

**Chapter 16-201 WAC**  
**FERTILIZER BULK STORAGE AND OPERATIONAL AREA CONTAINMENT RULES**

Last Update: 1/15/20

**WAC**

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**WAC 16-201-010 Definitions.** The definitions set forth in this section shall apply throughout this chapter, unless the context otherwise requires.

(1) **"Approved air gap"** means a physical separation between the free-flowing end of a water supply pipeline and the overflow rim of an open or nonpressurized receiving vessel. To be an approved air gap, the separation must be at least:

(a) Twice the diameter of the supply piping measured vertically from the overflow rim of the receiving vessel, and in no case be less than one inch, when unaffected by vertical surfaces (sidewalls): or

(b) Three times the diameter of the supply piping, if the horizontal distance between the supply pipe and a vertical surface (sidewall) is less than or equal to three times the diameter of the supply pipe, or if the horizontal distance between the supply pipe and intersecting vertical surfaces (sidewalls) is less than or equal to four times the diameter of the supply pipe and in no case less than one and one-half inches.

(2) **"Approved reduced pressure principle backflow prevention assembly (RPBA)"** means an RPBA of a make, model and size that is approved by the Washington state department of health.

(3) **"Appurtenances"** means all valves, pumps, fittings, pipes, hoses and metering devices which are connected to a storage container, or which are used to transfer a material into or out of such storage container.

(4) **"Bulk fertilizer"** means commercial fertilizer distributed in a nonpackage form such as, but not limited to, tote bags, tanks, trailers, spreader trucks, and railcars.

(5) "**Certified engineer**" means a licensed professional engineer, registered in the state of Washington in the discipline in which he/she is practicing.

(6) "**Commercial fertilizer**" means any substance containing one or more recognized plant nutrients and which is used for its plant nutrient content and/or which is designated for use or claimed to have value in promoting plant growth, and shall include limes, gypsum, and manipulated animal and vegetable manures. It shall not include unmanipulated animal and vegetable manures and other products exempted by the department by rule: Provided, That for the purpose of this chapter calcium carbonate (lime) and anhydrous ammonia are exempt: Provided further, That this rule does not apply to materials (including but not limited to compost, biosolids, or municipal sewage sludge), or to products derived therefrom, which are regulated pursuant to the provisions of chapter 70.95 or 70.95J RCW, or rules adopted thereunder.

(7) "**Department**" means the Washington state department of agriculture.

(8) "**Discharge**" means a spill, leak, or release, accidental or otherwise, from a storage container, container or appurtenance. It does not include a fully contained transfer of fertilizer made pursuant to sale, storage, distribution or use.

(9) "**Dry fertilizer**" means fertilizer in solid form.

(10) "**Liquid fertilizer**" means fertilizer in liquid form, and includes solutions, emulsions, suspensions and slurries. Liquid fertilizer does not include anhydrous ammonia.

(11) "**Not technically feasible**" means compliance is not physically or technically possible or feasible, and/or compliance cannot be achieved without compromising operational safety, and/or significantly compromising operational access. Monetary cost of compliance alone, shall not be sufficient for the department to determine that compliance is not technically feasible.

(12) "**Operational area**" means an area or areas at a fertilizer bulk permanent storage facility where fertilizers are transferred, loaded, unloaded, mixed, repackaged, refilled or where fertilizers are cleaned, washed or rinsed from containers or application, handling, storage or transportation equipment.

(13) "**Operational area containment**" means any structure or system designed and constructed to intercept and contain discharges, including storage container or equipment wash water, rinsates, and rainwater from the operational area(s) of fertilizer bulk storage facilities.

(14) "**Permanent storage facility**" means a location at which undivided quantities of liquid bulk fertilizer in excess of five hundred U.S. gallons or undivided quantities of dry bulk fertilizer in excess of fifty thousand pounds is held in storage: Provided, That temporary field storage is not considered a permanent storage facility.

(15) "**Primary containment**" means the storage of liquid or dry bulk fertilizer in storage containers at a permanent storage facility.

(16) "**Rinsate**" means the liquid generated from the rinsing of any equipment or container that has come in direct contact with any fertilizer, including: Recovered sedimentation, washwater, contaminated precipitation, or other contaminated debris.

(17) "**Secondary containment**" means a device or structure designed, constructed, and maintained to hold or confine a discharge of a liquid fertilizer from a permanent storage facility.

