

Wisconsin Department of Agriculture,  
Trade and Consumer Protection  
**Agricultural Resource Management Division**



EXPLANATIONS  
AND CLARIFICATIONS  
OF  
**WIS. ADMIN. CODE CH. ATCP 33**  
**FERTILIZER AND PESTICIDE**  
**BULK STORAGE**

(Pub. 2009)

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## PERTINENT SECTIONS OF WIS. STATS. CH. 94

**94.645 Fertilizer and pesticide storage. (1) DEFINITIONS.** In this section:

(a) "Bulk fertilizer" has the meaning specified under s. 94.64 (1) (b).

(b) "Bulk pesticide" means liquid pesticide in a container larger than 55 gallons or solid pesticide in undivided quantities greater than 100 pounds.

(c) "Distribute" means to import, consign, sell, offer for sale, solicit orders for sale or otherwise supply fertilizer or pesticide for sale or use in this state.

(d) "Fertilizer" has the meaning specified under s. 94.64 (1) (e), except that this term does not include anhydrous ammonia.

(e) "Manufacture" means to process, granulate, compound, produce, mix, blend or alter the composition of fertilizer or to manufacture, formulate, prepare, compound, propagate, package, label or process any pesticide.

(f) "Pesticide" has the meaning specified under s. 94.67 (25).

(g) "Waters of the state" has the meaning specified under s. 281.01 (18).

**(2) STORAGE.** (a) Except as provided in par. (b), every person who manufactures or distributes bulk fertilizer or bulk pesticides shall comply with the storage standards adopted under sub. (3). (b) This section does not apply to containers for liquid pesticide larger than 55 gallons if the larger containers are designed for emergency storage of leaking containers which are 55 gallons or smaller and are used only for that purpose.

**(3) RULES.** The department shall adopt by rule standards for the storage of bulk fertilizer or bulk pesticides, for the purpose of protecting the waters of the state from harm due to contamination by fertilizer or pesticides. The rule shall apply to all persons who manufacture or distribute bulk fertilizer or bulk pesticides. The rule shall comply with ch. 160. The rule may include different standards for new and existing facilities, but all standards shall provide substantially similar protection for the waters of the state.

**(4) ENFORCEMENT.** (a) The department shall enforce this section. The department may, by special order under s. 93.18, prohibit a violation of rules promulgated under this section and require necessary measures to correct the violation. Special orders may be issued on a summary basis, without prior complaint, notice or hearing, where necessary to protect public health or the environment. A summary special order is subject to a subsequent right of hearing before the department, if a hearing is requested within 10 days after the date on which the order is served. Any party affected by the special order may request a preliminary or informal hearing pending the scheduling and conduct of a full hearing. Hearings, if requested, shall be conducted as expeditiously as possible after receipt of a request for hearing. Enforcement of a summary special order shall not be stayed pending hearing, except as otherwise ordered by the department.

(b) The circuit court for any county where violation of such an order occurs has jurisdiction to enforce the special order by injunctive and other appropriate relief.

**(5) PENALTIES.** Any person who violates this section or any rule or order adopted under this section shall forfeit not less than \$10 nor more than \$1,000 for each violation. Each violation of this section or any rule or order under this section constitutes a separate offense and each day of continued violation is a separate offense.

**History:** 1983 a. 410; 1985 a. 135 s. 85; 1995 a. 227.

## Introduction

This document is intended to assist facilities regulated by the Wisconsin Department of Agriculture, Trade and Consumer protection's fertilizer and pesticide bulk storage rule.

Each of these guides is set up with a copy of the rule on the left hand pages and additional information and Department clarifications and explanations of the rule on the right hand pages. Although this guide does not provide all clarifications and explanations made in regard to these rules, it does cover most of the areas where questions have been raised to date. The clarifications and explanations are subject to change, based on additional information and problems noted with current explanations.

For additional information, please contact our office at (608) 224-4518 or PO Box 8911, Madison, WI 53708-8911.

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**Note: Chapter 33 as it existed on October 31, 2006, was repealed and a new chapter 33 was created effective November 1, 2006.**

**Note:** Chapter ATPC 29 contains general rules related to the manufacture, storage, labeling, distribution and use of pesticides. Persons who manufacture, label, distribute or commercially apply pesticides must be licensed by the department.

Chapter ATPC 40 contains general rules related to the manufacture, labeling and distribution of fertilizer. Persons who manufacture, label or distribute fertilizer must be licensed by the department.

The department of agriculture, trade and consumer protection may investigate violations of this chapter, and may take enforcement action as necessary. See, for example, ss. 93.06 (7) to (10), 93.08, 93.14 to 93.16, 94.645 (4) and (5), and 94.77, Stats. See also s. 94.64, Stats. (fertilizer) and ss. 94.67 to 94.71, Stats. (pesticides).

Under ch. ATPC 35, the department may reimburse certain agricultural chemical contamination cleanup costs. Failure to comply with this chapter may affect an operator's eligibility for reimbursement under ch. ATPC 35.

Under the Federal Insecticide, Fungicide, and Rodenticide Act (7 USC 136 et. seq.), pesticide sellers who repackage pesticides by delivering them from bulk storage to customers must do the following things, among others:

- Register the seller's facility as a pesticide producing establishment.
- File annual pesticide production reports.
- Maintain books and records.
- Provide labeling to purchasers of bulk pesticides.
- Deliver pesticides from bulk storage only to customers.
- Maintain a formal repackaging agreement with the pesticide product registrant.

### Subchapter 1 — Definitions and General Provisions

**ATCP 33.01 Definitions.** In this chapter:

**(1)** "API 650" means the American Petroleum Institute standard 650, *Welded Steel Tanks for Oil Storage*, 10<sup>th</sup> edition.

