufacturer”, 555.41(b)] A separate manufacturer’s license is not required by a licensed manufacturer for the purpose of on-site manufacture, for example, mixing binary explosives or making blasting agents at a quarry or other job site. It is not necessary for a licensed manufacturer to also obtain a dealer’s license to engage in business on his or her licensed premises as a dealer in explosive materials (see also Question 52 and 53) [27 CFR 555.11; definition of “manufacturer”, 555.41(b)(2)].

38. How do I apply for a Federal explosives license or permit?

You can request an application for a Federal explosives license or permit from the Federal Explosives Licensing Center at 877-283-3552 or from the ATF Distribution Center at 703-455-7801. As part of the application process, you must complete and submit an ATF Form 5400.13/5400.16, Application for Explosives License or Permit. You must also submit the names, identifying information, fingerprints, and photographs of all responsible persons. In addition, you must submit the names and identifying information of all employees who are authorized to possess explosive materials in the course of their employment on ATF Form 5400.28, Employee Possessor Questionnaire. [27 CFR 555.45(c)]

39. What is a “responsible person”?

Federal explosives laws define a “responsible person” as an individual who has the power to direct the management and policies of the applicant pertaining to explosive materials. Responsible persons generally include sole proprietors and explosives facility site managers. In the case of a corporation, association, or similar organization, responsible persons generally include only those corporate directors/officers, and stockholders, who have the power to direct management and policies as they pertain to explosive materials.

For example, a corporate vice president whose duties include acquiring and approving contracts with explosives distributors would be considered a responsible person. Other corporate officials whose duties do not include the power to direct the management and policies of the applicant pertaining to explosive materials, for example, a vice president responsible solely for human resources, would not typically be considered a responsible person. Each applicant for a license or permit must assess the corporate and other management responsibilities for all key personnel and determine whether or not these duties place the individual in the position of being a responsible person. [18 U.S.C. 841(s), 27 CFR 555.11; definition of “responsible person”]

40. Who is a “possessor of explosives”?

A possessor of explosives is any employee of a license or permit holder or any employee of an applicant for a license or permit who has or will have actual physical possession of explosive materials or who has or will have constructive possession of explosive materials. For example, persons who physically handle explosive materials would be considered to be actual possessors of explosive materials. This would include employees who directly handle explosive materials as part of the production process; employees who handle explosive materials in order to ship, transport, or sell them; and employees, such as blasters and their helpers who actually use explosive materials. A constructive possessor is any
person who has access to explosive materials, without physically
handling them. For example, a supervisor at a construction site
keeps keys for storage magazines in which explosives are
stored or who directs the use of explosive materials by other
employees has constructive possession of explosives.

41. Why is it necessary to provide new and
additional information on responsible persons
and employee possessors of explosives?
The law requires this information for ATF to conduct back-
ground checks on all responsible persons and employee possess-
ors to restrict the availability of explosives to authorized persons
only and to reduce the risk of prohibited persons acquiring
explosive materials. [18 U.S.C. 843(h); 27 CFR 555.33,
555.45(c)]

42. When will I need to submit the identifying
information for my responsible persons and
employee possessors of explosives?
(a) All license and permit applicants and any renewal applicants
must submit identifying information for responsible persons and
employee possessors (and fingerprints and photographs for
responsible persons) upon submission of an original or renewal
application.

(b) Any new responsible person added after a license or permit
has been issued by ATF must be reported to ATF within 30 days.
However, the submission of fingerprints and photographs by
the new responsible person is required only at the time of any
subsequent renewal.

(c) For all licenses and permits (new and renewal), any new
employee possessors must be reported to ATF within 30 days of
hire on the Employee Possessor Questionnaire form (ATF F
5400.28). [27 CFR 555.45(e), 27 CFR 555.57(b)]

43. How do I get my fingerprints taken?
Fingerprints must be submitted on Fingerprint Identification
Cards, FD-258 that have been issued by ATF. The fingerprint
cards must contain the following ORI information: WVATF0900;
ATF-NATL EXPL. LIC, MARTINSBURG WV. These fingerprint
cards may be obtained by contacting the Federal Explosives
Licensing Center at 877-283-3352 or the ATF Distribution Center
at 703-455-7801. The fingerprint cards must be completed by
your local law enforcement authority.

44. Will ATF notify me whether or not my
responsible persons and employee possessors
have passed their background checks?
Yes. A “Notification of Clearance” will be issued directly to all
license or permit holders advising whether their responsible
persons and employee possessors have been cleared to possess
explosive materials, or are or may be prohibited from possessing
explosives. These notices must be retained as part of the license
or permit holders permanent records. In addition, letters of
clearance or denial will be issued directly to responsible persons
and employee possessors. [27 CFR 555.33]

45. What notification will I receive if one of my
responsible persons or employee possessors
does not pass their ATF background check?
If an individual does not pass the background check, a letter
will be sent to the licensee or permittee who submitted the
individual’s name indicating that the individual was denied. A
letter will also be sent to that individual explaining the prohibition
and outlining appeal and relief procedures, as may be applicable.
Unless and until an appeal overturns the denial or relief from
disabilities is granted, that individual may not lawfully possess
explosives. [27 CFR 555.33]

46. Who will conduct the background checks
on applicants, responsible persons, and possess-
ors?
ATF will perform the background checks. If employers wish to
require their own background checks as a condition of employ-
ment, they may do so. However, such a background check will not
be accepted in place of the ATF background check. [27 CFR
555.33]

47. May I sell black powder without a license?
No. Anyone who engages in the business of selling black
powder, regardless of quantity, must be licensed as an explosives
dealer. [27 CFR 555.41(b)]

48. Is a manufacturer’s license required to
acquire and mix binary explosives?
If the individual purchasing the binary explosives is engaged in
the business of manufacturing explosives, i.e., mixes and uses
them in the operation of a commercial business (for example,
operating a quarry, or providing the service of removing stumps or
boulders from a farm field), then a manufacturer’s license is
required.

An individual farmer who merely wishes to mix the binary
explosives to remove obstacles from his field and provides no
other outside service would not need a manufacturer’s license.

Please note, however: A Federal explosives license or permit
would be required to obtain any explosive device, such as detonators,
used to initiate the mixed binary explosives. In addition,
transportation of any explosive material, including mixed binary
explosives, without a Federal license or permit is prohibited. [27
CFR 555.11: Definition of “manufacturer”; 27 CFR 555.26,
555.41(b)]

49. What is theatrical flash powder and is there
a license for its manufacture?
Theatrical flash powder is flash powder commercially manufac-
tured in premeasured kits not exceeding 1 ounce in weight, and
mixed immediately prior to use and intended for use in events
such as theatrical shows, stage plays, band concerts, magic acts, thrill shows, and clown acts in circuses. A manufacturer's license allows on-site manufacturers to operate nationally on one license issued to their principal place of business. [27 CFR 555.11: definitions of “flash powder” and “theatrical flash powder”, 555.41(b)]

50. Is a separate license required for each location where business is conducted?
Yes. A separate license is required for each location where business is conducted. However, a separate license is not required for:
(a) Facilities used only for the storage of explosive materials;
(b) Locations used solely for the storage of records relating to the business; and
(c) Licensed manufacturers’ on-site manufacturing. [27 CFR 555.41(b)]

51. Must a person who engages in the business of both manufacturing and importing at the same location have both licenses?
Yes. The licenses for manufacturing and importing allow a person to engage in separate and distinct activities and a separate license is required for each activity. However, a manufacturer or an importer does not need a separate dealer's license to also distribute explosive materials from the licensed premises. [27 CFR 555.41(b)]

52. Does a licensed manufacturer, importer, or dealer need a permit to use explosive materials?
No. No licensee will be required to obtain a user permit to lawfully transport, ship, or receive explosive materials in interstate or foreign commerce. [27 CFR 555.41(b)(2)]

53. Does a Federal license or permit exempt the holder from State or local requirements?
No. A license or permit confers no right or privilege to conduct business or operations, including storage, contrary to State or other law. All legal requirements must be followed, whether Federal, State, or local. [18 U.S.C. 848; 27 CFR 555.62]

54. Who is authorized to import explosive materials?
Any licensed importer is authorized to engage in the business of importing explosive materials for sale, distribution, or their own use. Any licensed manufacturer, dealer, or holder of a user permit may import explosive materials for their own use only. Licensees and user permittees importing explosive materials must provide to the U.S. Customs and Border Protection (CBP) a copy of the license or permit. Note, however, that in the case of certain military explosives or propellant powder or other components of small arms ammunition, Federal firearms regulations require the importer to provide an approved ATF Form 6 to the CBP. [27 CFR 555.41(b)(2), 555.41(b)(3), 447.21, 555.108(a), 555.183, 478.113]

55. How may an employee of an explosives licensee or permittee qualify to accept delivery of explosive materials for the employer?
The employee must be on the current list of representatives or agents authorized to accept delivery of explosive materials on behalf of the employer and be an authorized employee possessor of explosives. [27 CFR 555.103(b), 555.105(b)]

56. When an explosives licensee or permittee sends one of their truck drivers to the distributor’s premises to pick up explosive materials that have been purchased by the licensee or permittee, will the driver be required to sign any forms?
No, however the driver is required to furnish the seller with an identification document as defined in 27 CFR Part 555.11. [27 CFR 555.103(b), 555.105(b)]

57. Will a licensee or permittee be notified in advance when the license or user permit needs to be renewed?
Generally, prior to expiration of the license or permit, a license or permittee will be notified. The application form must be completed and filed with ATF before expiration of the current license or permit for the renewal to be considered timely. However, if a licensee or permittee does not receive a renewal notification, it is still that licensee's or permittee's responsibility to ensure that an application is filed prior to expiration of the current license or permit. [27 CFR 555.46]

58. Have timely filed my application for renewal of my license (or user's permit) but I have not received my new license (or permit). May I continue in business even though the expiration date shown on my license or permit has passed? If so, how long?
Yes. You may continue to operate the business pursuant to your current license or permit until the application for renewal is acted upon. [5 U.S.C. 558]

59. Can a license or permit be revoked?
Yes. The Director, Industry Operations for the ATF Field Division in which a licensee or permittee is located may revoke a license or permit if the holder has violated any provision of 18 U.S.C. Chapter 40 or its implementing regulations or has become ineligible to receive explosive materials under 18 U.S.C. 842(i). [18 U.S.C. 843(d); 27 CFR 555.71, 555.74]
60. If a Federal explosives licensee or permittee is indicted for or convicted of a "crime punishable by imprisonment for a term exceeding one year", may he or she continue operations under the license or permit?

As stated in the answer to Question 4 in General Q&A, a person under indictment for, or convicted of, a crime punishable by imprisonment for a term exceeding one year is not eligible to be issued a license or permit. However, a licensee or permittee who is indicted for, or convicted of, such a crime during the term of his or her existing license or permit is not barred from licensed or permit operations for 30 days after the date of the indictment or the date the conviction becomes final. If the licensee or permittee files an application for relief from disabilities within such 30-day period, he or she may continue licensed or permit operations while the application is pending. If a relief application is not filed during that period, the licensee or permittee may not continue operations beyond such 30-day period. The right of a licensee to continue licensed or permitted operations beyond such 30-day period is also conditioned on the licensee or permittee timely filing a license or permit renewal application disclosing that the applicant has been indicted for, or convicted of, the crime. A licensee or permittee may not continue operations beyond 30 days following the date the Director issues notification that the relief application has been denied. [18 U.S.C. 845(b); 27 CFR 555.142]

61. May a licensed dealer make a sale to a holder of a limited permit in an adjoining state?

No. Sales may not be made to limited permittees who are out-of-State residents. [18 U.S.C. 842(a); 27 CFR 555.11; definition of "limited permit", 555.41(b)(3)]

Recordkeeping

62. Does a licensee or permittee have to keep records of the acquisition, distribution, and storage of explosive materials?

Yes. Licensees and permittees must keep records of acquisitions, dispositions, and storage of explosive materials. [18 U.S.C. 842(f), 847; 27 CFR 555.107, 555.122-.125, and 555.127, Subpart G]

63. How do licensees and permittees account for explosive quantities in their records?

If acquisitions are recorded by weight, then distribution must also be recorded by weight. If acquisitions are recorded by physical count (e.g., by units), then distribution must also be recorded by physical count. [27 CFR 555.122-.125]

64. Must a licensee or permittee maintain a daily summary of magazine transactions?

Yes. After the initial inventory required by regulations has been taken, the inventory shall be entered in a record of daily transactions. Not later than the close of the next business day, each licensee and permittee shall record by manufacturer's name or brand name the total quantity received in and removed from each magazine during the day and the total remaining on hand at the end of the day. [27 CFR 555.127]

65. Where must a licensee or permittee keep the daily summary of magazine transactions?

The records must either be kept at each magazine or at one central location on the business premises, provided a separate record of daily transactions is maintained for each magazine. [27 CFR 555.127]

66. How can I obtain additional copies of ATF forms?

Forms are available on-line at www.atf.gov/forms/5000. explosive. Requests for forms should be mailed to the ATF Distribution Center, 7943 Angus Court, Springfield, Virginia 22153. You may also have forms mailed to you by submitting an on-line request at www.atf.gov/oco/index.htm, or by telephoning your request to 703-455-7801. [27 CFR 555.21(b)]

67. Does a purchaser of black powder have to sign any forms at the time of purchase?

If 50 pounds or less of commercially manufactured black powder is being purchased, and the powder is intended to be used solely for sporting, recreational, or cultural purposes in antique firearms as defined in 18 U.S.C. 921(a)(16) or in antique devices exempt from the term "destructive device" in 18 U.S.C. 921(a)(4), no form is required. However, if the black powder is being purchased for any other purpose (regardless of quantity), the purchaser or transferee must possess a Federal explosives license or permit. [18 U.S.C. 845(a)(3); 18 U.S.C. 926(c); 27 CFR 555.141(b), 555.26(a)]

68. Is there a requirement for licensees and permittees to make an annual inventory of explosive materials on hand?

Yes. An inventory is required to be taken at least once a year. [27 CFR 555.122-.125]
69. When must ATF Form 5400.4, “Limited Permittee Transaction Report (L PTR)”, be executed?

Before distribution of explosive materials to a limited permittee, the licensee or permittee must obtain an executed ATF Form 5400.4 from the limited permittee with an original unaltered and unexpired Intrastate Purchase of Explosives Coupon (IPEC) attached. Except when delivery of explosive materials is made by a common or contract carrier who is an agent of the limited permittee, the licensee or permittee must verify the identity of the holder of the limited permit by examining an identification document (as defined in 555.11) and noting on the ATF Form 5400.4 the type of document presented. The licensee or permittee must complete the appropriate section on ATF Form 5400.4 to indicate the type and quantity of explosive materials distributed, the license or permit number of the seller, and the date of the transaction. The licensee or permittee must sign and date the form. [27 CFR 555.126(b)]

70. Do the ATF Forms 5400.4 have to be maintained by the licensee or permittee making the sale?

Yes. One copy of ATF Form 5400.4 must be retained by the seller as part of his permanent records in chronological order by date of disposition, or in alphabetical order by name of limited permittee. They must be maintained for a period of five years. [27 CFR 555.126]

71. May I keep computerized records?

Yes. See ATF Ruling 2007-1.

Storage

72. Who must comply with the storage requirements?

Except for those items and activities given exempt status under 18 U.S.C. 845 (also see 27 CFR 555.141), or exempted under 27 CFR 555.32, Special Explosives Devices, all persons who store explosive materials must store them in conformity with the provisions of Subpart K of the regulations, unless the person or the materials are exempt from regulation. [18 U.S.C. 842(j); 27 CFR 555.29, 555.141, 555.201(a)]

73. What are the classes of explosive materials for storage purposes?

There are 3 classes of explosive materials:

(a) High explosives (for example, dynamite, flash powders, and bulk salutes);

(b) Low explosives (for example, black powder, safety fuses, igniters, igniter cords, fuse lighters, and “display fireworks”, except for bulk salutes); and

(c) Blasting agents (for example, ammonium nitrate-fuel oil and certain water gels). [27 CFR 555.202]

74. May a person store explosive materials in a residence or dwelling?

No. Storage of explosive materials in a residence or dwelling is prohibited. [27 CFR 555.208(b), 555.210(b), 555.211(b)]

75. What is the “Table of Distances”?

This table lists the minimum acceptable distances separating explosives magazines from inhabited buildings, passenger railroads, public highways, and other explosives magazines. The table is contained in 27 CFR 555.218.

76. When low and high explosives are stored together, how is the distance determined to meet the table of distance requirements?

The table of distances at 27 CFR 555.218 would be applied using the total weight of explosive materials in the magazine. [27 CFR 555.218]

77. Is it necessary to inspect my explosives magazines on a regular basis?

Yes. Any person storing explosives must inspect the magazines at least once every 7 days to determine whether there has been unauthorized entry or attempted entry into the magazines or unauthorized removal of the contents of the magazines. [27 CFR 555.204]

78. What are the requirements for making changes or additions to an approved storage facility?

Making changes in construction to an approved explosives magazine or adding a magazine requires that the magazine be notified. However, mobile or portable type 5 magazines and magazines used for the temporary (under 24 hours) storage of explosive materials are exempt from this requirement. See 27 CFR 555.63 for details.

79. Is any type of black powder fuse exempt from storage requirements?

Yes, 3/32-inch and other external burning pyrotechnic hobby fuses are exempt from the requirements of Federal explosives laws and regulations. [18 U.S.C. 845(a)(4-5); 27 CFR 555.11: definition of “ammunition”, 555.141(a)(4), 555.141(b)]

80. With the exception of 3/32-inch pyrotechnic safety fuse for use in small arms, must black powder fuses generally be stored in approved explosives magazines?

Yes. Generally igniter fuses, time fuses, blasting fuses, safety fuses, or other black powder fuses by whatever name known, must be stored in approved magazines.
81. Is smokeless powder designed for use in small arms ammunition subject to the explosives storage requirements?

Smokeless propellants designed for use in small arms ammunition are exempt from regulation under 18 U.S.C. Chapter 40 and the regulations in 27 CFR Part 555. However, it should be noted that persons engaged in the business of importing or manufacturing smokeless propellants must have a Federal explosives license. Additionally, smokeless propellant designed for use other than small arms ammunition is not exempt. Therefore, explosives products such as squibs, fireworks, theatrical special effects, or other articles that may be utilizing smokeless propellants are regulated and must be stored accordingly.

82. My office building, in which several company employees work during the day in connection with my explosives business, is located in the general area of my explosives magazine. Do the regulations and the Table of Distances apply to this building as an “inhabited building”?  

No. A building such as an office building or repair shop which is part of the premises of an explosives business and is used by the business in connection with the manufacture, transportation, storage, or use of explosive materials is not considered to be an “inhabited building”. [27 CFR 555.11: definition of “inhabited building”, 555.218]

83. Am I required to notify my State or local authorities about my explosives storage magazines?  

Yes. All persons who store explosive materials must notify the fire department having jurisdiction over the site where explosive materials are manufactured or stored. Notification must be made orally by the end of the day on which storage begins and in writing within 48 hours from the time storage began. The notification must include the type of explosive materials, magazine capacity, and the location of each storage site. [27 CFR 555.11: Definition of “authority having jurisdiction for fire safety”, 27 CFR 555.201(f)]

84. What is the definition of a “case hardened shackle”?  

Case hardening involves putting carbon (or a combination of carbon and nitrogen) into the surface of the steel to make it a high-carbon steel, which can be hardened by heat treatment. Only the outer skin gets hard in this manner. The center is still tough and malleable. This makes for a strong lock with a tough surface.

85. Can detonators be stored with detonating cord?  

No. However, products which are manufactured with a detonator attached to the detonating cord as an integral part need not be disassembled and stored separately. [27 CFR 555.213]

86. Are there storage requirements for oxidizers, such as ammonium nitrate?  

In general, no. However, when a magazine or bin containing ammonium nitrate is located within the sympathetic detonation distance of other explosives or blasting agents, it must be stored in accordance with the table of distances in 27 CFR 555.220.

87. Are State and local government agencies required to store their explosive materials in conformity with Federal storage regulations?  

Yes. There is no exemption in the law or regulations for the storage of explosive materials by any State or political subdivision thereof. [18 U.S.C. 842(f), 845(a)(6); 27 CFR 555.141(a)(3), (a)(5)]

Fireworks  

Fireworks are defined in the Federal explosives regulations as any composition or device designed to produce a visible or an audible effect by combustion, deflagration, or detonation. Fireworks are further divided into two broad classifications, consumer fireworks or display fireworks as defined at 27 CFR Part 555.11.

88. Are “consumer fireworks” subject to regulation under the Federal explosives laws?  

No. The importation, distribution, and storage of fireworks defined as consumer fireworks are exempted from the provisions of the Federal explosives laws. However, because they contain pyrotechnic compositions classified by ATF as explosive materials, the manufacture of consumer fireworks requires a manufacturer's license. In addition, pyrotechnic compositions used in the manufacture of consumer fireworks must be stored in accordance with regulations in 27 CFR Subpart K. Consumer fireworks are defined as “any small firework device designed to produce visible effects by combustion and which must comply with the construction, chemical composition, and labeling regulations of the U.S. Consumer Product Safety Commission, as set forth in title 16, Code of Federal Regulations, parts 1500 and 1507. Some small devices designed to produce audible effects are included, such as whistling devices, ground devices containing 50 mg or less of explosive materials, and aerial devices containing 130 mg or less of explosive materials. Consumer fireworks are classified as fireworks UN0336 and UN0337 by the U.S. Department of Transportation at 49 CFR 172.101. This term does not include fused set pieces containing components which together exceed 50 mg of salute powder.” [27 CFR 555.11: definition of “consumer fireworks”; definition of “licensed manufacturer”, 555.141(a)(7)]
89. Are “display fireworks” considered to be explosive materials subject to regulation under Federal explosives laws and regulations?

Yes. Display fireworks include, but are not limited to, salutes containing more than 2 grains (130 mg) of explosive materials, aerial shells containing more than 40 grains of pyrotechnic compositions, and other display pieces which exceed the limits of explosive materials for classification as “consumer fireworks”. These fireworks are classified as fireworks UN0333, UN0334, or UN0335 by regulations of the U.S. Department of Transportation at 49 CFR 172.101. Display fireworks also include fused set pieces containing components which together exceed 50 mg of salute powder. [27 CFR 555.11: definition of “display fireworks”]

90. How must display fireworks be stored?

Display fireworks, with the exception of bulk salutes, are considered low explosives and, at a minimum, must be stored in type 4 storage magazines. They may also be stored in type 1 or type 2 magazines. Bulk salutes, which are defined as either salute components prior to final assembly into aerial shells, or finished salute shells held separately prior to being packed with other types of display fireworks, are classified as high explosives. As such, bulk salutes may only be stored in type 1 or type 2 magazines specifically constructed for the storage of high explosives. [27 CFR 555.11, 555.202(b), 555.203(d), 555.207, 555.208, 555.210]

91. Are “Articles Pyrotechnic” subject to the requirements of the Federal explosives regulations?

The importation, distribution, and storage of fireworks defined as “Articles Pyrotechnic”, are exempt from the Federal explosives laws and regulations. However, because they contain pyrotechnic compositions classed by ATF as explosive materials, the manufacture of items defined as “articles pyrotechnic” requires an ATF manufacturer’s license. In addition, pyrotechnic compositions used in the manufacture of articles pyrotechnic must be stored in accordance with regulations in 27 CFR Subpart K. [27 CFR 555.11: definitions of “articles pyrotechnic” and “consumer fireworks”, 555.14(a)(7)]

92. Must partially assembled display fireworks be removed from a drying building for overnight storage?

Yes. At the end of a day’s manufacturing operations, all dry explosive powders and mixtures and partially assembled and finished display fireworks must be removed from fireworks process buildings and stored in a magazine meeting the storage requirements in 27 CFR Part 555, Subpart K. [27 CFR 555.205, 555.221]

93. What areas of a fireworks manufacturing plant are considered to be “fireworks process buildings”?

Fireworks process buildings include any buildings in which pyrotechnic compositions or explosive materials are mixed, pressed, finished, or assembled. Fireworks process buildings do not include plant warehouses, office buildings, or other buildings and areas in which no fireworks, pyrotechnic compositions, or explosive materials are processed or stored. [27 CFR 555.11: definition of “fireworks process building”]

94. Under what conditions may I temporarily store display fireworks (including low explosives for choreographed shows) on trucks?

See ATF Ruling 2007-2.

95. What types of fireworks require an ATF license or permit in order to be lawfully transported or received?

Any fireworks defined as “display fireworks” in 27 CFR 555.11 may be lawfully received or transported only by persons who hold a valid license or permit. No ATF license or permit is required to receive or transport “consumer fireworks” or “articles pyrotechnic”. [18 U.S.C. 842(a)(3); 27 CFR 555.26, 555.141(a)(7)]

Plastic Explosives

96. What is a plastic explosive?

A plastic explosive is defined as “an explosive material in flexible or elastic sheet form formulated with one or more high explosives which in their pure form has a vapor pressure less than 10^4 Pa at a temperature of 250 C., is formulated with a binder material, and is a mixture malleable or flexible at normal room temperature.” [18 U.S.C. 841(q); 27 CFR 555.180(d)(4)]

97. What plastic explosives are required to contain detection agents?

All plastic explosives manufactured or imported on or after April 24, 1996, must contain a detection agent. Federal law enforcement agencies and the military may possess unmarked plastic explosives if they meet the requirements of the use-up period described in Question 103. [18 U.S.C. 841(q), 842(n); 27 CFR 555.180]

98. What are the permissible detection agents for marking plastic explosives?

These agents are listed in the law and regulations at 18 U.S.C. 841(p) and 27 CFR 555.180(d)(3).

99. Is it lawful to manufacture plastic explosives that do not contain a detection agent?

No. [18 U.S.C. 842(l); 27 CFR 555.180(a)]
100. Is it lawful to import into the United States plastic explosives that do not contain a detection agent?

No. The importation of plastic explosives into the United States requires that the importer file ATF Form 6 certifying that the imported plastic explosives contain the required detection agent, or is exempted from the marking requirements as provided in the regulations. [18 U.S.C. 842(m); 27 CFR 555.180(b), 555.182, 555.183]

101. Is it lawful to ship, transport, transfer, receive, or possess any plastic explosive that does not contain a detection agent?

No. However, a 15-year use-up period is provided for Federal law enforcement agencies and the military for unmarked plastic explosives imported into or manufactured in the U.S. prior to April 24, 1996. [18 U.S.C. 842(n); 27 CFR 555.180(c)]

102. If a person acquired plastic explosives not containing a detection agent before April 24, 1996, may he or she continue to lawfully possess the explosives?

No. With the exception of the use-up period provided by law for Federal law enforcement agencies or the military, the time period for lawful possession of unmarked plastic explosives terminated on April 24, 1999. [18 U.S.C. 842(n); 27 CFR 555.180(c)]

103. Are police departments exempt from the prohibition against possessing unmarked plastic explosives after April 24, 1999?

No. Police departments and other State or local law enforcement agencies could lawfully possess unmarked plastic explosives acquired on or before April 24, 1996, until April 24, 1999. Such agencies still possessing unmarked plastic explosives should destroy them or abandon them to ATF. Contact the nearest ATF field office for information. [18 U.S.C. 842(n); 27 CFR 555.180(c)(1)]

U.S. Military Explosives

104. Would an ATF license or permit be needed to demilitarize (demil) U.S. military explosives?

As long as the demil operator has a valid Department of Defense contract to perform such operations, the operations would be exempt from 27 CFR Part 555 and no license or permit would be required. However, if title to the explosive materials has passed from the military to the demil operator and the operator intends to resell the explosives on the commercial market, then such operations may be regulated by ATF (e.g., storage, sales, manufacturing) and an ATF license or permit may be needed. Contact the nearest ATF field office for further information. [18 U.S.C. 845(a)(3), (a)(6) and 27 CFR 555.141(a)(3), (a)(5)]

105. Would a civilian contractor who is manufacturing explosive materials pursuant to a government contract for or on behalf of the United States military be entitled to the exemptions from the explosives laws and regulations?

Yes, provided that all the explosive materials in question are manufactured under a government contract. Any explosive materials manufactured in anticipation of receiving a government contract would not qualify for this exemption.

If the contractor manufactures any explosive materials not pursuant to a U.S. military contract, the manufacture and the explosive materials are subject to all requirements of the law and regulations. [18 U.S.C. 845(a)(3), (a)(6); 27 CFR 555.26, 555.41, 555.141(b)]

106. Is an ATF licensee or permittee, whose licensed premises are located on a U.S. military installation, subject to the regulations in 27 CFR Part 555?

All activities conducted outside the scope of a U.S. Government contract are subject to the requirements of Part 555, even if the activities are conducted on property owned by the military. [18 U.S.C. 845(a)(3), (a)(6); 27 CFR 555.26, 555.29, 555.41, 555.141(a)(3), (a)(5)]
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1. 27 CFR 55.11: Meaning of Terms (Also § 55.206)

An office or repair shop used in connection with the manufacture, etc. of explosive materials is not an “inhabited building.”

ATF Ruling 75-20

ATF has held that a building, such as an office or repair shop, which is a part of the premises of an explosives manufacturer and is used in connection with the manufacture, transportation, storage, or use of explosive materials, is not an “inhabited building.” Section 55.11 of 27 CFR defines inhabited building as “any building regularly occupied in whole or in part as a habitation for human beings, or any church, schoolhouse, railroad station, store, or other structure where people are accustomed to assemble, except any building occupied in connection with the manufacture, transportation, storage, or use of explosive materials.”

Regulations in 27 CFR §§ 55.206 and 55.218 set forth provisions concerning the location of storage facilities and the minimum distances such storage facilities may be located from, among other things, “inhabited buildings.” These provisions are intended to provide protection to persons who inhabit buildings located near premises where explosives are manufactured, stored, etc. However, it is the intent of § 55.11 to exempt buildings used by the explosives industry in connection with the manufacture, transportation, storage, or use of explosive materials from the table of distance requirements on “inhabited buildings.” [75 CB 64]

2. 27 CFR 55.207: Construction of Type 1 Magazines (Also § 55.210)

Certain explosives storage facilities meeting standards of construction prescribed by the Department of Defense Explosives Safety Board for such storage are approved by the Bureau.

ATF Ruling 75-21

ATF has held that explosives storage facilities with smooth-finished concrete floors that were constructed under contract for the use of the Department of Defense (DOD) and that are presently being leased to licensees and permitees for the storage of commercial explosives are considered to be in compliance with the requirements for nonsparking floors, as set forth in 27 CFR §§ 55.207(a)(4), 55.207(b), and 55.210, for the storage of all types of fully packaged explosives, pyrotechnics and propellants, with the exception of black powder. Any other such magazines which have smooth finished concrete floors and which meet or exceed DOD construction specifications will also be considered to be in compliance with the requirements of Part 555 with respect to nonsparking floors. It is the responsibility of the licensee or permittee to provide verification that such facilities were manufactured under DOD specifications or that the facilities meet or exceed such specification standards. If the Division Director determines that the concrete floors of type 1 or type 4 magazines do not meet the preceding requirements, he will require such floors to be covered with a nonsparking material, such as epoxy paint or mastic. [75 CB 67]
3. 27 CFR 55.41: Licenses and Permits-General

Certain companies that manufacture explosive materials for use in their own operations are required to obtain licenses as manufacturers of explosive materials.

ATF Ruling 75-31

ATF has held that companies, such as public utility companies engaged in line and facility construction, which manufacture explosives on a regular or continual basis are considered to be engaged in the business of manufacturing explosive materials and must be appropriately licensed as required by 18 U.S.C. 842. The term "manufacturer" is defined in 18 U.S.C. 841(b) as "any person engaged in the business of manufacturing explosive materials for purposes of sale or distribution or for his own use." Although the term "engaged in the business" is not susceptible to a rigid definition within 18 U.S.C. §§ 841-848, it is interpreted to imply an element of continuity or habitual practice; an element clearly present in the operations of companies described herein. Therefore, these companies are considered to be "engaged in the business" and must be licensed as explosives manufacturers. [75 CB 65]

4. 27 CFR 555.109: Identification of Explosive Materials

Methods of marking containers of explosive materials are prescribed.