(18) "**Storage container**" means a container, including a railcar, nurse tank or other mobile container, that is used or intended for the storage of bulk liquid or dry fertilizer. It does not include a mobile

container at a storage facility for less than fifteen days if this storage is incidental to the loading or unloading of a storage container at the bulk fertilizer storage facility. Storage container does not include underground storage containers or surface impoundments such as lined ponds or pits.

(19) **"Substantially similar protection"** means alternative containment and management practices that prevent or control releases to the environment to the same or similar degree as the protections afforded by full compliance with this chapter.

(20) **"Temporary field storage"** means a storage container with the capacity to store no more than ten thousand gallons of liquid bulk fertilizer and that is used for the temporary storage of liquid bulk fertilizer during application. Liquid bulk fertilizer application tanks directly attached to an apparatus for the purpose of fertigation are exempt from this chapter.

(21) **"Washwater"** means the liquid generated from the rinsing of the exterior of any equipment, containers or secondary containment or operational areas which have or may have come in direct contact with any fertilizer.

[Statutory Authority: Chapters 15.54 and 34.05 RCW. WSR 03-23-130, § 16-201-010, filed 11/19/03, effective 12/20/03. Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-010, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-010, filed 11/2/93, effective 3/1/94.]

#### **WAC 16-201-020 Secondary containment of liquid bulk fertilizers**

—**General requirements.** Primary storage of bulk liquid fertilizers at a permanent storage facility shall be located within secondary containment designed to prevent the release of discharged fertilizers. Secondary containment shall consist of:

(1) A wall and liner with a sloped floor as provided in WAC 16-201-028 and 16-201-030; or

(2) A prefabricated facility as provided in WAC 16-201-040.

(3) Secondary containment in operation prior to March 1, 1994, which does not have sloped floors shall be exempt from this section: Provided, That upon alteration to the secondary containment or increase of storage volume, the secondary containment shall be brought into full compliance with this section.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-020, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-020, filed 11/2/93, effective 3/1/94.]

#### **WAC 16-201-025 Secondary containment of liquid bulk fertilizers**

—**Capacity.** (1) Secondary containment shall contain at least one hundred twenty-five percent of the volume of the largest storage container within the area plus the displacement of all other tanks, appurtenances, and other items within the containment area: Provided, That permanent storage facilities that have tanks of one hundred thousand gallons or greater capacity may use the following method to meet the capacity requirement: Secondary containment shall contain at least one

hundred ten percent of the volume of the largest storage container within the area plus the displacement of all other tanks, appurtenances, and other items within the area plus sufficient volume to contain the precipitation from a twenty-five year, twenty-four hour storm event.

(2) If the secondary containment is located indoors or under a roof to prevent accumulation of rainfall, the area shall contain at least one hundred ten percent of the volume of the largest storage container plus the displacement of all other tanks, appurtenances and other items within the containment area.

(3) Secondary containment in operation prior to March 1, 1994, having a capacity of at least one hundred ten percent of the volume of the largest storage container within the area plus the displacement of all other tanks, appurtenances, and other items within the containment area shall be considered to be in compliance with this section: Provided, That upon alteration to the secondary containment or increase of storage container volume the secondary [containment] shall be brought into full compliance with the specific capacity requirement of this section.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-025, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-025, filed 11/2/93, effective 3/1/94.]

**Reviser's note:** RCW 34.05.395 requires the use of underlining and deletion marks to indicate amendments to existing rules, and deems ineffectual changes not filed by the agency in this manner. The bracketed material in the above section does not appear to conform to the statutory requirement.

**WAC 16-201-028 Secondary containment of liquid bulk fertilizers**  
**—Walls and floors.** (1) The secondary containment floor shall slope to one or more liquid tight collection points or sumps that allows spilled or deposited materials to be easily removed.

(2) The walls and floor of secondary containment shall be constructed of steel, poured reinforced concrete, precast concrete modules, solid masonry, or other materials or combination of materials that:

(a) Shall be designed to withstand a full hydrostatic head of any discharged liquid;

(b) Shall have sufficient thickness and chemical resistance to contain a release until it is recovered;

(c) Shall be constructed and maintained to a permeability standard of  $1 \times 10^{-6}$  cm/sec as determined by ASTM test method D-5084 Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter or other test method approved by the department;

(d) Shall have sufficient structural strength to maintain the containment's integrity under normally anticipated loadings;

(e) Shall be chemically compatible with the materials being stored; and

(f) Shall be properly sealed to prevent leakage.