**Note:** Copies of API 650 are on file with the department and the revisor of statutes. Copies may be purchased from the American Petroleum Institute at 1220 L Street NW, Washington DC 20005-4070, telephone (202) 682-8000.

**(2)** "API 653" means the American Petroleum Institute standard 653, *Tank Inspection, Repair, Alteration, and Reconstruction*, 3rd edition.

**Note:** Copies of API 653 are on file with the department and the revisor of statutes. Copies may be purchased from the American Petroleum Institute at 1220 L Street NW, Washington DC 20005-4070, telephone (202) 682-8000.

**(3)** "API 653-certified inspector" means an inspector certified by the American Petroleum Institute, according to API 653, to inspect facilities for compliance with API 653.

**(4)** "Appurtenances" means all valves, pumps, fittings, pipes, hoses, gauges, metering devices, mixing containers, and dispensing devices that are connected to a storage container, or through which liquid bulk fertilizer or liquid bulk pesticide is transferred into or out of a storage container.

**(5)** "Bedrock" means the solid rock underlying any loose surficial material such as soil, alluvium or glacial drift. Bedrock includes but is not limited to limestone, dolomite, sandstone, shale and igneous and metamorphic rock.

**(6)** "Bladder tank" means a covered liquid-tight steel tank containing a flexible liquid-tight bladder that holds the contents of the tank.

**Note:** A "bladder tank" is both a "secondary containment structure" as defined in sub. (29) and a "storage container" as defined in sub. (31).

**(7)** "Bulk fertilizer" means fertilizer in a container larger than 55 gallons (208 liters), or dry fertilizer in undivided quantities greater than 100 pounds (45 kilograms).

**(8)** "Bulk pesticide" means liquid pesticide in a container larger than 55 gallons (208 liters), or dry pesticide in undivided quantities greater than 100 pounds (45 kilograms).

**(9)** "Department" means the Wisconsin department of agriculture, trade and consumer protection.

Only those definitions which have caused significant confusion in the past are explained below.

(7) "Bulk fertilizer" includes any fertilizer in a liquid container larger than 55 gallons. Use solutions or rinsates (dilute mixtures of fertilizers and water or other substances, that results from cleaning fertilizer application equipment, mix or nurse tanks catch basins or spill containment surfaces) resulting from bulk fertilizers remain bulk fertilizers. Also, bulk fertilizer transferred into containers smaller than 55 gallons remains bulk. Solutions or rinsates from non-bulk fertilizers are not bulk fertilizers. Rinsates resulting from non-bulk fertilizers are not bulk, even if the rinsate is stored in a container larger than 55 gallons.

(8) "Bulk pesticide" includes any pesticide in a liquid container larger than 55 gallons, and that "pesticide" includes herbicides. Use solutions or rinsates (dilute mixtures of pesticides and water or other substances, that results from cleaning pesticide application equipment, mix or nurse tanks catch basins or spill containment surfaces) resulting from bulk pesticides remain bulk pesticides. Also, bulk pesticide transferred into small containers (even those under 55 gallons, and including 2½ gallon jugs for in-field mix/load) remains bulk unless all requirements for pesticide repackaging are met, including: repackaging agreements; labeling; EPA establishment registration and container identification. Solutions or rinsates from non-bulk pesticides are not bulk pesticides. Rinsates resulting from non-bulk pesticides are not bulk, even if the rinsate is stored in a container larger than 55 gallons.

(10) “Discharge” means a spill, leak or other release of bulk fertilizer, bulk pesticide or rinsate. “Discharge” includes a spill, leak or other release that is contained within a mixing and loading pad, sump or secondary containment structure. “Discharge” does not include the legal use or disposal, according to this chapter, of material recovered from a mixing and loading pad, sump or secondary containment structure.

(11) “Distribute” means to import, consign, sell, offer for sale, solicit orders for sale, or otherwise supply fertilizer or pesticide for sale or use in this state.

(12) “Dry fertilizer” means fertilizer in solid form.

(13) “Dry pesticide” means pesticide in solid form, pesticide-impregnated fertilizer, and includes pesticides formulated as dusts, wettable powders, dry flowable powders or granules.

(14) “Fertilizer” has the meaning given in s. 94.64 (1) (e), Stats., except that it does not include manipulated manure or anhydrous ammonia.

**Note:** Under s. 94.64 (1) (e), Stats., “fertilizer” means any substance, containing one or more plant nutrients, which is used for its plant nutrient content and which is designed for use or claimed to have value in promoting plant growth, except unmanipulated animal or vegetable manures, marl, liming material, sewage sludge other than finished sewage sludge products, and wood ashes. “Fertilizer” includes fertilizer materials, mixed fertilizers, custom mixed fertilizers, nonagricultural fertilizers and all other fertilizers or mixtures of fertilizers, regardless of type or form.

(15) “Groundwater” means any waters of the state occurring in a saturated subsurface geological formation of rock or soil.

(16) “Handling” means the transfer, loading, unloading, mixing or repackaging of bulk fertilizer or bulk pesticide, or the cleaning of containers or equipment to remove fertilizer or pesticide residues. “Handling” includes transferring water into a container that contains pesticide or fertilizer residues.

(17) “Inorganic soil” means a soil composed of less than 30% organic matter, measured as less than 15% organic carbon by weight.

(18) “Liquid fertilizer” means fertilizer in liquid form. “Liquid fertilizer” includes fertilizer solutions, fertilizer suspensions, fertilizer slurries and dilute fertilizers intended for distribution as fertilizer.

(19) “Liquid pesticide” means pesticide in liquid form. “Liquid pesticide” includes pesticide solutions, pesticide emulsions, pesticide suspensions, pesticide slurries and dilute pesticides intended for distribution as pesticides.