ATF Ruling 75-35

Editors note: ATF Ruling 75-35 was rendered obsolete pursuant to ATF 5F, 70 Federal Register 30626 (May 27, 2005), and effective July 26, 2005.

5. 27 CFR 55.11: Meaning of Terms- State of Residence

"State of residence" of business entities who use explosive materials; distribution of explosive materials by licensees to out-of-State business entities other than licensees and permittees; and distribution to nonresident employees of such entities are discussed.

Editor's Note: Provisions of ATF Ruling 76-4 were modified, in part, by the Safe Explosives Act.

Effective May 24, 2003, it is unlawful for any person to receive explosive materials unless such person holds an ATF license of permit. It is also unlawful for any licensee or permittee to knowingly distribute explosive materials to any person who does not hold a license or permit. The only relevance remaining in the term "State of residence" is for distribution of explosive materials to, and receipt by, limited permit holders. Pursuant to 18 U.S.C. 842(a)(3) and (a)(4), limited permit holders may, on not more than 3 separate occasions, lawfully receive explosive materials from a licensee or permittee whose premises are located within the state of residence of the limited permit holder. ATF Rule 76-4 continues to apply in determining whether a limited permit holder has acquired a "State of residence" for purposes of receipt of explosives under 18 U.S.C. 842(a)(4)(B).

6. 27 CFR 55.126: Explosives Transaction Record

Under certain conditions, a single Form 5400.4 may be used to cover a series of deliveries.

Editor's Note: The provisions of ATF Rule 76-10 were rendered obsolete by ATF No. 1, 68 FR 13791, Mar. 20, 2003.

7. 27 CFR 55.207: Construction of Type 1 Storage Facilities (Also § 55.208)

Alternate construction standards for storage facilities for explosive materials are prescribed.

ATF Ruling 76-18

Section 842(j) of 18 U.S.C. states: "It shall be unlawful for any person to store any explosive material in a manner not in conformance with regulations promulgated by the Secretary. In promulgating such regulations, the Secretary shall take into consideration the class, type, and quantity of explosive materials to be stored, as well as the standards of safety and security recognized in the explosives industry." The regulations in 27 CFR §§ 55.207 and 55.208 prescribe types of storage facilities for explosive materials and provide (among other things) that such storage facilities shall be bullet resistant.

Section 55.201(b) provides that alternate storage facilities may be authorized for the storage of explosive materials when it is shown that such alternate facilities are or will be constructed in a manner substantially equivalent to the standards of construction contained in the applicable regulations.

The term "bullet-resistant" means resistant to penetration of a bullet of 150 grain M2 ball ammunition having a nominal muzzle velocity of 2700 feet per second fired from a .30 caliber rifle from a distance of 100 feet perpendicular to the wall or door. It has been determined that a wide range of construction criteria meet the bullet-resistant requirements of regulations for construction of storage facilities for explosive materials. In order to promote standards of safety and security in the storage of explosive materials while allowing the industry a wide latitude in the selection of construction materials, it is held that storage facilities (magazines) that are constructed according to the following minimum specifications are bullet-resistant and meet the
requirements of the regulations as set forth in 27 CFR Part 55 (All steel and wood dimensions are actual thicknesses. To meet the concrete block and brick dimensions indicated, the manufacturers' represented thicknesses may be used).

(a) Exterior of 5/8 inch steel, lined with an interior of any type of nonsparking material.
(b) Exterior of 1/8 inch steel, lined with an interior of not less than 1/4 inch plywood.
(c) Exterior of 1/4 inch steel, lined with an interior of two inches of hardwood.
(d) Exterior of 3/8 inch steel, lined with an interior of three inches of softwood or 2 1/4 inches of plywood.
(e) Exterior of 1/4 inch steel, lined with an interior of three inches of hardwood.
(f) Exterior of 1/4 inch steel, lined with an interior of five inches of softwood or 5 1/4 inches of plywood.
(g) Exterior of 1/4 inch steel, lined with an intermediate layer of two inches of hardwood and an interior lining of 1 1/4 inches of plywood.
(h) Exterior of 3/8 inch steel, lined with an interior of four inches of hardwood.
(i) Exterior of 1/8 inch steel, lined with an interior of seven inches of softwood or 6 1/4 inches of plywood.
(j) Exterior of 3/8 inch steel, lined with an intermediate layer of three inches of hardwood and an interior lining of 1/4 inch of plywood.
(k) Exterior of 1/4 inch steel, lined with an interior of five inches of hardwood.
(l) Exterior of 1/8 inch steel, lined with an interior of nine inches of softwood.
(m) Exterior of 1/4 inch steel, lined with an intermediate layer of four inches of hardwood and an interior lining of 3/4 inch plywood.
(n) Exterior of any type of fire-resistant material which is structurally sound, lined with an intermediate layer of four inches of solid concrete block, OR four inches of solid brick OR four inches of solid concrete; AND, an interior lining of 1/2 inch plywood placed securely against the masonry lining.
(o) Standard eight inch concrete block with voids filled with well-tamped sand/cement mixture.
(p) Standard eight inch solid brick.
(q) Exterior of any type of fire-resistant material which is structurally sound, lined with an intermediate six inch space filled with well-tamped dry sand or well-tamped sand/cement mixture.

(r) Exterior of 1/8 inch steel, lined with a first intermediate layer of 3/4 inch plywood, a second intermediate layer of 3/8 inches of well-tamped dry sand or sand/cement mixture and an interior lining of 3/4 inch plywood.
(s) Exterior of any type of fire-resistant material, lined with a first intermediate layer of 3/4 inch plywood, a second intermediate layer of 3/8 inches well-tamped dry sand or sand/cement mixture, a third intermediate layer of 3/4 inch plywood, and a fourth intermediate layer of two inches of hardwood OR 1 1/4 gauge steel AND an interior lining of 3/4 inch plywood.
(t) Eight inch thick solid concrete. [76 CB 106]

8. 27 CFR 55.213: Quantity and Storage Restrictions (Also § 55.208)

Alternate magazine construction standards for storage of electric blasting caps with other explosive materials are prescribed.

ATF Ruling 77-24

Section 842(j) of 18 U.S.C. states: "It shall be unlawful for any person to store any explosive material in a manner not in conformity with regulations promulgated by the Secretary. In promulgating such regulations, the Secretary shall take into consideration the class, type, and quantity of explosive materials to be stored, as well as the standards of safety and security recognized in the explosives industry." The regulations in 27 CFR § 55.213 restrict the storage of blasting caps with other explosive materials.

Section 55.201(b) provides that alternate storage magazines may be authorized for the storage of explosive materials when it is shown that such alternate magazines are or will be constructed in a manner substantially equivalent to the standards of construction contained in the applicable regulations.

ATF recognizes that the transportation and storage of explosive materials in the same vehicle along with electric blasting caps is often desired. The Institute of Makers of Explosives established a recommended standard for such transport in their Safety Library Publication No. 22, dated November 5, 1971 [revised January 1985]. This standard prescribes the minimum construction criteria for:

(a) A container securely attached—
   (1) Above the cab of the vehicle (see Figure 1, Appendix A), and
   (2) To the vehicle frame under the cargo space (see Figure 2, Appendix A), or

(b) A built-in compartment in the cargo space of the vehicle (see Appendix B).

In addition to motorized vehicles, consideration was also given for the use of similar criteria on portable wheeled trailers being used as magazines under § 55.208(a) of the regulations (see 75
Appendix B). In order to insure standards of safety and security in the storage of explosive materials while allowing the industry a proper latitude in the construction of magazines, it is held that vehicles used for transporting and for storing explosive materials that are constructed in conformity with the standards listed below, and in compliance with all other safety and security provisions contained in Part 55 (e.g., effectively immobilized when unattended) will meet the requirements of ATF regulations. Even though constructed on the same vehicle, each compartment will be considered as a separate magazine. The two magazines on the vehicle will, however, be considered as one magazine when applying the American Table of Distances [see Table at § 55.218].

Construction Standards For Storage of Electric Blasting Caps (Non-Mass-Detonating)

a. The container or compartment must provide for total enclosure of the electric blasting caps.

b. The partition between the explosives storage compartment and the electric blasting cap compartment must be of laminate construction consisting of A/C grade or better exterior plywood, gypsum board [sheetrock] and low carbon steel plates. In order of arrangement, the laminate must conform to the following, with minimum thickness of each lamination as indicated:

- ½ inch plywood
- ½ inch gypsum board [sheetrock],
- ¼ inch low carbon steel, and,
- ¼ inch plywood, with the ⅛ inch plywood facing the explosives storage compartment. See Appendix C for details of laminate construction. The door to the electric blasting cap compartment must be of metal construction or solid wood covered with metal; the outside walls and top must be of the same construction as the rest of the vehicle or trailer. If high explosives or bullet sensitive explosive materials are stored in the vehicle, then the storage compartment of the vehicle must be constructed so as to be bullet-resistant.

c. As an alternative to the construction requirements shown in paragraph b, a container for use only as illustrated in Appendix A may be used when constructed as follows:

1. The top, lid or door, and the sides and bottom of each container must be of laminate construction consisting of A/C grade or better exterior plywood, solid hardwood, gypsum board [sheetrock], and sheet metal. In order of arrangement, the laminate must conform to the following, with minimum thickness of each lamination as indicated:

- ¼ inch plywood,
- 1 inch solid hardwood,
- ½ inch plywood,
- ½ inch gypsum board [sheetrock] (OR ¼ inch particle board), and 22 gauge sheet metal, constructed inside to outside in that order.

See Appendix D for details of laminate construction.

d. The laminate composite material must be securely bound together by waterproof adhesive or other equally effective means.

e. The steel plates at the joints of laminations must be secured by continuous fillet welds.

f. All interior surfaces of the container or compartment must be constructed so as to prevent contact of contents with any sparking metal.

g. There must be direct access to the container or into a compartment from outside the vehicle.

h. Each container or compartment must have a snug fitting continuous piano-type hinged lid or door equipped with a locking device (or devices).

i. Without permitting direct access to contents under normal conditions, the locking or hinging mechanisms must permit at least one edge of the lid or door to rise or move outward at least ½ inch when subjected to internal pressure.

j. The exterior of the container or compartment must be weather-resistant. [77 CB 191]


27 CFR 55.208(b)(1), 55.210(b)(1), and 55.211(b)(1): Indoor Storage of Explosives in a Residence or Dwelling

ATF will approve variances to store explosives in a residence or dwelling only upon certain conditions including, but not limited to, receipt of a certification of compliance with State and local law, and documentation that local fire safety officials have received a copy of the certification.

ATF Ruling 2002-3

Section 842(j) of 18 U.S.C. states: "It shall be unlawful for any person to store any explosive material in a manner not in conformity with regulations promulgated by the Secretary."

The regulations in 27 CFR 55.208(b)(1), 55.210(b)(1), and 55.211(b)(1) specify that no indoor magazine is to be located in a residence or dwelling. Section 55.22 specifies that the Director may allow alternate methods or procedures in lieu of a method or procedure specifically prescribed in the regulations. Specifically, section 55.22(g)(3) provides that such "variances" are permissible only in certain circumstances, including where "[t]he alternate method or procedure will not be contrary to any provision of law and will not... hinder the effective administration of this part."
ATF has been advised that certain variances previously approved for storage of explosives in residences or dwellings are in violation of State or local zoning law. ATF believes it is important to ensure that approval of variances is in compliance with all State and local provisions.

To obtain a variance for indoor storage of explosives in a residence or dwelling, ATF has determined that a person must submit to ATF a certification signed under penalty of perjury along with the request for the variance. The certification must:

1. State that the proposed alternative storage method will comply with all applicable State and local laws;
2. Provide the name, title, address, and phone number of the authority having jurisdiction for fire safety of the locality in which the explosive materials are being stored; and,
3. Demonstrate that the person has mailed or delivered the certification to the authority identified in (2).

When required by the Director, such persons must furnish other documentation as may be necessary to determine whether a variance should be approved.

Held, ATF will approve variances to store explosives in a residence or dwelling only upon certain conditions including, but not limited to, receipt of a certification of compliance with State and local law, and documentation that local fire safety officials have received a copy of the certification.

Date signed: August 23, 2002

   Indoor Storage of Explosives in Business Premises Directly Adjacent to a Residence or Dwelling

**ATF Ruling 2002-4**

ATF requires approval of variances for indoor storage of explosives in business premises directly adjacent to a residence or dwelling.

Section 842(j) of 18 U.S.C. states: "It shall be unlawful for any person to store any explosive material in a manner not in conformity with regulations promulgated by the Secretary."

The regulations in 27 CFR 55.208(b)(1), 55.210(b)(1), and 55.211(b)(1) specify that no indoor magazine is to be located in a residence or dwelling. Section 55.22 specifies that the Director may allow alternate methods or procedures in lieu of a method or procedure specifically prescribed in the regulations. Specifically, section 55.22(a)(3) provides that such "variances" are permissible only in certain circumstances, including where "[t]he alternate method or procedure will not be contrary to any provision of law and will not ... hinder the effective administration of this part."

ATF has been asked whether businesses that are directly adjacent to living quarters may lawfully store explosive materials in the business premises. The issue presented is whether the premises amount to a "residence or dwelling" within the meaning of the regulations cited above.

Even where the business premises are segreagable from the living quarters by the existence of a door or a common wall, the business premises retain their character as a residence or dwelling. Accordingly, indoor storage of explosives in such premises is generally prohibited and can be allowed only pursuant to an approved variance.

Held, ATF requires approval of variances for indoor storage of explosives in business premises directly adjacent to a residence or dwelling. ATF may approve such variances upon receipt of all appropriate certification and other documentation as may be requested.

Date signed: August 23, 2002


Distributors distributing explosive materials to holders of limited permits via common or contract carrier may verify receipt of the explosive materials by telephone, facsimile, e-mail, or other means within three business days of shipment in lieu of requiring the common or contract carrier to verify the identity of the person accepting delivery of the explosives. The distributor shall make a notation on ATF Form 5400.4 indicating whether the shipment was received and the date and time of the contact with the distributee.

**ATF Ruling 2003-5**

The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) has received questions from the explosives industry regarding the requirement under 27 CFR 555.105(b)(6)(iii) that, effective May 24, 2003, a common or contract carrier hired by a Federal explosives licensee or permittee verify the identity of the distributee, note the type and number of the identification document, and provide this information to the distributor. The distributor is required to record this information on ATF Form 5400.4, Limited Permittee Transaction Report (LPTR). Industry members have informed ATF that this requirement places an undue burden on common and contract carriers. Drivers are concerned that verifying the identity of persons accepting delivery of explosive materials by examining an identification document and providing the identification information to the distributor will be overly time consuming. Drivers are also concerned that they could be held personally liable for delivering explosives to persons not authorized to receive them.

ATF imposed the verification requirements of section 555.105(b)(6)(iii) to ensure that when explosive materials are sold by a distributor to a holder of a limited permit and transported by a common or contract carrier hired by the distributor, the explosive materials are delivered only to a person authorized to receive
12. 27 CFR 555.11: Meaning of Terms

ATF provides guidance on three different private roads and whether they are "highways" as defined in 27 CFR 555.11.

ATF Ruling 2005-2

The Federal explosives laws, 18 U.S.C. Chapter 40, require all persons to store explosive materials in a manner in conformity with regulations issued by the Attorney General. 18 U.S.C. 842(j). The Attorney General has delegated his authority to administer and enforce the Federal explosives laws to the Director, ATF 28 CFR 0.130. Regulations in 27 CFR Part 555 implement the provisions of the Federal explosives laws. Storage regulations in 27 CFR Part 555, Subpart K, provide that outdoor magazines in which high explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which high explosives are stored than the minimum distances specified in the table of distances for storage of explosive materials in section 555.218 of the regulations. 27 CFR 555.206.

Section 555.11 of the regulations defines the term "highway" as "any public street, public alley, or public road, including a privately financed, constructed, or maintained road that is regularly and openly traveled by the general public."

In Scenario A, a private road owned by a corporation is used by the general public as an access road to a parking lot owned by the corporation. The road is near an explosives magazine. The road does not have a gate, sign, or other means of restricting access to the road. The road is also used by the general public on a daily basis to gain access to other public streets.

In Scenario B, a company that manufactures fireworks, a logging company, and an individual who owns buildings utilized to store his collection of automobiles all occupy property to which the only access is a privately owned road. A separate party that leases to these three entities owns the property. The road is located on private property, and a locked gate at the entrance to the road prevents access by the general public. The display fireworks company, the logging company, and the individual storing automobiles all have keys to unlock the gate and travel on the road when needed. The gate is locked at all times, and there is no evidence that the road is open to anyone other than the two businesses and one individual who require access to their property.

In Scenario C, an explosives company maintains explosives magazines in a quarry area that has a roadway traversing through the quarry. The quarry owns the property, and the road is maintained by the quarry. The road has a gate and there are signs advising no trespassing. However, when ATF officials visited the location on several occasions, the gate was left open and members of the public regularly utilized the roadway as a shortcut between...
two major highways. There were no indications the owner of the property took any steps to prevent members of the public from utilizing the roadway.

Applying the regulatory definition of “highway” to the three scenarios, the road in Scenario A is clearly a highway that is subject to the tables of distances in Part 555. Although it is privately owned, it is regularly and openly traveled by members of the general public without restriction.

The roadway in Scenario B is not a “highway” as defined. Access is restricted at all times and there is no evidence the general public regularly travels on the roadway. Access to the road is provided to only a limited number of persons who have a legal right to travel the road. Accordingly, this road is not regularly and openly traveled by members of the general public.

ATF concludes that the roadway described in Scenario C is a “highway” as defined in 27 CFR 555.11. Although access to the roadway is restricted by a gate and “No trespassing” signs are posted, the gate is not closed at all times. Furthermore, ATF observation indicates that the roadway is regularly and openly traveled by members of the general public. Based on these facts, the roadway is a highway which is subject to the tables of distance in 27 CFR Part 555.

Held, a private road with no gate, signs, or other means of restricting access that is used by the general public as an access road to a parking lot and as access to other public streets is a highway” as defined in 27 CFR 555.11.

Held further, a private road with a locked gate at the entrance that is locked at all times and used by a limited number of persons leasing or owning property accessed by the road is not a “highway” as defined in 27 CFR 555.11.

Held further, a private roadway traversing a quarry with a gate restricting access and a “no trespassing” sign is a “highway,” as defined in 27 CFR 555.11, because the gate is not locked at all times and the general public regularly utilizes the roadway as a shortcut between two public highways.

Date approved: September 8, 2005

13. 27 CFR 555.11: Meaning of Terms

ATF provides guidance on two situations involving structures and whether they are “inhabited buildings” as defined in 27 CFR Part 555.

ATF Ruling 2005-3

The Federal explosives laws, 18 U.S.C. Chapter 40, require all persons to store explosive materials in a manner in conformity with regulations issued by the Attorney General. 18 U.S.C. 842(j). The Attorney General has delegated his authority to administer and enforce the Federal explosives laws to the Director, ATF. 28 CFR 0.130. Regulations in 27 CFR Part 555 implement the provisions of the Federal explosives laws. Storage regulations in 27 CFR Part 555, Subpart K, provide that outdoor magazines in which high explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which high explosives are stored than the minimum distances specified in the table of distances for storage of explosive materials in section 555.218 of the regulations. 27 CFR 555.206.

The regulation at 27 CFR 555.11 defines the term “inhabited building” as “any building regularly occupied in whole or in part as a habitation for human beings, or any church, schoolhouse, railroad station, store, or other structure where people are accustomed to assemble, except any building occupied in connection with the manufacture, transportation, storage, or use of explosive materials.”

In Scenario A, an explosives licensee leases explosives magazines to an individual who uses the magazines for storage of goods other than explosive materials. The magazines are located adjacent to magazines used by the explosives licensee for the storage of explosive materials. The magazines used by the lessee are not separated by the minimum distances required for the separation of magazines from “inhabited buildings” as required by the regulations in 27 CFR Part 555.

The magazines are visited regularly by the individual who stores property in the magazines, but no additional persons accompany the individual when he is present at the magazine. However, the individual hires contractors to repair equipment stored in the facilities from time to time, and 1-3 employees of the contractor may occasionally be present for short periods of time at the storage site. However, such visits occur no more than 3-5 times per year. In addition, an employee from the water company visits the storage site once a month to read the water meter, an employee from the power company reads the power meter once a month, and other vendors may be present at the site for short periods of time for other legitimate purposes.

In Scenario B, a licensed manufacturer of explosives X leases a unit in an industrial park that shares a common wall with a unit leased by licensed manufacturer Y. Both licensees store explosives in magazines located inside and outside the units. The magazines of Manufacturer X and the building used by Manufacturer Y are not separated by the minimum distance prescribed in 27 CFR Part 555 for the separation of magazines and inhabited buildings. Likewise, the magazines of Manufacturer Y and the building used by Manufacturer X are not separated by the minimum distance prescribed in 27 CFR Part 555 for the separation of magazines and inhabited buildings. In both structures, employees and contractors are regularly present during work hours for purposes of carrying on the manufacturing and distributing businesses of the two licensees. This includes personnel who work in the manufacturing plant, those who work on the loading dock to load and ship explosives products to customers, and those who work in the office taking orders, sending out invoices, and handling other clerical work for the businesses.

Applying the law and regulations to the facts of Scenario A, ATF concludes that the leased structures used by the individual to store items other than explosives are not being used as a
habitation for human beings and are not buildings occupied in connection with the manufacture, transportation, storage, or use of explosive materials. Accordingly, the sole issue remaining is whether the structure is one where people are accustomed to assemble.

Noteworthy, the regulation uses the term “people,” which is the plural version of “person.” Thus, ATF believes that more than one person must “assemble” at the structure for it to be an “inhabited building.” In addition, the word “assemble” is defined, in part, as “To bring or gather together in a group or whole.” The word “assembly” is defined, in part, as “A group of persons gathered for a common purpose.” The American Heritage Dictionary, Second College Edition, Houghton Mifflin Co., 1982. It is clear that the presence of one person at a structure or location cannot be an assembly of any sort. Accordingly, in situations where one person is present at a particular structure, whether on a regular or infrequent basis, such a structure is not an “inhabited building” as defined in 27 CFR 555.11.

Likewise, occasional visits to the storage facility by mail delivery persons or employees of public utility companies for brief periods of time would not be an “assembly” that would make the facility an inhabited building. However, if 2 or more repair persons are present at the facility to make repairs to equipment stored there, such persons would be there for a common purpose, and would have “assembled” at the structure. However, the structure would be an “inhabited building” only if it is a structure where people are accustomed to assemble. The word “accustomed” is defined as “To familiarize, as by constant practice, use, or habit: accustomed himself to working long hours.” The word “accustomed” is defined as “Usual, characteristic, or normal: worked with her accustomed thoroughness.” The American Heritage Dictionary, Second College Edition, Houghton Mifflin Co., 1982. These definitions indicate that a structure will be one where people are accustomed to assemble only if there is some degree of continuity, regularity, or frequency to such assembly.

Infrequent, occasional visits to the storage site by 2 or more repair persons would not make the storage facility an “inhabited building,” because such intermittent visits would not be “customary.” Only where 2 or more persons are present at the site for a common purpose and on a regular basis would the building fit within the definition of “inhabited building.”

To address Scenario B, it is apparent that the building leased by Manufacturer X is exempt from the definition of “inhabited building” as to the magazines of Manufacturer X, and the building leased by Manufacturer Y is likewise exempt as to the magazines of Manufacturer Y. This is because both buildings are occupied in connection with the manufacture, transportation, and storage of explosive materials. Clearly, the employees of both licensees are aware that explosive materials are present on the premises and they assume the risk of any such operation. A more difficult question is presented by the buildings of Manufacturer X and the magazines of Manufacturer Y and vice versa. ATF cannot assume that all employees are cognizant of the activities of their neighbors in the industrial park. Thus, it cannot be assumed that the employees are knowingly assuming the risk of explosive material stored in magazines owned by the other licensee.

Given the plain language of the regulation, however, ATF does not believe it is appropriate to deny the coverage of the regulatory exemption to adjoining licensees on the basis of an assumption of the risk analysis. The current regulatory definition excludes from the definition of “inhabited building” any building occupied in connection with the manufacture, transportation, storage, or use of explosive materials, regardless of the knowledge of the building’s occupants. Accordingly, ATF concludes that the industrial units occupied by Manufacturer X and Manufacturer Y are both exempted from the definition of “inhabited building” as to the magazines of each other as well as to their own magazines.

Held, a structure used to store items other than explosive materials that is visited on a regular basis by one individual is not an “inhabited building” as defined in 27 CFR 555.11, because it is not a structure where people are accustomed to assemble.

Where 2 or more persons are present at the structure to repair equipment stored therein and such visits to the site are occasional and infrequent, the structure is not an “inhabited building” because the visits are not “customary.” However, where 2 or more persons make regular visits to the structure for a common purpose, the structure is an “inhabited building,” and explosives magazines may not be stored closer to the structure than the minimum distances specified in the regulations in 27 CFR Part 555.

Held further, buildings occupied by licensed explosives manufacturers in connection with the manufacture, transportation, storage, or use of explosive materials are not included within the definition of “inhabited building” as to magazines located on their own premises. In addition, buildings occupied by licensed explosives manufacturers in connection with the manufacture, transportation, storage, or use of explosives are not included within the definition of “inhabited building” as to magazines located on property owned by another licensee.

Date approved: November 25, 2005
14. 18 U.S.C. 842(f): Records Required for Explosives Licensees and Permittees

27 CFR 555, Subpart G: Records and Reports

27 CFR 555.22: Alternate Methods or Procedures; Emergency Variations from Requirements

Under specified conditions, approval is granted to utilize computerized records as required records under 27 CFR 555, Subpart G.

ATF Ruling 2007-1

Section 842(f), Title 18, United States Code, makes it unlawful for any licensee or permittee to willfully manufacture, import, purchase, distribute, or receive explosive materials without making such records as the Attorney General may by regulation require, including, but not limited to, a statement of intended use, the name, date, place of birth, social security number or taxpayer identification number, and place of residence of any natural person to whom explosive materials are distributed.

Regulations implementing section 842(f) are in 27 CFR Part 555, Subpart G. The regulations in this subpart specify the records required to be created and maintained by licensed importers (section 555.122), licensed manufacturers (section 555.123), licensed dealers (section 555.124), and permittees (section 555.125). The regulation in section 555.121 provides that licensees and permittees must keep records pertaining to explosive materials in permanent form (i.e., commercial invoices, record books) and in the manner required in Subpart G. In addition, sections 555.122-555.125 specifically allow licensees and permittees to use an alternate record to record the distribution of explosive materials when it is shown that the alternate records would accurately and readily disclose the information required by the regulations. These regulations require licensees and permittees who propose to use alternate records to submit a letter application to ATF describing the proposed alternate records and the need for them. Alternate records are not to be employed until approval from ATF is received.

Regulations at 27 CFR 555.22 allow for the approval and use of an alternate method or procedure in lieu of a method or procedure specifically prescribed in Part 555. ATF may approve an alternate method or procedure when it is found that—

1. Good cause is shown for the use of the alternate method or procedure;
2. The alternate method or procedure is within the purpose of, and consistent with the effect intended by, the specifically prescribed method or procedure and that the alternate method or procedure is substantially equivalent to that specifically prescribed method or procedure; and
3. The alternate method or procedure will not be contrary to any provision of law and will not result in an increase in cost to the Government or hinder the effective administration of 27 CFR Part 555.

With advances in technology and the dramatic decrease in the cost of computers, many businesses rely upon computers to maintain records of their inventory, sales, customer lists, and other business information. Even the smallest home-based business utilizes computers to record and maintain business information. Creating and maintaining records in a computer database, rather than paper form, makes it easier to ensure accuracy of records and makes it less likely that records will be lost or misplaced. In addition, maintaining records via computer generally saves time and money in bookkeeping and auditing expenses. This utilization of computers has allowed companies to automate inventories, utilizing technology such as bar codes or RFID (radio frequency identification) chips. This facilitates better accountability of product overall, reducing the potential of everyday accounting errors. Over the years ATF has seen a significant increase in the number of requests from explosives licensees and permittees for authorization to utilize computerized records rather than paper records of acquisition and distribution and other required records, such as magazine transaction records. ATF routinely approves requests to utilize computerized records, with certain conditions, finding that the use of such records is substantially equivalent to methods of record keeping set forth in the regulations in 27 CFR Part 555, Subpart G.

Several explosives industry members have asked whether computerized records may be maintained without obtaining written approval from ATF if they contain all the required information specified in the regulations and are maintained in a permanent form. Additionally, industry members have questioned whether computer records in combination with paper records may be maintained if they are permanent and contain all the information required by the regulations.

ATF has determined that records of acquisition and disposition, magazine summary records, and the other records required by 27 CFR Part 555, Subpart G, satisfy the standard of permanency and are substantially equivalent to paper records if they meet the following criteria:

1. All data entered into the computer system must be recorded into the database and cannot be capable of being edited or modified at a later date. The software system must retain any correction of errors as an entirely new entry, without deleting or modifying the original entry. The system may allow for entries in a notes column to explain any correction.
2. The system must have a reliable daily memory backup capability to protect the data from accidental deletion or other system failure.

It is also acceptable for licensees/permittees to maintain required records using a combination of a computer program, commercial invoices, and other documents, provided that all of the required information is maintained in the records in
permanent form. Any use of a computer for any portion of the required records must comply with the standards outlined above. However, each particular transaction must be self-contained with all the required information in the same recordkeeping medium. As one example, dispositions of explosives by a dealer cannot be separated by keeping the dates of disposition and the manufacturer’s name or brand name in the computer, and all the other required information for that disposition on separate written documents.

ATF finds that good cause exists for authorizing the use of a computer to create and maintain the records required by 27 CFR Part 555, Subpart G, as the use of computers is accepted throughout the business community as a reliable, cost-efficient means of maintaining business records. ATF also finds that the use of a computer to maintain required records, contingent upon the requirements outlined above, is consistent with the effect intended by the requirements of Subpart G, as it will result in a permanent, reliable record that will accurately indicate acquisitions and dispositions of explosive materials.

Finally, ATF finds that the use of computer records properly containing all the required information should not hinder the effective administration of the Federal explosives laws or regulations – use of such records generally makes it easier for ATF to conduct inventories of product on hand and to audit required records. Accordingly, ATF concludes that the requirements for approval of an alternate method or procedure in accordance with 27 CFR Part 555, sections 555.22 and 555.122-555.125, are met.

Held, persons holding licenses and permits issued under 18 U.S.C., Chapter 40, may use computers to create and maintain all or any portion of the records required by 18 U.S.C. 842(j) and 27 CFR Part 555, Subpart G, if the following conditions are satisfied:

1. All data entered into the computer system must be recorded into the database and cannot be capable of being edited or modified at a later date. The software system must retain any correction of errors as an entirely new entry, without deleting or modifying the original entry. The system may allow for entries in a notes column to explain any correction.

2. The system must have a reliable daily memory backup capability to protect the data from accidental deletion or other system failure.

Held further, licensees and permittees who wish to use computers to create and maintain all or a portion of their required records in accordance with the requirements set forth in this ruling are not required to obtain advance approval in accordance with 27 CFR 555.22 or 555.121-125.

Held further, licensees and permittees utilizing a combination of a computer program, commercial invoices, and other paper documents as required records must ensure that the required information for a particular transaction is fully contained in the same recordkeeping medium.

Held further, this ATF approved alternate method or procedure for computerized records shall not be withdrawn unless the holder of said variance is so advised by ATF in writing or no longer holds a Federal explosives license or permit.