(3) Any piping through the outside walls of secondary containment shall be installed and maintained such that the structural integrity of the wall is preserved and in such a manner as to prevent leaks.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-028, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800

and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-028, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-029 Secondary containment of liquid bulk fertilizer—Earthen walls.** (1) Secondary containment walls constructed of earth shall be allowed at permanent storage facilities when a liner is used: Provided, That only permanent storage facilities having storage containers of one hundred thousand gallons or greater capacity can use clay liners.

(2) Earthen walls shall have a horizontal to vertical slope of at least three to one, unless a steeper slope is consistent with good engineering practice, and shall be packed and protected from erosion.

(3) The top of earthen walls shall be no less than two feet six inches wide.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-029, filed 11/17/00, effective 12/18/00.]

**WAC 16-201-030 Secondary containment of liquid bulk fertilizers—Lining.** If a liner is required to meet the standards set forth in WAC 16-201-028, then it must be constructed as follows:

(1) Synthetic liners:

(a) Synthetic liners shall be chemically compatible with the materials being stored within the permanent storage facility and have a minimum thickness of thirty mils +/-1 mil. A written confirmation of compatibility and a written estimate of the life of the liner from the manufacturer shall be kept on file at the permanent storage facility or the nearest local office from which the permanent storage facility is administered.

(b) Synthetic liners shall be installed under the supervision of a qualified representative of the manufacturer, a contractor certified by the manufacturer, or a certified engineer. All field constructed seams shall be tested, and repaired if necessary, in accordance with the manufacturer's recommendations.

(2) Permanent storage facilities with storage containers of one hundred thousand gallons or greater may use clay soil liners: Provided, That:

(a) The surface soil shall be sealed, including the berm of an earthen dike, with a sealing agent such as sodium bentonite, attapul-gite or a similar clay material[;]

(b) The liner shall be constructed in accordance with reliable civil engineering practices, to achieve a coefficient of permeability not to exceed  $1 \times 10^{-6}$  cm/sec and shall be maintained at  $1 \times 10^{-5}$  cm/sec with a thickness of not less than six inches[.][;]

(c) The floor and internal walls of the containment area shall have a protective barrier to prevent desiccation, evaporation, freeze, thaw, or other physical damage.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-030, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-030, filed 11/2/93, effective 3/1/94.]

**Reviser's note:** RCW 34.05.395 requires the use of underlining and deletion marks to indicate amendments to existing rules, and deems ineffectual changes not filed by the agency in this manner. The bracketed material in the above section does not appear to conform to the statutory requirement.

**WAC 16-201-031 Secondary containment of liquid bulk fertilizers**  
**—Floors and linings—Alternative procedures.** A floor and/or liner need not be installed directly under a storage container having a capacity of one hundred thousand gallons or more which has been constructed on site and put into use prior to March 1, 1994: Provided, That one of the following alternative procedures are complied with, certified to in writing by an official of the company which owns the storage container, and the certificate is filed with the department:

(1) Alternative 1 is as follows:

(a) A second bottom made of steel shall be constructed for the storage container. The second bottom shall be placed over the original bottom and separated from the original bottom by a support medium designed to provide for leak detection between the two bottoms and properly support the new bottom. This support layer may consist of gravel, sand, concrete (grooved to provide leak detection), steel or other grillage, wire mesh, etc. as dictated by good engineering practice.

(b) The original bottom of the storage container shall be tested for leaks before the support layer and second bottom are installed. A record of the test shall be kept on file at the permanent storage facility or at the nearest local office from which the permanent storage facility is administered.

(c) The newly constructed bottom shall be tested for leaks before any liquid fertilizer is stored on the newly constructed bottom. A record of the test shall be kept on file at the permanent storage facility or at the nearest local office from which the permanent storage facility is administered.

(d) There shall be a system to readily detect leaks through the newly constructed bottom into the support layer. Leak tests should be conducted at not more than six-month intervals with a record of such tests to be kept at the permanent storage facility or at the nearest local office from which the permanent storage facility is administered.

(2) Alternative 2 is as follows:

(a) The storage container shall be emptied, cleaned, and tested for leaks. The walls and floor of the storage container shall be tested to assure that welds and thickness of steel plates are sound and adequate to contain the fertilizers. A record of the inspection, test results, and of any repairs made shall be submitted to the department and maintained by the owner or operator.