(20) “Manufacture” means to do any of the following, as applicable:

- (a) Process, granulate, compound, produce, mix, blend or alter the composition of fertilizer.
- (b) Process, formulate, prepare, compound, propagate, package or label any pesticide.

(21) “Mini-bulk container” means any of the following:

(a) A storage container, designed for ready handling and transport, which holds more than 55 gallons (208 liters) but not more than 350 gallons (1,325 liters) of liquid fertilizer or liquid pesticide.

(b) A container that holds more than 100 pounds (45 kilograms) but not more than 2,500 pounds (1,136 kilograms) of dry fertilizer.

(c) A container that holds more than 100 pounds (45 kilograms) but not more than 1,000 pounds (454 kilograms) of dry pesticide.

(10) “Discharge” is defined as any quantity of material. A *reportable discharge* is defined as any spill which has adversely impacted or threatens to impact public health, public welfare or the environment, or a spill which exceeds the reporting limits if an immediate impact or threat does not exist. If a **fertilizer** discharge has not impacted or does not threaten public health, welfare or the environment, it still must be reported to the DNR at (800) 943-0003 if the amount spilled exceeds **250 pounds of dry fertilizer or 25 gallons of liquid fertilizer**. If a **pesticide** discharge has not impacted or does not threaten public health, welfare or the environment, it still must be reported to the DNR at (800) 943-0003 if the **amount of pesticide spilled**, when diluted according to label directions, **would cover 1 or more acre of land if applied according to label directions**. *Discharges that are fully contained by a secondary containment structure or a mix/load pad do not have to be reported to the DNR, unless a serious threat to public health exists.*

(22) “Mixing and loading pad” means a surface that complies with subchapter IV.

(23) “Mobile container” means a bulk fertilizer or bulk pesticide storage container that is anchored to a vehicle, trailer or axles, and that can be readily transported when full. “Mobile container” includes a rail car, a nurse tank, or a supply container on application equipment.

(24) “Operator” means a person who owns, operates or legally controls a storage facility, either directly or through an employee or agent, and includes employees and agents of an operator.

(25) “Person” means an individual, corporation, partnership, cooperative, limited liability company, trust or other legal entity.

(26) “Pesticide” has the meaning given in s. 94.67 (25), Stats. “Pesticide” includes all of the following:

(a) A fertilizer–pesticide mixture.

(b) A substance that is labeled as a pesticide for use in further manufacture or formulation of pesticides.

**Note:** Under s. 94.67 (25), Stats., “pesticide” means any substance or mixture of substances labeled or designed or intended for use in preventing, destroying, repelling or mitigating any pest, or as a plant regulator, defoliant or desiccant.

(27) “Professional engineer” means an individual licensed as a professional engineer by the Wisconsin department of regulation and licensing.

(28) “Rinsate” means water or other liquid containing fertilizer or pesticide residue. “Rinsate” includes liquid produced by the rinsing of fertilizer or pesticide containers.

(29) “Secondary containment structure” means a structure that is designed to contain a discharge from a storage container or appurtenance.

(30) “Storage bin” means a stationary receptacle used to store an undivided quantity of dry bulk fertilizer or dry bulk pesticide.

(31) “Storage container” means a container used to store liquid bulk fertilizer or liquid bulk pesticide at a storage facility. “Storage container” includes a mobile container.

(32) “Storage facility” means a place where bulk fertilizer or bulk pesticide is or has been stored for distribution, or for the manufacture of fertilizer or pesticide. “Storage facility” does not include a place where a mobile container is parked for unloading if all of the following apply:

(a) No person who owns or controls the parking location, or receives the unloaded fertilizer or pesticide, is engaged in the manufacture or distribution of fertilizer or pesticide.

(b) The fertilizer or pesticide is unloaded with the consent of a person who owns or controls the parking location.

(c) The fertilizer or pesticide is unloaded at the parking location for no more than 3 other persons, for application to a total of no more than 500 acres, in any calendar year.

(d) The mobile container, if unloaded for any person other than the person who owns or controls the parking location, has a capacity of no more than 500 gallons.

(e) The mobile container is parked at the location for no longer than 7 days.

(23) Camel tanks or bullet tanks can not be readily transported when full and, therefore, are not mobile containers.

(24) “Operator” is the person responsible for complying with this rule. In general, a farmer storing bulk fertilizer or bulk pesticide on his own property and exclusively for his own use is not subject to these rules. If a farmer sells bulk fertilizer or bulk pesticide to a neighbor or allows the neighbor (or a cooperative group of farmers) to store bulk products on his or her site, then that farmer is an operator and must comply with these rules. If a farmer allows a fertilizer or pesticide distributor to store bulk product at a site that the farmer controls, then both the distributor and the farmer are operators and must comply with this rule, although principal responsibility will fall to the distributor that should be knowledgeable about the rule.

(31) “Storage container” is defined to include both fixed and mobile containers. Products in transit are not considered in storage, but parking filled mobile containers at a “Storage facility” is considered storage.

(32) “Storage facility” includes any site from which bulk pesticide is distributed. This includes any and all contiguous land that is owned, leased or controlled by the storage facility operator. Contiguous land means land included in the same parcel or adjacent parcel, including parcels that are separated by a road, railroad, or utility right-of-way, or by a government-owned land corridor or waterway not wider than 66 feet. It also includes places where mobile containers are stored, loaded or unloaded unless it is being unloaded for one retail customer (farmer) at a site that the customer controls (farm deliveries). If a farmer stores bulk pesticide for a neighbor if a pesticide distributor stores bulk pesticide on a farm, that farm is a storage facility.

