(d) For quantity and distance purposes, detonating cord of 50 to 60 grains shall be calculated as equivalent to nine pounds of high explosives per 1,000 feet. Heavier or lighter core loads shall be rated proportionately.

12:190–5.16 Location of ammonium nitrate and blasting agents from high explosives or blasting agents

(a) Ammonium nitrate and ammonium nitrate-based blasting agents shall be separated from nearby stores of high explosives or blasting agents referred to as the "donor" by distances as provided in Table 5.16.

Table 5.16
Location of Ammonium Nitrate and Blasting Agents From High Explosives or Blasting Agents

Donor Weight		Minimum Separation Distance of Acceptor** When Barricaded feet		Minimum Thickness of Artificial
Pounds Over	Pounds Not Over	Ammonium Nitrate	Blasting Agent	Barricades Inches
0	100	3	11	12
100	300	4	14	12
300	600	5	18	12
600	1,000	6	22	12
1,000	1,600	7	25	12
1,600	2,000	8	29	12
2,000	3,000	9	32	15
3,000	4,000	10	36	15
4,000	6,000	11	40	15
6,000	8,000	12	43	20
8,000	10,000	13	47	20
10,000	12,000	14	50	20
12,000	16,000	15	54	25
16,000	20,000	16	58	25
20,000	25,000	18	65	25
25,000	30,000	19	68	30
30,000	35,000	20	72	30
35,000	40,000	21	76	30
40,000	45,000	22	79	35
45,000	50,000	23	83	35
50,000	55,000	24	86	35
55,000	60,000	25	90	35
60,000	70,000	26	94	40
70,000	80,000	28	101	40
80,000	90,000	30	108	40
90,000	100,000	32	115	40
100,000	120,000	34	122	50
120,000	140,000	37	133	50
140,000	160,000	40	144	50
160,000	180,000	44	158	50
180,000	200,000	48	173	50
200,000	220,000	52	187	60
220,000	250,000	56	202	60
250,000	275,000	60	216	60
275,000	300,000	64	230	60

* High explosives and blasting agents are donors. Ammonium nitrate, by itself, is not considered to be a donor.
** Ammonium nitrate and blasting agents are acceptors.

(b) If storage of ammonium nitrate is located within the sympathetic detonation distance of explosives or blasting agents, one-half the mass of the ammonium nitrate shall be included in the mass of the donor when calculating separation distances.

(c) When ammonium nitrate or a blasting agent or both is not barricaded, the distances shown in Table 5.16 shall 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 storage is in bullet-resistant magazines recommended for explosives or where the storage is protected by a bullet-resistant wall, the distances and barricade thicknesses need not exceed those prescribed in Table 5.10.

(d) Table 5.16 shall apply to the blasting agents which pass the insensitivity test in the definition of blasting agent of N.J.A.C. 12:190–2.1.

(e) Earthen dikes, sand dikes, or enclosures filled with the required minimum thickness of earth or sand shall be acceptable artificial barricades. Hills or timber of sufficient density shall be acceptable natural barricades.

(f) For determining the distances to be kept from inhabited buildings, passenger railways, and public highways, Table 5.10 shall apply. Ammonium nitrate, when stored with blasting agents or explosives, may be counted at one half its actual weight.

12:190–5.17 Storage in general

(a) All explosive materials shall be kept in locked magazines as prescribed by this subchapter unless they are:

1. In the process of manufacture;

2. Being physically handled in the operating process of a permit holder or user;

3. Being used; or

4. Being transported to a place of storage or used by a permit holder.

(b) No explosives shall be stored in a residence, except when approved by the Commissioner.

(c) No person shall store any explosive materials in a manner not in conformance with this subchapter. The storage standards prescribed by this subchapter confer no rights or privileges to store explosive materials in a manner contrary to 27 CFR Part 181.

(d) No more than one indoor magazine shall be kept in any one building, except that two may be kept in the same building when one is used for the storage of blasting caps, squibs, or similar items and the other magazine is used for the storage of other high explosives or low explosives. Two indoor magazines within the same building shall be separated by a distance of not less than 10 feet.

(e) Combustible material shall not be permitted within 50 feet of outdoor magazines and 25 feet of indoor magazines.

12:190–5.18 Storage within magazines

(a) All magazines shall be in the charge of a competent person at least 21 years of age.

(b) Explosives shall not be stored in any amount exceeding the quantity stated on the storage permit.

(c) Explosives may be stored unattended in types 1, 2, and 4 magazines.

(d) High explosives in excess of 50 pounds or more than 5,000 blasting caps shall not be stored in a type 2 indoor magazine.

(e) Explosives shall not be stored unattended in type 3 magazines.

(f) Low explosives in excess of 50 pounds shall not be stored in a type 4 indoor magazine. This quantity limit shall not apply to smokeless powder which is covered in N.J.A.C. 12:190–10.2.

(g) Any person storing explosive materials shall open and inspect his magazines at least every three days. This inspection need not be an inventory, but shall be sufficient to determine whether there has been unauthorized removal of their contents.

(h) A permittee who intends to make modifications to or changes in a magazine, shall report such intention to the Office of Safety Compliance, prior to modifying the magazine.

(i) Acquired additional magazines shall not be utilized without obtaining a valid permit for such magazine.

(j) Plans shall be submitted for approval, when required by the Commissioner, before magazines are constructed and used.

(k) Explosives materials within type 1, 2, or 4 magazines shall not be placed directly against interior walls and shall 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 shall be used.

(*l*) Containers of explosive materials shall be stored by being laid flat with top sides up. Corresponding classes as defined in 40 CFR Part 173, grades, and brands of explosives shall be stored together within a magazine in such a manner that grade, brand, and USDOT class marks are easily visible upon inspection. Stocks of explosive materials shall be stored so as to be easily counted and checked.

(m) Except with respect to fiberboard or other nonmetal containers, containers of explosive materials shall not be unpacked or repacked inside a magazine or within 50 feet of a magazine, and shall not be unpacked or repacked near other explosive materials. Containers of explosives materials shall be securely closed while being stored.

(n) Tools used for opening or closing containers of explosive materials shall 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 shall be used for opening or closing wood containers of explosive materials. Metal tools other than nonsparking transfer conveyors shall not be stored in any magazine containing high explosives.

12:190–5.19 Storage in tunnels

(a) Explosives shall not be stored in tunnels where persons are located, unless such storage is approved.

(b) Immediately after the completion of explosive loading operations, all unused explosives in tunnels shall be removed to magazines complying with this subchapter.

12:190–5.20 Storage for underground mines

(a) This section shall apply to storage of explosives for underground mining operations.

(b) "Container" means in this section a receptacle to move explosives in underground mining operations from magazines to the work face in the mine.

(c) A magazine for explosives shall not be permitted underground, until the underground workings are developed to a point where the magazine:

1. Is at least 300 feet from any shaft;

2. Is at least 15 feet from any haulage way or travel way;

3. Has a travel way to the nearest means of egress with at least two sharp turns;

4. Could impede excavation of all persons in the event of accidental detonation of the explosives in the magazine; and

5. Is at least 50 feet from any magazine containing blasting caps.

(d) A type 5 magazine shall be used for the storage of explosives underground.

(e) The amount of explosives stored underground in a mine in a magazine shall not exceed 5,000 pounds.

(f) Any explosives in excess of the amount required for one day's underground mining operations when stored underground in a mine shall be stored in a Type 5 approved magazine constructed in accordance with (i) below.

(g) Daily supplies of explosives within a mine at any working place shall be kept in approved containers constructed in accordance with (j) below.

(h) Prior to closing any part of a mine, all explosives contained therein shall be removed.