(b) The interior floor and twelve inches up the wall of the storage container shall be coated with a liner to inhibit corrosion. A record of this procedure shall be submitted to the department and maintained by the owner or operator.

(c) A test for leaks and liner deterioration or metal corrosion shall be conducted every five years thereafter. A record of the test findings and of indicated repairs and maintenance shall be maintained by the owner or operator.

(3) Alternative 3 is as follows:

(a) Monitoring devices shall be installed in angled borings under each storage container. These monitoring devices shall constitute a leak detection system for each storage container in advance of the point at which any leak would reach groundwater.

(b) The number, length, and depth of each boring shall be determined on the basis of site characteristics. The array of monitoring devices under each storage container shall constitute the best practical early warning detection system for storage container leakage.

(c) Each monitoring plan under alternative 3 shall be implemented only upon review and written approval of the department and shall include inspection/monitoring schedules.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-031, filed 11/17/00, effective 12/18/00.]

**WAC 16-201-040 Secondary containment of liquid bulk fertilizers —Prefabricated facilities.** (1) Prefabricated [secondary containment] shall be composed of a rigid prefabricated basin having both a base and walls constructed of steel or synthetic materials which are resistant to corrosion, puncture or cracking. Materials used in the secondary containment shall be chemically compatible with the products being stored within the secondary containment. A written confirmation of compatibility from the basin manufacturer shall be kept on file at the permanent storage facility or at the nearest local office from which the permanent storage facility is administered.

(2) The prefabricated secondary containment shall be designed and installed to withstand all foreseeable loading conditions, including the tank load and a full hydrostatic head of any discharged liquid. Multiple basins connected to provide the capacity required in WAC 16-201-025 shall be connected in a manner which assures an adequate transfer of discharged liquid between basins.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-040, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-040, filed 11/2/93, effective 3/1/94.]

**Reviser's note:** RCW 34.05.395 requires the use of underlining and deletion marks to indicate amendments to existing rules, and deems ineffectual changes not filed by the agency in this manner. The bracketed material in the above section does not appear to conform to the statutory requirement.

**WAC 16-201-050 Secondary containment of liquid bulk fertilizers —Discharge outlets or valves.** Secondary containment, including prefabricated secondary containment, shall not have discharge outlets or valves. Discharge outlets or valves on existing secondary containment shall be sealed. Secondary containments may be interconnected.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-050, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-050, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-060 Secondary containment of liquid bulk fertilizers —Storage with other material.** (1) No material may be stored within liquid fertilizer secondary containment unless the material is compatible with all other material stored within the secondary containment. For the purposes of this section, compatible means that the materials, when mixed together, will not react in a manner that will cause a human health or environmental hazard.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-060, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800

and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-060, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-070 Secondary containment of liquid bulk fertilizers—Precipitation accumulations.** Precipitation may not be allowed to accumulate in secondary containment to the point where it:

(1) Reduces the capacity of the secondary containment below one hundred ten percent of the volume of the largest storage container within the area plus the displacement of all other storage containers, appurtenances, and other items within the containment area;

(2) Increases corrosion of storage containers or appurtenances;  
or

(3) Impairs the stability of storage containers.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-070, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-070, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-080 Secondary containment of liquid bulk fertilizers—Recovery of discharges.** Discharges within secondary containment shall be immediately recovered.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-080, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-080, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-100 Primary containment of liquid bulk fertilizers—Permanent storage facility.** Permanent storage facility general requirements:

(1) Storage containers and appurtenances shall be constructed, installed and maintained so as to prevent the discharge of liquid fertilizer.

(2) Storage containers and appurtenances shall be constructed of materials which are resistant to corrosion, puncture or cracking.

(3) Materials used in the construction or repair of storage containers and appurtenances may not be of a type which react chemically or electrolytically with stored liquid fertilizer in a way which may weaken the storage container or appurtenances, or create a risk of discharge.

(4) Metals used for valves, fittings and repairs on metal storage containers shall be compatible with the metals used in the construction of the storage container, so that the combination of metals does not cause or increase corrosion which may weaken the storage container or its appurtenances, or create a risk of discharge.

(5) Storage containers and appurtenances shall be designed to handle all operating stresses, taking into account static head, pressure build up from pumps and compressors, and any other mechanical stresses to which the storage containers and appurtenances may be subject in the foreseeable course of operations.