A few examples of what is or is not a storage facility:

- A tender trailer is parked next to an application site for tending an applicator in that field or on other property owned by the customer that controls that field. The tender trailer may also contain enough pesticide for other customers, but the trailer is moved to the other customers’ property or properties before being unloaded for those customers. The site is not a storage facility, but is subject to the security requirements of ch. ATCP 29, Wis. Adm. Code (which applies only to *pesticides*). In addition, this site becomes a storage facility if the tender trailer is parked at the site once the application to the property controller’s fields is complete.
- The tender trailer in the prior example is now left in one location while being used to make applications for several customers. This includes a location adjacent to an air-strip used for bulk transfer to application aircraft. The site is a storage facility subject to these rules and the application business is the operator responsible for compliance.
- The same tender trailer in any of the above examples now has several minibulks each of two or three pesticides, (i.e., far more pesticide than the applicator will use that day). In such circumstances, the applicator is using the tender trailer as a storage location for extra minibulks, any place where that tender trailer is parked is a storage facility and the owner of that tender is the operator that must comply with these rules.

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**(33)** “Structure” means a storage building, storage container, mixing and loading pad, sump, secondary containment structure, or rail car unloading area.

**(34)** “Substantially alter” means to reconstruct, replace, structurally modify or change the capacity of a structure, or make any other change that may affect the containment of bulk fertilizer or bulk pesticide or the containment or recovery of discharges. “Substantially alter” does not include routine repair or maintenance, or routine replacement of parts with like parts.

**(35)** “Sump” means a pit or receptacle that receives and collects liquid runoff from a mixing and loading pad or secondary containment structure.

**(36)** “Tank-in-tank” means a steel storage container enclosed within a liquid-tight steel tank with which it shares a common roof but no common walls or floor. “Tank-in-tank” does not include a storage container with a double bottom.

**Note:** A “tank-in-tank” is both a “secondary containment structure” under sub.(29) and a “storage container” under sub. (31).

**(37)** “Waters of the state” means those portions of Lake Michigan and Lake Superior within the boundaries of this state, and all lakes, bays, rivers, streams, springs, ponds, wells, impounding reservoirs, marshes, watercourses, drainage systems and other surface water or groundwater, natural or artificial, public or private, within this state or its jurisdiction.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.02 Variances. (1) VARIANCE REQUEST.** An operator may request a variance from a standard or requirement under this chapter. The operator shall make the request in writing, and may include the request as part of a filing under s. ATCP 33.10(1). A request shall include all of the following:

(a) A clear description of the proposed nonconforming feature for which the operator seeks the variance.

(b) A statement describing how the proposed nonconforming feature will provide equivalent protection for waters of the state.

(c) A statement by a professional engineer, certifying that the proposed nonconforming feature will provide equivalent protection for waters of the state, if the proposed feature affects any of the following:

1. The containment of bulk fertilizer or bulk pesticide.
2. The containment or recovery of discharges.

**(2) ACTION ON VARIANCE REQUEST.** The department may grant a variance request under sub. (1) if the department finds that the proposed nonconforming feature will provide equivalent protection for waters of the state. The department shall grant or deny a request within 30 days after the department receives a complete request, except that the department may for good cause extend the action deadline if the department gives written notice of the extension within the initial 30-day period. The extension notice shall include the extended deadline.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

## Subchapter II — Construction Plans and Siting

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**ATCP 33.10 Construction plans. (1) FILING REQUIRED.** At least 21 days before an operator constructs or substantially alters a structure at a storage facility, the operator shall file all of the following with the department:

(a) Design specifications for the construction or alteration.

(b) A signed written statement by a professional engineer, certifying that the design specifications comply with applicable requirements under this chapter.

(c) The approximate date on which the operator plans to start the construction or alteration.

The operator may not start the construction or alteration before that date unless the operator gives the department prior notice of the new start date. The department may request additional schedule information, as necessary, in order to schedule an inspection under sub. (3).

**Note:** Subsection (1) does not apply to the routine repair or maintenance of an existing structure. See s. ATCP 33.01 (34). This chapter does not require an operator to take soil samples before the operator constructs or substantially alters a structure. However, an operator may wish to do so in order to maintain cost reimbursement eligibility under s. ATCP 35.04.

**(2) DISCRETIONARY REVIEW.** The department may review and comment on the design specifications filed under sub. (1). The department is not required to review, approve or comment on the design specifications. A failure to comment does not signify approval. An operator is not required to obtain the department's approval for a proposed construction or alteration, but is required to comply with this chapter.

**(3) DISCRETIONARY INSPECTION.** The department may inspect a construction or alteration under sub. (1).

**(4) CONSTRUCTION CONFORMING TO PLAN.** An operator may not, without prior written notice to the department, deviate from design specifications filed under sub. (1).

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.12 Storage facility siting. (1) REQUIREMENTS.** Except as provided in sub. (2), the base of each mixing and loading pad, the base of each secondary containment structure, and the floor of each building used to store bulk fertilizer or bulk pesticide shall be all of the following:

(a) At least 5 feet above bedrock.

(b) At least 5 feet above the seasonal high groundwater level. A determination of seasonal high groundwater level, by an independent soils tester licensed by the Wisconsin department of regulation and licensing, is presumptively valid for purposes of this paragraph.

(c) At least 1,000 feet from the ordinary high water mark of any navigable lake and 300 feet from the ordinary high water mark of any navigable stream.

(d) Located outside of any 100-year flood plain.

**(2) EXEMPTION.** Subsection (1) does not apply to the reconstruction, expansion or alteration of a mixing and loading pad, secondary containment structure or storage building that was in use prior to November 1, 2006.