Date approved: January 18, 2007

15. 18 U.S.C. 842(j): Storage of Explosives

27 CFR 555.210: Construction of Type 4 Magazines

27 CFR 555.215: Housekeeping

27 CFR 555.201: Notification of Local Fire Officials

27 CFR 555.63: Explosives Magazine Changes

27 CFR 555.22: Alternative Methods or Procedures; Emergency Variations from Requirements

Under specified conditions, display fireworks may be temporarily stored in locked and attended motor vehicles at the explosives magazine site(s) and at fireworks display site(s) without meeting the locking requirements of 27 CFR 555.210 provided certain additional security measures are in place. Additionally, allowance per 27 CFR 555.215 is made for the fuel tanks containing volatile materials that may be on the temporary storage vehicles. Finally, slight variation is provided for notification requirements to ATF and local fire officials.

ATF Rule. 2007-2

The Federal explosives laws, 18 U.S.C. Chapter 40, require all persons to store explosive materials in a manner in conformity with regulations issued by the Attorney General. 18 U.S.C. 842(j). The Attorney General has delegated the authority to administer and enforce the Federal explosives laws to the Director, ATF 28 CFR 0.130. Regulations in 27 CFR Part 555, implement the provisions of the Federal explosives laws.

The regulation at 27 CFR 555.210(a) states, in part, “[o]utdoor magazines are to be fire-resistant, weather-resistant, and theft-resistant.” Partly to satisfy the theft-resistant requirement, this section requires that each door be equipped with two mortise locks; two padlocks fastened in separate hasps and staples; a combination of a mortise lock and a padlock; a mortise lock that requires two keys to open; or a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least...
¾-inch diameter. Padlocks must be protected with not less than ¾-inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples.

The regulation at 27 CFR 555.215 states, in part, “[v]olatile materials are to be kept a distance of not less than 50 feet from outdoor magazines.”

The regulation at 27 CFR 555.201 requires, in part, that any person storing explosive materials notify local fire authorities orally before the end of the day on which storage of the explosive materials began and in writing within 48 hours from the time such storage began.

The regulation at 27 CFR 555.63 requires that any licensee or permittee who acquires (adds) a storage magazine must notify ATF at least five business days in advance of using any added explosives storage magazine.

Regulations at 27 CFR 555.22 allow for the approval and use of an alternate method or procedure in lieu of a method or procedure specifically prescribed in Part 555. ATF may approve an alternate method or procedure when it is found that—

(1) Good cause is shown for the use of the alternate method or procedure;
(2) The alternate method or procedure is within the purpose of, and consistent with the effect intended by, the specifically prescribed method or procedure and that the alternate method or procedure is substantially equivalent to that specifically prescribed method or procedure; and
(3) The alternate method or procedure will not be contrary to any provision of law and will not result in an increase in cost to the Government or hinder the effective administration of 27 CFR Part 555.

ATF has approved a significant number of variances for temporary storage for a specified amount of time before a display fireworks event, as well as during and after the event until the remaining explosive materials can be placed back into the appropriate storage magazine.

Preparation of display fireworks shows and the transportation of explosive materials to numerous show sites often take place over a period of several days. Preparing and temporarily storing the fireworks for these shows ordinarily take place on delivery trucks and trailers in one storage location where the proprietor already maintains storage of explosives materials with a high degree of security and safety by complying with the provisions of 27 CFR Part 555.

Many display fireworks shows also take several days to prepare at the show site. During preparation and after the show is completed, explosive materials frequently must be temporarily stored. This is often either extra product that was brought to the show or misfires that have been maintained and must be returned to permanent storage.

Allowing flexibility through alternate methods or procedures for specific regulations increases both safety and security at these show sites. These procedures are needed to increase public safety, as well as facilitate smooth operations for the display fireworks industry. The highest risk of incidents involving the accidental ignition of display fireworks is during handling, with the next highest risk being transportation. Providing no flexibility to allow storage in the delivery vehicles would require the industry to dangerously load and unload from storage magazines to vehicles and back into a storage magazine. Additionally, ATF believes that providing this guidance allows for preplanning by the proprietor and consistency of regulatory application nationwide.

One of the major dangers around explosives is fire. Therefore, the regulations require that volatile materials be maintained a distance of not less than 50 feet from outdoor explosives storage magazines. ATF believes that requiring attended storage for display fireworks temporarily stored in vehicles will ensure public safety, in lieu of the 50 foot separation requirement. The attendee should be able to alert the proper authorities if needed to ensure that a fire does not compromise this storage, or may relocate these temporary storage magazines to a safe location away from an identified fire.

Held, ATF will approve alternate methods or procedures for the temporary storage of display fireworks in locked and attended vehicles at explosives magazine site(s), as well as at the fireworks display site(s), under the following conditions:

1. The doors to each storage compartment containing explosive materials must be locked with at least one steel padlock having at least five tumblers and a caschardened shackle of at least ¾-inch diameter. The padlock does not need to be protected by a steel hood. However, each temporary storage magazine must be attended at all times for security purposes. The vehicle is considered “attended” when an authorized individual is within 100 feet of all temporary storage and has an unobstructed view of the vehicle(s) containing the explosive materials. The individual must remain awake and observant of activities around the vehicle(s).

2. The person who temporarily stores the explosive materials must notify in writing the authority having jurisdiction for fire safety in the locality in which the explosive materials are stored no less than 3 Federal office business days prior to utilizing the additional temporary storage magazine(s).

3. The person who temporarily stores the explosive materials must notify ATF in writing of the location of this storage no less than 3 Federal office business days prior to utilizing the additional temporary storage magazine(s).

All other provisions of 27 CFR Part 555 must be complied with as prescribed.

Held further, this ATF-approved alternate method or procedure for the temporary storage of display fireworks in locked and attended vehicles shall not expire unless the holder of said variance is so advised by ATF or no longer holds a Federal explosives license or permit.

Date approved: January 18, 2007

27 CFR 555.211(a): Immobilization of Outdoor Type 5 Mobile Storage Magazines

27 CFR 555.215: Housekeeping

27 CFR 555.22: Alternative Methods or Procedures; Emergency Variations from Requirements

Under specified conditions, blasting agents may be stored in mobile type 5 magazines (bulk delivery trucks) without meeting the prescribed immobilization requirements of 27 CFR 555.211.

ATF Rule 2007-3

The Federal explosives laws, 18 U.S.C. Chapter 40, require all persons to store explosive materials in a manner in conformity with regulations issued by the Attorney General. 18 U.S.C. 842(j). The Attorney General has delegated his authority to administer and enforce the Federal explosives laws to the Director, ATF. 28 CFR 0.130. Regulations in 27 CFR

Part 555 implement the provisions of the Federal explosives laws.

The regulation at 27 CFR 555.211(a)(1) states, in part, "[o]utdoor magazines are to be weather-resistant and theft-resistant." This section further states, "[w]hen unattended, vehicular magazines must have wheels removed or otherwise be effectively immobilized by kingpin locking devices or other methods approved by the Director."

The regulation at 27 CFR 555.215 states, in part, "[v]olatile materials are to be kept a distance of not less than 50 feet from outdoor magazines."

The regulation at 27 CFR 555.22 allows for the approval and use of an alternate method or procedure in lieu of a method or procedure specifically prescribed in Part 555. ATF may approve an alternate method or procedure when it is found that —

1. Good cause is shown for the use of the alternate method or procedure;
2. The alternate method or procedure is within the purpose of, and consistent with the effect intended by, the specifically prescribed method or procedure and that the alternate method or procedure is substantially equivalent to that specifically prescribed method or procedure; and
3. The alternate method or procedure will not be contrary to any provision of law and will not result in an increase in cost to the Government or hinder the effective administration of 27 CFR Part 555.

ATF has approved a significant number of variances for an alternate means of immobilizing preloaded bulk delivery vehicles when some additional security measures were put in place.

Bulk delivery vehicles are routinely utilized for on-site delivery of blasting services. Often these trucks contain a blasting agent defined under 27 CFR 555.11. Utilization of these bulk products delivered on-site and used immediately has increased safety and security by reducing the number of remotely located storage trailers containing packaged blasting agent products. These delivery vehicles generally leave the explosives storage locations at unusual times of day or night, and for safety reasons they are loaded the day before for next day's delivery. These trucks are incapable of being disabled by a kingpin locking device, and the requirement to remove the wheels for immobilization is obviously not feasible. Additionally, there are times when explosive material remains on the vehicle when it returns from use. Most of these products degrade during handling, therefore, removing them from the bulk vehicle would not be an option.

One of the major dangers surrounding explosives is fire. Therefore, the regulations at 27 CFR 555.215 require that volatile materials be maintained a distance of not less than 50 feet from outdoor explosive storage magazines. Because these preloaded storage vehicles contain a fuel tank filled with volatile materials, they must remain in an area protected from fire such as gravel, paved, or closely mowed designated parking area.

ATF believes that the following alternate method of operation is substantially equivalent to the prescribed methods. Increased safety for employees and the public provides good cause for this alternate method. It is not contrary to law and will not result in any increased cost to the Government. Overall, ATF believes allowing for this flexibility assists with the effective administration of 27 CFR Part 555.

Held, ATF will approve alternate methods or procedures for the preloading and temporary storage of bulk blasting agents in delivery vehicles at explosive magazine site(s), when the security and immobilization meets the following criteria:

1. All doors on the vehicle are locked, the ignition key is removed, and the key is secured away from the truck.
2. When the site is not in operation, outer perimeter security is established. This may be by a variety of means such as a locked gate, security guards, fence, natural features, or a combination of these.
3. Each potential access point to explosive materials on a storage vehicle will be secured with a minimum of one padlock that has at least five tumblers and casehardened shackle of at least 3⁄8-inch diameter.
4. Each vehicle shall be immobilized through the use of a steering wheel locking device, lockable battery disconnect switch, or both.
5. All vehicles preloaded with blasting agents shall be parked in a company designated area not susceptible to fire propagation such as bare dirt, gravel, rock, paving, or closely moved parking lot.
All other provisions of 27 CFR Part 555 must be complied with as prescribed.

Held further, licensees and permittees who wish to use the alternate method or procedure set forth in this ruling are not required to obtain advance approval in accordance with 27 CFR 555.22.

Held further, this ATF-approved alternate method or procedure for the temporary storage of bulk blasting agent products in locked and properly secured vehicles shall not be withdrawn unless the holder of said variance is so advised by ATF in writing or no longer holds a Federal explosives license or permit.

Date approved: January 26, 2007
**APPENDIX A**

PERMANENTLY MOUNTED CONTAINERS

Figure 1

Figure 2

NOTE: The configurations shown in Figures 1 and 2 are equally applicable to multi-axle and "cab-over" vehicles.

[Diagrams: Courtesy of IME]

**APPENDIX B**

COMPARTMENTS

Figure 1

Figure 2

Figure 3

NOTE: The configurations shown in Figures 1 and 2 are equally applicable to multi-axle and "cab-over" vehicles.

[Diagrams: Courtesy of IME]

ATF Rul. 77-24, Appendix A and B
APPENDIX C

1/4" PLYWOOD (A/C grade or better, exterior) outside
1/8" LOW CARBON STEEL
1/2" SHEETROCK

Inside

1/2" PLYWOOD (A/C grade or better, exterior)

Sketch of laminate construction for container or compartment for electric blasting caps; use, as illustrated in Appendix A, B, and E.

APPENDIX D

22 GAUGE SHEET METAL

Inside

OUTSIDE
1/2" SHEETROCK or 1/4" PARTICLE BOARD
1/2" PLYWOOD
1" HARDWOOD

Sketch of laminate construction for container or compartment for electric blasting caps; restricted to use as illustrated in Appendix A.

[Diagrams: Courtesy of MME]
Effect of 18 U.S.C. Chapter 40 On the Fireworks Industry

[Caution! This Item discusses Federal requirements only. Please contact your State or local authorities for any additional requirements.]

Title XI of the Organized Crime Control Act of 1970 (18 U.S.C. Chapter 40) establishes controls over explosive materials, including black powder and other pyrotechnic compositions commonly used in fireworks. Part 555 of Title 27, Code of Federal Regulations (CFR), contains the regulations which implement Title XI. Section 555.141(a)(7) exempts "the importation, distribution, and storage of fireworks classified as UN0336, UN0337, UN0431, or UN0432 explosives by the U.S. Department of Transportation at 49 CFR 172.101 and generally known as 'consumer fireworks' or 'articles pyrotechnic.'" Section 555.141(a)(7) does not exempt "display fireworks," as defined in 555.11.

With Respect to Fireworks: Who needs a license?

1. Manufacturers of black powder;
2. Manufacturers of any other explosive material used in manufacturing consumer fireworks or display fireworks; and
3. Importers of, or dealers in, display fireworks.

With Respect to Fireworks: Who needs a permit?

1. All persons transporting, shipping, causing to be transported, or receiving display fireworks, regardless of whether for their own use or for commercial display purposes (Certain exemptions apply, e.g. agencies of the United States or of any State or political subdivisions thereof are exempt from permit requirements); and
2. A person, other than a licensee, transporting, shipping, causing to be transported, or receiving explosive materials for use in manufacturing display fireworks or consumer fireworks.

With Respect to Fireworks: Who may not need a license or permit?

Frequently, persons contracting for display fireworks (e.g., for Fourth of July observances) from a Federal explosives licensee or permittee receive a total service, including the services of a pyrotechnician who transports display fireworks in interstate or intrastate commerce to the site of the display and conducts and supervises the display. In these instances, the customers purchase and receive the contractor's services and not the explosive materials themselves (i.e., the cost of the services includes the contractor's expense in providing the fireworks utilized), and the cost of the services includes the dealer's expense in providing the fireworks utilized. When business is transacted in this manner, the customers purchasing and receiving the services need not obtain Federal explosives licenses or permits under Part 555 as long as they are not transporting, shipping, causing to be transported, or receiving explosive materials. Note: the transportation of explosive materials to the display sites would be authorized by the Federal explosives license or permit of the licensee or permittee providing the services.

With Respect to Fireworks: Types of permits

1. User permit: Allows the permit holder to transport, ship, cause to be transported, and receive display fireworks in interstate or foreign commerce for his or her own use and not for resale. This permit is issued at a cost of $100 for a 3-year period and is renewable at a cost of $50 for a 3-year period.
2. User-limited permit: Identical to the user permit but issued for a single purchase transaction, only. The fee is $75; the permit is nonrenewable.

With Respect to Fireworks: Storage

The law prohibits any person from storing any explosive materials in a manner not in conformity with the regulations promulgated by the Attorney General (18 U.S.C. 842(j)). Pursuant to this section, the Attorney General has prescribed storage regulations in 27 CFR Part 555, Subpart K. Display fireworks must be stored in conformity with the regulations. Display fireworks generally contain perchlorate mixture explosives, potassium chlorate base explosive mixtures, and black powder, which are entered on the List of Explosive Materials with numerous others. (The List, which is not all-inclusive, is annually compiled and readily available without charge from the address set out in 27 CFR 555.23 or online at www.atf.gov) Display fireworks must be stored as low explosives in magazines meeting, at a minimum, the requirements for type 4 storage magazines prescribed by 27 CFR 555.210 unless they contain other classes of explosives. Bulk salutes must be stored as high explosives in type 1 or type 2 magazines. The net weight of the explosive materials contained in the display fireworks may be used in determining compliance with table of distance requirements. To determine the actual weight of the materials, it may be necessary to contact their manufacturers. The manufacturer of exempt or nonexempt fireworks having stocks of explosive materials on hand to be used in the manufacture of fireworks must store the stocks in conformity with applicable storage requirements.
Explosives Dealer's and User's Guide to Federal Explosives Regulation

Explosives May Not be Distributed by Licensees (Or by Any Person) to Any Person Who:

1. Is under indictment for, or who has been convicted of a crime punishable by imprisonment for a term exceeding one year.
2. Is an unlawful user of, or addicted to, marijuana or any depressant or stimulant drug or narcotic drug (as these terms are defined in section 102 of the Controlled Substances Act).
3. Has been adjudicated as a mental defective or has been committed to a mental institution.
4. Is a fugitive from justice.
5. Is an alien (with certain exceptions)
6. Has been discharged from the armed forces under dishonorable conditions; or
7. Having been a citizen of the United States, has renounced citizenship.
8. Is less than 21 years of age.

Dealers in Explosives Must:

- Have a current and valid Federal explosives license.
- Have proper storage facilities.
- Keep accurate and complete records.
- Verify that each buyer has a Federal explosives license or permit.
- Verify buyers’ identities.

Users of Explosives

Federal permits are required of those who transport, ship, cause to be transported, or receive explosive materials. Among other things, the permittee must keep complete and accurate records of the acquisitions and dispositions of explosives materials. Unless otherwise exempted by law, no person may receive or transport any explosive materials without a permit.

No person shall store any explosive material in a matter not in conformity with applicable regulations.

All persons must report to ATF and local authorities any loss or theft of their explosive materials within 24 hours of discovery.

A Federal license or permit does not confer any right or privilege to violate any state law or local ordinance.

The above summary is general and does not purport to fully convey the Federal explosives law and regulations pertaining to dealers and users.

Black Powder Transactions

Public Law 93-639 (1975) allows nonlicensees/nonpermittees to purchase commercially manufactured black powder, in quantities of 50 pounds or less, solely for sporting, recreational or cultural purposes for use in antique firearms or antique devices. A nonlicensee or nonpermittee purchasing black powder under the exemption need not be a resident of the State in which the dealer is located. Also, the categories of persons to whom the distribution of explosive materials is prohibited do not apply to black powder transactions made under the exemption. Acquisitions of black powder not qualifying under this exemption are subject to the same regulatory requirements that govern any other low explosive.

All persons who distribute black powder, regardless of quantity, must be licensed as explosives dealers and, among other things, must provide adequate storage.

Explosives Security

Through prompt reporting of losses and thefts of explosives and increased emphasis on physical security, explosives licensees and permittees can contribute greatly to efforts by Federal, State and local authorities to reduce the incidence of bombings and other criminal misuse of explosives in the United States. The following actions are of prime importance and in some instances required:

Report . . . any thefts or losses of explosives within 24 hours of discovery, by telephone, to ATF (toll free: 1-800-800-3855) and to appropriate local authorities. Because the States and many municipalities have designated specific agencies to investigate the theft or loss of explosives, licensees and permittees are urged to be familiar with State and local reporting procedures and appropriate contact points.

Follow . . . telephone notification with a written report on ATF Form 5400.5, “Report of Theft or Loss—Explosive Materials,” to the nearest ATF Division Office, and in accordance with the instructions on the form.

Observe . . . activity around magazines, within business premises, and on job sites, particularly if strangers appear to be loitering in the area in which explosives are being kept. On-site users should take special care to assure that explosives removed from storage for use on the job are either detonated or accounted for and unused items returned to storage.
Picryl fluoride.
74-21-8 [95% nitromethane, 5% ethylenediamine].
O-nitro aliphatic compounds.
Polyolpolynitrate-nitrocellulose explosive gels.
Potassium chlorate and lead sulfocyanate explosive.
Potassium nitrate explosive mixtures.
Potassium nitroaminotetrazole.
Pyrotechnic compositions.
PYX [2,6-bis(picrylamino)] 3,5-dinitropyridine.

R
RDX [cyclonite, hexogen, T4, cyclo-1,3,5,-trimethylene-2,4,6-trinitramine; hexahydro-1,3,5-trinitro-S-triazine].

S
Safety fuse.
Salts of organic amino sulfonic acid explosive mixture.
Salutes (bulk).
Silver acetylide.
Silver azide.
Silver fulminate.
Silver oxalate explosive mixtures.
Silver stibnate.
Silver tartrate explosive mixtures.
Silver tetrathionate.
Slurried explosive mixtures of water, inorganic oxidizing salt, gelling agent, fuel, and sensitizer (cap sensitive).
Smokeless powder.
'Sudatol.'
Sodium anatol.
Sodium azide explosive mixture.
Sodium dinitro-ortho-cresolate.
Sodium nitrate explosive mixtures.
Sodium nitrate-potassium nitrate explosive mixture.
Sodium picramate.
Special fireworks.
Squibs.
Styphnic acid explosives.

T
TacoT [tetranitro-2,3,5,6-dibenz-1,3a,4,6a-tetrazapentalene].
TAIB [triaminotrinitrobenzene].
TATP [triacetone triperoxide].
TBEODN [triethylene glycol dinitrate].
Tetranitrocarbazole.
Tetrazene [tetracene, tetrazine, 1(5-tetrazolyl)-4-guanyl tetrazene hydrate].
Tetrazole explosives.
Tetryl [2,4,6 tetranitro-N-methylaniline].
Tetrytol.
Thickened inorganic oxidizer salt slurried explosive mixture.
TMETN [trimethylolethane trinitrate].
TNBP [trinitroethyl formal].
TNEOC [trinitroethyl orthocarbonate].
"NBOF [trinitroethyl orthoformal].
"NT [trinitrotoluene, trotyl, trilite, triton].
Torpex.
Tridite.

Trimethylol ethyl methane trinitrate composition.
Trimethylolmethane trinitration cellulose.
Trimonite.
Trinitroanisole.
Trinitrobenzene.
Trinitrobenzoic acid.
Trinitrocresol.
Trinitro-ortho-cresol.
Trinitronaphthalene.
Trinitrophenol.
Trinitrophloroglucinol.
Trinitroresorcinol.
Tritonal.

U
Urea nitrate.

W
Water-bearing explosives having salts of oxidizing acids and nitrogen bases, sulfates, or sulfamates (cap sensitive).
Water-in-oil emulsion explosive compositions.

X
Xanthanonas hydrophilic colloid explosive mixture.

Approved: September 18, 2006.
Michael J. Sullivan, Acting Director.

[FR Doc. E6-15850 Filed 9-26-06; 8:45 am]
APPENDIX N: ATF Safety & Security Information for Explosives Licensees
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ATF Office/Hotline Telephone Numbers and Addresses

ATF 24-Hour Hotline .....................................................................................Toll Free 800-800-3855
U.S. Bomb Data Center (M-F, 8 a.m. to 5 p.m. e.s.t.) ..........................Toll Free 800-461-8841
                             Toll Free Fax 866-927-4570

Stolen Explosives Hotline .................................................................Toll Free 888-283-2662
(After hours, weekends) ..............................................................(888-ATF-BOMB)

Local ATF Office Telephone Number (*see our Website for contact information)

ATF Website (For Updates and to Download Forms) ......................www.atf.gov

U.S. Bomb Data Center (Repository): USBDC@atf.gov
Bureau of Alcohol, Tobacco, Firearms and Explosives
U.S. Bomb Data Center
P.O. Box 50980
Washington, D.C. 20091

Explosives Industry Programs Branch (EIPB) Mailing Address: EIPB@atf.gov
Bureau of Alcohol, Tobacco, Firearms and Explosives
Explosives Industry Programs Branch
650 Massachusetts Avenue, NW.
Room 5000
Washington, D.C. 20226

ATF Distribution Center ..........................................................................703-455-7801

Important Telephone Numbers:

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The Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF), in partnership with the Institute of Makers of Explosives (IME) and the International Society of Explosives Engineers (ISEE), would like to take this opportunity to once again remind all members of the explosives industry of the vital importance of employing security safeguards over explosive materials. Whether the explosive materials are in the process of manufacture, in storage, or in use, we urge everyone to use all necessary measures to safeguard explosive materials and prevent them from falling into the hands of those who may use them in criminal or terrorist acts.

The purpose of this booklet is to provide you, the industry member, with useful tips, techniques, and tools developed by ATF, the ISEE, and the IME for properly securing explosive materials. In past advisories to explosives industry members, ATF has requested that you report any suspicious behavior or unusual activity to ATF and local law enforcement authorities. Keeping explosives secure requires more than that, however. It requires preparing and implementing a security plan. We urge each member of the explosives industry to adopt a security program. If you already have a security plan, please take this opportunity to re-evaluate your plan and ensure that it provides both safeguards and an action plan in the event of an emergency situation.

What Is ATF Doing to Support the Explosives Industry in Keeping Explosives Secure?

ATF is committed to 1) keeping explosives out of the hands of those with criminal intent and 2) prosecuting those who illegally obtain or misuse explosives. While ATF is primarily concerned with law enforcement and regulatory duties, we also strive to work with and consult with the industries we regulate, or the businesses, agencies, and groups that affect the industry. By doing this, we hope to develop more efficient, more effective, and less burdensome programs, policies, and procedures.

For example, immediately following the 1995 bombing of the Murrah Federal Building in Oklahoma City, ATF formed an alliance with The Fertilizer Institute (TFI) and other agriculture industry members to put forward a program called “Be Aware for America.”

This program encouraged agriculture industry members to report any suspicious activities or thefts of ammonium nitrate, a precursor chemical often sought after by those with criminal intent, to ATF.

This program was expanded in 1998 to include “Be Secure for America,” which encouraged the agriculture industry to take extra security measures at production and distribution facilities. It was further updated in 2004 as part of the “America’s Security Begins with You” initiative. Each of these initiatives sought to raise industry members’ awareness about potential security vulnerabilities relating to ammonium nitrate and give them ideas on how to fix potentially dangerous problems.

After September 11, 2001, ATF initiated an ambitious outreach program to meet with every explosives industry member to address their concerns, to develop contacts, and to encourage the use of extra security measures. ATF was very successful in this initiative and will use this information for developing future outreach programs.
Whenever the country's threat level is raised in response to the Department of Homeland Security's advisories, ATF has contacted industry members through the ISEE, the IME, and other explosives organizations. These organizations get in touch with their own members to urge them to provide extra security at their facilities and report anything suspicious to ATF or other law enforcement authorities.

ATF personnel often meet locally with representatives of the explosives industry in their area to discuss safety and security, and we encourage industry members to contact their local ATF office to arrange these meetings. ATF personnel also attend and give presentations on security at industry seminars and conferences. Those ATF representatives who attend these events enjoy meeting with industry members to discuss ideas on making the industry safer and more secure and on making ATF more effective at keeping explosive materials out of the hands of criminals.

Finally, ATF's personnel, using agency resources such as the U.S. Bomb Data Center (USBDC), the Explosives Technology Branch, and the Forensic Science Laboratories, remain dedicated to the aggressive pursuit and prosecution of those who divert explosives into the illegal market, those who steal explosives, and those who illegally possess or misuse explosive materials. It was this dedication that led to the successful prosecution of domestic terrorist Eric Rudolph.

The ISEE and IME's Commitment to the Promotion of Explosives Safety and Security

The ISEE and IME have always had zero tolerance for the theft or illegal possession of explosive materials in any quantity and support the criminal prosecution of persons who commit such acts. Security and safety topics are often discussed at the ISEE's annual conventions and at IME's meetings.

The IME and ISEE have also provided exceptional guidance to ATF in the development of this booklet. These organizations and ATF intend this guide to be useful for both industry members and ATF personnel. The IME has compiled and formulated excellent industry standards in the securing of explosive materials. In IME Standard Library Publication 27 (SLP 27), they outline guidelines that industry members should use in securing their explosives. While the suggestions for safety and security outlined in SLP 27 are voluntary, adoption of these guidelines would be highly beneficial to all explosives industry members. Copies of this and other SLPs are available from the IME at 202-429-9280 or by visiting their website at www.ime.org. A copy may also be obtained through the ISEE Blaster's Library at www.isee.org/publications, or 440-349-4400.

The following list, taken directly from the IME's SLP 27, is an example of the minimum general concepts IME recommends should be included in any security program.

1. Limit public disclosure of information on quantities and locations of explosives storage on a need-to-know basis. Of course, public safety authorities (such as fire, police, and local emergency management) should be in possession of specific information regarding the quantities and location of explosives storage facilities.

2. Get to know your local law enforcement and local emergency planning committee (LEPC) personnel and get them to know you. An "open house" held every year at your facility is an excellent method to accomplish this. This not only provides first-hand familiarity to law enforcement of your site, but provides invaluable face-to-face interaction with these authorities. If you cannot get law enforcement or LEPC personnel to visit your site, visit them. Request a meeting so that you can introduce and explain your operation. Specifically request in writing that law enforcement pay special attention to any suspicious activity around your site(s).
3. Instruct all employees to report any unusual or suspicious activity immediately to appropriate authorities. Such activity could include:
   - An attempt to purchase explosives by an unfamiliar or seemingly inexperienced individual;
   - An individual who is reluctant to provide identification or information on their operation or intended use of explosives;
   - Encountering an individual, either at work or on your own time, who seems very interested in your occupation and details related to the accessibility of explosives;
   - Out-of-place or repeat sightings of vehicles or individuals, especially individuals or vehicles at gates or perimeter roads, and aerial over flights;
   - Sighting unauthorized individuals inside a secure area; and
   - Explosives-laden vehicles being followed.

If you encounter any such activity, write down information such as vehicle color, make, license number and State, and a physical description of suspicious individuals as soon as possible after noticing them. Take a photograph if possible. Retain and preserve papers or other items a suspicious individual may have touched for potential law enforcement processing. When witnessing known criminal activity, contact law enforcement immediately.

4. Designate an individual as your security coordinator. All employees should report suspicious or unusual activities to the security coordinator or, if the security coordinator cannot be contacted, their immediate supervisor. The security coordinator or supervisor then reports the suspicious or unusual activities to appropriate law enforcement personnel. The security coordinator should also establish relationships with nearby chemical (or similar business) operations to share information. The security coordinator should maintain a log of unusual events.

5. Establish a predetermined action plan for implementation of increased security measures brought on by a declaration of threat level higher than “Yellow” or “Elevated” by DHS. How to deal with shipments, production, and blasting operations in progress should be well understood by all employees beforehand. In the event of an Orange or Red Alert, additional security measures should be considered for implementation on a site-specific basis, in view of the type and scope of the specific alert.

6. Disseminate increased security alerts and security recommendations such as these to your customers and suppliers throughout the industry. Facilitate their understanding of these alerts and recommendations.

7. Control official documents and information. Prevent documents such as licenses, permits, route plans, shipping schedules, and other authorizations from reaching unauthorized individuals. Information related to shipping, inventory, production schedules, and processes should be kept secure and provided on a need-to-know basis.

8. Conduct a safety and security review of all outside contractors or service providers who have access to areas where explosives are present and are not escorted before their services are used. Include a security element in contractor or service provider indoctrination training.

9. Develop security plans and conduct vulnerability assessments for your entire operation.
Voluntary Security Checklist

Note: This checklist provides voluntary suggestions that industry members can use to make their businesses more secure. These suggestions are not required by ATF, but are only to serve as a helpful guide for securing explosive materials.

1. Controlling Access to Keys
   - Access to the keys for your storage magazines and for trucks loaded with explosives should be restricted to essential personnel only. It also helps to keep your keys in a secure, unmarked area, preferably not in a central location at the premises.
   - Having a logbook for essential personnel to sign in and sign out keys can also enhance security and can be useful in tracking down a missing set of keys. Alternatively, you could number or mark keys and assign them to specific individuals.
   - If you do not share keys, conducting an inventory of keys can help ensure that all keys are currently accounted for. You could conduct a yearly inventory of keys at the same time as your required inventory of explosive materials.
   - You should change magazine locks if keys are missing or remain in the possession of terminated employees. This will help ensure that only your current employees have access to your magazines. You should create an internal policy for your company that instructs employees with access to keys to refrain from duplicating the keys without authorization.
   - Consider using locks with “forcing” and “surreptitious entry” ratings of at least “five” in the American Society for Testing Materials’ (ASTM) F883-97, Standard Performance Specification for Padlocks. For referenced ASTM standards, visit the ASTM Website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For the Annual Book of ASTM Standards volume information, refer to the Standards Document Summary page on the ASTM Website.
   - Licensees and permittees may also consider the need to conduct regular inventories more often than once per year to ensure that there have been no thefts/losses of explosive materials.
   - This booklet provides you with a clearly defined plan of action for recording and reporting lost or stolen explosive materials. It is also recommended that you obtain all applicable Federal, State, and local agency telephone numbers in order to make a report.