(6) Every fertilizer storage container connection, except a safety relief valve connection, shall be equipped with a manual shut-off

valve located on the storage container or at a distance from the storage container dictated by standard engineering practice.

(7) Appurtenances shall be adequately supported to prevent sagging and possible breakage because of gravity and other forces encountered in the ordinary course of operation.

(8) Fertilizer storage containers and appurtenances shall be protected against reasonably foreseeable risks of damage by trucks and other moving vehicles or objects.

(9) Tanks designed as underground storage tanks shall not be used as above ground storage tanks for fertilizer unless they are designed and approved for above ground use or have been inspected and approved by a certified engineer. A record of the inspection and approval shall be maintained as a permanent record.

[Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-100, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-110 Primary containment of liquid bulk fertilizers—Prohibition against underground storage.** No person shall store liquid bulk fertilizer, fertilizer spills or rinsates in an underground storage container or surface impoundment, such as a lined pond or pit. A watertight catch basin or sump used for the temporary collection of rinsate or runoff from transfer and loading areas is exempt from this section.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-110, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-110, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-120 Primary containment of liquid bulk fertilizers—Abandoned storage containers.** (1) Storage containers used at a permanent storage facility, or used for temporary field storage to hold liquid bulk fertilizer or fertilizer rinsate are considered abandoned if they have been out of service for more than six consecutive months because of a weakness or leak, or have been out of service for any reason for more than two years without an integrity test having been performed.

(2) Abandoned underground storage containers containing fertilizer which meet the definition of hazardous substance underground storage tank system in chapter 173-360 WAC are subject to the applicable requirements in that chapter.

(3) Abandoned above ground storage containers shall be thoroughly cleaned. All hatches on the storage containers shall be secured and all valves or connections shall be severed or plugged with vents being left functional.

(4) Abandoned storage containers shall be posted with a clearly legible tag with the words "Out of Service."

(5) Abandoned storage containers shall not be allowed to be put back in service on the same site without first installing secondary containment protection.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-120, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800

and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-120, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-130 Primary containment of liquid bulk fertilizers—Anchoring of storage containers.** Storage containers shall be secured, if necessary, to prevent flotation or instability which might occur as a result of liquid accumulations within a secondary containment facility.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-130, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-130, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-140 Primary containment of liquid bulk fertilizers—Filling storage containers.** Storage containers may not be filled beyond the capacity for which they are designed, taking into account the density of the liquid being stored and thermal expansion during storage.

[Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-140, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-150 Primary containment of liquid bulk fertilizers—Liquid level gauging device.** (1) Every storage container shall be equipped with a liquid level gauging device by which the level of liquid in the storage container can be readily and safely determined.

(2) A liquid level gauging device is not required if the level of fluid in a storage container can be readily and reliably measured by other means.

(3) Liquid level gauging devices shall be secured, in a safe manner, to protect against breakage or vandalism which may result in a discharge.

(4) External sight gauges are prohibited unless they are equipped with an automatic shut-off valve.

[Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-150, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-160 Primary containment of liquid bulk fertilizers—Security.** All bulk fertilizer storage containers and appurtenances shall be fenced or otherwise secured to provide reasonable protection against vandalism or unauthorized access. Valves on storage containers shall be closed and locked or otherwise secured when left unattended. Locks on end valves shall be considered adequate security for containers and appurtenances. For purposes of this section, unattended means there is no employee on the property for a period of twelve hours or longer.

[Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-160, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-170 Primary containment of bulk fertilizers—Labeling.** (1) All bulk fertilizer storage containers shall be clearly and conspicuously labeled to identify the contents.

(2) All bulk fertilizer storage containers shall bear a label or placard in accordance with Uniform Fire Code Standard No. 79-3, identifying the material therein.

(3) All bulk fertilizer storage containers used for temporary field storage shall be labeled with the owner's name, the capacity of the tank, and an identifying number. Lettering shall be a minimum of two inches in height and in a color contrasting to the background.

(4) All bulk fertilizer storage containers used for temporary field storage shall have attached, in a weather-proof enclosure, a record of the date the storage container was put in place.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-170, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-170, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-180 Primary containment of liquid bulk fertilizers—Temporary field storage.** (1) Temporary field storage shall comply with the following sections: WAC 16-201-100, 16-201-110, 16-201-120, 16-201-140, 16-201-150, and 16-201-170.

(2) Temporary field storage shall be inspected for leakage and soundness daily when in use.