**Note:** The exemption under sub. (2) applies only to sub. (1). It does not exempt a storage facility from any other federal, state or local regulations that may apply.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.14 Water supply protection. (1) GENERAL.** Wells at a storage facility shall comply with applicable requirements in chs. NR 811 and 812.

**Note:** Chapters NR 811 and 812 comprise the state well code.

**(2) BACKFLOW PREVENTION.** (a) All water supply outlets at the storage facility shall be protected against backflow caused by backpressure or backsiphonage. Protection may include any of the following:

1. A vertical air gap between each water supply outlet and any container or equipment filled from that outlet. The air gap distance shall be at least one inch, or twice the effective opening of the supply outlet, whichever is greater.

2. A backflow prevention device that complies with s. Comm 82.41.

**Note:** Comm 82 is part of the state plumbing code.

(b) An operator shall notify the department at least 7 business days prior to installing or modifying a backflow protection device or system, unless the operator is merely re-installing backflow prevention devices that the operator has temporarily removed to protect them from frost damage.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

### Subchapter III — Storage Containers and Related Structures

**ATCP 33.20 Liquid fertilizer and pesticide storage containers. (1) GENERAL REQUIREMENTS.** (a) Storage containers and appurtenances shall be designed, constructed, inspected and maintained to operate effectively and to prevent discharges under all reasonably foreseeable use conditions. Storage containers and appurtenances shall comply with this section, and shall be located within a secondary containment structure if required under s. ATCP 33.40.

(b) Storage containers and appurtenances shall be designed, constructed, inspected and maintained to resist corrosion, puncture and cracking.

(c) Materials used to construct or repair storage containers and appurtenances may not react chemically or electrolytically with stored fertilizer or pesticide in a way that may weaken the storage container or appurtenance, create a risk of discharge, or adulterate the fertilizer or pesticide.

(d) Metals used for storage container valves, fittings or repairs shall be compatible with other metals in the storage container, so that the combination of metals does not cause corrosion or electrolytic reactions that may weaken the storage container or its appurtenances, or create a risk of discharge.

(e) Storage containers and appurtenances shall be designed, constructed and maintained to hold fertilizer or pesticide of the highest specific gravity that may be stored in the containers.

(f) Bladder tanks, tank-in-tanks and field-erected storage containers shall be all of the following:

1. Designed and constructed according to API 650, and certified for compliance by the manufacturer, if the structure is installed, constructed or substantially altered after November 1, 2006. API 650 calculations shall be based on the highest specific gravity of fertilizer or pesticide that may be stored in the container.

2. Inspected before use, and at least once every 5 years during use, by an API 653-certified inspector for compliance with API 653. The storage container shall be inspected more frequently if recommended by an API 653-certified inspector. API 653 calculations shall be based on the highest specific gravity of fertilizer or pesticide that may be stored in the container.

33.20(1) Containers should be structurally sound (no sagging or buckling) and should be placed on a firm, level base. The base of a vertical or cone bottom tank should be fully supported out to the perimeter of the container. Horizontal cylindrical tanks should have the weight distributed along the entire length of the base if laying on the ground, or should be placed on well-designed steel or concrete supports. Polyethylene and fiberglass tanks should be supported according to the manufacturers original design of the tank.

Metal containers should be free of extensive corrosion and dents. Welded seams near dents and creased dents should be carefully inspected for cracks or evidence of leaking. Liners in mild steel containers may be damaged by denting the container. Polyethylene and fiberglass containers should be firm and free of cracks and dents. Fittings and corners are the areas most susceptible to damage.

Plugs, valves, welds and other locations on the container where construction materials differ should show no corrosion worse than that found on other portions of the container. Localized discoloration in corroded area may indicate a small leak. Polyethylene tanks, fittings and repairs should show no signs of softening, brittleness or other reaction. (Many polyethylene containers become brittle upon exposure to sunlight or cold.) Fiberglass tanks should show no signs of resin breakdown resulting in exposed fibers.

Materials used for valves, fittings and repairs should be designed of equal or greater strength and be equally or more chemically resistant than the container itself. Appurtenances on the container should be of a design consistent with that of the container. Refer to the construction material compatibility chart (Appendix 3).

3. Repaired, when necessary, according to API 653 and the recommendations of an API 653-certified inspector.

**Note:** Copies of API 650 and 653 are on file with the department and the revisor of statutes. Copies may be purchased from the American Petroleum Institute at 1220 L Street NW, Washington DC 20005-4070, telephone (202) 682-8000.

**(2) APPURTENANCES.** (a) Every storage container connection, except a safety relief connection, shall be equipped with a shutoff valve located on the storage container or at a distance from the storage container dictated by standard engineering practice.

(b) On pesticide storage containers other than mini-bulk containers or containers used to store sodium hypochlorite, all wetted parts inside shutoff valves and all connections between storage containers and shutoff valves shall be made of stainless steel.

**Note:** The department may grant a variance authorizing alternative materials that provide equivalent protection for waters of the state. See s. ATCP 33.02.

(c) Pipes, fittings and other appurtenances shall be permanently supported to prevent sagging and breakage that may be caused by gravity, vibration or other forces that may be encountered in the ordinary course of operations. To prevent sagging and breakage, piping and its supports shall be able to support 250 pounds.

(d) An operator shall do all of the following at least annually:

1. Inspect and pressure test appurtenances installed below ground, within or beneath a mixing and loading pad, or within or beneath a secondary containment structure. The operator shall maintain the appurtenances as necessary, to keep them pressure-tight, and shall keep a written record of the pressure test results.

2. Inspect and test, for liquid-tightness, every joint through which a pipe extends through a secondary containment structure.

(e) An appurtenance may not be installed below ground, within or beneath a mixing and loading pad, within or beneath a secondary containment structure, or through any wall or floor of a secondary containment structure, on or after November 1, 2006.

