

WAC 296-52-67130 Fixed location mixing. (1) Building location.

Buildings or other facilities used for manufacturing blasting agents must meet the separation distance requirements of Table H-21 for inhabited buildings, passenger railroads, and public highways.

(2) **Building construction.** Buildings used for mixing blasting agents must be constructed of noncombustible material or sheet metal on wood studs and be well ventilated.

(3) **Determining distance.** When determining the distances separating highways, railroads, and inhabited buildings from potential explosions (Table H-20), the sum of all masses that may propagate (i.e., lie at distances less than specified in Table H-22) from either individual or combined donor masses are included in the sum. However, when the ammonium nitrate is included, only fifty percent of its weight must be used because of its reduced blast effects.

(4) **Heat sources.**

(a) **Internal heating units.** Properly designed and located heating units that do not depend on combustion processes may be used in the building.

(b) **External heating units.** All direct sources of heat must be located outside the mixing building.

(5) **Mixing plant floors** must be made of nonabsorbent materials such as concrete.

(6) **Electrical equipment.**

(a) Electrical switches, controls, motors, and lights located in the mixing room must:

(i) Comply with the requirements of WAC 296-800-280.

(ii) Be located outside the mixing room.

(b) The frame of the mixer and all other equipment must be:

(i) Electrically bonded.

(ii) Provided with a continuous path to ground.

(7) **Internal combustion engines.**

(a) **Location.** All internal combustion engines used for electric power generation must be:

(i) Located outside the mixing plant building; or

(ii) Properly ventilated and isolated by a firewall.

(b) **Exhaust systems.** Engine exhaust systems must be positioned so spark emission does not become a hazard to any material in or adjacent to the plant.

(8) **Mixing equipment.** Equipment used for mixing blasting agents must comply with the following:

(a) **Design.** The design of the mixer must:

(i) Minimize the possibility of frictional heating, compaction, and confinement;

(ii) Have the bearings and drive assemblies mounted outside the mixer and protected against the accumulation of dust;

(iii) Have the surfaces accessible for cleaning.

(b) **Construction.** Mixing and packaging equipment must be constructed of materials compatible with the fuel ammonium nitrate composition.

(c) **Fire precautions.** The following fire precautions must be followed:

(i) **Mixer fuel oil flow.** In case of fire:

(A) Appropriate means to prevent the flow of fuel oil to the mixer must be provided.

(B) An automatic spring-loaded shutoff valve with fusible link must be installed in gravity flow systems.

(ii) **Flame/spark producing devices.** Smoking, matches, open flames, spark-producing devices, and firearms (except firearms carried by law enforcement bomb squad members or qualified guards), are not allowed inside or within fifty feet of any facility used for mixing blasting agents.

(9) **Blasting agent compositions.** The following are requirements for determining blasting agent compositions:

(a) **Determining sensitivity.** The sensitivity of the blasting agent must be determined by means of a Number 8 test detonator at regular intervals and after every change in formulation.

(b) **Handling precautions.** Precautions must be taken when handling:

(i) Small particle oxidizers, such as crushed ammonium nitrate prills or fines, may be more sensitive than coarser products and must be handled with greater care;

(ii) Solid fuels must be used in a manner to minimize dust explosion hazards;

(iii) Metal powders, such as aluminum, must be:

(A) Kept dry; or

(B) Stored in moisture resistant or weather tight containers or bins.

(c) **Use restrictions.** The following cannot be used:

(i) Crude and crankcase oil;

(ii) Hydrocarbon liquid fuel with a flash point lower than the 125°F minimum for Number 2 diesel fuel oil; or

(iii) Peroxides and chlorates.

(10) **Fuel oil storage.**

(a) **Facilities.** Fuel oil storage facilities must be:

(i) Independent structures; or

(ii) Located at a site away from the manufacturing building.

(b) **Surrounding area.** In order to prevent oil from draining toward a manufacturing building in the event of a tank rupture, the surrounding grounds must slope away from the building.

(11) **Safety precautions.** Safety precautions at mixing plants must include these requirements:

(a) **Floor construction.** Floors must be constructed to eliminate floor drains and piping where molten materials could flow and be confined, in case of fire.

(b) **Mixing/packaging room.** The floors and equipment of the mixing and packaging room must be cleaned regularly and thoroughly to prevent accumulation of oxidizers, fuels, and other sanitizers.

(c) **Housekeeping.** The following housekeeping requirements must be followed:

(i) **Mixing plant.** The mixing and packaging plant must:

(A) Be cleaned regularly and thoroughly to prevent excessive accumulation of dust.

(B) Safely dispose of empty ammonium nitrate bags daily.

(ii) **Surrounding area.** The land surrounding the mixing plant must be kept clear of brush, dried grass, leaves, and other materials for a minimum of twenty-five feet.

(d) **Welding.**

(i) Welding or open flames are not permitted in or around the mixing or storage area of the plant unless:

(A) The equipment or area has been completely washed; and

(B) All oxidizer material has been removed.

(ii) Before welding or repairing hollow shafts:

- (A) Oxidizer materials must be removed from the inside and outside of the shaft; and
- (B) The shaft must be vented with a minimum 1/2-inch diameter opening.
- (e) **Explosives.** Explosives are not permitted inside or within fifty feet of any facility used for mixing blasting agents.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, and 49.17.060. WSR 17-16-132, § 296-52-67130, filed 8/1/17, effective 9/1/17. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 02-03-125, § 296-52-67130, filed 1/23/02, effective 3/1/02.]