(3) Valves on temporary field storage shall be closed and locked or otherwise secured when left unattended.

(4) The physical location and identifying number of all temporary field storage shall be provided to the department upon request.

(5) Once temporary field storage is set in place, it may remain at that location without secondary containment for a maximum of twenty-one consecutive days commencing from the date of placement in any six-month period, after which it must be removed. Upon written request, the department may issue a permit to extend the time temporary field storage may be in one place during any six-month period due to weather related conditions. No advisory group review, pursuant to WAC 16-201-280(2) is available for this type of permit.

[Statutory Authority: Chapters 15.54 and 34.05 RCW. WSR 03-23-130, § 16-201-180, filed 11/19/03, effective 12/20/03. Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-180, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-180, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-190 Operational area containment of liquid fertilizers—Permanent storage facility.** (1) All operational area activities shall take place on or within operational area containment: Provided, That during the unloading or loading of railcars, marine vessels, or manned trucks when product is unloaded from direct shipments from manufacturers, individual basins or portable storage containers shall be used to recover spillage and leakage from transfer connections and pumps.

(2) Operational area containment shall be designed and constructed to contain fertilizers, rinsates, washwater and other materials spilled or deposited during mixing, loading, unloading, draining, rinsing and washing activities.

(3) The walls and floor of operational area containment shall be constructed of steel, poured reinforced concrete, precast concrete modules, solid masonry, or other materials or combination of materials that:

(a) Are designed to withstand a full hydrostatic head of any discharged liquid;

(b) Have sufficient thickness and chemical resistance to contain a release until it is recovered;

(c) Are constructed and maintained to a permeability standard of  $1 \times 10^{-6}$  cm/sec as determined by ASTM test method D-5084 Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter or other test method approved by the department.

(4) If synthetic materials are used in construction they shall be chemically compatible with the products handled at the site. A written confirmation of compatibility from the manufacturer shall be kept on file at the site or the nearest location from which the site is administered.

(5) Operational area containment shall be constructed to withstand the weight of any vehicles or storage containers which will be on it.

(6) Operational area containment shall be constructed with sufficient surface area, using curbs or other means, to prevent any discharge from leaving the containment area. The operational area containment shall have a capacity of at least fifteen hundred gallons. If no storage container or mobile storage container used at the operational area containment to transfer liquid bulk fertilizers has a capacity of more than one thousand gallons, the operational area containment shall be of adequate size and design to contain one hundred twenty-five percent the capacity of the largest storage container, or mobile storage container used.

(7) Operational area containment shall slope to one or more liquid tight collection points or sumps that allows spilled or deposited materials to be easily recovered.

[(8)] An above ground storage container may be used in conjunction with the operational area containment to meet the capacity requirement. If an above ground storage container is used to meet the capacity requirement, the storage container shall be located within secondary containment. The storage container shall be clearly and conspicuously labeled "fertilizer rinsate."

(9) Any pump used for recovering material from the operational area containment shall be manually activated.

(10) The operational area containment shall not have a discharge outlet or valve. Discharge outlets or valves on existing operational areas shall be sealed. Operational area containments may be interconnected.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-190, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-190, filed 11/2/93, effective 3/1/94.]

**Reviser's note:** RCW 34.05.395 requires the use of underlining and deletion marks to indicate amendments to existing rules, and deems ineffectual changes not filed by the agency in this manner. The bracketed material in the above section does not appear to conform to the statutory requirement.

**WAC 16-201-200 Operational area containment of liquid fertilizers—Temporary field storage.** (1) During loading and unloading of liquid bulk fertilizer at temporary field storage locations individual basins or portable storage containers shall be used to recover spillage and leakage from transfer connections and pumps.

(2) Liquid bulk fertilizer storage containers used for temporary field storage shall be located at least one hundred feet from wells and surface water except, for purposes of this section, irrigation water flowing directly to a field, or on a field, is not considered surface water unless the water could be carried beyond the field being irrigated.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-200, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-200, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-210 Dry bulk fertilizer storage and handling.** (1) Dry bulk fertilizer shall be stored inside a structure or device having a roof or cover, sidewalls, and a base sufficiently impermeable to prevent contact with precipitation and surface water; or

(2) If dry bulk fertilizer is stored outdoors, it shall be placed on a ground cover sufficiently impermeable to prevent seepage or runoff and shall be completely covered with a tarpaulin or other suitable covering to prevent contact with precipitation and surface water.