(f) Piping connections shall be one of the following:

1. Threaded, welded, fused or permanently band-clamped.

2. Located over a mixing and loading pad that complies with s. ATCP 33.30.

3. Located within a secondary containment structure that complies with s. ATCP 33.42.

**(3) LIQUID LEVEL GAUGING DEVICES.** (a) If a storage container is equipped with a liquid level gauging device, the device shall be designed for safe and reliable use.

(b) An external sight gauge may not be used on a pesticide storage container, other than on a mobile container mounted on pesticide application equipment.

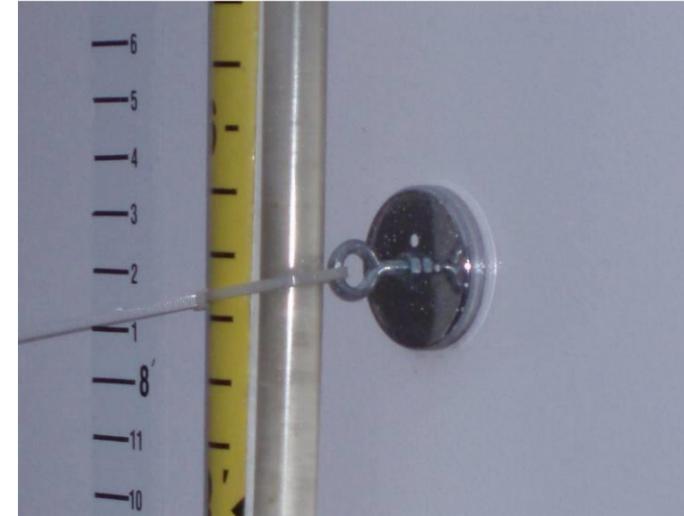
(2)(a) Filling and emptying connections, sight gauges and any other non-plugged container opening below the liquid level of a full container must have a shut-off valve on or very near the container. The valve should typically be no farther from the container than 3 times the diameter of the plumbing being used to connect the valve to the container. For cone bottom tanks, the first valve can be located within three pipe diameters of the tank skirt or frame, provided the pipe is rigidly connected to the frame.

(c) Fixed plumbing may be supported by permanent brackets or by the ground. Concrete or wood blocks that are not permanently connected to the plumbing, or other objects which can be easily removed, are not adequate. If rigid plumbing is supported by the ground, a flexible hose should connect the container and the rigid plumbing. The container valve must be located on the tank prior to such a flexible connection. Pipes should be supported well enough to hold the weight of an adult without causing failure. Sharp piping corners and extensive piping lengths should be braced or solidly connected to prevent failure caused by movement during use.

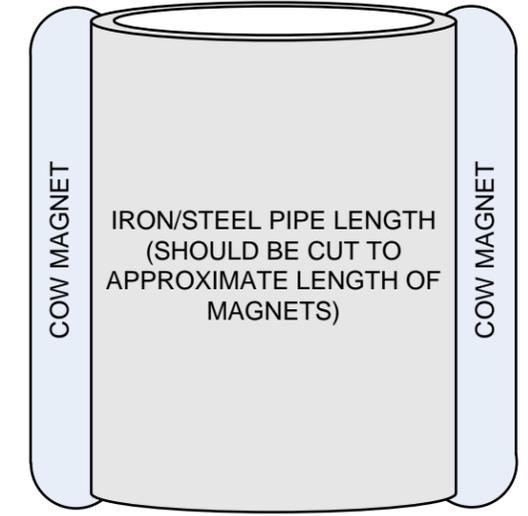
(c) If an external sight gauge is used on a fertilizer storage container, the sight gauge shall comply with the all of the following:

1. The sight gauge shall be equipped with a valve that can stop the flow of liquid fertilizer from the storage container to the sight gauge. The valve shall be closed when the sight gauge is not in use.
2. The sight gauge tube shall be secured to the storage container at intervals of no more than 10 feet.

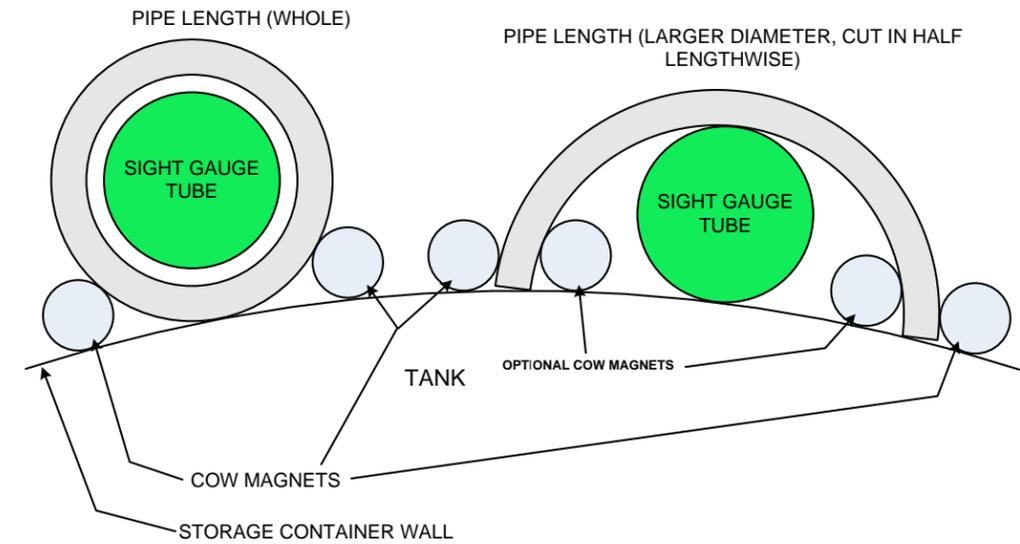
(c) External sight gauge tubes must be anchored or secured to the container at intervals no greater than 10 feet. Ideally on mild steel containers, steel devices, to which the tubes can be tied or secured, should be welded to the storage container. However, until such welding can be performed or if such welding is not possible, the sight gauge tubes can be anchored via magnetic means as shown the following figure and photograph.