2. Securing Your Magazine
   - Although ATF recognizes that most licensees and permittees are already keeping their magazines in secure locations and are complying with the Federal requirement to visually inspect their magazines once every 7 days, you may want to consider inspecting readily accessible magazines on a daily basis. These inspections will allow you to assess and correct any security or safety vulnerability that may be present.
   - Even if the current locations of explosives magazines meet the requirements of the table of distances, licensees and permittees may want to reassess their magazine locations to ensure that the magazines are placed in the most secure locations.
   - Limit access to sites where explosive materials are being stored to essential personnel only. Restricting unauthorized personnel from these sites will prevent further exposure of the magazines to theft or tampering.
   - Consider installing fences, floodlights, alarms, security cameras, locked gates, or other security devices at the site to better monitor the location. Alarm monitoring signs could be posted in highly visible places to deter unauthorized access.
   - Contacting your local law enforcement agency and establishing a rapport with the officers who routinely patrol your area could be beneficial to your security. Familiarize them with your business hours so they can alert you when people are present during off hours.
Voluntary Security Checklist

- Training your employees is essential to securing your explosives. Employees should be trained to recognize what constitutes a suspicious customer or an unusual transaction. They should also be trained to respond to thefts, losses, or emergencies involving explosive materials.

- Other agencies such as the Occupational Safety and Health Administration (OSHA), the Mine Safety and Health Administration (MSHA), or State agencies may have additional rules and requirements for securing storage sites. It is recommended that you contact these agencies for information on their requirements.

4. Updating Employee Backgrounds

- The best way to know who is working for you is to frequently update your list of responsible persons and employee possessors. Your company could establish an internal program to review these checks and update them as required.

5. Getting to Know and Recognize Your Vendors

- To the degree possible, encourage your employees to recognize which vendors service your facility. Have the vendor’s telephone number(s) readily available to help your employees contact a vendor if they need to verify any unknown individual who claims to be from the vendor.

- You should have vendors check in and receive an identification badge while at your facility. Escorting vendors throughout your facility is also recommended.

6. Knowing Your Customer

- Although all persons ordering or receiving explosive materials must be licensed or permitted, licensees should also be alert to the following suspicious activities:
  - The customer insists on paying in cash.
  - The customer acts nervous or behaves in an unusual manner.
  - The customer knows little about the product he/she is buying or its use.

Note: ATF has provided a Guide to Recording Suspicious Persons Description in the back of this booklet. This guide may be useful for recording descriptive information on any suspicious individual. Suspicious activities can be reported to ATF’s 24-hour hotline listed in the front of this book or your local law enforcement authority.

- Follow-up phone calls to your customer(s) may be useful to ensure that the customer(s) received the correct amount of explosive materials when a common or contract carrier is used to deliver the materials.

- Be cautious with unsolicited e-mail inquiries involving explosive materials, properties, blasting techniques, tunneling, etc. Please provide any suspicious e-mails to ATF if you believe further investigation is required.
Procedures to Follow When Explosives Are
Taken in a Crime (e.g., Theft)

- Contact Local Law Enforcement Authorities
  Local Law Enforcement Telephone Number:
  
  Contacting the local law enforcement authorities is essential to the quick recovery of explosives taken in a crime.

- Contact Local ATF Office
  Local ATF Office Telephone Number:
  
  The local ATF office will work with the local law enforcement authorities investigating the theft. They can also assist in the preparation of the Theft/Loss Report for submission to the U.S. Bomb Data Center.

- Contact U.S. Bomb Data Center
  Telephone Numbers: 1-800-461-8841 or 1-888-283-2662 (ATF-BOMB)

- Ensure Safety and Preserve Evidence
  You are first and foremost responsible for making sure that you and your employees are safe! Do not enter a crime scene until law enforcement authorities indicate that it is safe. Do not disturb the crime scene until law enforcement authorities have completed evidence gathering. Unless you are asked to assist, avoid the temptation to assess damage/losses until they are finished.

- Prepare ATF Report of Theft or Loss
  (ATF F 5400.5)
  A Report of Theft or Loss—Explosive Materials must be prepared when a theft of explosives from a licensee or permittee's inventory occurs. Submit the original to ATF and keep a copy for your records. Although the U.S. Bomb Data Center should be notified as soon as possible, Federal law requires notification within 24 hours of the discovery.

- Notify ATF of Any Recovered Explosives
  It is not uncommon to find that explosive materials initially thought to have been part of a group of stolen materials were in fact sold lawfully or are still in inventory. If explosive materials are inaccurately reported as stolen, it hampers law enforcement's ability to solve the crime or may jeopardize prosecution. Please immediately correct inaccurate reports.
Procedures to Follow When Explosives Are Missing From Inventory (e.g., Disposition Unrecorded/Unknown)

- Prepare ATF Report of Theft or Loss (ATF Form 5400.5)

  A Report of Theft or Loss—Explosive Materials must be prepared when it is discovered that explosive materials are missing from inventory. Submit the original to the U.S. Bomb Data Center and keep a copy for your records. The form can be obtained from the ATF Distribution Center or from www.atf.gov.

  Although the U.S. Bomb Data Center should be notified as soon as possible, Federal law requires notification within 24 hours of the discovery.

  A full inventory check is also highly recommended (but not required) to locate missing explosives and to prevent future inventory losses.

- Notify the Local Law Enforcement Authority
  Local Police Telephone Number:

  Although this notification is a requirement for all Federal explosives licensees and permittees, it should be made clear to the authorities that there is no evidence of a crime and that the disposition of these explosive materials is unknown/unrecorded. No local police report number is required to be placed in the disposition records because many departments will not issue a police report if no crime has occurred.

- Contact U.S. Bomb Data Center
  Telephone Numbers: 1-800-461-8841 or 1-888-283-2662 (ATF-BOMB)

- Notify ATF of Any Recovered Explosives

  It is not uncommon to find explosive materials that initially could not be accounted for or located. It is extremely important that these discoveries be reported to the U.S. Bomb Data Center so that the list of explosives reported missing from inventory can be corrected.
Statutory Program Provisions
(18 U.S.C. Chapter 40)

Title 18 U.S.C. 842(h). Title 18 U.S.C. 842(h) states “It shall be unlawful for any person to receive, possess, transport, ship, conceal, store, barter, sell, dispose of, or pledge or accept as security for a loan, any stolen explosive materials which are moving as, which are part of, which constitute, or which have been shipped or transported in, interstate or foreign commerce, either before or after such materials were stolen, knowing or having reasonable cause to believe that the explosive materials were stolen.”

Title 18 U.S.C. 842(k). Title 18 U.S.C. 842(k) states, “It shall be unlawful for any person who has knowledge of the theft or loss of any explosive materials from his stock, to fail to report such theft or loss within twenty-four hours of discovery thereof, to the Attorney General and to appropriate local authorities.”

Title 18 U.S.C. 844(l). Title 18 U.S.C. 844(l) states, “A person who steals any explosive material from a licensed importer, licensed manufacturer, or licensed dealer, or from any permittee shall be fined under this title, imprisoned not more than 10 years, or both.”

Title 18 U.S.C. 844(p). Title 18 U.S.C. 844(p) discusses the theft reporting requirement. It states “(1) In general. A holder of a license or permit who knows that explosive materials have been stolen from that licensee or permittee, shall report the theft to the Attorney General not later than 24 hours after the discovery of the theft. (2) Penalty. A holder of a license or permit who does not report a theft in accordance with paragraph (1), shall be fined not more than $10,000, imprisoned not more than 5 years, or both.”
27 CFR 555.28. Stolen explosive materials. This regulation states, "No person shall receive, conceal, transport, ship, store, barter, sell, or dispose of any stolen explosive materials knowing or having reasonable cause to believe that the explosive materials were stolen."

27 CFR 555.30(a). Reporting theft or loss of explosive materials. This regulation states, "Any licensee or permittee who has knowledge of the theft or loss of any explosive materials from his stock shall, within 24 hours of discovery, report the theft or loss by telephoning 1-800-800-3855 (nationwide toll free number) and on ATF Form 5400.5 (formerly Form 4712) in accordance with the instructions on the form. Theft or loss of any explosive materials shall also be reported to appropriate local authorities."

27 CFR 555.30(b). Reporting theft or loss of explosive materials. This regulation states, "Any other person, except a carrier of explosive materials, who has knowledge of the theft or loss of any explosive materials from his stock shall, within 24 hours of discovery, report the theft or loss by telephoning 1-800-800-3855 (nationwide toll free number) and in writing to the nearest ATF office. Theft or loss shall be reported to appropriate local authorities."

27 CFR 555.30(c). Reporting theft or loss of explosive materials. This regulations states, "Report of theft or loss of explosive materials under paragraphs (a) and (b) of this section must include the following information, if known:

(1) The manufacturer or brand name.
(2) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, etc.).
(3) Description (United Nations (UN) identification number, hazard division number, and classification letter, e.g., 1.1D) as classified by the U.S. Department of Transportation at 49 CFR 172.101 and 173.52.
(4) Size (length and diameter)."

27 CFR 555.30(d). Reporting theft or loss of explosive materials. This regulation states, "A carrier of explosive materials who has knowledge of the theft or loss of any explosive materials shall, within 24 hours of discovery, report the theft or loss by telephoning 1-800-800-3855 (nationwide toll free number). Theft or loss shall also be reported to appropriate local authorities. Reports of theft or loss of explosive materials by carriers shall include the following information, if known:

   (1) The manufacturer or brand name.
   (2) Quantity (applicable quantity units, such as pounds of explosives, number of detonators, etc.).
   (3) Description (United Nations (UN) identification number, hazard division number, and classification letter, e.g., 1.1D) as classified by the U.S. Department of Transportation at 49 CFR 172.101 and 173.52."

27 CFR 555.34. Replacement of stolen or lost ATF Form 5400.30 (Intrastate Purchase of Explosives Coupon (IPEC)). This regulation states, "When any Form 5400.30 is stolen, lost, or destroyed, the person losing possession will, upon discovery of the theft, loss, or destruction, immediately, but in all cases before 24 hours have elapsed since discovery, report the matter to the Director by telephoning 1-888-ATF-BOMB (nationwide toll free number). The report will explain in detail the circumstances of the theft, loss, or destruction and will include all known facts that may serve to identify the document. Upon receipt of the report the Director will make such investigation as appears appropriate and may issue a duplicate document upon such conditions as the circumstances warrant."

27 CFR 555.165(a). Failure to report theft or loss. This regulation states, "Any person who has knowledge of the theft or loss of any explosive materials from his stock and fails to report the theft or loss within 24 hours of discovery in accordance with 555.30, shall be fined not more than $1,000 or imprisoned not more than one year, or both."

27 CFR 555.165(b). On and after January 24, 2003, any licensee or permittee who fails to report a theft of explosive materials in accordance with 555.30 will be fined under Title 18 U.S.C., imprisoned not more than 5 years, or both.
Licensee/Permittee Responsibility

Reporting Changes in Responsible Persons and Employee Possessors

The Safe Explosives Act requires 1) all explosives licensees, permittees, and new applicants to provide information on employee possessors to ATF; and 2) for responsible persons to provide fingerprints and photographs to ATF, along with other required information, as part of the application process. This is to allow ATF to conduct background checks on new responsible persons and employee possessors as noted in 27 CFR 555.57(c). These provisions help ensure that explosives do not get into the hands of persons who may use them in criminal or terrorist acts.

Some licensees and permittees have asked when these provisions must be met. As noted in 27 CFR 555.57(b): “For all licenses or permits issued on or after May 24, 2003, each person holding the license or permit must report to the Chief, Firearms and Explosives Licensing Center, any change in responsible persons or employees authorized to possess explosive materials. Such reports must be submitted within 30 days of the change and must include appropriate identifying information for each responsible person. Reports relating to newly hired employees authorized to possess explosive materials must be submitted on ATF F 5400.28 for each employee.”

For licensing purposes, “changes” in responsible persons and employee possessors refers to those persons hired by the licensee or permittee after the submission of the application or renewal application form to the Federal Explosives Licensing Center.
Responsible Persons vs. Employee Possessors

**Responsible Persons:** A responsible person is an individual who has the power to direct the applicant's management and policies pertaining to explosive materials.

Examples:
- Explosives facilities site managers.
- Corporate directors and officers, as well as stockholders who have the power to direct management and policies pertaining to explosives.

**Employee Possessors:** An employee possessor is an individual who has the actual or constructive possession of explosive materials during the course of his/her employment.

**Actual Possession:**
This occurs when a person physically handles explosive materials as part of the production process; handles explosive materials in order to ship, transport, or sell them; or uses explosive materials.

**Constructive Possession:**
This exists when an employee lacks direct physical control over explosive materials but knowingly has the power and intention to exercise dominion and control over the explosive materials, either directly or indirectly through others.

Examples:
- An employee at a construction site who keeps the keys for the explosives magazines.
- An employee who directs the use of explosive materials by other employees.

**Please Note:** An employee possessor must be an employee of the licensee or permittee. Workers not on the licensee's or permittee's payroll are not employees or employee possessors.

Any further questions on these requirements should be addressed to the Explosives Industry Programs Branch in ATF Headquarters at 202-927-2310, or the Federal Explosives Licensing Center in West Virginia at 1-877-283-3352.
Accurate identification of explosive materials is critical to the safety and security of the public. The regulation at 27 CFR 555.109 requires each licensed manufacturer or importer of explosive materials to use legible marks to identify all explosive materials manufactured or imported for sale or distribution. The marks of identification include the importer's location (city and State), the manufacturer's location (city and State/country) and the date and shift of manufacture (including the date/shift for explosives manufactured overseas). The licensed importer or manufacturer must place these marks on each cartridge, bag, or other immediate container of explosive materials manufactured for sale or distribution. The marks of identification must also be placed on the outside container, if any, used for their packaging.

Federal explosives licensees and permittees receiving explosives must record the importer's and manufacturer's marks of identification in their acquisition and disposition records. Please be careful when identifying explosives and recording the identifying information. Commercial explosives manufacturers use an alphanumeric series called a date shift code that provides the location, date, and shift of manufacture. The date shift code is printed on the product or package. The date shift code is not to be confused with other alphanumeric codes that may appear on packages of explosives. These include U.S. Department of Transportation (DOT) classification codes, UN numbers, and DOT exemption numbers.

Accurately identifying explosives in your acquisition and disposition records ensures that explosives can be traced in the event that they are lost, stolen, or recovered in a crime.

Recordkeeping Requirements

The regulations at 27 CFR 555, Subpart G, require explosives licensees and permittees to keep permanent records of the acquisition, disposition, and inventory of explosive materials. ATF relies on explosives licensees and permittees to make accurate and timely entries into their records. These records are essential in accounting for explosives inventory and identifying lost or stolen explosives. They are also an extremely important source of information for law enforcement during a criminal investigation. Persons holding multiple licenses or permits are required to prepare and maintain records for each license or permit. The information entered into the records is dependent upon the type of explosives license or permit. The regulations do not require a specific record format; however, ATF has provided the following samples to guide you when preparing your permanent records of acquisition, disposition, and inventory.

<table>
<thead>
<tr>
<th>Date</th>
<th>Name or Brand Name of Manufacturer</th>
<th>Quantity In</th>
<th>Quantity Out</th>
<th>Balance</th>
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Refer to 27 CFR 555.127
## Recordkeeping Requirements

### Dealer of Explosives Record of Acquisition

<table>
<thead>
<tr>
<th>Date of Acquisition</th>
<th>Name or Brand Name of Manufacturer and Importer (If any)</th>
<th>Manufacturer's Marks of Identification</th>
<th>Quantity</th>
<th>Description</th>
<th>Name, Address and License or Permit Number of Distributor</th>
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Refer to 27 CFR 555.124(b)

### Dealer of Explosives Record of Disposition

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<th>Date of Disposition</th>
<th>Name or Brand Name of Manufacturer and Importer (If any)</th>
<th>Manufacturer's Marks of Identification</th>
<th>Quantity</th>
<th>Description</th>
<th>License or Permit Number of Distributee</th>
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Refer to 27 CFR 555.124(c)

### Importer of Explosives Record of Acquisition

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<thead>
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<th>Date of Importation or Other Acquisition</th>
<th>Name or Brand Name and Country of Manufacturer</th>
<th>Manufacturer's Marks of Identification</th>
<th>Quantity</th>
<th>Description</th>
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Refer to 27 CFR 555.122(b)

### Importer of Explosives Record of Disposition

<table>
<thead>
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<th>Date of Acquisition</th>
<th>Name or Brand Name and Country of Manufacturer</th>
<th>Manufacturer's Marks of Identification</th>
<th>Quantity</th>
<th>Description</th>
<th>License or Permit Number of Distributee</th>
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Refer to 27 CFR 555.122(c)

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Safety and Security Information for Federal Explosives Licensees and Permittees
# Recordkeeping Requirements

### Manufacturer of Explosives Record of Acquisition

<table>
<thead>
<tr>
<th>Date of Manufacture or Other Acquisition</th>
<th>Manufacturer's Marks of Identification</th>
<th>Quantity</th>
<th>Name, Brand Name or Description and Size</th>
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Refer to 27 CFR 555.123(b)

### Manufacturer of Explosives Record of Use

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<th>Date of Use</th>
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Refer to 27 CFR 555.123(d)

### User of Explosives Record of Acquisition

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<th>Date of Acquisition</th>
<th>Name or Brand Name of Manufacturer</th>
<th>Manufacturer's Marks of Identification</th>
<th>Quantity</th>
<th>Description</th>
<th>Name, Address and License or Permit Number of Distributor</th>
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Refer to 27 CFR 555.125(b)

### User of Explosives Record of Disposition (Surplus Stock)

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<tr>
<th>Date of Disposition</th>
<th>Name or Brand Name of Manufacturer and Importer (if any)</th>
<th>Manufacturer’s Marks of Identification</th>
<th>Quantity</th>
<th>Description</th>
<th>License or Permit Number of Distributor</th>
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Refer to 27 CFR 555.125(c)
Explosives Storage Requirements

The Federal explosives regulations at 27 CFR, Part 555, Subpart K, outline the storage requirements for explosive materials. Section 555.205 specifies that all explosive materials must be kept in locked magazines meeting the standards in Subpart K unless they are:

(a) In the process of manufacture;
(b) Being physically handled in the operating process of a licensee or user;
(c) Being used; or
(d) Being transported to a place of storage or use by a licensee or permittee or by a person who has lawfully acquired explosive materials under Sec. 555.106.

When none of the above conditions apply, this section mandates that explosive materials must be kept in magazines that meet the construction and table of distance requirements of Subpart K. Any divergence from these requirements requires prior approval by the Director, ATF, in accordance with the provisions of 27 CFR, Part 555.22. Persons with questions on this issue should contact the Explosives Industry Programs Branch in ATF Headquarters at 202-927-2310 or through e-mail (EIPB@atf.gov).

Please note that "exempted" items (items that have received a specific exemption from ATF) are also exempt from the storage requirements outlined in Subpart K.
Guide to Recording Suspicious Person Description

PLEASE RECORD AS MUCH INFORMATION AS POSSIBLE

<table>
<thead>
<tr>
<th>SEX</th>
<th>RACE</th>
<th>AGE</th>
<th>HEIGHT</th>
<th>WEIGHT</th>
<th>WEAPON TYPE</th>
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</thead>
</table>

| HAIR      |      |     |        |        |             |
| GLASSES TYPE |    |    |        |        |             |
| COMPLEXION |      |    |        |        |             |
| SCARS/MARKS |     |   |        |        |             |
| TATTOO    |      |   |        |        |             |
| JEWELRY   |      |   |        |        |             |

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<th>SHOES</th>
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</table>

<table>
<thead>
<tr>
<th>AUTO LICENSE, MAKE, COLOR</th>
<th>DIRECTION OF TRAVEL</th>
</tr>
</thead>
</table>

ADDITIONAL INFORMATION

Make additional copies of this page and keep them in areas that are readily available to employees.
U.S. Department of Justice
Bureau of Alcohol, Tobacco, Firearms and Explosives
99 New York Avenue, NE
Washington, DC 20226

For more information visit:
www.atf.gov
1910.109(a)

"Definitions applicable to this section".

1910.109(a)(1)

"Blasting agent." Blasting agent - any material or mixture, consisting of a fuel and oxidizer, intended for blasting, not otherwise classified as an explosive and in which none of the ingredients are classified as an explosive, provided that the finished product, as mixed and packaged for use or shipment, cannot be detonated by means of a No. 8 test blasting cap when unconfined.

1910.109(a)(2)

"Explosive-actuated power devices." Explosive-actuated power device - any tool or special mechanized device which is actuated by explosives, but not including propellant-actuated power devices. Examples of explosive-actuated power devices are jet hammers and jet perforators.

...1910.109(a)(3)

1910.109(a)(3)

"Explosive." Explosive - any chemical compound, mixture, or device, the primary or common purpose of which is to function by explosion, i.e., with substantially instantaneous release of gas and heat, unless such compound, mixture, or device is otherwise specifically classified by the U.S. Department of Transportation; see 49 CFR chapter I. The term "explosives" shall include all material which is classified as Class A, Class B, and Class C explosives by the U.S. Department of Transportation, and includes, but is not limited to dynamite, black powder, pellet powders, initiating explosives, detonating caps, safety fuse, fuse lighters, fuse igniters, squibs, cordic detonator fuse, instantaneous fuse, igniter cord, igniters, small arms ammunition, small arms ammunition primers, smokeless propellent, cartridges for propellant-actuated power devices, and cartridges for industrial guns. Commercial explosives are those explosives which are intended to be used in commercial or industrial operations.

Note 1: Classification of explosives is described by the U.S. Department of Transportation as follows (see 49 CFR chapter I):

1910.109(a)(3)(I)

"Class A explosives." Possessing, detonating, or otherwise maximum hazard; such as dynamite, nitroglycerin, picric acid, lead azide, fulminate of mercury, black powder, blasting caps, and detonating primers.

1910.109(a)(3)(II)

"Class B explosives." Possessing flammable hazard, such as propellant explosives (including some smokeless propellents), photographic flash powders, and some special fireworks.

1910.109(a)(3)(III)

"Class C explosives." Includes certain types of manufactured articles which contain Class A or Class B explosives, or both, as components but in restricted quantities.

1910.109(a)(3)(IV)

"Forbidden or not acceptable explosives." Explosives which are forbidden or not acceptable for transportation by common carriers by rail freight, rail express, highway, or water in accordance with the regulations of the U.S. Department of Transportation, 49 CFR chapter I.

1910.109(a)(4)

"Highway." Highway - any public street, public alley, or public road.

...1910.109(a)(5)

1910.109(a)(5)

[Reserved]
"Magazine." Magazine - any building or structure, other than an explosives manufacturing building, used for the storage of explosives.

"Motor vehicle." Motor vehicle - any self-propelled vehicle, truck, tractor, semitrailer, or truck-full trailers used for the transportation of freight over public highways.

"Propellant-actuated power devices." Propellant-actuated power devices - any tool or special mechanical device or gas generator system which is actuated by a smokeless propellant or which releases and directs work through a smokeless propellant charge.

[Reserved]

"Pyrotechnics." Pyrotechnics - any combustible or explosive compositions or manufactured articles designed and prepared for the purpose of producing audible or visible effects which are commonly referred to as fireworks.

[Reserved]

..1910.109(a)(12)

"Semiconductive hose." Semiconductive hose - a hose with an electrical resistance high enough to limit flow of stray electric currents to safe levels, yet not so high as to prevent drainage of static electric charges to ground; hose of not more than 2 megohms resistance over its entire length and of not less than 5,000 ohms per foot meets the requirement.

"Small arms ammunition." Small arms ammunition - any shotgun, rifle, pistol, or revolver cartridge, and cartridges for propellant-actuated power devices and Industrial guns. Military - type ammunition containing explosive - bursting charges, Incendiary, tracer, spotting, or pyrotechnic projectiles is excluded from this definition.

"Small arms ammunition primers." Small arms ammunition primers - small percussion-sensitive explosive charges, encased in a cup, used to ignite propellant powder.

"Smokeless propellants." Smokeless propellants - solid propellants, commonly called smokeless powders in the trade, used in small arms ammunition, cannon, rockets, propellant-actuated power devices, etc.

"Special industrial explosives devices." Special industrial explosives devices - explosive-actuated power devices and propellant-actuated power devices.

..1910.109(a)(17)

"Special industrial explosives materials." Special industrial explosives materials - shaped materials and sheet forms and various other extrusions, pellets, and packages of high explosives, which include dynamite, trinitrotoluene (TNT), pentaoxythiol tetranitrate (PETN), hexahydro-1,3,5-trinitro-s-triazine (RDX), and other similar compounds used for high-energy-rate forming, expanding, and shaping in metal fabrication, and for demolition and quick reduction of scrap metal.

"Water gels or slurry explosives." These comprise a wide variety of materials used for blasting. They all contain substantial proportions of water and high proportions of ammonium nitrate, some of which is in solution in the water. Two broad classes of water gels are (1) those which are sensitized by a material classed as an explosive, such as TNT or smokeless powder, (2) those which contain no legitimized classified as an explosive; these are sensitized with metals such as aluminum or with other fuels. Water gels may be prepared at an explosives plant or mixed at the site immediately before delivery into the borehole.

"DOT specifications." Regulations of the Department of Transportation published in 49 CFR chapter I.
1910.109(b)

"Miscellaneous provisions."

1910.109(b)(1)

"General hazard." No person shall store, handle, or transport explosives or blasting agents when such storage, handling, and transportation of explosives or blasting agents constitutes an undue hazard to life.

...1910.109(c)

1910.109(c)

"Storage of explosives."

1910.109(c)(1)

"General provisions."

1910.109(c)(1)(i)

All Class A, Class B, Class C explosives, and special industrial explosives, and any newly developed and unclassified explosives, shall be kept in magazines which meet the requirements of this paragraph.

1910.109(c)(1)(ii)

Blasting caps, electric blasting caps, detonating primers, and primed cartridges shall not be stored in the same magazine with other explosives.

1910.109(c)(1)(iii)

Ground around magazines shall slope away for drainage. The land surrounding magazines shall be kept clear of brush, dried grass, leaves, and other materials for a distance of at least 25 feet.

1910.109(c)(1)(iv)

Magazines as required by this paragraph shall be of two classes; namely, Class I magazines, and Class II magazines.

1910.109(c)(1)(v)

Class I magazines shall be required where the quantity of explosives stored is more than 50 pounds. Class II magazines may be used where the quantity of explosives stored is 50 pounds or less.

1910.109(c)(1)(vi)

Class I magazines shall be located away from other magazines in conformity with Table H-21.

**TABLE H-21—AMERICAN TABLE OF DISTANCES FOR STORAGE OF EXPLOSIVES**

*Note: revised and approved by the Institute of Makers of Explosives, June 3, 1964*

<table>
<thead>
<tr>
<th>Explosives</th>
<th>Distances in feet when storage is barricaded</th>
<th>Separation of magazines</th>
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<tbody>
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<td>385</td>
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</tbody>
</table>

Footnote(1) "Natural barricade" means natural features of the ground, such as hills, or timber of sufficient density that the surrounding exposures which require protection cannot be seen from the magazine when the trees are bare of leaves.

Footnote(2) "Artificial barricade" means an artificial mound or revetted wall of earth of a minimum thickness of three feet.

Footnote(3) "Barricaded" means that a building containing explosives is effectively screened from a magazine, building, railway, or highway, either by a natural barricade, or by an artificial barricade of such height that a straight line from the top of any sidewall of the building containing explosives to the eave line of any magazine, or building, or to a point 12 feet above the center of a railway or highway, will pass through such intervening natural or artificial barricade.

Footnote(4) When two or more storage magazines are located on the same property, each magazine must comply with the minimum distances specified from inhabited buildings, railways, and highways, and in addition, they should be separated from each other by not less than the distances shown for "Separation of Magazines," except that the quantity of explosives contained in any magazine shall govern in regard to the spacing of said cap magazines from magazines containing other explosives. If any two or more magazines are separated from each other by less than the specified "Separation of Magazines" distances, then two or more magazines, as a group, must be considered as one magazine, and the total quantity of explosives stored in such group must be treated as if stored in a single magazine located on the site of any magazine of the group, and must comply with the minimum distances specified from other magazines, inhabited buildings, railways, and highways.

Footnote(5) This table applies only to the permanent storage of commercial explosives. It is not applicable to transportation of explosives, or any handling or temporary storage necessary or incident thereto. It is not intended to apply to bombs, projectiles, or other heavily encased explosives.

1910.109(c)(1)(vi)
Except as provided in subdivision (viii) of this subparagraph, class II magazines shall be located in conformity with Table H-21, but may be permitted in warehouses and in wholesale and retail establishments when located on a floor which has an entrance at outside grade level and the magazine is located not more than 10 feet from such an entrance. Two class II magazines may be located in the same building when one is used only for blasting caps in quantities not in excess of 5,000 caps and a distance of 18 feet is maintained between magazines.

1910.109(c)(1)(vi)

When used for temporary storage at a site for blasting operations, class II magazines shall be located away from other magazines. A distance of at least one hundred and fifty (150) feet shall be maintained between class II magazines and the work in progress when the quantity of explosives kept therein is in excess of 25 pounds, and at least 50 feet when the quantity of explosives is 25 pounds, or less.

1910.109(c)(1)(vi)(b)

This paragraph (c) does not apply to:

1910.109(c)(1)(vi)(c)

Stocks of small arms ammunition, propellant-actuated power cartridges, small arms ammunition primers in quantities of less than 750,000, or of smokeless propellants in quantities less than 750 pounds;

1910.109(c)(1)(vi)(d)

Explosive-actuated power devices when in quantities less than 50 pounds net weight of explosives;

1910.109(c)(1)(vi)(e)

Fuse lighters and fuse igniters

1910.109(c)(1)(vi)(f)

Safety fuses other than corduroy detonant fuses.

1910.109(c)(2)

"Construction of magazines - general."

1910.109(c)(2)(i)

Magazines shall be constructed in conformity with the provisions of this paragraph.

1910.109(c)(2)(ii)

Magazines for the storage of explosives, other than black powder, Class B and Class C explosives shall be bullet resistant, weather resistant, fire resistant, and ventilated sufficiently to protect the explosive in the specific locality. Magazines used only for storage of black powder, Class B and Class C explosives shall be weather resistant, fire-resistant, and have ventilation. Magazines for storage of blasting and electric blasting caps shall be weather resistant, fire-resistant, and ventilated.

1910.109(c)(2)(iii)

Property upon which Class I magazines are located and property where Class II magazines are located outside of buildings shall be posted with signs reading "Explosives—Keep Off."

1910.109(c)(2)(iv)

Magazines requiring heat shall be heated by either hot-water radiant heating with the magazine building; or air directed into the magazine building over either hot water or low pressure steam (15 p.s.i.g.) coils located outside the magazine building.

1910.109(c)(2)(v)

The magazine heating systems shall meet the following requirements:

1910.109(c)(2)(v)(a)

The radiant heating coils within the building shall be installed in such a manner that the explosives or explosives containers cannot contact the coils and air is free to circulate between the coils and the explosives or explosives containers.

1910.109(c)(2)(v)(b)

The heating ducts shall be installed in such a manner that the hot-air discharge from the duct is not directed against the explosives or explosives containers.
The heating device used in connection with a magazine shall have controls which prevent the ambient building temperature from exceeding 130 deg. F.

1910.109(c)(2)(v)(d)

The electric fan or pump used in the heating system for a magazine shall be mounted outside and separate from the wall of the magazine and shall be grounded.

1910.109(c)(2)(v)(e)

The electric fan motor and the controls for electrical heating devices used in heating water or steam shall have overloads and disconnects, which comply with subpart S of this part. All electrical switch gear shall be located a minimum distance of 25 feet from the magazine.

1910.109(c)(2)(v)(f)

The heating source for water or steam shall be separated from the magazine by a distance of not less than 25 feet when electrical and 50 feet when fuel fired. The area between the heating unit and the magazine shall be cleared of all combustible materials.

1910.109(c)(2)(v)(g)

The storage of explosives and explosives containers in the magazine shall allow uniform air circulation so product temperature uniformity can be maintained.

1910.109(c)(2)(vi)

When lights are necessary inside the magazine, electric safety flashlight, or electric safety lanterns shall be used.

1910.109(c)(3)

"Construction of Class I magazines."