(3) All loading, unloading, mixing and handling of dry bulk fertilizer at the storage facility shall be conducted on a surface of a size and design that will allow for the collection of spilled materials.

(4) Operational areas shall be cleaned to prevent accumulation of dry bulk fertilizer spilled during loading and unloading.

[Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-210, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-220 Backflow prevention.** (1) When piping within secondary containment or an operational area is directly connected to a water source such as a well or public water system, an approved air gap or an approved reduced pressure principle backflow prevention assembly (RPBA) shall be installed to protect the water source. Approved air gaps and approved RPBA's shall be installed, operated, inspected and/or tested and maintained per WAC 246-290-490

(2) Approved RPBA's shall be inspected and tested by a Washington State Department of Health certified backflow assembly tester, and approved air gaps shall be inspected by a Washington State Department of Health certified backflow assembly tester or cross-connection control specialist:

- (a) At the time of installation, alteration or relocation, and
- (b) At least on an annual schedule thereafter.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-220, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-220, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-230 Fertilizer spill and rinsate management.** (1)

Fertilizer spills within secondary containment or operational area containment shall be immediately recovered.

(2) Fertilizer rinsate shall be removed from secondary containment and operational area containment as necessary to ensure the capacity of the containment area does not fall below the levels required by this chapter. [Rinsate] accumulations collected in an operational area water-tight sump shall not exceed the capacity of the sump at the end of the business day.

(3) Fertilizer spills or rinsates shall not be released to the environment unless the material is applied at normal fertilizer rates, used in fertilizer blends, used in a fertilizer manufacturing process, or disposed of properly.

(4) Recovered spills or rinsates in excess of 500 gallons must be contained in a storage container within secondary containment. The storage container must be clearly and conspicuously labeled to identify the content.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-230, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-230, filed 11/2/93, effective 3/1/94.]

**Reviser's note:** RCW 34.05.395 requires the use of underlining and deletion marks to indicate amendments to existing rules, and deems ineffectual changes not filed by the agency in this manner. The bracketed material in the above section does not appear to conform to the statutory requirement.

**WAC 16-201-240 Maintenance and inspection.** (1)

The operator of a fertilizer bulk storage facility shall inspect and maintain storage containers, appurtenances, secondary containment and operational area containment to minimize the risk of a fertilizer release.

(2) The inspection shall include a visual observation for any evidence of leaks, spills, cracks, solar decay or wear. Pressure testing may be used in lieu of visual observation for leaks in liquid bulk fertilizer facilities.

For the purpose of this section, "pressure testing" means a test sufficient to determine the presence or absence of a leak within the appurtenances of a liquid bulk fertilizer storage facility. Such pressure testing must be conducted at a pressure rate exceeding the standard operating pressure of the liquid bulk fertilizer storage facility, and must be conducted in accordance with standards established for the materials of the appurtenances, if such standards have been established.

(3) Maintenance of the fertilizer bulk storage facilities shall be performed as needed to ensure that the integrity of the bulk fertilizer storage containers, secondary containment and operational area containment is maintained.

(4) Bulk fertilizer storage containers and appurtenances shall be inspected at least once per month when in use. Secondary containment and operational area containment shall be inspected at least once per month when in use.

(5) All secondary and operational area containment shall be maintained free of debris and foreign matter.

(6) A written record of all inspections and maintenance shall be made on the day of the inspection or maintenance and kept at the storage site or at the nearest local office from which the storage site is administered.

(7) Inspection records shall contain the name of the person making the inspection, the date of the inspection, conditions noted and maintenance performed.

[Statutory Authority: RCW 15.54.800 and chapter 34.05 RCW. WSR 20-03-111, § 16-201-240, filed 1/15/20, effective 2/15/20. Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-240, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-240, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-250 Recordkeeping requirements.** Records required by this section and documents necessary to ensure compliance with this chapter shall be made available for inspection and copying by the department. The following records shall be maintained at permanent storage facilities or at the nearest local office from which the permanent storage facility is administered.

(1) A record of construction materials and methods of construction to show compliance with WAC 16-201-025, 16-201-028, 16-201-030, 16-201-040, 16-201-050, and 16-201-190. These records shall be maintained as permanent records.