A magnetic plate equipped with an eye-bolt. A wire/cable-tie is then threaded through the eye and tightened snugly around the sight gauge tube.



A section of (whole) pipe held to the container with cow magnets; see left part of diagram below.



**(4) PROHIBITED MATERIALS; FERTILIZER STORAGE CONTAINERS.** Fertilizer storage containers shall comply with all of the following:

- (a) Storage containers and appurtenances used to store nitrogen solutions may not be constructed of copper, brass, zinc, or copper base alloys.
- (b) Storage containers and appurtenances used to store liquid fertilizers containing phosphates or chlorides may not be constructed of aluminum or aluminum alloys.
- (c) Storage containers and appurtenances used to store low pH liquid fertilizers may not be constructed of ferrous materials other than stainless steel, unless the materials are coated or treated with protective substances that effectively inhibit corrosion.
- (d) Storage containers and appurtenances used to store phosphoric acid may not be constructed of ferrous materials other than 316 or 317 stainless steel unless the container is lined with a substance to prevent corrosion.
- (e) Storage containers and appurtenances used to store liquid fertilizers containing potassium chloride (potash) may not be constructed of ferrous materials other than stainless steel unless one of the following applies:

- 1. The storage containers and appurtenances are lined, coated or treated with protective substances that effectively inhibit corrosion.
- 2. The storage containers and appurtenances are used for storage periods of not more than 6 months each, and are completely emptied, cleaned and inspected for leaks and corrosion before being refilled for any subsequent storage period.

**(5) PROHIBITED MATERIALS; PESTICIDE STORAGE CONTAINERS.** (a) Pesticide storage containers and appurtenances may not be made of polyvinyl chloride unless they are used only to store sodium hypochlorite.

- (b) Pesticide storage containers and appurtenances may not be made of ferrous metals unless one of the following applies:
  - 1. The storage containers and appurtenances are made of stainless steel.
  - 2. The storage containers and appurtenances have a protective lining that prevents corrosion and does not react chemically with the stored pesticide.
  - 3. The storage containers and appurtenances are used only to store non-corrosive wood preservatives.

**(6) ANCHORING STORAGE CONTAINERS.** (a) Except as provided in par. (b), storage containers shall be anchored to prevent flotation or instability that may result from liquid accumulation within a secondary containment structure. Anchors shall be independent of secondary containment structures and mixing and loading pads, except that anchor plates may be embedded in Portland cement concrete floors of secondary containment structures if the anchor plates and the concrete floors are designed to withstand the flotation and wind stresses placed on them.

**Note:** Anchors located in soil *outside* the secondary containment structure do not place any added stress on the structure or its construction. It is possible to design anchor plates for the floors of a portland cement concrete secondary containment structure to withstand anchor stresses, but similar designs for walls are usually inadequate or cost-prohibitive.

- (b) Paragraph (a) does not apply to any of the following:
  - 1. A storage container located in a secondary containment structure that complies with s. ATCP 33.42, if it is the only storage container located in that secondary containment structure.
  - 2. A tank-in-tank that complies with s. ATCP 33.44 (9) or a bladder tank that complies with s. ATCP 33.44 (10), unless located in a secondary containment structure with other storage containers.

- (4) These requirements apply to all wetted parts. Non-wetted parts may be constructed of these materials provided they are well-maintained. "Low pH solutions" includes those with a pH below 5 (acidic). Refer to the compatible materials chart (Appendix 2).
- (5)(b) To exempt a wood preserving product from the tank lining requirements, the department requests corrosivity documentation from the pesticide manufacturer for the delivered preserving product.
- (6) Small steel tanks are highly variable in weight for a given size, but 1.5 to 2 feet of liquid within a containment structure is commonly enough to cause flotation. Fiberglass and polyethylene tanks will float in a few inches to a foot of liquid. Cone-bottom tanks, where the area surrounding the cone is open, are less susceptible to flotation, but may also float within a tall dike. A cone bottom tank with a full skirt that does not have openings in it is even more susceptible to flotation than a normal flat bottom vertical tank.

If anchoring is needed, it may be provided by anchors or guy wires, or by an open port of adequate size - generally a manhole - well below the level at which flotation would occur. Simply leaving the valve open is not sufficient and can cause a problem if more than one valve could be used to fill the tank.

Anchors must be independent of mix/load pads and secondary containment structures, although the department will allow the continued use of such anchors, provided they were in use prior to the effective date of the rule, November 1, 2006. Containers may be anchored to the steel posts used to support a steel-walled synthetic-lined structure. In the absence of other acceptable forms of anchoring, containers should be anchored using soil anchors, such that the rigid part of the anchor extends from below ground to above or nearly above the elevation of the containment structure wall. This is so the guy wires or cables do not stress any part of the wall.

**(7) SECURITY.** (a) Except as provided in par. (b), an operator shall secure each storage container and its appurtenances by doing at least one of the following:

1. Keeping the storage container and appurtenances in a locked building.
2. Locking all valves on the storage container and appurtenances.
3. Keeping the storage container and appurtenances in a locked outdoor enclosure that complies with par. (c).

(b) Paragraph (a) does not apply if any of the following apply:

1. The operator or employees are present at the storage facility.
2. The storage container and its appurtenances are empty and thoroughly cleaned. Thorough cleaning, in the case of a pesticide storage container and its appurtenances, means removal of pesticide residues from exterior surfaces and triple rinsing of interior surfaces. Triple rinsing of interior surfaces is not required if a manufacturer-installed device prevents the container from being opened.