1910.109(c)(3)(i)

Class I magazines shall be of masonry construction or of wood or of metal construction, or a combination of these types. Thickness of masonry units shall not be less than 8 inches. Hollow masonry units used in construction required to be bullet resistant shall have all hollow spaces filled with weak cement or well-knapped sand. Wood constructed walls, required to be bullet resistant, shall have at least a 6-inch space between interior and exterior sheathing and the space between sheathing shall be filled with well-tamped sand. Metal wall construction, when required to be bullet resistant, shall be lined with brick at least 4 inches in thickness or shall have at least a 6-inch sandfill between interior and exterior walls.

1910.109(c)(3)(ii)

Floors and roofs of masonry magazines may be of wood construction. Wood floors shall be tongue and groove lumber having a nominal thickness of 1 inch.

1910.109(c)(3)(iii)

Roofs required to be bullet resistant shall be protected by a sand tray located at the line of eaves and covering the entire area except that necessary for ventilation. Sand in the sand tray shall be maintained at a depth of not less than 4 inches.

1910.109(c)(3)(iv)

All wood at the exterior of magazines, including eaves, shall be protected by being covered with black or galvanized steel or aluminum metal of thickness of not less than No. 28 gauge. All nails exposed to the interior of magazines shall be well countersunk.

1910.109(c)(3)(v)

Foundations for magazines shall be of substantial construction and arranged to provide good cross ventilation.

1910.109(c)(3)(vi)

Magazines shall be ventilated sufficiently to prevent dampness and heating of stored explosives. Ventilating openings shall be screened to prevent the entrance of sparks.

1910.109(c)(3)(vii)

Openings to magazines shall be restricted to that necessary for the placement and removal of stocks of explosives. Doors for openings in magazines for Class A explosives shall be bullet resistant. Doors for magazines not required to be bullet resistant shall be designed to prevent unauthorized entrance to the magazine.

1910.109(c)(3)(viii)

[Reserved]
Provisions shall be made to prevent the piling of stocks of explosives directly against masonry walls, brick-lined or sand-filled metal walls and single-thickness metal walls; such protection, however, shall not interfere with proper ventilation at the interior of side and end walls.

"Construction of Class II magazines."

Class II magazines shall be of wood or metal construction, or a combination thereof.

Wood magazines of this class shall have sides, bottom, and cover constructed of 2-inch hardwood boards well braced at corners and protected by being entirely covered with sheet metal of not less than No. 20 gage. All nails exposed to the interior of the magazine shall be well countersunk. All metal magazines of this class shall have sides, bottom, and cover constructed of sheet metal, and shall be lined with three-eighths-inch plywood or equivalent. Edges of metal covers shall overlap sides at least 1 inch.

Covers for both wood- and metal-constructed magazines of this class shall be provided with substantial strap hinges and shall be provided with substantial means for locking.

Magazines of this class shall be painted red and shall bear lettering in white, on all sides and top, at least 3 inches high, "Explosives - Keep Fire Away." Class II magazines when located in warehouses, and in wholesale and retail establishments shall be provided with substantial wheels or casters to facilitate easy removal in the case of fire. Where necessary due to climatic conditions, Class II magazines shall be ventilated.

"Storage within magazines."

Packages of explosives shall be laid flat with top side up. Black powder when stored in magazines with other explosives shall be stored separately. Black powder stored in keeps shall be stored on ends, tuns down, or on side, stems down. Corresponding grades and brands shall be stored together in such a manner that brands and grade marks show. All stocks shall be stored so as to be easily counted and checked. Packages of explosives shall be piled in a stable manner. When any kind of explosive is removed from a magazine for use, the oldest explosive or that particular kind shall always be taken first.

Packages of explosives shall not be unpacked or repacked in a magazine nor within 50 feet of a magazine or in close proximity to other explosives. Tools used for opening packages of explosives shall be constructed of nonsparking materials, except that metal slitters may be used for opening soringboard boxes. A wood wedge and a fiber, rubber, or wood mallet shall be used for opening or closing wood packages of explosives. Opened packages of explosives shall be securely closed before being returned to a magazine.

Magazines shall not be used for the storage of any metal tools nor any commodity except explosives, but this restriction shall not apply to the storage of blasting agents and blasting supplies.

Magazine floors shall be regularly swept, kept clean, dry, free of grit, paper, empty used packages, and rubbish. Brooms and other cleaning utensils shall not have any spark-producing metal parts. Sweepings from floors of magazines shall be properly disposed of. Magazine floors stained with nitroglycerin shall be cleaned according to instructions by the manufacturer.

When any explosive has deteriorated to an extent that it is in an unstable or dangerous condition, or if nitroglycerin leaks from any explosives, then the person in possession of such explosive shall immediately proceed to destroy such explosive in accordance with the instructions of the manufacturer. Only experienced persons shall be allowed to do the work of destroying explosives.

When magazines need inside repairs, all explosives shall be removed therefrom and the floors cleaned. In making outside repairs, if there is a possibility of causing sparks or fire the explosives shall be removed from the magazine. Explosives removed from a magazine under repair
APPENDIX P: Commerce In Explosives (27 CFR 55 subpart K)
Title 27: Alcohol, Tobacco and Firearms
PART 555—COMMERCE IN EXPLOSIVES

Subpart K—Storage

§ 555.201 General.

(a) Section 642(q) of the Act and § 555.29 of this part require that the storage of explosive materials by any person must be in accordance with the regulations in this part. Further, section 646 of the Act authorizes regulations to prevent the occurrence of accidental explosions in which explosive materials were involved. The storage standards prescribed by this subpart confer no right or privilege to store explosive materials in a manner contrary to State or local law.

(b) The Director may authorize alternate construction for explosives storage magazines when it is shown that the alternate magazine construction is substantially equivalent to the standards of safety and security contained in this subpart. Any alternate explosive magazine construction approved by the Director prior to August 8, 1982, will continue as approved unless notified in writing by the Director. Any person intending to use alternate magazine construction shall submit a letter application to the regional director (compliance) for transmission to the Director, specifically describing the proposed magazine. Explosive materials may not be stored in alternate magazines before the application has been notified that the application has been approved.

(c) A licensee or permittee who intends to make changes in his magazines, or who intends to construct or acquire additional magazines, shall comply with § 555.63.

(d) The regulations set forth in §§ 555.221 through 555.224 pertain to the storage of display fireworks, pyrotechnic compositions, and explosive materials used in assembling fireworks and articles pyrotechnic.

(e) The provisions of §§ 555.202(b) classifying flash powder and bulk salutes as high explosives are mandatory after March 7, 1991: Provided that those persons who held licenses or permits under this part on that date shall, with respect to the premises covered by such licenses or permits, comply with the high explosives storage requirements for flash powder and bulk salutes by March 7, 1991.

(f) Any person who stores explosive materials shall notify the authority having jurisdiction for fire safety in the locality in which the explosive materials are being stored of the type, magazine capacity, and location of each site where such explosive materials are stored. Such notification shall be made orally before the end of the day on which storage of the explosive materials commenced and in written within 48 hours from the time such storage commenced.

(Paragraph (f) approved by the Office of Management and Budget under control number 1140—0071)


§ 555.202 Classes of explosive materials.

For purposes of this part, there are three classes of explosive materials. These classes, together with the description of explosive materials comprising each class, are as follows:

(a) High explosives. Explosive materials which can be caused to detonate by means of a blasting cap when unconfined, (for example, dynamite, flash powders, and bulk salutes). See also §§ 555.201(e).

(b) Low explosives. Explosive materials which can be caused to detonate when confined (for example, black powder, safety fuses, igniters, igniter cords, fuse lighters, and pyrotechnics) classified as UN0033, UN0034, or UN0035 by the U.S. Department of Transportation regulations at 49 CFR 172.101, except for bulk salutes.

(c) Blasting agents. (For example, ammonium nitrate-fuel oil and certain water-gels (see also §§ 555.11).


§ 555.203 Types of magazines.

For purposes of this part, there are five types of magazines. These types, together with the classes of
explosive materials, as defined in §555.202, which will be stored in them, are as follows:

(a) Type 1 magazines. Permanent magazines for the storage of high explosives, subject to the limitations prescribed by §§555.206 and 555.213. Other classes of explosive materials may also be stored in type 1 magazines.

(b) Type 2 magazines. Mobile and portable indoor and outdoor magazines for the storage of high explosives, subject to the limitations prescribed by §§555.206, 555.206(b), and 555.213. Other classes of explosive materials may also be stored in type 2 magazines.

(c) Type 3 magazines. Portable outdoor magazines for the temporary storage of high explosives while attended (for example, a “day box”), subject to the limitations prescribed by §§555.206 and 555.213. Other classes of explosive materials may also be stored in type 3 magazines.

(d) Type 4 magazines. Magazines for the storage of low explosives, subject to the limitations prescribed by §§555.206(a), 555.206(b), and 555.213. Blasting agents may be stored in type 4 magazines, subject to the limitations prescribed by §§555.206(c), 555.211(b), and 555.213. Detonators that will not mass detonate may also be stored in type 4 magazines, subject to the limitations prescribed by §§555.206(d), 555.211(b), and 555.213.

(e) Type 5 magazines. Magazines for the storage of blasting agents, subject to the limitations prescribed by §§555.206(c), 555.211(b), and 555.213.

§ 555.204 Inspection of magazines.

Any person storing explosive materials shall inspect his magazines at least every seven days. This inspection need not be an inventory, but must be sufficient to determine whether there has been unauthorized entry or attempted entry into the magazines, or unauthorized removal of the contents of the magazines.

§ 555.205 Movement of explosive materials.

All explosive materials must be kept in locked magazines meeting the standards in this subpart unless they are:

(a) In the process of manufacture;

(b) Being physically handled in the operating process of a licensee or user;

(c) Being used;

(d) Being transported to a place of storage or use by a licensee or permittee or by a person who has lawfully acquired explosive materials under §555.108.

§ 555.206 Location of magazines.

(a) Outdoor magazines in which high explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which high explosives are stored, than the minimum distances specified in the table of distances for storage of explosive materials in §555.218.

(b) Outdoor magazines in which low explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which explosive materials are stored, than the minimum distances specified in the table of distances for storage of low explosives in §555.219, except that the table of distances in §555.214 shall apply to the storage of display fireworks. The distances shown in §555.219 may not be reduced by the presence of barricades.

(c)(1) Outdoor magazines in which blasting agents in quantities of more than 50 pounds are stored must be located no closer to inhabited buildings, passenger railways, or public highways than the minimum distances specified in the table of distances for storage of explosive materials in §555.218.

(2) Ammonium nitrate and magazines in which blasting agents are stored must be located no closer to magazines in which high explosives or other blasting agents are stored than the minimum distances specified in the table of distances for the separation of ammonium nitrate and blasting agents in §555.220. However, the minimum distances for magazines in which explosives and blasting agents are stored from inhabited buildings, etc., may not be less than the distances specified in the table of distances for storage of explosives materials in §555.218.


§ 555.207 Construction of type 1 magazines.

A type 1 magazine is a permanent structure: a building, an igloo or "Army-type structure", a tunnell, or a dugout. It is to be bullet-resistant, fire-resistant, weather-resistant, theft-resistant, and ventilated.

(e) Buildings. All building type magazines are to be constructed of masonry, wood, metal, or a combination of these materials, and have no openings except for entrances and ventilation. The ground around building magazines must slope away for drainage or other adequate drainage provided.

(1) Masonry wall construction. Masonry wall construction is to consist of brick, concrete, tile, cement block, or cinder block and be not less than 6 inches in thickness. Hollow masonry units used in
construction must have all hollow spaces filled with well-tamped, coarse, dry sand or weak concrete (at least a mixture of one part cement and eight parts of sand with enough water to dampen the mixture while tamping in place). Interior walls are to be constructed of, or covered with, a nonsparking material.

(2) Fabricated metal wall construction. Metal wall construction is to consist of sectional sheets of steel or aluminum not less than number 14-gauge, securely fastened to a metal framework. Metal wall construction is either lined inside with brick, solid cement blocks, insulated not less than four inches thick, or will have at least six inch sand fill between interior and exterior walls. Interior walls are to be constructed of, or covered with, a nonsparking material.

(3) Wood-frame wall construction. The exterior of outer wood walls is to be covered with iron or aluminum not less than number 20-gauge. An inner wall of, or covered with nonsparking material will be constructed so as to provide a space of not less than six inches between the outer and inner walls. The space is to be filled with course, dry sand or weak concrete.

(4) Floors. Floors are to be constructed of, or covered with, a nonsparking material and shall be strong enough to bear the weight of the maximum quantity to be stored. Use of pallets covered with a nonsparking material is considered equivalent to a floor constructed of or covered with a nonsparking material.

(5) Foundations. Foundations are to be constructed of brick, concrete, cement block, stone, or wood posts. If pier or piers are used, in lieu of a continuous foundation, the space under the buildings is to be enclosed with metal.

(6) Roof. Except for buildings with fabricated metal roofs, the outer roof is to be covered with no less than number 20-gauge iron or aluminum, fastened to at least 1/4 inch sheathing.

(7) Built-in resilient ceilings or roofs. Where it is possible for a bullet to be fired directly through the roof and into the magazine at such an angle that the bullet would strike the Explosives within, the magazine is to be protected by one of the following methods:

(i) A sand tray lined with a layer of building paper, plastic, or other nonporous material, and filled with not less than four inches of course, dry sand, and located at the tops of inner walls covering the entire ceiling area, except that portion necessary for ventilation.

(ii) A fabricated metal roof constructed of 1/8 inch plate steel lined with four inches of hardwood. (For each additional 1/8 inch of plate steel, the hardwood lining may be decreased one inch.)

(8) Doors. All doors are to be constructed of not less than 1/4 inch plate steel and fitted with at least two inches of hardwood. Hinges and hasps are to be attached to the doors by welding, riveting or bolting (nails on inside of door). They are to be installed in such a manner that the hinges and hasps cannot be removed when the doors are closed and locked.

(9) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case hardened shackle of at least 1/4 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hood constructed so as to prevent saving or lever action on the locks, hasps, and staples. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bell, lock, or bar that cannot be actuated from the outside.

(10) Ventilation. Ventilation is to be provided to prevent dampness and heating of stored explosive materials. Ventilation openings must be screened to prevent the entrance of sparks. Ventilation openings in side walls and foundations must be offset or shielded for fire-resistant purposes. Magazines having foundation and roof ventilators with the air circulating between the side walls and the floors and between the side walls and the ceiling must have a wooden lattice or equivalent to prevent the passage of explosive materials from being stacked against the side walls and blocking the air circulation.

(11) Exposed metal. No sparking material is to be exposed to contact with the stored explosive materials. All ferrous metal nails in the floor and side walls, which might be exposed to contact with explosive materials, must be blind nailed, countersunk, or covered with a nonsparking lattice work or other nonsparking material.

(b) Igloos. "Army-type structures", tunnels, and dugouts. Igloos, "Army-type structure", tunnel, and dugout magazines are to be constructed of reinforced concrete, masonry, metal, or a combination of these materials. They must have an earth/ground covering of not less than 24 inches on the top, sides and rear unless the magazine meets the requirements of paragraph (a)(7) of this section. Interior walls and floors must be constructed of, or covered with, a nonsparking material. Magazines of this type are also to be constructed in conformity with the requirements of paragraph (a)(4) and paragraphs (a)(5) through (11) of this section.

§ 555.208 Construction of type 2 magazines.

A type 2 magazine is a box, trailer, semitrailer, or other mobile facility.

(a) Outdoor magazines—(1) General. Outdoor magazines are to be bullet-resistant, fire-resistant, weather-resistant, theft-resistant, and ventilated. They are to be supported to prevent direct contact with the ground and, if less than one cubic yard in size, must be securely fastened to a fixed object. The ground around outdoor magazines must slope away for drainage or other adequate drainage provided. When not in use, vehicle magazines must have wheels removed or otherwise effectively immobilized by kingpins, locking devices or other methods approved by the Director.

(2) Exterior construction. The exterior and doors are to be constructed of not less than 1/4 inch steel and lined with at least two inches of hardwood. Magazines with top openings will have lids with water-
(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least .38-inch diameter. Padlocks must be protected with not less than .14-inch steel body construction so as to prevent sawing or lever action on the locks, hasps, and staples. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(b) Indoor magazines—(1) General. Indoor magazines are to be fire-resistant and theft-resistant. They need not be bullet-resistant and weather-resistant if the buildings in which they are stored provide protection from the weather and from bullet penetration. No indoor magazine is to be located in a residence or dwelling. The indoor storage of high explosives must not exceed a quantity of 50 pounds. More than one indoor magazine may be located in the same building if the total quantity of explosive materials stored does not exceed 50 pounds. Detonators must be stored in a separate magazine (except as provided in 555.219) and the total quantity of detonators must not exceed 5,000.

(2) Exterior construction. Indoor magazines are to be constructed of wood or metal according to one of the following specifications:

(i) Wood Indoor magazines are to have sides, bottoms and doors constructed of at least two inches of hardwood and are to be well braced at the corners. They are to be covered with sheet metal of not less than number 26-gauge (.0179 inches). Nails exposed to the interior of magazines must be countersunk.

(ii) Steel Indoor magazines are to have sides, bottoms and doors constructed of not less than number 12-gauge (.1046 inches) metal and be lined inside with a nonsparking material. Edges of metal covers must overlap sides at least one inch.

(iii) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(iv) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least .38-inch diameter. Padlocks must be protected with not less than .14-inch steel body construction so as to prevent sawing or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door lock with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least .38-inch diameter, if the door hinges and lock hasp are securely fastened to the magazine. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(2) Detonator boxes. Magazines for detonators in quantities of 100 or less are to have sides, bottoms and doors constructed of not less than number 12-gauge (.1046 inches) metal and lined with a nonsparking material. Hinges and hasps must be attached so they cannot be removed from the outside. One steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least .38-inch diameter is sufficient for locking purposes.

§ 555.209 Construction of type 3 magazines.

A type 3 magazine is a "day-box" or other portable magazine. It must be fire-resistant, weather-resistant, and theft-resistant. A type 3 magazine is to be constructed of not less than number 12-gauge (.1046 inches) steel, lined with at least either 1/2-inch plywood or 1/2-inch Masonite-type hardboard. Doors must overlap sides by at least one inch. Hinges and hasps are to be attached by welding, riveting or bolting (nuts on inside). One steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least .38-inch diameter is sufficient for locking purposes. Explosive materials are not to be left unattended in type 3 magazines and must be removed to type 1 or 2 magazines for unattended storage.

§ 555.210 Construction of type 4 magazines.

A type 4 magazine is a building, igloo or "Army-type structure", tunnel, dugout, box, trailer, or a semitrailer or other mobile magazine.

(a) Outdoor magazines—(1) General. Outdoor magazines are to be fire-resistant, weather-resistant, and theft-resistant. The ground around outdoor magazines must slope away for drainage or other adequate drainage be provided. When unattended, vehicular magazines must have wheels removed or otherwise be effectively immobilized by kingpin locking devices or other methods approved by the Director.

(2) Construction. Outdoor magazines are to be constructed of masonry, metal-covered wood, fabricated metal, or a combination of these materials. Foundations are to be constructed of brick, concrete, cement block, stone, or metal or wood posts. If piles or posts are used, in lieu of a continuous foundation, the space under the building is to be enclosed with fire-resistant material. The walls and floor are to be constructed of, or covered with, a nonsparking material or lattice work. The doors must be metal or solid wood covered with metal.

(b) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts...
on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

4. Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 5/16 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent saving or lever action on the locks, hasps, and staples. These requirements do not apply to magazine doors that are adequately secured on the inside in means of a bolt, lock, or bar that cannot be acted upon from the outside.

(b) Indoor magazines—(1) General. Indoor magazines are to be fire-resistant and theft-resistant. They need not be weather-resistant if the buildings in which they are stored provide protection from the weather. No indoor magazine is to be located in a residence or dwelling. The indoor storage of low explosives must not exceed a quantity of 50 pounds. More than one indoor magazine may be located in the same building if the total quantity of explosive materials stored does not exceed 50 pounds. Detonators that will not cause detonation must be stored in a separate magazine and the total number of electric detonators must not exceed 5,000.

2. Construction. Indoor magazines are to be constructed of masonry, metal-covered wood, fabricated metal, or a combination of these materials. The walls and doors are to be constructed of, or covered with, a nonsparking material. The doors must be metal or solid wood covered with metal.

3. Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

4. Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate haveps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 5/16 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent saving or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter, if the door hinges and lock hasp are securely fastened to the magazine. These requirements do not apply to magazine doors that are adequately secured on the inside in means of a bolt, lock, or bar that cannot be acted upon from the outside.

§ 555.211 Construction of type 5 magazines.

A type 5 magazine is a building, igloo, or "Army-type structure", tunnel, dugout, bin, box, trailer, or a semitrailer or other mobile facility.

(o) Outdoor magazines—(1) General. Outdoor magazines are to be weather-resistant and theft-resistant. The ground around magazines must slope away for drainage or other adequate drainage be provided. When unattended, vehicular magazines must have wheels removed or otherwise be effectively immobilized by Kingpin locking devices or other methods approved by the Director.

2. Construction. The doors are to be constructed of solid wood or metal.

3. Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

4. Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent saving or lever action on the locks, hasps, and staples. Trailers, semitrailers, and similar vehicular magazines may, for each door, be locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter, if the door hinges and lock hasp are securely fastened to the magazine and to the door frame. These requirements do not apply to magazine doors that are adequately secured on the inside in means of a bolt, lock, or bar that cannot be acted upon from the outside.

5. Placards. The placards required by Department of Transportation regulations at 49 CFR part 172, subpart F, for the transportation of blasting agents shall be displayed on all magazines.

(b) Indoor magazines—(1) General. Indoor magazines are to be theft-resistant. They need not be weather-resistant if the buildings in which they are stored provide protection from the weather. No indoor magazine is to be located in a residence or dwelling. Indoor magazines containing quantities of blasting agents in excess of 50 pounds are subject to the requirements of § 555.210 of this subpart.

2. Construction. The doors are to be constructed of wood or metal.

3. Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

4. Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent saving or lever action on the locks, hasps, and staples. Indoor
§ 556.212 Smoking and open flames.

Smoking, matches, open flames, and spark producing devices are not permitted:

(a) In any magazines;

(b) Within 50 feet of any outdoor magazine, or

(c) Within any room containing an indoor magazine.

§ 556.213 Quantity and storage restrictions.

(a) Explosive materials in excess of 300,000 pounds or detonators in excess of 20 million are not to be stored in one magazine unless approved by the Director.

(b) Detonators are not to be stored in the same magazine with other explosive materials, except under the following circumstances:

(1) In a type 4 magazine, detonators that will not mass detonate may be stored with electric squibs, safety fuse, shock tube, ignitors, and igniter cord.

(2) In a type 1 or type 2 magazine, detonators may be stored with delay devices and any of the items listed in paragraph (a)(1) of this section.


§ 556.214 Storage within types 1, 2, 3, and 4 magazines.

(a) Explosive materials within a magazine are not to be placed directly against interior walls and must be stored so as not to interfere with ventilation. To prevent contact of stored explosive materials with walls, a nonsparking lattice work or other nonsparking material may be used.

(b) Containers of explosive materials are to be stored so that marks are visible. Stocks of explosive materials are to be stored so they can be easily counted and checked upon inspection.

(c) Except with respect to fiberboard or other nonmetal containers, containers of explosive materials are not to be unpacked or repacked inside a magazine or within 50 feet of a magazine, and must not be unpacked or repacked close to other explosive materials. Containers of explosive materials must be closed while being stored.

(d) Tools used for opening or closing containers of explosive materials are to be of nonsparking materials, except that metal tongs may be used for opening fiberboard containers. A wooden wedge and a fiber, rubber, or wooden mallet are to be used for opening or closing wood containers of explosive materials. Metal tools other than nonsparking transfer conveyors are not to be stored in any magazine containing high explosives.

§ 556.215 Housekeeping.

Magazines are to be kept clean, dry, and free of grit, paper, empty packages and containers, and rubbish. Floors are to be regularly swept. Brooms and other utensils used in the cleaning and maintenance of magazines must have no spark-producing metal parts, and may be kept in magazines. Floors stained by leakage from explosive materials are to be cleaned according to instructions of the explosives manufacturer. When any explosive material has deteriorated it is to be destroyed in accordance with the advice or instructions of the manufacturer. The area surrounding magazines is to be kept clear of rubbish, brush, dry grass, or trees (except live trees more than 10 feet tall), for not less than 25 feet in all directions. Volatile materials are to be kept a distance of not less than 50 feet from outdoor magazines. Living foliage which is used to stabilize the earthen covering of a magazine need not be removed.

§ 556.216 Repair of magazines.

Before repairing the interior of magazines, all explosive materials are to be removed and the interior cleaned. Before repairing the exterior of magazines, all explosive materials must be removed if there exists any possibility that repairs may produce sparks or flames. Explosive materials removed from magazines under repair must be (a) placed in other magazines appropriate for the storage of those explosive materials under this subpart, or (b) placed a safe distance from the magazines under repair where they are to be properly guarded and protected until the repairs have been completed.

§ 556.217 Lightning.

(a) Battery-activated safety lights or battery-activated safety lanterns may be used in explosives storage magazines.
§ 555.218 Table of distances for storage of explosive materials.

<table>
<thead>
<tr>
<th>Quantity of explosives</th>
<th>Inhabited buildings</th>
<th>Public highways with traffic volume of 3000 or fewer vehicles/day</th>
<th>Passenger railways—public highways with traffic volume of more than 3,000 vehicles/day</th>
<th>Separation of magazines</th>
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<td>235</td>
<td>470</td>
<td>95</td>
<td>190</td>
</tr>
<tr>
<td>200</td>
<td>255</td>
<td>510</td>
<td>105</td>
<td>210</td>
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<tr>
<td>250</td>
<td>270</td>
<td>540</td>
<td>110</td>
<td>220</td>
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<tr>
<td>300</td>
<td>285</td>
<td>560</td>
<td>120</td>
<td>240</td>
</tr>
<tr>
<td>400</td>
<td>320</td>
<td>640</td>
<td>130</td>
<td>260</td>
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<td>500</td>
<td>340</td>
<td>680</td>
<td>135</td>
<td>270</td>
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<td>600</td>
<td>355</td>
<td>710</td>
<td>140</td>
<td>290</td>
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<td>700</td>
<td>375</td>
<td>750</td>
<td>150</td>
<td>300</td>
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<td>800</td>
<td>390</td>
<td>780</td>
<td>155</td>
<td>310</td>
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<td>900</td>
<td>400</td>
<td>800</td>
<td>160</td>
<td>320</td>
</tr>
<tr>
<td>1,000</td>
<td>425</td>
<td>850</td>
<td>165</td>
<td>330</td>
</tr>
<tr>
<td>1,200</td>
<td>450</td>
<td>900</td>
<td>170</td>
<td>340</td>
</tr>
<tr>
<td>1,400</td>
<td>470</td>
<td>940</td>
<td>175</td>
<td>350</td>
</tr>
<tr>
<td>1,600</td>
<td>490</td>
<td>980</td>
<td>180</td>
<td>360</td>
</tr>
<tr>
<td>1,800</td>
<td>500</td>
<td>1,010</td>
<td>185</td>
<td>370</td>
</tr>
<tr>
<td>2,000</td>
<td>545</td>
<td>1,090</td>
<td>190</td>
<td>380</td>
</tr>
<tr>
<td>2,500</td>
<td>580</td>
<td>1,160</td>
<td>195</td>
<td>390</td>
</tr>
<tr>
<td>3,000</td>
<td>635</td>
<td>1,270</td>
<td>210</td>
<td>420</td>
</tr>
<tr>
<td>4,000</td>
<td>685</td>
<td>1,370</td>
<td>225</td>
<td>450</td>
</tr>
<tr>
<td>5,000</td>
<td>730</td>
<td>1,460</td>
<td>235</td>
<td>470</td>
</tr>
<tr>
<td>6,000</td>
<td>770</td>
<td>1,540</td>
<td>245</td>
<td>490</td>
</tr>
<tr>
<td>7,000</td>
<td>800</td>
<td>1,600</td>
<td>250</td>
<td>500</td>
</tr>
<tr>
<td>8,000</td>
<td>855</td>
<td>1,870</td>
<td>265</td>
<td>510</td>
</tr>
<tr>
<td>9,000</td>
<td>865</td>
<td>1,730</td>
<td>260</td>
<td>520</td>
</tr>
<tr>
<td>10,000</td>
<td>875</td>
<td>1,760</td>
<td>270</td>
<td>540</td>
</tr>
<tr>
<td>12,000</td>
<td>885</td>
<td>1,770</td>
<td>275</td>
<td>550</td>
</tr>
<tr>
<td>14,000</td>
<td>900</td>
<td>1,800</td>
<td>280</td>
<td>560</td>
</tr>
<tr>
<td>16,000</td>
<td>940</td>
<td>1,880</td>
<td>285</td>
<td>570</td>
</tr>
<tr>
<td>18,000</td>
<td>975</td>
<td>1,950</td>
<td>290</td>
<td>580</td>
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<td>20,000</td>
<td>1,055</td>
<td>2,000</td>
<td>315</td>
<td>630</td>
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<td>25,000</td>
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<td>340</td>
<td>680</td>
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<td>30,000</td>
<td>1,205</td>
<td>2,000</td>
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<td>720</td>
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<tr>
<td>35,000</td>
<td>1,275</td>
<td>2,000</td>
<td>360</td>
<td>760</td>
</tr>
<tr>
<td>Pounds</td>
<td>From Inhabited Building Distance (feet)</td>
<td>From Public Railroad and Highway Distance (feet)</td>
<td>From above ground magazine (feet)</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------------------------------------</td>
<td>-----------------------------------------------</td>
<td>----------------------------------</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>1,000</td>
<td>75</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td></td>
<td>0,000</td>
<td>75</td>
<td>75</td>
<td></td>
</tr>
</tbody>
</table>

Table: American Table of Distances for Storage of Explosives (December 1910), as Revised and Approved by the Institute of Makers of Explosives—July, 1991.

Notes to the Table of Distances for Storage of Explosives

(1) Terms found in the table of distances for storage of explosive materials are defined in §555.11.

(2) When two or more storage magazines are located on the same property, each magazine must comply with the minimum distances specified from inhabited buildings, railways, and highways, and, in addition, they should be separated from each other by not less than the distances shown for "Separation of Magazines," except that the quantity of explosives contained in cap magazines shall govern in regard to the spacing of said cap magazines from magazines containing other explosives. If any two or more magazines are separated from each other by less than the specified "Separation of Magazines" distances, then such two or more magazines, as a group, must be considered as one magazine, and the total quantity of explosives stored in such group must be treated as if stored in a single magazine located on the site of any magazine of the group, and must comply with the minimum of distances specified from other magazines, inhabited buildings, railways, and highways.

(3) All types of blasting caps in strengths through No. 8 cap should be rated at 11/2lbs. (1.5 lbs.) of explosives per 1,000 caps. For strengths higher than No. 8 cap, consult the manufacturer.

(4) For quantity and distance purposes, detonating cord of 50 or 60 grains per foot should be calculated as equivalent to 9 lbs. of high explosives per 1,000 feet. Heavier or lighter core cord should be rated proportionately.