(2) A record of the method(s) used to use or dispose of product or contaminated materials recovered from discharges outside secondary or operational area containment. This record applies only to discharges required to be reported to the Washington state department of ecology by the Washington state Dangerous waste regulations, chapter 173-303 WAC. These records shall be maintained for a period of at least three years.

(3) Inspection and maintenance records required by WAC 16-201-240. These records shall be maintained for a period of at least three years.

(4) Manufacturer's compatibility statements required by WAC 16-201-030 and 16-201-040. These records shall be maintained as permanent records.

(5) A copy of the permanent storage facility's spill response plan required by WAC 16-201-260. This record shall be maintained as a permanent document.

(6) Records required by WAC 16-201-100(9). These records shall be maintained as permanent records.

(7) Records required by WAC 16-201-220, Backflow prevention.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-250, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-250, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-260 Spill response plan.** (1) The operator of a permanent storage facility shall prepare a written spill response plan for the permanent storage facility. If all or portions of the information required by the spill response plan have been prepared for plans required by other government agencies, they need not be prepared for this plan: Provided, That the information is readily accessible to emergency responders and department personnel. However, when copies of the plan are distributed, all required information shall be provided.

The plan shall include the following elements:

(a) The identity and telephone numbers of the persons and agencies who are to be contacted in the event of a spill, including persons responsible for the stored fertilizer.

(b) For each fertilizer stored at the permanent storage facility a complete copy of the storage container labeling required in WAC 16-201-170, and the labeling required to accompany sale of the fertilizer under the Washington Commercial Fertilizer Act, chapter 15.54 RCW.

(c) A material safety data sheet for each fertilizer stored at the permanent storage facility.

(d) The procedures to be used for controlling and recovering, or otherwise responding to a spill for each type of bulk fertilizer stored at the permanent storage facility.

(e) The procedures to be followed in using or disposing of a recovered spill.

(2) The plan shall be kept current at all times.

(3) A copy of the spill response plan shall be kept readily available for inspection and use at the permanent storage facility or at the nearest local office from which the permanent storage facility is administered and shall be available for inspection and copying by the department.

(4) A copy of the spill response plan shall be provided to the local fire department.

(5) Persons employed at permanent storage facilities shall be trained in spill response procedures pursuant to the spill response plan.

(6) Emergency equipment and supplies. Every permanent storage facility shall have access to pumps and recovery containers which can be used to control and recover spills. Pumps, recovery containers and persons capable of deploying and operating them shall be readily available in an emergency. Pumps and recovery containers may include those operated by a local fire department or other persons: Provided, That the use and availability of the pumps and recovery containers is arranged in advance as part of the spill response plan. Absorbent materials and other equipment suitable for the control and cleanup of smaller spills shall be available at the permanent storage facility. The permanent storage facility shall maintain a list showing the types and locations of clean-up supplies and equipment. The list shall be maintained at the permanent storage facility or the nearest local office from which the facility is administered.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-260, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-260, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-270 Effective dates.** The requirements of this chapter shall be effective immediately: Provided, That

(1) All permanent storage facilities that have storage containers of one hundred thousand gallons or greater and that were in operation prior to March 1, 1994, shall comply with WAC 16-201-020 through 16-201-080, and 16-201-190 by March 1, 2001;

(2) Storage of bulk fertilizer, fertilizer spills or rinsates shall comply with WAC 16-201-110 within 30 months of the effective date of this rule;

(3) Fertilizer spills or rinsates must be contained in compliance with WAC 16-201-230(4) within 30 months of the effective date of this rule.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-270, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-270, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-280 Permits.** (1) The department may issue a permit exempting any person from a requirement under this chapter if compliance is not technically feasible in the judgment of the department and the department finds that alternative measures provide substantially similar protection. All information required to prove that substantially similar protection is possible shall be provided to the department by the person requesting the permit.

(2) At the request of the department, advisory group, or permittee, an advisory group appointed by the director shall evaluate and advise the department on any request for permit from this chapter.

[Statutory Authority: RCW 15.54.800. WSR 00-23-075, § 16-201-280, filed 11/17/00, effective 12/18/00. Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-280, filed 11/2/93, effective 3/1/94.]

**WAC 16-201-290 Penalties.** Any person who fails to comply with any provisions of this chapter shall be subject to imposition of a civil penalty as provided in chapter 15.54 RCW.

[Statutory Authority: RCW 15.54.800 and 15.58.040. WSR 93-22-093 (Order 5018), § 16-201-290, filed 11/2/93, effective 3/1/94.]