§ 555.219 Table of distances for storage of low explosives.
<table>
<thead>
<tr>
<th>Donor weight (pounds)</th>
<th>Minimum separation distance of acceptor from donor when barricaded (ft.)</th>
<th>Minimum thickness of artificial barricades (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ammonium nitrate Blasting agent</td>
<td></td>
</tr>
<tr>
<td>Over</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>200</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>300</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>400</td>
<td>11</td>
<td>29</td>
</tr>
<tr>
<td>500</td>
<td>12</td>
<td>32</td>
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<tr>
<td>600</td>
<td>13</td>
<td>43</td>
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<tr>
<td>700</td>
<td>14</td>
<td>50</td>
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<tr>
<td>800</td>
<td>15</td>
<td>54</td>
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<tr>
<td>900</td>
<td>16</td>
<td>58</td>
</tr>
<tr>
<td>1000</td>
<td>18</td>
<td>66</td>
</tr>
<tr>
<td>2000</td>
<td>20</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>79</td>
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<tr>
<td></td>
<td>23</td>
<td>83</td>
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<tr>
<td></td>
<td>24</td>
<td>86</td>
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<td></td>
<td>25</td>
<td>90</td>
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<td></td>
<td>26</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>106</td>
</tr>
<tr>
<td></td>
<td>32</td>
<td>115</td>
</tr>
<tr>
<td></td>
<td>34</td>
<td>122</td>
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<td></td>
<td>37</td>
<td>133</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>144</td>
</tr>
<tr>
<td></td>
<td>44</td>
<td>156</td>
</tr>
<tr>
<td></td>
<td>48</td>
<td>173</td>
</tr>
<tr>
<td></td>
<td>52</td>
<td>187</td>
</tr>
<tr>
<td></td>
<td>56</td>
<td>202</td>
</tr>
</tbody>
</table>
Table: National Fire Protection Association (NFPA) Official Standard No. 492, 1968

Notes of Table of Separation Distances of Ammonium Nitrate and Blasting Agents From Explosives or Blasting Agents

(1) This table specifies separation distances to prevent explosion of ammonium nitrate and ammonium nitrate-based blasting agents by propagation from nearby stores of high explosives or blasting agents referred to in the table as the "donor." Ammonium nitrate, by itself, is not considered to be a donor when applying this table. Ammonium nitrate, ammonium nitrate-fuel oil or combinations thereof are acceptors. If stores of ammonium nitrate are located within the sympathetic detonation distance of explosives or blasting agents, one-half the mass of the ammonium nitrate is to be included in the mass of the donor.

(2) When the ammonium nitrate and/or blasting agent is not barricaded, the distances shown in the table must be multiplied by six. These distances allow for the possibility of high velocity metal fragments from mixers, hoppers, truck bodies, sheet metal structures, metal containers, and the like which may enclose the "donor." Where explosives storage is in bullet-resistant magazines or where the storage is protected by a bullet-resistant wall, distances and barricade thicknesses in excess of those prescribed in the table in §555.218 are not required.

(3) These distances apply to ammonium nitrate that passes the insensitivity test prescribed in the definition of ammonium nitrate fertilizer issued by the Fertilizer Institute.® Ammonium nitrate failing to pass the test must be stored at separation distances in accordance with the table in §555.218.

Definition and Test Procedures for Ammonium Nitrate Fertilizer, Fertilizer Institute 1015–10th St. N.W. Washington, DC 20036.

(4) These distances apply to blasting agents which pass the insensitivity test prescribed in regulations of the U.S. Department of Transportation (49 CFR part 173).

(5) Eart or sand dikes, or enclosures filled with the prescribed minimum thickness of earth or sand are acceptable artificial barricades. Natural barricades, such as hills or timber of sufficient density that the surrounding exposures which require protection cannot be seen from the "donor" when the trees are bare of leaves, are also acceptable.

(6) For determining the distances to be maintained from inhabited buildings, passenger railways, and public highways, use the table in §555.218.

§555.221 Requirements for display fireworks, pyrotechnic compositions, and explosive materials used in assembling fireworks or articles pyrotechnic.

(a) Display fireworks, pyrotechnic compositions, and explosive materials used to assemble fireworks and articles pyrotechnic shall be stored at all times as required by this Subpart unless they are in the process of manufacture, assembly, packaging, or are being transported.

(b) No more than 650 pounds (227 kg) of pyrotechnic compositions or explosive materials are permitted at one time in any fireworks mixing building, any building or area in which the pyrotechnic compositions or explosive materials are pressed or otherwise prepared for finishing or assembly, or any finishing or assembly building. All pyrotechnic compositions or explosive materials not in immediate use will be stored in covered, non-flammable containers.

(c) The maximum quantity of flash powder permitted in any fireworks process building is 10 pounds (4.5 kg).

(d) All dry explosive powders and mixtures, partially assembled display fireworks, and finished display fireworks shall be removed from fireworks process buildings at the conclusion of a day's operations and placed in approved magazines.


§555.222 Table of distances between fireworks process buildings and between fireworks process and fireworks non-process buildings.

<table>
<thead>
<tr>
<th>Net weight of fireworks¹ (pounds)</th>
<th>Display fireworks² (foot)</th>
<th>Consumer fireworks³ (foot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–100</td>
<td>57</td>
<td>37</td>
</tr>
<tr>
<td>101–200</td>
<td>89</td>
<td>37</td>
</tr>
<tr>
<td>201–300</td>
<td>77</td>
<td>37</td>
</tr>
<tr>
<td>301–400</td>
<td>85</td>
<td>37</td>
</tr>
<tr>
<td>401–500</td>
<td>91</td>
<td>37</td>
</tr>
</tbody>
</table>
Above 500 | Not permitted<sup>4,5</sup> | Not permitted<sup>4,5</sup>
---|---|---

1. Not weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

2. The distances in this column apply only with natural or artificial barricades. If such barricades are not used, the distances must be doubled.

3. While consumer fireworks or articles pyrotechnic in a finished state are not subject to regulation, explosive materials used to manufacture or assemble such fireworks or articles are subject to regulation. Thus, fireworks process buildings where consumer fireworks or articles pyrotechnic are being processed shall meet these requirements.

4. A maximum of 800 pounds of in-process pyrotechnic compositions, either loose or in partially-assembled fireworks, is permitted in any fireworks process building.

5. A maximum of 10 pounds of flash powder, either in loose form or in assembled units, is permitted in any fireworks process building. Quantities in excess of 10 pounds must be kept in an approved magazine.


§ 555.223 Table of distances between fireworks process buildings and other specified areas.

Distance from Passenger Railways, Public Highways, Fireworks Plant Buildings used to Store Consumer Fireworks and Articles Pyrotechnic, Magazines and Fireworks Shipping Buildings, and Inhabited Buildings<sup>3,4,5</sup>

<table>
<thead>
<tr>
<th>Net weight of fireworks&lt;sup&gt;1&lt;/sup&gt; (pounds)</th>
<th>Display fireworks&lt;sup&gt;1&lt;/sup&gt; (feet)</th>
<th>Consumer fireworks&lt;sup&gt;2&lt;/sup&gt; (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–100</td>
<td>200</td>
<td>25</td>
</tr>
<tr>
<td>101–200</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>201–300</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>301–400</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>401–500</td>
<td>200</td>
<td>50</td>
</tr>
<tr>
<td>Above 500</td>
<td>Not permitted</td>
<td>Not permitted.</td>
</tr>
</tbody>
</table>

1. Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

2. While consumer fireworks or articles pyrotechnic in a finished state are not subject to regulation, explosive materials used to manufacture or assemble such fireworks or articles are subject to regulation. Thus, fireworks process buildings where consumer fireworks or articles pyrotechnic are being processed shall meet these requirements.

3. This table does not apply to the explosion distances between fireworks process buildings (see §555.222) and between magazines (see §§555.218 and 555.224).

4. The distances in this table apply with or without artificial or natural barricades or screen barricades. However, the use of barricades is highly recommended.

5. No work of any kind, except to place or move items other than explosive materials from storage, shall be conducted in any building designated as a warehouse. A fireworks plant warehouse is not subject to §555.222 or this section, tables of distances.


§ 555.224 Table of distances for the storage of display fireworks (except bulk salutes).

<table>
<thead>
<tr>
<th>Net weight of firework&lt;sup&gt;1&lt;/sup&gt; (pounds)</th>
<th>Distance between magazine and inhabited building, passenger railway, or public highway&lt;sup&gt;3,4&lt;/sup&gt; (feet)</th>
<th>Distance between magazines&lt;sup&gt;5&lt;/sup&gt; (feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0–1000</td>
<td>150</td>
<td>100</td>
</tr>
<tr>
<td>1001–5000</td>
<td>230</td>
<td>160</td>
</tr>
<tr>
<td>5001–10000</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td>Above 10000</td>
<td>Use table §555.218</td>
<td></td>
</tr>
</tbody>
</table>

1. Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=033ee65804ac745c773292ba9a9d... 2/17/2011
For the purposes of applying this table, the term "magazine" also includes fireworks shipping buildings for display fireworks.

For fireworks storage magazines in use prior to (30 days from the date of publication of the final rule in the Federal Register), the distances in this table may be halved if properly barricaded between the magazine and potential receptor sites.

This table does not apply to the storage of bulk solids. Use table at §555.218.

APPENDIX Q: OSHA Blasting Regulations (29 CFR 1926.900 subpart U)
Title 29: Labor
PART 1926—SAFETY AND HEALTH REGULATIONS FOR CONSTRUCTION

Subpart U—Blasting and the Use of Explosives

Authority: Sec. 107, Contract Work Hours and Safety Standards Act (40 U.S.C. 333); secs. 4, 6, 8, Occupational Safety and Health Act of 1970 (29 U.S.C. 653, 655, 657); Secretary of Labor's Order No. 12–71 (36 FR 8754), 8–76 (41 FR 25059), 9–83 (48 FR 35736), or 6–86 (62 FR 111), as applicable; and 29 CFR part 1911.

§ 1926.900 General provisions.

(a) The employer shall permit only authorized and qualified persons to handle and use explosives.

(b) Smoking, firearms, matches, open flame lamps, and other fires, flame or heat producing devices and sparks shall be prohibited in or near explosive magazines or while explosives are being handled, transported or used.

(c) No person shall be allowed to handle or use explosives while under the influence of intoxicating liquors, narcotics, or other dangerous drugs.

(d) All explosives shall be accounted for at all times. Explosives not being used shall be kept in a locked magazine, unavailable to persons not authorized to handle them. The employer shall maintain an inventory and use record of all explosives. Appropriate authorities shall be notified of any loss, theft, or unauthorized entry into a magazine.

(e) No explosives or blasting agents shall be abandoned.

(f) No fire shall be fought where the fire is in imminent danger of contact with explosives. All employees shall be removed to a safe area and the fire area guarded against intruders.

(g) Original containers, or Class II magazines, shall be used for taking detonators and other explosives from storage magazines to the blasting area.

(h) When blasting is done in congested areas or in proximity to a structure, railway, or highway, or any other installation that may be damaged, the blaster shall take special precautions in the loading, delaying, initiation, and confinement of each blast with mats or other methods so as to control the throw of fragments, and thus prevent bodily injury to employees.

(i) Employees authorized to prepare explosive charges or conduct blasting operations shall use every reasonable precaution including, but not limited to, visual and audible warning signals, flags, or barricades, to ensure employee safety.

(j) Insofar as possible, blasting operations above ground shall be conducted between sunup and sundown.
(1) Buildings shall be of noncombustible construction or sheet metal on wood studs.

(2) Floors in a mixing plant shall be of concrete or of other nonabsorbent materials.

(3) All fuel oil storage facilities shall be separated from the mixing plant and located in such a manner that in case of tank rupture, the oil will drain away from the mixing plant building.

(4) The building shall be well ventilated.

(5) Heating units which do not depend on combustion processes, when properly designed and located, may be used in the building. All direct sources of heat shall be provided exclusively from units located outside the mixing building.

(6) All internal-combustion engines used for electric power generation shall be located outside the mixing plant building, or shall be properly ventilated and isolated by a firewall. The exhaust systems on all such engines shall be located so any spark emission cannot be a hazard to any materials in or adjacent to the plant.

(7) Buildings used for the mixing of water gels shall conform to the requirements of this subdivision.

(1) Buildings shall be of noncombustible construction or sheet metal on wood studs.

(2) Floors in a mixing plant shall be of concrete or of other nonabsorbent materials.

[44 FR 8577, Feb. 9, 1979; 44 FR 20940, Apr. 6, 1979, as amended at 58 FR 35183, June 30, 1993]

§ 1926.801 Blaster qualifications.

(a) A blaster shall be able to understand and give written and oral orders.

(b) A blaster shall be in good physical condition and not be addicted to narcotics, intoxicants, or similar types of drugs.

(c) A blaster shall be qualified, by reason of training, knowledge, or experience, in the field of transporting, storing, handling, and use of explosives, and have a working knowledge of State and local laws and regulations which pertain to explosives.

(d) Blasters shall be required to furnish satisfactory evidence of competency in handling explosives and performing in a safe manner the type of blasting that will be required.

(e) The blaster shall be knowledgeable and competent in the use of each type of blasting method used.

§ 1926.902 Surface transportation of explosives.

(a) Transportation of explosives shall meet the provisions of Department of Transportation regulations contained in 49 CFR parts 146–149, Water Carriers; 49 CFR parts 171–179, Highways and Railways;
shall be prohibited.

(g) Explosives and blasting agents shall be hoisted, lowered, or conveyed in a powder car. No other materials, supplies, or equipment shall be transported in the same conveyance at the same time.

(h) No one, except the operator, his helper, and the powderman, shall be permitted to ride on a conveyance transporting explosives and blasting agents.

(i) No person shall ride in any shaft conveyance transporting explosives and blasting agents.

(j) No explosives or blasting agents shall be transported on any locomotive. At least two car lengths shall separate the locomotive from the powder car.

(k) No explosives or blasting agents shall be transported on a man haul trip.

(l) The car or conveyance containing explosives or blasting agents shall be pulled, not pushed, whenever possible.

(m) The powder car or conveyance especially built for the purpose of transporting explosives or blasting agents shall bear a reflectorized sign on each side with the word "Explosives" in letters, not less than 4 inches in height, upon a background of sharply contrasting color.

(n) Compartments for transporting detonators and explosives in the same car or conveyance shall be physically separated by a distance of 24 inches or by a solid partition at least 6 inches thick.

(o) Detonators and other explosives shall not be transported at the same time in any shaft conveyance.

(p) Explosives, blasting agents, or blasting supplies shall not be transported with other materials.

(q) Explosives or blasting agents, not in original containers, shall be placed in a suitable container when transported manually.

(r) Detonators, primers, and other explosives shall be carried in separate containers when transported manually.

[44 FR 8577, Feb. 9, 1979; 44 FR 20940, Apr. 6, 1979, as amended at 52 FR 36382, Sept. 28, 1987]

§ 1926.904 Storage of explosives and blasting agents.

(a) Explosives and related materials shall be stored in approved facilities required under the applicable provisions of the Bureau of Alcohol, Tobacco and Firearms regulations contained in 27 CFR part 55, Commerce in Explosives.

(b) Blasting caps, electric blasting caps, detonating primers, and primed cartridges shall not be stored in the same magazine with other explosives or blasting agents.

(c) Smoking and open flames shall not be permitted within 50 feet of explosives and detonator storage magazine.

(d) No explosives or blasting agents shall be permanently stored in any underground operation until the operation has been developed to the point where at least two modes of exit have been provided.

(e) Permanent underground storage magazines shall be at least 300 feet from any shaft, adit, or active underground working area.

(f) Permanent underground magazines containing detonators shall not be located closer than 50 feet to any magazine containing other explosives or blasting agents.

[44 FR 8577, Feb. 9, 1979; 44 FR 20940, Apr. 6, 1979, as amended at 58 FR 35311, June 30, 1993]
(u) When loading blasting agents pneumatically over electric blasting caps, semiconductive delivery hose shall be used and the equipment shall be bonded and grounded.

[44 FR 8577, Feb. 9, 1979; 44 FR 20840, Apr. 6, 1979, as amended at 58 FR 35184, June 30, 1993]

§ 1926.906 Initiation of explosive charges—electric blasting.

(a) Electric blasting caps shall not be used where sources of extraneous electricity make the use of electric blasting caps dangerous. Blasting cap leg wires shall be kept short-circuited (shunted) until they are connected into the circuit for firing.

(b) Before adopting any system of electrical firing, the blaster shall conduct a thorough survey for extraneous currents, and all dangerous currents shall be eliminated before any holes are loaded.

(c) In any single blast using electric blasting caps, all caps shall be of the same style or function, and of the same manufacture.

(d) Electric blasting shall be carried out by using blasting circuits or power circuits in accordance with the electric blasting cap manufacturer's recommendations, or an approved contractor or his designated representative.

(e) When firing a circuit of electric blasting caps, care must be exercised to ensure that an adequate quantity of delivered current is available, in accordance with the manufacturer's recommendations.

(f) Connecting wires and lead wires shall be insulated single solid wires of sufficient current-carrying capacity.

(g) Bus wires shall be solid single wires of sufficient current-carrying capacity.

(h) When firing electrically, the insulation on all firing lines shall be adequate and in good condition.

(i) A power circuit used for firing electric blasting caps shall not be grounded.

(j) In underground operations when firing from a power circuit, a safety switch shall be placed in the permanent firing line at intervals. This switch shall be made so it can be locked only in the “Off” position and shall be provided with a short-circuiting arrangement of the firing lines to the cap circuit.

(k) In underground operations there shall be a “lightning” gap of at least 5 feet in the firing system ahead of the main firing switch; that is, between this switch and the source of power. This gap shall be bridged by a flexible jumper cord just before firing the blast.

(l) When firing from a power circuit, the firing switch shall be locked in the open or “Off” position at all times, except when firing. It shall be so designed that the firing lines to the cap circuit are automatically short-circuited when the switch is in the “Off” position. Keys to this switch shall be entrusted only to the blaster.

(m) Blasting machines shall be in good condition and the efficiency of the machine shall be tested periodically to make certain that it can deliver power at its rated capacity.

(n) When firing with blasting machines, the connections shall be made as recommended by the manufacturer of the electric blasting caps used.

(o) The number of electric blasting caps connected to a blasting machine shall not be in excess of its rated capacity. Furthermore, in primary blasting, a series circuit shall contain no more caps than the limits recommended by the manufacturer of the electric blasting caps in use.

(p) The blaster shall be in charge of the blasting machines, and no other person shall connect the leading wires to the machine.

(q) Blasters, when testing circuits to charged holes, shall use only blasting galvanometers or other instruments that are specifically designed for this purpose.
(b) Detonating cord shall be handled and used with the same respect and care given other explosives.

(c) The line of detonating cord extending out of a bore hole or from a charge shall be cut from the supply spool before loading the remainder of the bore hole or placing additional charges.

(d) Detonating cord shall be handled and used with care to avoid damaging or severing the cord during and after loading and hooking-up.

(e) Detonating cord connections shall be competent and positive in accordance with approved and recommended methods. Knot-type or other cord-to-cord connections shall be made only with detonating cord in which the explosive core is dry.

(f) All detonating cord trunklines and branchlines shall be free of loops, sharp kinks, or angles that direct the cord back toward the oncoming line of detonation.

(g) All detonating cord connections shall be inspected before firing the blast.

(h) When detonating cord millisecond-delay connectors or short-interval-delay electric blasting caps are used with detonating cord, the practice shall conform strictly to the manufacturer’s recommendations.

(i) When connecting a blasting cap or an electric blasting cap to detonating cord, the cap shall be taped or otherwise attached securely along the side or the end of the detonating cord, with the end of the cap containing the explosive charge pointed in the direction in which the detonation is to proceed.

(j) Detonators for firing the trunkline shall not be brought to the loading area nor attached to the detonating cord until everything else is in readiness for the blast.

§ 1926.909 Firing the blast.

(a) A code of blasting signals equivalent to Table U–1, shall be posted on one or more conspicuous places at the operation, and all employees shall be required to familiarize themselves with the code and conform to it. Danger signs shall be placed at suitable locations.

(b) Before a blast is fired, a loud warning signal shall be given by the blaster in charge, who has made certain that all surplus explosives are in a safe place and all employees, vehicles, and equipment are at a safe distance, or under sufficient cover.

(c) Flagmen shall be safely stationed on highways which pass through the danger zone so as to stop traffic during blasting operations.

(d) It shall be the duty of the blaster to fix the time of blasting.

(e) Before firing an underground blast, warning shall be given, and all possible entries into the blasting area, and any entrances to any working place where a drift, raise, or other opening is about to hole through, shall be carefully guarded. The blaster shall make sure that all employees are out of the blast area before firing a blast.

Table U–1

Warning Signal—A 1-minute series of long blasts 5 minutes prior to blast signal.

Blast Signal—A series of short blasts 1 minute prior to the shot.

All Clear Signal—A prolonged blast following the inspection of blast area.

§ 1926.910 Inspection after blasting.

(a) Immediately after the blast has been fired, the firing line shall be disconnected from the blasting machine, or where power switches are used, they shall be locked open or in the off position.
(c) Detonators and explosives shall be taken separately into pressure working chambers.

(d) The blaster or powderman shall be responsible for the receipt, unloading, storage, and on-site transportation of explosives and detonators.

(e) All metal pipes, rails, air locks, and steel tunnel lining shall be electrically bonded together and grounded at or near the portal or shaft, and such pipes and rails shall be cross-bonded together at not less than 1,000-foot intervals throughout the length of the tunnel. In addition, each low air supply pipe shall be grounded at its delivery end.

(f) The explosives suitable for use in wet holes shall be water-resistant and shall be Fume Class 1.

(g) When tunnel excavation in rock face is approaching mixed face, and when tunnel excavation is in mixed face, blasting shall be performed with light charges and with light burden on each hole. Advance drilling shall be performed as tunnel excavation in rock face approaches mixed face, to determine the general nature and extent of rock cover and the remaining distance ahead to soft ground as excavation advances.

§ 1926.914 Definitions applicable to this subpart.

(a) American Table of Distances (also known as Quantity Distance Tables) means American Table of Distances for Storage of Explosives as revised and approved by the Institute of the Makers of Explosives, June 5, 1964.

(b) Approved storage facility—A facility for the storage of explosive materials conforming to the requirements of this part and covered by a license or permit issued under authority of the Bureau of Alcohol, Tobacco and Firearms. (See 27 CFR Part 55)

(c) Blast area—The area in which explosives loading and blasting operations are being conducted.

(d) Blaster—The person or persons authorized to use explosives for blasting purposes and meeting the qualifications contained in § 1826.001.

(e) Blasting agent—A blasting agent is any material or mixture consisting of a fuel and oxidizer used for blasting, but not classified an explosive and in which none of the ingredients is classified as an explosive provided the furnished (mixed) product cannot be detonated with a No. 8 test blasting cap when confined. A common blasting agent presently in use is a mixture of ammonium nitrate (\(\text{NH}_4\text{NO}_3\)) and carbonaceous combustibles, such as fuel oil or coal, and may either be procured, premixed and packaged from explosives companies or mixed in the field.

(f) Blasting cap—A metallic tube closed at one end, containing a charge of one or more detonating compounds, and designed for and capable of detonation from the sparks or flame from a safety fuse inserted and crimped into the open end.

(g) Block hoisting—The breaking of boulders by firing a charge of explosives that has been loaded in a drill hole.

(h) Conveyance—Any unit for transporting explosives or blasting agents, including but not limited to trucks, trailers, rail cars, barges, and vessels.

(i) Detonating cord—A flexible cord containing a center core of high explosives which when detonated, will have sufficient strength to detonate other cap-sensitive explosives with which it is in contact.

(j) Detonator—Blasting caps, electric blasting caps, delay electric blasting caps, and nonelectric delay blasting caps.

(k) Electric blasting cap—A blasting cap designed for and capable of detonation by means of an electric current.

(l) Electric blasting circuitry—

(1) Bus wire. An expendable wire, used in parallel or series, in parallel circuits, to which are connected
(y) Springing—The creation of a pocket in the bottom of a drill hole by the use of a moderate quantity of explosives in order that larger quantities or explosives may be inserted therein.

(a) Water gels, or slurry explosives—A wide variety of materials used for blasting. They all contain substantial proportions of water and high proportions of ammonium nitrate, some of which is in solution in the water. Two broad classes of water gels are: (1) Those which are sensitized by a material classed as an explosive, such as TNT or smokeless powder, and (2) those which contain no ingredient classified as an explosive, these are sensitized with metals such as aluminum or with other fuels. Water gels may be premixed at an explosives plant or mixed at the site immediately before delivery into the bore hole.

(aa) Semiconductive hose. Semiconductive hose—a hose with an electrical resistance high enough to limit flow of stray electric currents to safe levels, yet not so high as to prevent drainage of static electric charges to ground; hose of not more than 2 megohms resistance over its entire length and of not less than 5,000 ohms per foot meets the requirement.

[44 FR 8577, Feb. 9, 1979; 44 FR 20940, Apr. 6, 1979, as amended at 58 FR 35184 and 35311, June 30, 1993]
APPENDIX R: MSHA Explosives & Blasting Regulations (30 CFR 57.600)
Sec. 57.6000  Definitions.

The following definitions apply in this subpart.

Blasting agent. Any substance classified as a blasting agent by the Department of Transportation in 49 CFR 173.114a(a). This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

Detonating cord. A flexible cord containing a center core of high explosives which may be used to initiate other explosives.

Detonator. Any device containing a detonating charge used to initiate an explosive. These devices include electric or nonelectric instantaneous or delay blasting caps, and delay connectors. The term "detonator" does not include detonating cord. Detonators may be either "Class A" detonators or "Class C" detonators, as classified by the Department of Transportation in 49 CFR 173.53, and 173.100. This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

Explosive. Any substance classified as an explosive by the Department of Transportation in 49 CFR 173.53, 173.88, and 173.100. This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

Explosive material. Explosives, blasting agents, and detonators.

Flash point. The minimum temperature at which sufficient vapor is released by a liquid to form a flammable vapor-air mixture near the surface of the liquid.

Igniter cord. A fuse that burns progressively along its length with an external flame at the zone of burning, used for lighting a series of safety fuses in a desired sequence.

Magazine. A bullet-resistant, theft-resistant, fire-resistant, weather-resistant, ventilated facility for the storage of explosives and detonators (BATF Type 1 or Type 2 facility).

Misfire. The complete or partial failure of explosive material to detonate as planned. The term also is used to describe the explosive material itself that has failed to detonate.

Primer. A unit, package, or cartridge of explosives which contains a detonator and is used to initiate other explosives or blasting agents.

Safety switch. A switch that provides shunt protection in blasting circuits between the blast site and the switch used to connect a power source to the blasting circuit.

Slurry. An explosive material containing substantial portions of a liquid, oxidizers, and fuel, plus a thickener.
Water gel. An explosive material containing substantial portions of water, oxidizers, and fuel, plus a cross-linking agent.


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Storage--Surface and Underground

Sec. 57.6100 Separation of stored explosive material.

(a) Detonators shall not be stored in the same magazine with other explosive material.

(b) When stored in the same magazine, blasting agents shall be separated from explosives, safety fuse, and detonating cord to prevent contamination.

Sec. 57.6101 Areas around explosive material storage facilities.

(a) Areas surrounding storage facilities for explosive material shall be clear of rubbish, brush, dry grass, and trees for 25 feet in all directions, except that live trees 10 feet or taller need not be removed.

(b) Other combustibles shall not be stored or allowed to accumulate within 50 feet of explosive material. Combustible liquids shall be stored in a manner that ensures drainage will occur away from the explosive material storage facility in case of tank rupture.

Sec. 57.6102 Explosive material storage practices.

(a) Explosive material shall be--

(1) Stored in a manner to facilitate use of oldest stocks first;

(2) Stored according to brand and grade in such a manner as to facilitate identification; and

(3) Stacked in a stable manner but not more than 8 feet high.

(b) Explosives and detonators shall be stored in closed nonconductive containers except that nonelectric detonating devices may be stored on nonconductive racks provided the case-insert instructions and the date-plant-shift code are maintained with the product.

Storage--Surface Only

Sec. 57.6130 Explosive material storage facilities.

(a) Detonators and explosives shall be stored in magazines.

(b) Packaged blasting agents shall be stored in a magazine or other facility which is ventilated to prevent dampness and excessive heating, weather-resistant, and locked or attended. Drop trailers do not have to be ventilated if they are currently licensed by the Federal, State, or local authorities for over-the-road use. Facilities other than magazines used to store blasting agents shall contain only blasting agents.

(c) Bulk blasting agents shall be stored in weather-resistant bins or tanks which are locked, attended, or otherwise inaccessible to unauthorized entry.

(d) Facilities, bins or tanks shall be posted with the appropriate
United States Department of Transportation placards or other appropriate warning signs that indicate the contents and are visible from each approach.

Sec. 57.6131 Location of explosive material storage facilities.

(a) Storage facilities for any explosive material shall be—
   (1) Located so that the forces generated by a storage facility explosion will not create a hazard to occupants in mine buildings and will not damage dams or electric substations; and
   (2) Detached structures located outside the blast area and a sufficient distance from powerlines so that the powerlines, if damaged, would not contact the magazines.

(b) Operators should also be aware of regulations affecting storage facilities in 27 CFR part 55, in particular, 27 CFR 55.218 and 55.220. This document is available at any MSHA Metal and Nonmetal Safety and Health district office.

Sec. 57.6132 Magazine requirements.

(a) Magazines shall be—
   (1) Structurally sound;
   (2) Noncombustible or the exterior covered with fire-resistant material;
   (3) Bullet resistant;
   (4) Made of nonsparking material on the inside;
   (5) Ventilated to control dampness and excessive heating within the magazine;
   (6) Posted with the appropriate United States Department of Transportation placards or other appropriate warning signs that indicate the contents and are visible from each approach, so located that a bullet passing through any of the signs will not strike the magazine;
   (7) Kept clean and dry inside;

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   (8) Unlighted or lighted by devices that are specifically designed for use in magazines and which do not create a fire or explosion hazard;
   (9) Unheated or heated only with devices that do not create a fire or explosion hazard;
   (10) Locked when unattended; and
   (11) Used exclusively for the storage of explosive material except for essential nonsparking equipment used for the operation of the magazine.

   (b) Metal magazines shall be equipped with electrical bonding connections between all conductive portions so the entire structure is at the same electrical potential. Suitable electrical bonding methods include welding, riveting, or the use of securely tightened bolts where individual metal portions are joined. Conductive portions of nonmetal magazines shall be grounded.

   (c) Electrical switches and outlets shall be located on the outside of the magazine.

Sec. 57.6133 Powder chests.

(a) Powder chests (day boxes) shall be—
   (1) Structurally sound, weather-resistant, equipped with a lid or
cover, and with only nonsparking material on the inside;
(2) Posted with the appropriate United States Department of
Transportation placards or other appropriate warning signs that indicate
the contents and are visible from each approach;
(3) Located out of the blast area once loading has been completed;
(4) Locked or attended when containing explosive material; and
(5) emptied at the end of each shift with the contents returned to a
magazine or other storage facility, or attended.
(b) Detonators shall be kept in chests separate from explosives or
blasting agents, unless separated by 4-inches of hardwood or equivalent,
or a laminated partition. When a laminated partition is used, operators
must follow the provisions of the Institute of Makers of Explosives
(IME) Safety Library Publication No. 22, (May 1993), "Recommendations
for the Safe Transportation of Detonators in a Vehicle with other
Explosive Materials," (May 1993), and the "Generic Loading Guide for
the IME-22 Container," (October 1993). This incorporation by reference
has been approved by the Director of the Federal Register in accordance
with 5 U.S.C. 552(a) and 1 CFR part 51. Copies are available at MSHA,
1100 Wilson Blvd., Room 2436, Arlington, Virginia 22209-3939, and at all
Metal and Nonmetal Mine Safety and Health district offices, or available
for inspection at the National Archives and Records Administration
(NARA). For information on the availability of this material at NARA,
call 202-741-6030, or go to: http://www.archives.gov/federal--register/
code--of--federal--regulations/ibr--locations.html.

[61 FR 36801, July 12, 1996, as amended at 67 FR 38385, June 4, 2002]

Storage--Underground Only

Sec. 57.6160 Main facilities.

(a) Main facilities used to store explosive material underground
shall be located--
(1) In stable or supported ground;
(2) so that a fire or explosion in the storage facilities will not
prevent escape from the mine, or cause detonation of the contents of
another storage facility;
(3) out of the line of blasts, and protected from vehicular traffic,
except that accessing the facility;
(4) At least 200 feet from work places or shafts;
(5) At least 50 feet from electric substations;
(6) A safe distance from trolley wires; and
(7) At least 25 feet from detonator storage facilities.
(b) Main facilities used to store explosive material underground
shall be--
(1) Posted with warning signs that indicate the contents and are
visible from any approach;
(2) used exclusively for the storage of explosive material and
necessary equipment associated with explosive material storage and
delivery;
(3) Portions of the facility used for the storage of explosives
shall only contain nonsparking material or equipment.

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(ii) The blasting agent portion of the facility may be used for the
storage of other necessary equipment;
(3) kept clean, suitably dry, and orderly;
(4) provided with unobstructed ventilation openings;
(5) Kept securely locked unless all access to the mine is either locked or attended; and
(6) Unlighted or lighted only with devices that do not create a fire or explosion hazard and which are specifically designed for use in magazines.
(c) Electrical switches and outlets shall be located outside the facility.

Sec. 57.6161 Auxiliary facilities.

(a) Auxiliary facilities used to store explosive material near work places shall be wooden, box-type containers equipped with covers or doors, or facilities constructed or mined-out to provide equivalent impact resistance and confinement.
(b) The auxiliary facilities shall be--
(1) Constructed of nontsparking material on the inside when used for the storage of explosives;
(2) Kept clean, suitably dry, and orderly;
(3) Kept in repair;
(4) Located out of the line of blasts so they will not be subjected to damaging shock or flyrock;
(5) Identified with warning signs or coded to indicate the contents with markings visible from any approach;
(6) Located at least 15 feet from all haulageways and electrical equipment, or placed entirely within a mined-out recess in the rib used exclusively for explosive material;
(7) Filled with no more than a one-week supply of explosive material;
(8) Separated by at least 25 feet from other facilities used to store detonators; and
(9) Kept securely locked unless all access to the mine is either locked or attended.

Transportation--Surface and Underground

Sec. 57.6200 Delivery to storage or blast site areas.

Explosive material shall be transported without undue delay to the storage area or blast site.

Sec. 57.6201 Separation of transported explosive material.

Detonators shall not be transported on the same vehicle or conveyance with other explosives except as follows:
(a) Detonators in quantities of more than 1,000 may be transported in a vehicle or conveyance with explosives or blasting agents provided the detonators are--
(1) Maintained in the original packaging as shipped from the manufacturer; and
(2) Separated from explosives or blasting agents by 4 inches of hardwood or equivalent, or a laminated partition. The hardwood or equivalent shall be fastened to the vehicle or conveyance. When a laminated partition is used, operators must follow the provisions of the Institute of Makers of Explosives (IME) Safety Library Publication No. 22, 'Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials' (May 1993), and the 'Generic Loading Guide for the IME-22 Container' (October 1993).
incorporation by reference has been approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies are available at MSHA, 1100 Wilson Blvd., Room 2436, Arlington, Virginia 22209-3939, and at all Metal and Nonmetal Mine Safety and Health district offices, or available for examination at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/code-of-federal-regulations/lbr-locations.html.

(b) Detonators in quantities of 1,000 or fewer may be transported with explosives or blasting agents provided the detonators are--

(1) Kept in closed containers; and

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(2) Separated from explosives or blasting agents by 4 inches of hardwood or equivalent, or a laminated partition. The hardwood or equivalent shall be fastened to the vehicle or conveyance. When a laminated partition is used, operators must follow the provisions of IME Safety Library Publication No. 22, "Recommendations for the Safe Transportation of Detonators in a Vehicle with other Explosive Materials" (May 1993), and the "Generic Loading Guide for the IME-22 Container" (October 1993). This incorporation by reference has been approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies are available at MSHA, 1100 Wilson Blvd., Room 2436, Arlington, Virginia 22209-3939, and at all Metal and Nonmetal Mine Safety and Health district offices, or available for examination at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/code-of-federal-regulations/lbr-locations.html.

[61 FR 36801, July 12, 1996, as amended at 67 FR 38385, June 4, 2002]

Sec. 57.6202 Vehicles.

(a) Vehicles containing explosive material shall be--

(1) Maintained in good condition and shall comply with the requirements of subpart M of this part;

(2) Equipped with sides and enclosures higher than the explosive material being transported or have the explosive material secured to a nonconductive pallet;

(3) Equipped with a cargo space that shall contain the explosive material (passenger areas shall not be considered cargo space);

(4) Equipped with at least two multipurpose dry-chemical fire extinguishers or one such extinguisher and an automatic fire suppression system;

(5) Posted with warning signs that indicate the contents and are visible from each approach;

(6) Occupied only by persons necessary for handling the explosive material;

(7) Attended or the cargo compartment locked at surface areas of underground mines, except when parked at the blast site and loading is in progress; and

(8) Secured while parked by having--

(i) The brakes set;

(ii) The wheels chocked if movement could occur; and

(iii) The engine shut off unless powering a device being used in the loading operation.
(b) Vehicles containing explosives shall have—
(1) No sparking material exposed in the cargo space; and
(2) Only properly secured nonsparking equipment in the cargo space
with the explosives.
(c) Vehicles used for dispensing bulk explosive material shall—
(1) Have no zinc or copper exposed in the cargo space; and
(2) Provide any enclosed screw-type conveyors with protection
against internal pressure and frictional heat.

Sec. 57.6203 Locomotives.

Explosive material shall not be transported on a locomotive. When
explosive material is hauled by trolley locomotive, covered,
electrically insulated cars shall be used.

Sec. 57.6204 Hoists.

(a) Before explosive material is transported in hoist conveyances—
(1) The hoist operator shall be notified; and
(2) Hoisting in adjacent shaft compartments, except for empty
conveyances or counterweights, shall be stopped until transportation of
the explosive material is completed.
(b) Explosive material transported in hoist conveyances shall be
placed within a container which prevents shifting of the cargo that
could cause detonation of the container by impact or by sparks. The
manufacturer's container may be used if secured to a nonconductive
pallet. When explosives are transported, they shall be secured so as not
to contact any sparking material.
(c) No explosive material shall be transported during a mantrip.

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Sec. 57.6205 Conveying explosives by hand.

Closed, nonconductive containers shall be used to carry explosives
and detonators to and from blast sites. Separate containers shall be
used for explosives and detonators.

USE--SURFACE AND UNDERGROUND

Sec. 57.6300 Control of blasting operations.

(a) Only persons trained and experienced in the handling and use of
explosive material shall direct blasting operations and related
activities.
(b) Trainees and inexperienced persons shall work only in the
immediate presence of persons trained and experienced in the handling
and use of explosive material.

Sec. 57.6301 Blasthole obstruction check.

Before loading, blastholes shall be checked and, wherever possible,
cleared of obstructions.
Sec. 57.6302 Separation of explosive material.

Explosives and blasting agents shall be kept separated from detonators until loading begins.

Sec. 57.6303 Initiation preparation.

(a) Primers shall be made up only at the time of use and as close to the blast site as conditions allow.
(b) Primers shall be prepared with the detonator contained securely and completely within the explosive or contained securely and appropriately for its design in the tunnel or cap well.
(c) When using detonating cord to initiate another explosive, a connection shall be prepared with the detonating cord threaded through, attached securely to, or otherwise in contact with the explosive.

Sec. 57.6304 Primer protection.

(a) Tamping shall not be done directly on a primer.
(b) Rigid cartridges of explosives or blasting agents that are 4 inches (100 millimeters) in diameter or larger shall not be dropped on the primer except where the blasthole contains sufficient depth of water to protect the primer from impact. Slit packages of prill, water gel, or emulsions are not considered rigid cartridges and may be drop loaded.

Sec. 57.6305 Unused explosive material.

Unused explosive material shall be moved to a protected location as soon as practical after loading operations are completed.

Sec. 57.6306 Loading, blasting, and security.

(a) When explosive materials or initiating systems are brought to the blast site, the blast site shall be attended; barricaded and posted with warning signs, such as "Danger," "Explosives," or "Keep Out!" or flagged against unauthorized entry.
(b) Vehicles and equipment shall not be driven over explosive material or initiating systems in a manner which could contact the material or system, or create other hazards.
(c) Once loading begins, the only activities permitted within the blast site shall be those activities directly related to the blasting operation and the activities of surveying, stemming, sampling of geology, and reopening of holes, provided that reasonable care is exercised. Haulage activity is permitted near the base of bench faces being loaded or awaiting firing, provided no other haulage access exists.
(d) Loading and blasting shall be conducted in a manner designed to facilitate a continuous process, with the blast fired as soon as possible following the completion of loading. If blasting a loaded round may be delayed for more than 72 hours, the operator shall notify the appropriate MSHA district office.
(e) In electric blasting prior to connecting to the power source, and in nonelectric blasting prior to attaching an initiating device, all persons shall leave the blast area except persons in a blasting shelter or other location that protects them from concussion (shock wave), flying material, and gases.
(f) Before firing a blast—
   (1) ample warning shall be given to allow all persons to be
       evacuated;
   (2) clear exit routes shall be provided for persons firing the
       round; and

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(3) all access routes to the blast area shall be guarded or
    barricaded to prevent the passage of persons or vehicles.

(g) work shall not be resumed in the blast area until a post-blast
    examination addressing potential blast-related hazards has been
    conducted by a person with the ability and experience to perform the
    examination.

Sec. 57.6307 Drill stem loading.

Explosive material shall not be loaded into blastholes with drill
stem equipment or other devices that could be extracted while containing
explosive material. the use of loading hose, collar sleeves, or collar
pipes is permitted.

Sec. 57.6308 Initiation systems.

Initiation systems shall be used in accordance with the
manufacturer's instructions.

Sec. 57.6309 Fuel oil requirements for ANFO.

(a) liquid hydrocarbon fuels with flash points lower than that of
    no. 2 diesel oil (125 °C) may be used at ambient air temperatures
    below 45 °F.

(b) waste oil, including crankcase oil, shall not be used to prepare
    ammonium nitrate-fuel oil.

Sec. 57.6310 Misfire waiting period.

When a misfire is suspected, persons shall not enter the blast
area—
   (a) for 30 minutes if safety fuse and blasting caps are used; or
   (b) for 15 minutes if any other type detonators are used.

Sec. 57.6311 Handling of misfires.

(a) Faces and muck piles shall be examined for misfires after each
    blasting operation.

(b) only work necessary to remove a misfire and protect the safety
    of miners engaged in the removal shall be permitted in the affected
    area until the misfire is disposed of in a safe manner.

(c) When a misfire cannot be disposed of safely, each approach to
    the area affected by the misfire shall be posted with a warning sign at
    a conspicuous location to prohibit entry, and the condition shall be
    reported immediately to mine management.
(d) Misfires occurring during the shift shall be reported to mine management not later than the end of the shift.

Sec. 57.6312 Secondary blasting.

Secondary blasts fired at the same time in the same work area shall be initiated from one source.

Electric Blasting--Surface and Underground

Sec. 57.6400 Compatibility of electric detonators.

All electric detonators to be fired in a round shall be from the same manufacturer and shall have similar electrical firing characteristics.

Sec. 57.6401 Shunting.

Except during testing--
(a) Electric detonators shall be kept shunted until connected to the blasting line or wired into a blasting round;
(b) Wired rounds shall be kept shunted until connected to the blasting line; and
(c) Blasting lines shall be kept shunted until immediately before blasting.

Sec. 57.6402 Deenergized circuits near detonators.

Electrical distribution circuits within 50 feet of electric detonators at the blast site shall be deenergized. Such circuits need not be deenergized between 25 to 50 feet of the electric detonators if stray current tests, conducted as frequently as necessary, indicate a maximum stray current of less than 0.05 ampere through a 1-ohm resistor as measured at the blast site.

Sec. 57.6403 Branch circuits.

(a) If electric blasting includes the use of branch circuits, each branch shall be equipped with a safety switch or equivalent method to isolate the circuits to be used.

(b) At least one safety switch or equivalent method of protection shall be located outside the blast area and shall be in the open position until persons are withdrawn.

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Sec. 57.6404 Separation of blasting circuits from power source.

(a) Switches used to connect the power source to a blasting circuit shall be locked in the open position except when closed to fire the blast.

(b) Lead wires shall not be connected to the blasting switch until the shot is ready to be fired.
Sec. 57.6405 Firing devices.

(a) Power sources shall be capable of delivering sufficient current to energize all electric detonators to be fired with the type of circuits used. Storage or dry cell batteries are not permitted as power sources.

(b) Blasting machines shall be tested, repaired, and maintained in accordance with manufacturer's instructions.

(c) Only the blaster shall have the key or other control to an electrical firing device.

Sec. 57.6406 Duration of current flow.

If any part of a blast is connected in parallel and is to be initiated from powerlines or lighting circuits, the time of current flow shall be limited to a maximum of 25 milliseconds. This can be accomplished by incorporating an arcing control device in the blasting circuit or by interrupting the circuit with an explosive device attached to one or both lead lines and initiated by a 25-millisecond delay electric detonator.

Sec. 57.6407 Circuit testing.

A blasting galvanometer or other instrument designed for testing blasting circuits shall be used to test the following:

(a) In surface operations--

(1) Continuity of each electric detonator in the blasthole prior to stemming and connection to the blasting line;

(2) Resistance of individual series or the resistance of multiple balanced series to be connected in parallel prior to their connection to the blasting line;

(3) Continuity of blasting lines prior to the connection of electric detonator series; and

(4) Total blasting circuit resistance prior to connection to the power source.

(b) In underground operations--

(1) Continuity of each electric detonator series; and

(2) Continuity of blasting lines prior to the connection of electric detonators.

Nonelectric Blasting--Surface and Underground

Sec. 57.6500 Damaged initiating material.

A visual check of the completed circuit shall be made to ensure that the components are properly aligned and connected. Safety fuse, igniter cord, detonating cord, shock or gas tubing, and similar material which is kinked, bent sharply, or damaged shall not be used.

Sec. 57.6501 Nonelectric initiation systems.

(a) When the nonelectric initiation system uses shock tube--

(1) Connections with other initiation devices shall be secured in a manner which provides for uninterrupted propagation;

(2) Factory-made units shall be used as assembled and shall not be
cut except that a single splice is permitted on the lead-in trunkline
during dry conditions; and
(3) Connections between blastholes shall not be made until
immediately prior to clearing the blast site when surface delay
detonators are used.
(b) When the nonelectric initiation system uses detonating cord--
(1) The line of detonating cord extending out of a blasthole shall
be cut from the supply spool immediately after the attached explosive is
correctly positioned in the hole;
(2) In multiple row blasts, the trunkline layout shall be designed
so that the detonation can reach each blasthole from at least two
directions;
(3) Connections shall be tight and kept at right angles to the
trunkline;
(4) Detonators shall be attached securely to the side of the
detonating cord and pointed in the direction in which detonation is to
proceed;
(5) Connections between blastholes shall not be made until
immediately prior to clearing the blast site when surface delay
detonators are used; and

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(6) Lead-in lines shall be manually unreel'd if connected to the
trunklines at the blast site.
(c) When nonelectric initiation systems use gas tube, continuity of
the circuit shall be tested prior to blasting.

Sec. 57.6502 Safety fuse.

(a) The burning rate of each spool of safety fuse to be used shall
be measured, posted in locations which will be conspicuous to safety
fuse users, and brought to the attention of all persons involved with
the blasting operation.
(b) When firing with safety fuse ignited individually using handheld
lighters, the safety fuse shall be of lengths which provide at least the
minimum burning time for a particular size round, as specified in the
following table:

<table>
<thead>
<tr>
<th>Number of holes in a round</th>
<th>Minimum burning time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2 min. \1\</td>
</tr>
<tr>
<td>2-5</td>
<td>2 min. 40 sec.</td>
</tr>
<tr>
<td>6-10</td>
<td>3 min. 20 sec.</td>
</tr>
<tr>
<td>11 to 15</td>
<td>5 min.</td>
</tr>
</tbody>
</table>

\1\ For example, at least a 36-inch length of 40-second-per-foot safety
fuse or at least a 48-inch length of 30-second-per-foot safety fuse
would have to be used to allow sufficient time to evacuate the area.

(c) Where flyrock might damage exposed safety fuse, the blast shall
be timed so that all safety fuses are burning within the blastholes
before any blasthole detonates.
(d) Fuse shall be cut and capped in dry locations.
(e) Blasting caps shall be crimped to fuse only with implements
designed for that purpose.
(f) Safety fuse shall be ignited only after the primer and the
explosive material are securely in place.

(g) Safety fuse shall be ignited only with devices designed for that purpose. Carbide lights, liquefied petroleum gas torches, and cigarette lighters shall not be used to light safety fuse.

(h) At least two persons shall be present when lighting safety fuse, and no one shall light more than 15 individual fuses. If more than 15 holes per person are to be fired, electric initiation systems, igniter cord and connectors, or other nonelectric initiation systems shall be used.

Extraneous Electricity—Surface and Underground

Sec. 57.6600 Loading practices.

If extraneous electricity is suspected in an area where electric detonators are used, loading shall be suspended until tests determine that stray current does not exceed 0.05 amperes through a 1-ohm resistor when measured at the location of the electric detonators. If greater levels of extraneous electricity are found, the source shall be determined and no loading shall take place until the condition is corrected.

Sec. 57.6601 Grounding.

Electric blasting circuits, including powerline sources when used, shall not be grounded.

Sec. 57.6602 Static electricity dissipation during loading.

When explosive material is loaded pneumatically into a blasthole in a manner that generates a static electricity hazard—

(a) An evaluation of the potential static electricity hazard shall be made and any hazard shall be eliminated before loading begins;

(b) The loading hose shall be of a semiconductive type, have a total of not more than 2 megohms of resistance over its entire length and not less than 1000 ohms of resistance per foot;

(c) Wire-countered hoses shall not be used;

(d) Conductive parts of the loading equipment shall be bonded and grounded and grounds shall not be made to other potential sources of extraneous electricity; and

(e) Plastic tubes shall not be used as hole liners if the hole contains an electric detonator.

Sec. 57.6603 Air gap.

At least a 15-foot air gap shall be provided between the blasting circuit and the electric power source.

Sec. 57.6604 Precautions during storms.

During the approach and progress of an electrical storm—

(a) Surface blasting operations shall be suspended and persons withdrawn.

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from the blast area or to a safe location; or
(b) Underground electrical blasting operations that are capable of being initiated by lightning shall be suspended and all persons withdrawn from the blast area or to a safe location.

Sec. 57.6605 Isolation of blasting circuits.

Lead wires and blasting lines shall be isolated and insulated from power conductors, pipelines, and railroad tracks, and shall be protected from sources of stray or static electricity. Blasting circuits shall be protected from any contact between firing lines and overhead powerlines which could result from the force of a blast.

Equipment/Tools—Surface and Underground

Sec. 57.6700 Nonsparking tools.

Only nonsparking tools shall be used to open containers of explosive material or to punch holes in explosive cartridges.

Sec. 57.6701 Tamping and loading pole requirements.

Tamping and loading poles shall be of wood or other nonconductive, nonsparking material. Couplings for poles shall be nonsparking.

Maintenance—Surface and Underground

Sec. 57.6800 Storage facilities.

When repair work which could produce a spark or flame is to be performed on a storage facility—
(a) The explosive material shall be moved to another facility, or moved at least 50 feet from the repair activity and monitored; and
(b) The facility shall be cleaned to prevent accidental detonation.

Sec. 57.6801 Vehicle repair.

Vehicles containing explosive material and oxidizers shall not be taken into a repair garage or shop.

Sec. 57.6802 Bulk delivery vehicles.

No welding or cutting shall be performed on a bulk delivery vehicle until the vehicle has been washed down and all explosive material has been removed. Before welding or cutting on a hollow shaft, the shaft shall be thoroughly cleaned inside and out and vented with a minimum 1/2-inch diameter opening to allow for sufficient ventilation.

Sec. 57.6803 Blasting lines.

Permanent blasting lines shall be properly supported. All blasting lines shall be insulated and kept in good repair.
Sec. 57.6900 Damaged or deteriorated explosive material.

Damaged or deteriorated explosive material shall be disposed of in a safe manner in accordance with the instructions of the manufacturer.

Sec. 57.6901 Black powder.

(a) Black powder shall be used for blasting only when a desired result cannot be obtained with another type of explosive, such as in quarrying certain types of dimension stone.

(b) Containers of black powder shall be--

(1) Nonsparking;

(2) Kept in a totally enclosed cargo space while being transported by a vehicle;

(3) Securely closed at all times when--

(i) Within 50 feet of any magazine or open flame;

(ii) Within any building in which a fuel-fired or exposed-element electric heater is operating; or

(iii) In an area where electrical or incandescent-particle sparks could result in powder ignition; and

(4) Opened only when the powder is being transferred to a blasthole or another container and only in locations not listed in paragraph (b)(3) of this section.

(c) Black powder shall be transferred from containers only by pouring.

(d) Spills shall be cleaned up promptly with nonsparking equipment. Contaminated powder shall be put into a container of water and shall be disposed of promptly after the granules have disintegrated, or the spill area shall be flushed promptly with water until the granules have disintegrated completely.

(e) Misfires shall be disposed of by washing the stemming and powder charge from the blasthole, and removing and disposing of the initiator in accordance with the requirement for damaged explosives.

(f) Holes shall not be reloaded for at least 12 hours when the blastholes have failed to break as planned.

Sec. 57.6902 Excessive temperatures.

(a) Where heat could cause premature detonation, explosive material shall not be loaded into hot areas, such as kilns or sprung holes.

(b) When blasting sulfide ores where hot holes occur that may react with explosive material in blastholes, operators shall--

(1) Measure an appropriate number of blasthole temperatures in order to assess the specific mine conditions prior to the introduction of explosive material;

(2) Limit the time between the completion of loading and the initiation of the blast to no more than 12 hours; and

(3) Take other special precautions to address the specific conditions at the mine to prevent premature detonation.
Sec. 57.6903 Burning explosive material.

If explosive material is suspected of burning at the blast site, persons shall be evacuated from the endangered area and shall not return for at least one hour after the burning or suspected burning has stopped.

Sec. 57.6904 Smoking and open flames.

Smoking and use of open flames shall not be permitted within 50 feet of explosive material except when separated by permanent noncombustible barriers. This standard does not apply to devices designed to ignite safety fuse or to heating devices which do not create a fire or explosion hazard.

Sec. 57.6905 Protection of explosive material.

(a) Explosive material shall be protected from temperatures in excess of 150 degrees Fahrenheit.
(b) Explosive material shall be protected from impact, except for tamping and dropping during loading.

General Requirements--Underground Only

Sec. 57.6960 Mixing of explosive material.

(a) The mixing of ingredients to produce explosive material shall not be conducted underground unless prior approval of the MSHA district manager is obtained. In granting or withholding approval, the district manager shall consider the potential hazards created by--
(1) The location of the stored material and the storage practices used;
(2) The transportation and use of the explosive material;
(3) The nature of the explosive material, including its sensitivity;
(4) Any other factor deemed relevant to the safety of miners potentially exposed to the hazards associated with the mixing of the bulk explosive material underground.
(b) Storage facilities for the ingredients to be mixed shall provide drainage away from the facilities for leaks and spills.
APPENDIX S: Explosives Transport on Public Highways (49 CFR 177 subpart B)
Title 49: Transportation
PART 177—CARRIAGE BY PUBLIC HIGHWAY

Subpart B—Loading and Unloading

Note: For prohibited loading and storage of hazardous materials, see §177.848.

§ 177.834 General requirements.

(a) Packages secured in a motor vehicle. Any package containing any hazardous material, not permanently attached to a motor vehicle, must be secured against shifting, including relative motion between packages, within the vehicle on which it is being transported, under conditions normally incident to transportation. Packages having valves or other fittings must be loaded in a manner to minimize the likelihood of damage during transportation.

(b) Each package containing a hazardous material bearing package orientation markings prescribed in §172.312 of this subchapter must be loaded on a transport vehicle or within a freight container in accordance with such markings and must remain in the correct position indicated by the markings during transportation.

(c) No smoking while loading or unloading. Smoking on or about any motor vehicle while loading or unloading any Class 1 (explosive), Class 3 (flammable liquid), Class 4 (flammable solid), Class 5 (oxidizing), or Division 2.1 (flammable gas) materials is forbidden.

(d) Keep fire away, loading and unloading. Extreme care shall be taken in the loading or unloading of any Class 1 (explosive), Class 3 (flammable liquid), Class 4 (flammable solid), Class 5 (oxidizing), or Division 2.1 (flammable gas) materials into or from any motor vehicle to keep fire away and to prevent persons in the vicinity from smoking, lighting matches, or carrying any flame or lighted cigar, pipe, or cigarette.

(e) Handbrake set while loading and unloading. No hazardous material shall be loaded into or on, or unloaded from, any motor vehicle unless the handbrake be securely set and all other reasonable precautions be taken to prevent motion of the motor vehicle during such loading or unloading process.

(f) Use of tools, loading and unloading. No tools which are likely to damage the effectiveness of the closure of any package or other container, or likely adversely to affect such package or container, shall be used for the loading or unloading of any Class 1 (explosive) material or other dangerous article.

(g) [Reserved]

(h) Precautions concerning containers in transit; fueling road units. Reasonable care should be taken to prevent undue rise in temperature of containers and their contents during transit. There must be no tampering with such container or the contents thereof nor any discharge of the contents of any container between point of origin and point of billed destination. Discharge of contents of any container, other than a cargo tank or IM portable tank, must not be made prior to removal from the motor vehicle. Nothing contained in this paragraph shall be so construed as to prohibit the fueling of machinery or vehicles used in road construction or maintenance.
(i) **Attendance requirements**—(1) **Loading.** A cargo tank must be attended by a qualified person at all times when it is being loaded. The person who is responsible for loading the cargo tank is also responsible for ensuring that it is so attended.

(2) **Unloading.** A motor carrier who transports hazardous materials by a cargo tank must ensure that the cargo tank is attended by a qualified person at all times during unloading. However, the carrier's obligation to ensure attendance during unloading ceases when:

(i) The carrier's obligation for transporting the materials is fulfilled;

(ii) The cargo tank has been placed upon the consignee's premises; and

(iii) The motive power has been removed from the cargo tank and removed from the premises.

(3) Except for unloading operations subject to §§177.837(d), 177.840(p), and 177.840(q), a qualified person "attends" the loading or unloading of a cargo tank if, throughout the process, he is alert and is within 7.62 m (25 feet) of the cargo tank. The qualified person attending the unloading of a cargo tank must have an unobstructed view of the cargo tank and delivery hose to the maximum extent practicable during the unloading operation.

(4) A person is "qualified" if he has been made aware of the nature of the hazardous material which is to be loaded or unloaded, he has been instructed on the procedures to be followed in emergencies, he is authorized to move the cargo tank, and he has the means to do so.

(i) Except for a cargo tank conforming to §173.29(b)(2) of this subchapter, a person may not drive a cargo tank motor vehicle containing a hazardous material regardless of quantity unless:

(1) All manhole closures are closed and secured; and

(2) All valves and other closures in liquid discharge systems are closed and free of leaks.

(k) [Reserved]

(l) **Use of cargo heaters when transporting certain hazardous material.** Transportation includes loading, carrying, and unloading.

(1) **When transporting Class 1 (explosive) materials.** A motor vehicle equipped with a cargo heater of any type may transport Class 1 (explosive) materials only if the cargo heater is rendered inoperable by:

(i) Draining or removing the cargo heater fuel tank; and (ii) disconnecting the heater's power source.

(2) **When transporting certain flammable material**—(i) **Use of combustion cargo heaters.** A motor vehicle equipped with a combustion cargo heater may be used to transport Class 3 (flammable liquid) or Division 2.1 (flammable gas) materials only if each of the following requirements are met:

(A) It is a catalytic heater.

(B) The heater's surface temperature cannot exceed 54 °C (130 °F)—either on a thermostatically controlled heater or on a heater without thermostatic control when the outside or ambient temperature is 16 °C (61 °F) or less.

(C) The heater is not ignited in a loaded vehicle.

(D) There is no flame, either on the catalyst or anywhere in the heater.

(E) The manufacturer has certified that the heater meets the requirements under paragraph (l)(2)(i) of this section by permanently marking the heater "MEETS DOT REQUIREMENTS FOR CATALYTIC HEATERS USED WITH FLAMMABLE LIQUID AND GAS."

(F) The heater is also marked "DO NOT LOAD INTO OR USE IN CARGO COMPARTMENTS CONTAINING FLAMMABLE LIQUID OR GAS IF FLAME IS VISIBLE ON CATALYST OR IN HEATER."

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(G) Heater requirements under §393.77 of this title are complied with.

(ii) **Effective date for combustion heater requirements.** The requirements under paragraph (i)(2)(i) of this section govern as follows:

(A) Use of a heater manufactured after November 14, 1975, is governed by every requirement under (i)(2)(i) of this section;

(B) Use of a heater manufactured before November 16, 1975, is governed only by the requirements under (i)(2)(i) (A), (C), (D), (F) and (G) of this section until October 1, 1976; and

(C) Use of any heater after September 30, 1976, is governed by every requirement under paragraph (i)(2)(i) of this section.

(iii) **Restrictions on automatic cargo-space-heating temperature control devices.** Restrictions on these devices have two dimensions: Restrictions upon use and restrictions which apply when the device must not be used.

(A) **Use restrictions.** An automatic cargo-space-heating temperature control device may be used when transporting Class 3 (flammable liquid) or Division 2.1 (flammable gas) materials only if each of the following requirements is met:

(1) Electrical apparatus in the cargo compartment is nonsparking or explosion proof.

(2) There is no combustion apparatus in the cargo compartment.

(3) There is no connection for return of air from the cargo compartment to the combustion apparatus.

(4) The heating system will not heat any part of the cargo to more than 54 °C (129 °F).

(B) **Protection against use.** Class 3 (flammable liquid) or Division 2.1 (flammable gas) materials may be transported by a vehicle, which is equipped with an automatic cargo-space-heating temperature control device that does not meet each requirement of paragraph (i)(2)(iii)(A) of this section, only if the device is first rendered inoperable, as follows:

(1) Each cargo heater fuel tank, if other than LPG, must be emptied or removed.

(2) Each LPG fuel tank for automatic temperature control equipment must have its discharge valve closed and its fuel feed line disconnected.

(m) Tanks constructed and maintained in compliance with Spec. 106A or 110A (§§179.300, 179.301 of this subchapter) that are authorized for the shipment of hazardous materials by highway in part 173 of this subchapter must be carried in accordance with the following requirements:

(1) Tanks must be securely chocked or clamped on vehicles to prevent any shifting.

(2) Equipment suitable for handling a tank must be provided at any point where a tank is to be loaded upon or removed from a vehicle.

(3) No more than two cargo carrying vehicles may be in the same combination of vehicles.

(4) Compliance with §§174.200 and 174.204 of this subchapter for combination rail freight, highway shipments and for trailer-on-flat-car service is required.

(n) Specification 56, 57, IM 101, and IM 102 portable tanks, when loaded, may not be stacked on each other nor placed under other freight during transportation by motor vehicle.

(o) **Unloading of IM and UN portable tanks.** No person may unload an IM or UN portable tank while it remains on a transport vehicle with the motive power unit attached except under the following
conditions:

(1) The unloading operation must be attended by a qualified person in accordance with the requirements in paragraph (i) of this section. The person performing unloading functions must be trained in handling emergencies that may occur during the unloading operation.

(2) Prior to unloading, the operator of the vehicle on which the portable tank is transported must ascertain that the conditions of this paragraph (o) are met.

(3) An IM or UN portable tank equipped with a bottom outlet as authorized in Column (7) of the §172.101 Table of this subchapter by assignment of a T Code in the appropriate proper shipping name entry, and that contains a liquid hazardous material of Class 3, PG I or II, or PG III with a flash point of less than 100 °F (38 °C); Division 5.1, PG I or II; or Division 6.1, PG I or II, must conform to the outlet requirements in §178.275(d)(3) of this subchapter, or, until October 1, 2004, be unloaded only at a facility conforming to the following—

(i) The applicable fire suppression requirements in 29 CFR 1910.106(a), (f), (g), (h), and (i);

(ii) The emergency shutdown requirements in 29 CFR 1910.119(f), 1910.120(q) and 1910.38(a);

(iii) The emergency response planning requirements in 29 CFR part 1910 and 40 CFR part 68;

(iv) An emergency discharge control procedure applicable to unloading operations, including instructions on handling emergencies that may occur during the unloading operation; and

(v) Public access to the unloading area must be controlled in a manner ensuring no public access during unloading.

(4) Alternatively, conformance to equivalent or more stringent non-federal requirements is authorized in place of paragraphs (o)(3)(i) through (o)(3)(iv) of this section.


Editorial Note: For Federal Register citations affecting §177.834, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 177.835 Class 1 materials.

(See also §177.834 (a) to (j).)

(a) Engine stopped. No Class 1 (explosive) materials shall be loaded into or on or be unloaded from any motor vehicle with the engine running.

(b) Care in loading, unloading, or other handling of Class 1 (explosive) materials. No bale hooks or other metallic tools shall be used for the loading, unloading, or other handling of Class 1 (explosive) materials, nor shall any package or other container of Class 1 (explosive) materials, except barrels or kegs, be rolled. No packages of Class 1 (explosive) materials shall be thrown or dropped during process of loading or unloading or handling of Class 1 (explosive) materials. Special care shall be exercised to the end that packages or other containers containing Class 1 (explosive) materials shall not catch fire from sparks or hot gases from the exhaust tailpipe.

(1) Whenever tarpaulins are used for covering Class 1 (explosive) materials, they shall be secured by means of rope, wire, or other equally efficient tie downs. Class 1 (explosive) materials placards or markings required by §177.823 shall be secured, in the appropriate locations, directly to the equipment transporting the Class 1 (explosive) materials. If the vehicle is provided with placard boards, the placards must be applied to these boards.

(2) [Reserved]

(c) Class 1 (explosive) materials on vehicles in combination. Division 1.1 or 1.2 (explosive) materials may not be loaded into or carried on any vehicle or a combination of vehicles if:
(1) More than two cargo carrying vehicles are in the combination;

(2) Any full trailer in the combination has a wheel base of less than 184 inches;

(3) Any vehicle in the combination is a cargo tank which is required to be marked or placarded under §177.823; or

(4) The other vehicle in the combination contains any:

(i) Substances, explosive, n.o.s., Division 1.1A (explosive) material (Initiating explosive),

(ii) Packages of Class 7 (radioactive) materials bearing "Yellow III" labels,

(iii) Division 2.3, Hazard Zone A or Hazard Zone B materials or Division 6.1, PG I, Hazard Zone A materials, or

(iv) Hazardous materials in a portable tank or a DOT specification 106A or 110A tank.

(d) [Reserved]

(e) No sharp projections inside body of vehicles. No motor vehicle transporting any kind of Class 1 (explosive) material shall have on the interior of the body in which the Class 1 (explosive) materials are contained, any inwardly projecting bolts, screws, nails, or other inwardly projecting parts likely to produce damage to any package or container of Class 1 (explosive) materials during the loading or unloading process or in transit.

(f) Class 1 (explosive) materials vehicles, floors tight and lined. Motor vehicles transporting Division 1.1, 1.2, or 1.3 (explosive) materials shall have tight floors; shall have that portion of the interior in contact with the load lined with either non-metallic material or non-ferrous metals, except that the lining is not required for truck load shipments loaded by the Departments of the Army, Navy or Air Force of the United States Government provided the Class 1 (explosive) materials are of such nature that they are not liable to leakage of dust, powder, or vapor which might become the cause of an explosion. The interior of the cargo space must be in good condition so that there will not be any likelihood of containers being damaged by exposed bolts, nuts, broken side panels or floor boards, or any similar projections.

(g) No detonator assembly or booster with detonator may be transported on the same motor vehicle with any Division 1.1, 1.2 or 1.3 material (except other detonator assemblies, boosters with detonators or detonators), detonating cord Division 1.4 material or Division 1.5 material. No detonator may be transported on the same motor vehicle with any Division 1.1, 1.2 or 1.3 material (except other detonators, detonator assemblies or boosters with detonators), detonating cord Division 1.4 material or Division 1.5 material unless—

(1) It is packed in a specification MC 201 (§178.318 of this subchapter) container; or

(2) The package conforms with requirements prescribed in §173.62 of this subchapter, and its use is restricted to instances when—

(i) There is no Division 1.1, 1.2, 1.3 or 1.5 material loaded on the motor vehicle; and

(ii) A separation of 61 cm (24 inches) is maintained between each package of detonators and each package of detonating cord; or

(3) It is packed and loaded in accordance with a method approved by the Department. One method approved by the Department requires that—

(i) The detonators are in packagings as prescribed in §173.63 of this subchapter which in turn are loaded into suitable containers or separate compartments; and

(ii) That both the detonators and the container or compartment meet the requirements of the Institute of Makers of Explosives' Safety Library Publication No. 22 (IBR, see §171.7 of this subchapter).

(h) Loading within body or covered tailgate closed. Except as provided in paragraph (g) of this section,
dealing with the transportation of liquid nitroglycerin, desensitized liquid nitroglycerin or diethylene glycol dinitrate, all of that portion of the lading of any motor vehicle which consists of Class 1 (explosive) materials shall be contained entirely within the body of the motor vehicle or within the horizontal outline thereof, without overhang or projection of any part of the load and if such motor vehicle has a tailgate or tailgate, it shall be closed and secured in place during such transportation. Every motor vehicle transporting Class 1 (explosive) materials must either have a closed body or have the body thereof covered with a tarpaulin, and in either event care must be taken to protect the load from moisture and sparks, except that subject to other provisions of these regulations, Class 1 (explosive) materials other than black powder may be transported on flat-bed vehicles if the explosive portion of the load on each vehicle is packed in fire and water resistant containers or covered with a fire and water resistant tarpaulin.

(i) Class 1 (explosive) materials to be protected against damage by other lading. No motor vehicle transporting any Class 1 (explosive) material may transport a part of its load any metal or other articles or materials likely to damage such Class 1 (explosive) material or any package in which it is contained, unless the different parts of such load be so segregated or secured in place in or on the motor vehicle and separated by bulkheads or other suitable means as to prevent such damage.

(j) Transfer of Class 1 (explosive) materials en route. No Division 1.1, 1.2, or 1.3 (explosive) material shall be transferred from one container to another, or from one motor vehicle to another vehicle, or from another vehicle to a motor vehicle, on any public highway, street, or road, except in case of emergency. In such cases red electric lanterns, red emergency reflectors or red flags shall be set out in the manner prescribed for disabled or stopped motor vehicles. (See Motor Carrier Safety Regulations, part 392 of this title.) In any event, all practicable means, in addition to these hereinbefore prescribed, shall be taken to protect and warn other users of the highway against the hazard involved in any such transfer or against the hazard occasioned by the emergency making such transfer necessary.


Editorial Note: For Federal Register citations affecting §177.835, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 177.837 Class 3 materials.

(See also §177.834 (a) to (l).)

(a) Engine stopped. Unless the engine of a cargo tank motor vehicle is to be used for the operation of a pump, Class 3 material may not be loaded into, or on, or unloaded from any cargo tank motor vehicle while the engine is running. The diesel engine of a cargo tank motor vehicle may be left running during the loading and unloading of a Class 3 material if the ambient atmospheric temperature is at or below −12 °C (10 °F).

(b) Bonding and grounding containers other than cargo tanks prior to and during transfer of lading. For containers which are not in metallic contact with each other, either metallic bonds or ground conductors shall be provided for the neutralization of possible static charges prior to and during transfers of Class 3 (flammable liquid) materials between such containers. Such bonding shall be made by first connecting an electric conductor to the container to be filled and subsequently connecting the conductor to the container from which the liquid is to come, and not in any other order. To provide against ignition of vapors by discharge of static electricity, the latter connection shall be made at a point well removed from the opening from which the Class 3 (flammable liquid) material is to be discharged.

(c) Bonding and grounding cargo tanks before and during transfer of lading. (1) When a cargo tank is loaded through an open filling hole, one end of a bond wire shall be connected to the stationary system piping or integrally connected steel framing, and the other end to the shell of the cargo tank to provide a continuous electrical connection. (If bonding is to the framing, it is essential that piping and framing be electrically interconnected.) This connection must be made before any filling hole is opened, and must remain in place until after the last filling hole has been closed. Additional bond wires are not needed around All-Metal flexible or swivel joints, but are required for nonmetallic flexible connections in the stationary system piping. When a cargo tank is unloaded by a suction-piping system through an open filling hole of the cargo tank, electrical continuity shall be maintained from cargo tank to receiving tank.

(2) When a cargo tank is loaded or unloaded through a vapor-tight (not open hole) top or bottom connection, so that there is no release of vapor at a point where a spark could occur, bonding or grounding is not required. Contact of the closed connection must be made before flow starts and must not be broken until after the flow is completed.

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=56b0e0c25a2a33234affd5577875... 2/22/2011
(3) Bonding or grounding is not required when a cargo tank is unloaded through a nonvapor-tight connection into a stationary tank provided the metallic filling connection is maintained in contact with the filling hole.

(d) Unloading combustible liquids. For a cargo tank unloading a material meeting the definition for combustible liquid in §173.160(f) of this subchapter, the qualified person attending the unloading operation must remain within 45.72 meters (150 feet) of the cargo tank and 7.62 meters (25 feet) of the delivery hose and must observe both the cargo tank and the receiving container at least once every five minutes during unloading operations that take more than five minutes to complete.

[29 FR 18795, Dec. 29, 1964]

Editorial Note: For Federal Register citations affecting §177.837, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 177.838 Class 4 (flammable solid) materials, Class 5 (oxidizing) materials, and Division 4.2 (pyrophoric liquid) materials.

(See also §177.834 (a) to (j).)

(a) Loading within body or covered; tailgate closed; pick-up and delivery. All of that portion of the lading of any motor vehicle transporting Class 4 (flammable solid) or Class 5 (oxidizing) materials shall be contained entirely within the body of the motor vehicle and shall be covered by such body, by tarpaulins, or other suitable means, and if such motor vehicle has a tailboard or tailgate, it shall be closed and secured in place during such transportation. Provided, however, That the provisions of this paragraph need not apply to "pick-up and delivery" motor vehicles when such motor vehicles are used in no other transportation than in and about cities, towns, or villages. Shipment in water-tight bulk containers need not be covered by a tarpaulin or other means.

(b) Articles to be kept dry. Special care shall be taken in the loading of any motor vehicle with Class 4 (flammable solid) or Class 5 (oxidizing) materials which are likely to become hazardous to transport when wet, to keep them from being wetted during the loading process and to keep them dry during transit. Special care shall also be taken in the loading of any motor vehicle with Class 4 (flammable solid) or Class 5 (oxidizing) materials, which are likely to become more hazardous to transport by wetting, to keep them from being wetted during the loading process and to keep them dry during transit. Examples of such dangerous materials are charcoal screenings, ground, crushed, or pulverized charcoal, and lump charcoal.

(c) Loading ventilation, precautions against spontaneous combustion. Whenever a motor carrier has knowledge concerning the hazards of spontaneous combustion or heating of any article to be loaded on a motor vehicle, such article shall be so loaded as to afford sufficient ventilation of the load to provide reasonable assurance against fire from this cause; and in such a case the motor vehicle shall be unloaded as soon as practicable after reaching its destination. Charcoal screenings, or ground, crushed, granulated, or pulverized charcoal, in bags, shall be so loaded that the bags are laid horizontally in the motor vehicle, and so piled that there will be spaces for effective air circulation, which spaces shall not be less than 10 cm (3.9 inches) wide; and air spaces shall be maintained between rows of bags. Bags shall not be piled closer than 15 cm (5.9 inches) from the top of any motor vehicle with a closed body.

(d)–(e) (Reserved)

(f) Nitrate, except ammonium nitrate having organic coating, must be loaded in closed or open type motor vehicles, which must be swept clean and be free of any projections capable of injuring bags when so packaged. When shipped in open type motor vehicles, the lading must be suitably covered. Ammonium nitrate having organic coating must not be loaded in all-metal vehicles, other than those made of aluminum or aluminum alloys of the closed type.

(g) A motor vehicle may only contain 45.4 kg (100 pounds) or less net mass of material described as "Smokeless powder for small arms, Division 4.1".

(h) Division 4.2 (pyrophoric liquid) materials in cylinders. Cylinders containing Division 4.2 (pyrophoric liquid) materials, unless packed in a strong box or case and secured therein to protect valves, must be loaded with all valves and safety relief devices in the vapor space. All cylinders must be secured so that no shifting occurs in transit.
§ 177.639 Class 8 (corrosive) materials.

(See also §177.834(a) through (j).)

(a) Nitric acid. No packaging of nitric acid of 50 percent or greater concentration may be loaded above any packaging containing any other kind of material.

(b) Storage batteries. All storage batteries containing any electrolyte must be so loaded, if loaded with other lading, that all such batteries will be protected against other lading falling onto or against them, and adequate means must be provided in all cases for the protection and insulation of battery terminals against short circuits.


§ 177.840 Class 2 (gases) materials.

(See also §177.834 (a) to (j).)

(a) Floors or platforms essentially flat. Cylinders containing Class 2 (gases) materials shall not be loaded onto any part of the floor or platform of any motor vehicle which is not essentially flat; cylinders containing Class 2 (gases) materials may be loaded onto any motor vehicle not having a floor or platform only if such motor vehicle be equipped with suitable racks having adequate means for securing such cylinders in place therein. Nothing contained in this section shall be so construed as to prohibit the loading of such cylinders on any motor vehicle having a floor or platform and racks as hereinbefore described.

(1) Cylinders. Cylinders containing Class 2 gases must be securely restrained in an upright or horizontal position, loaded in racks, or packed in boxes or crates to prevent the cylinders from being shifted, overturned or ejected from the motor vehicle under normal transportation conditions. However, after December 31, 2003, a pressure relief device, when installed, must be in communication with the vapor space of a cylinder containing a Division 2.1 (flammable gas) material.

(2) Cylinders for hydrogen, cryogenic liquid. A Specification DOT-4L cylinder containing hydrogen, cryogenic liquid may only be transported on a motor vehicle as follows:

(i) The vehicle must have an open body equipped with a suitable rack or support having a means to hold the cylinder upright when subjected to an acceleration of 2 "g" in any horizontal direction;

(ii) The combined total of the hydrogen venting rates, as marked, on the cylinders transported on one motor vehicle may not exceed 60 SCF per hour;

(iii) The vehicle may not enter a tunnel; and

(iv) Highway transportation is limited to private and contract carriage and to direct movement from point of origin to destination.

(b) Portable tank containers containing Class 2 (gases) materials shall be loaded on motor vehicles only as follows:

(1) Onto a flat floor or platform of a motor vehicle.

(2) Onto a suitable frame of a motor vehicle.

(3) In either such case, such containers shall be safely and securely blocked or held down to prevent shifting relative to each other or to the supporting structure when in transit, particularly during sudden starts and stops and changes of direction of the vehicle.
(d) Engine to be stopped in cargo tank motor vehicles, except for transfer pump. No Division 2.1 (flammable gas) material shall be loaded into or on or unloaded from any cargo tank motor vehicles with the engine running unless the engine is used for the operation of the transfer pump of the vehicle. Unless the delivery hose is equipped with a shut-off valve at its discharge end, the engine of the motor vehicle shall be stopped at the finish of such loading or unloading operation while the filling or discharge connections are disconnected.

(e) Chlorine cargo tank motor vehicles shall be shipped only when equipped:

1. With a gas mask of a type approved by the National Institute of Occupational Safety and Health (NIOSH) Pittsburgh Research Center, U.S. Department of Health and Human Services for chlorine service; and

2. With an emergency kit for controlling leaks in fittings on the dome cover plate.

(f) A cargo tank motor vehicle used for transportation of chlorine may not be moved, coupled or uncoupled, when any loading or unloading connections are attached to the vehicle, nor may it be left without the power unit attached unless the vehicle is chocked or equivalent means are provided to prevent motion. For additional requirements, see §173.315(c) of this subchapter.

(g) Each liquid discharge valve on a cargo tank motor vehicle, other than an engine fuel line valve, must be closed during transportation except during loading and unloading.

(h) The driver of a motor vehicle transporting a Division 2.1 (flammable gas) material that is a cryogenic liquid in a package exceeding 450 L (119 gallons) of water capacity shall avoid unnecessary delays during transportation. If unforeseen conditions cause an excessive pressure rise, the driver shall manually vent the tank at a remote and safe location. For each shipment, the driver shall make a written record of the cargo tank pressure and ambient (outside) temperature:

1. At the start of each trip,

2. Immediately before and after any manual venting,

3. At least once every five hours, and

4. At the destination point.

(i) No person may transport a Division 2.1 (flammable gas) material that is a cryogenic liquid in a cargo tank motor vehicle unless the pressure of the lading is equal to or less than that used to determine the marked rated holding time (MRHT) and the one-way travel time (OWTT), marked on the cargo tank in conformance with §173.318(g) of this subchapter, is equal to or greater than the elapsed time between the start and termination of travel. This prohibition does not apply if, prior to expiration of the OWTT, the cargo tank is brought to full equilibrium as specified in paragraph (j) of this section.

(j) Full equilibration of a cargo tank transporting a Division 2.1 (flammable gas) material that is a cryogenic liquid may only be done at a facility that loads or unloads a Division 2.1 (flammable gas) material that is a cryogenic liquid and must be performed and verified as follows:

1. The temperature and pressure of the liquid must be reduced by a manually controlled release of vapor; and

2. The pressure in the cargo tank must be measured at least ten minutes after the manual release is terminated.

(k) A carrier of carbon monoxide, cryogenic liquid must provide each driver with a self-contained air breathing apparatus that is approved by the National Institute of Occupational Safety and Health; for example, Mine Safety Appliance Co., Model 401, catalog number 461704.
(l) Operating procedure. Each operator of a cargo tank motor vehicle that is subject to the emergency discharge control requirements in §173.315(n) of this subchapter must carry on or within the cargo tank motor vehicle written emergency discharge control procedures for all delivery operations. The procedures must describe the cargo tank motor vehicle's emergency discharge control features and, for a passive shut-down capability, the parameters within which they are designed to function. The procedures must describe the process to be followed if a facility-provided hose is used for unloading when the cargo tank motor vehicle has a specially equipped delivery hose assembly to meet the requirements of §173.315(n)(2) of this subchapter.

(m) Cargo tank motor vehicle safety check. Before unloading from a cargo tank motor vehicle containing a liquefied compressed gas, the qualified person performing the function must check those components of the discharge system, including delivery hose assemblies and piping, that are readily observable during the normal course of unloading to assure that they are of sound quality, without obvious defects, detectable through visual observation and audio awareness, and that connections are secure. This check must be made after the pressure in the discharge system has reached at least equilibrium with the pressure in the cargo tank. Operators need not use instruments or take extraordinary actions to check components not readily visible. No operator may unload liquefied compressed gases from a cargo tank motor vehicle with a delivery hose assembly found to have any condition identified in §180.416(g)(1) of this subchapter or with piping systems found to have any condition identified in §180.416(g)(2) of this subchapter.

(n) Emergency shut down. If there is an unintentional release of product to the environment during unloading of a liquefied compressed gas, the qualified person unloading the cargo tank motor vehicle must promptly shut the internal self-closing stop valve or other primary means of closure and shut down all motive and auxiliary power equipment.

(o) Daily test of off-truck remote shut-off activation device. For a cargo tank motor vehicle equipped with an off-truck remote means to close the internal self-closing stop valve and shut off all motive and auxiliary power equipment, an operator must successfully test the activation device within 18 hours prior to the first delivery of each day. For a wireless transmitter/receiver, the person conducting the test must be at least 45.72 m (150 feet) from the cargo tank and may have the cargo tank in his line of sight.

(p) Unloading procedures for liquefied petroleum gas and anhydrous ammonia in metered delivery service. An operator must use the following procedures for unloading liquefied petroleum gas or anhydrous ammonia from a cargo tank motor vehicle in metered delivery service:

(1) For a cargo tank with a capacity of 13,247.6 L (3,500 water gallons) or less, excluding delivery hose and piping, the qualified person attending the unloading operation must remain within 45.72 meters (150 feet) of the cargo tank and 7.62 meters (25 feet) of the delivery hose and must observe both the cargo tank and the receiving container at least once every five minutes when the internal self-closing stop valve is open during unloading operations that take more than five minutes to complete.

(2) For a cargo tank with a capacity greater than 13,247.6 L (3,500 water gallons), excluding delivery hose and piping, the qualified person attending the unloading operation must remain within 45.72 m (150 feet) of the cargo tank and 7.62 m (25 feet) of the delivery hose when the internal self-closing stop valve is open.

(i) Except as provided in paragraph (p)(2)(ii) of this section, the qualified person attending the unloading operation must have an unobstructed view of the cargo tank and delivery hose to the maximum extent practicable, except during short periods when it is necessary to activate controls or monitor the receiving container.

(ii) For deliveries where the qualified person attending the unloading operation cannot maintain an unobstructed view of the cargo tank, when the internal self-closing stop valve is open, the qualified person must observe both the cargo tank and the receiving container at least once every five minutes during unloading operations that take more than five minutes to complete. In addition, by the compliance dates specified in §§173.315(n)(5) and 180.405(m)(3) of this subchapter, the cargo tank motor vehicle must have an emergency discharge control capability that meets the requirements of §173.315(n)(2) or §173.315(n)(4) of this subchapter.

(q) Unloading procedures for liquefied petroleum gas and anhydrous ammonia in other than metered delivery service. An operator must use the following procedures for unloading liquefied petroleum gas or anhydrous ammonia from a cargo tank motor vehicle in other than metered delivery service:

(1) The qualified person attending the unloading operation must remain within 7.62 m (25 feet) of the
cargo tank when the internal self-closing stop valve is open.

(2) The qualified person attending the unloading operation must have an unobstructed view of the cargo tank and delivery hose to the maximum extent practicable, except during short periods when it is necessary to activate controls or monitor the receiving container.

(i) Unloading using facility-provided hoses. A cargo tank motor vehicle equipped with a specially designed delivery hose assembly to meet the requirements of §173.315(n)(2) of this subchapter may be unloaded using a delivery hose assembly provided by the receiving facility under the following conditions:

(1) The qualified person monitoring unloading must visually examine the facility hose assembly for obvious defects prior to its use in the unloading operation.

(2) The qualified person monitoring unloading must remain within arm's reach of the mechanical means of closure for the internal self-closing stop valve when the internal self-closing stop valve is open except for short periods when it is necessary to activate controls or monitor the receiving container. For chlorine cargo tank motor vehicles, the qualified person must remain within arm's reach of a means to stop the flow of product except for short periods when it is necessary to activate controls or monitor the receiving container.

(3) If the facility hose is equipped with a passive means to shut off the flow of product that conforms to and is maintained to the performance standard in §173.315(n)(2) of this subchapter, the qualified person may attend the unloading operation in accordance with the attendance requirements prescribed for the material being unloaded in §177.834 of this section.

(e) Off-truck remote shut-off activation device. For a cargo tank motor vehicle with an off-truck remote control shut-off capability as required by §§173.315(n)(3) or (n)(4) of this subchapter, the qualified person attending the unloading operation must be in possession of the activation device at all times during the unloading process. This requirement does not apply if the activation device is part of a system that will shut off the unloading operation without human intervention in the event of a leak or separation in the hose.

(l) Unloading without appropriate emergency discharge control equipment. Until a cargo tank motor vehicle is equipped with emergency discharge control equipment in conformance with §§173.315(n)(2) and 180.405(m)(1) of this subchapter, the qualified person attending the unloading operation must remain within arm's reach of a means to close the internal self-closing stop valve when the internal self-closing stop valve is open except during short periods when the qualified person must activate controls or monitor the receiving container. For chlorine cargo tank motor vehicles unloaded after December 31, 1993, the qualified person must remain within arm's reach of a means to stop the flow of product except for short periods when it is necessary to activate controls or monitor the receiving container.

(u) Unloading of chlorine cargo tank motor vehicles. After July 1, 2001, unloading of chlorine from a cargo tank motor vehicle must be performed in compliance with Section 3 of the Chlorine Institute Pamphlet 57, "Emergency Shut-off Systems for Bulk Transfer of Chlorine" (IBR, see §171.7 of this subchapter).

(Approved by the Office of Management and Budget under control number 2137-0542)


Editorial Note: For Federal Register citations affecting §177.840, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 177.841 Division 6.1 and Division 2.3 materials.

(See also §177.834 (a) to (j).)

(a) Arsenical compounds in bulk. Care shall be exercised in the loading and unloading of "arsenical dust", "arsenic trichloride", and "sodium arsenate", allowable to be loaded into self-proof, steel hopper-type or drum-type motor-vehicle bodies equipped with water-proof, dust-proof covers well secured in place on all openings, to accomplish such loading with the minimum spread of such compounds into the atmosphere by all means that are practicable; and no such loading or unloading shall be done near or adjacent to any place where there are or are likely to be, during the loading or unloading process.
assemblages of persons other than those engaged in the loading or unloading process, or upon any public highway or in any public place. Before any motor vehicle may be used for transporting any other articles, all detectable traces of arsenical materials must be removed therefrom by flushing with water, or by other appropriate method, and the marking removed.

(b) [Reserved]

(c) Division 2.3 (poisonous gas) or Division 6.1 (poisonous) materials. The transportation of a Division 2.3 (poisonous gas) or Division 6.1 (poisonous) material is not permitted if there is any interconnection between packagings.

(d) [Reserved]

(e) A motor carrier may not transport a package:

(1) Except as provided in paragraph (e)(3) of this section, bearing or required to bear a POISON or POISON INHALATION HAZARD label or placard in the same motor vehicle with material that is marked as or known to be foodstuffs, feed or edible material intended for consumption by humans or animals unless the poisonous material is packaged in accordance with this subchapter and is:

(i) Overpacked in a metal drum as specified in §173.26(c) of this subchapter; or

(ii) Loaded into a closed unit load device and the foodstuffs, feed, or other edible material are loaded into another closed unit load device;

(2) Bearing or required to bear a POISON, POISON GAS or POISON INHALATION HAZARD label in the driver's compartment (including a sleeper berth) of a motor vehicle; or

(3) Bearing a POISON label displaying the text "PG III," or bearing a "PG III" mark adjacent to the POISON label, with materials marked as, or known to be, foodstuffs, feed or any other edible material intended for consumption by humans or animals, unless the package containing the Division 6.1, Packing Group III material is separated in a manner that, in the event of leakage from packages under conditions normally incident to transportation, commingling of hazardous materials with foodstuffs, feed or any other edible material would not occur.

[29 FR 18795, Dec. 29, 1964]

Editorial Note: For Federal Register citations affecting §177.841, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 177.842 Class 7 (radioactive) material.

(a) The number of packages of Class 7 (radioactive) materials in any transport vehicle or in any single group in any storage location must be limited so that the total transport index number does not exceed 50. The total transport index of a group of packages and overpacks is determined by adding together the transport index number on the labels on the individual packages and overpacks in the group. This provision does not apply to exclusive use shipments described in §§173.441(b), 173.457, and 173.427 of this subchapter.

(b) Packages of Class 7 (radioactive) material bearing "RADIOACTIVE YELLOW-II" or "RADIOACTIVE YELLOW-III" labels may not be placed in a transport vehicle, storage location or in any other place closer than the distances shown in the following table to any area which may be continuously occupied by any passenger, employee, or animal, nor closer than the distances shown in the table to any package containing undeveloped film (if so marked), and must conform to the following conditions:

(1) If more than one of these packages is present, the distance must be computed from the following table on the basis of the total transport index number determined by adding together the transport index number on the labels on the individual packages and overpacks in the vehicle or storeroom.

(2) Where more than one group of packages is present in any single storage location, a single group may not have a total transport index greater than 50. Each group of packages must be handled and stowed not closer than 6 m (20 feet) (measured edge to edge) to any other group. The following table is to be used in accordance with the provisions of paragraph (b) of this section:
<table>
<thead>
<tr>
<th>Total transport index</th>
<th>Minimum separation distance in meters (feet) to nearest undeveloped film in various times of transit</th>
<th>Minimum distance in meters (feet) to area of persons, or minimum distance in meters (feet) from dividing partition of cargo compartments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Up to 2 hours</td>
<td>2–4 hours</td>
</tr>
<tr>
<td>None</td>
<td>0.0 (0)</td>
<td>0.0 (0)</td>
</tr>
<tr>
<td>0.1 to 1.0</td>
<td>0.3 (1)</td>
<td>0.6 (2)</td>
</tr>
<tr>
<td>1.1 to 5.0</td>
<td>0.9 (3)</td>
<td>1.2 (4)</td>
</tr>
<tr>
<td>5.1 to 10.0</td>
<td>1.2 (4)</td>
<td>1.8 (6)</td>
</tr>
<tr>
<td>10.1 to 20.0</td>
<td>1.5 (5)</td>
<td>2.4 (8)</td>
</tr>
<tr>
<td>20.1 to 30.0</td>
<td>2.1 (7)</td>
<td>3.0 (10)</td>
</tr>
<tr>
<td>30.1 to 40.0</td>
<td>2.4 (8)</td>
<td>3.4 (11)</td>
</tr>
<tr>
<td>40.1 to 50.0</td>
<td>2.7 (9)</td>
<td>3.7 (12)</td>
</tr>
</tbody>
</table>

Note: The distance in this table must be measured from the nearest point on the nearest packages of Class 7 (radioactive) material.

(c) Shipments of low specific activity materials and surface contaminated objects, as defined in §173.403 of this subchapter, must be loaded so as to avoid spillage and scattering of loose materials. Loading restrictions are set forth in §173.427 of this subchapter.

(d) Packages must be so blocked and braced that they cannot change position during conditions normally incident to transportation.

(e) Persons should not remain unnecessarily in a vehicle containing Class 7 (radioactive) materials.

(f) The number of packages of fissile Class 7 (radioactive) material in any non-exclusive use transport vehicle must be limited so that the sum of the criticality safety indices (CSIs) does not exceed 50. In loading and storage areas, fissile material packages must be grouped so that the sum of CSIs in any one group is not greater than 50; there may be more than one group of fissile material packages in a loading or storage area, so long as each group is at least 6 m (20 feet) away from all other such groups. All pertinent requirements of §§173.457 and 173.459 apply.

(g) For shipments transported under exclusive use conditions the radiation dose rate may not exceed 0.02 mSv per hour (2 mrem per hour) in any position normally occupied in the motor vehicle. For shipments transported as exclusive use under the provisions of §173.441(b) of this subchapter for packages with external radiation levels in excess of 2 mSv (200 mrem per hour) at the package surface, the motor vehicle must meet the requirements of a closed transport vehicle (see §173.403 of this subchapter). The sum of criticality safety indices (CSIs) for packages containing fissile material may not exceed 100 in an exclusive use vehicle.


§ 177.843 Contamination of vehicles.

(a) Each motor vehicle used for transporting Class 7 (radioactive) materials under exclusive use conditions in accordance with §173.427(b)(4) or (c) or §173.443(c) of this subchapter must be surveyed with radiation detection instruments after each use. A vehicle may not be returned to service until the ...
radiation dose rate at every accessible surface is 0.005 mSv per hour (0.5 mrem per hour) or less and the removable (non-fixed) radioactive surface contamination is not greater than the level prescribed in §173.443(a) of this subchapter.

(b) This section does not apply to any vehicle used solely for transporting Class 7 (radioactive) material if a survey of the interior surface shows that the radiation dose rate does not exceed 0.1 mSv per hour (10 nrem per hour) at the interior surface or 0.02 mSv per hour (2 nrem per hour) at 1 meter (3.3 feet) from any interior surface. These vehicles must be stenciled with the words "For Radioactive Materials Use Only" in lettering at least 7.6 cm (3 inches) high in a conspicuous place, on both sides of the exterior of the vehicle. These vehicles must be kept closed at all times other than loading and unloading.

(c) In case of fire, accident, breakage, or unusual delay involving shipments of Class 7 (radioactive) material, see §§171.15, 171.16 and 177.856 of this subchapter.

(d) Each transport vehicle used to transport Division 6.2 materials must be disinfected prior to reuse if a Division 6.2 material is released from its packaging during transportation. Disinfection may be by any means effective for neutralizing the material released.


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