(c) An enclosure under par. (a) 3. shall consist of a secure wall or fence that is at least 5 feet tall at every point, and free of gaps that could allow unauthorized persons to enter. Security fencing installed on a concrete secondary containment structure wall shall comply with chapter 2 of the *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)*, if the secondary containment structure is constructed after November 1, 2006.

**Note:** The *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)*, written by Professor David W. Kammel, department of biological systems engineering, university of Wisconsin-extension, is on file with the department and the revisor of statutes. Copies are available from the department, free of charge, at the following address:

Department of Agriculture, Trade and Consumer Protection  
Agricultural Resource Management Division  
P.O. Box 8911  
Madison, WI 53708-8911  
Phone: (608) 224-4500  
Web: <http://www.datcp.state.wi.us>

**(8) STORAGE CONTAINERS PROTECTED FROM MOVING VEHICLES.** An operator shall protect storage containers and appurtenances against damage that may be caused by moving vehicles.

**(9) FILLING STORAGE CONTAINERS.** An operator may not fill a storage container to more than 95% of capacity unless the storage container is one of the following:

- (a) Kept at a constant temperature.
- (b) A mini-bulk container that is not filled beyond the maximum capacity shown on the container.

**(10) LABELING STORAGE CONTAINERS.** (a) An operator shall label each fertilizer storage container, other than a mobile container, with the name or grade of fertilizer that it contains. Label contents shall be visible from outside the secondary containment structure in which the storage container is located.

(b) An operator shall label each pesticide storage container in compliance with the federal insecticide, fungicide and rodenticide act as amended (7 USC 136 to 136y) and regulations issued under that act. Label contents shall be visible from outside the secondary containment structure in which the storage container is located. The label on each pesticide storage container shall include the federal pesticide producing establishment number of the establishment that produced the pesticide. The label on a pesticide bulk sale container shall show the net contents of the container.

**Note:** A storage facility at which an operator repackages pesticide from a storage container to mini-bulk or other containers is considered a "pesticide producing establishment" under the federal act. The operator of that storage facility must obtain a pesticide producing establishment number from the federal environmental protection agency, and must include that establishment number on every mini-bulk or other container filled at that storage facility. Mini-bulk containers must be properly labeled, regardless of whether they are mobile containers. Whenever an operator sells pesticide from a storage container, the operator must supply the purchaser with the pesticide labeling required under ss. 94.676 and 94.70, Stats.

(7) As an alternative to the locking of valves, valve handles may be removed when not in use. Before removing handles as a form of security, the valve should be closed and the valve construction should be inspected to make certain that the handle bolt does not hold the entire valve together. If the plumbing system consists entirely of permanent (threaded or welded) steel plumbing, the valve on the container does not need to be locked or have its handle removed, provided all plumbing outlets are equipped with secured valves.

If a facility permanently plumbs (no quick-connections) all storage containers to a common manifold that is otherwise secured (locked, fenced or inside a locked building), the facility is not required to have locked or lockable valves on the storage containers or a minimum 5-foot fence around the storage containers.

The facility should be secured such that non-malicious vandalism could not increase the likelihood of a discharge. Security should be such that no person could cause a discharge without bringing keys, tools or other material with them to open or damage the containers or related appurtenances. Alternatives may include drainage or locking of all self-draining pipes and other appurtenances, in addition to locking of container valves. Security requirements apply to all containers (mobile containers, spray rigs, etc.) that are left unattended with fertilizer or pesticide in them.

(8) Containers and appurtenances should not be located where they could be run over or backed into. Means of protection may include overhead suspension of appurtenances, a large curb, railroad ties or the containment structure wall.

In the absence of a secondary containment structure wall or large curb, storage containers including minibulks must be located outside the general traffic flow of the facility. If a mixing and loading pad doubles as secondary containment for bulk storage containers, the containers must be located outside the lane of traffic for the mix/load pad. Minibulks are not required to be protected from forklift traffic, as forklifts are necessary to move minibulk containers.

(9) Constant temperature environments include containers located in a heated building and containers that are insulated and equipped with operable heating units.

(10) Bulk containers must be labeled with the product name or grade in a lettering size and container location visible from outside secondary containment. If containers are plumbed into a central valve area, the valves should be coded to indicate which container is associated with each valve. If tanks can not be adequately labeled, placards must be posted nearby to clearly indicate that container's contents.

The pesticide container label must show the net contents of the last delivery to the bulk pesticide container.

**(11) VENTING PESTICIDE STORAGE CONTAINERS.** Every pesticide storage container, other than a mobile container or a container used only to store wood preservative, shall have a conservation vent that opens and closes within the designed pressure limits of the container to relieve excess pressure, prevent evaporative losses, and keep precipitation out of the container.

**(12) UNDERGROUND STORAGE PROHIBITED.** No person may store bulk liquid fertilizer, bulk liquid pesticide, or any material recovered under s. ATCP 33.52, below ground level, except in a storage container that is located in a secondary containment structure.

**(13) INSPECTING AND MAINTAINING STORAGE CONTAINERS.** An operator shall, at least semi-annually, inspect and maintain each storage container and its appurtenances to minimize the risk of a discharge. Whenever an operator repairs a storage container, the operator shall make the repair according to good engineering practice and manufacturer specifications. An operator shall remove a storage container from service if it cannot be adequately maintained.

**(14) ABANDONING STORAGE CONTAINERS.** (a) An operator shall do all of the following to an abandoned storage container:

1. Thoroughly clean and rinse the storage container.
2. Remove any storage container appurtenances.
3. Remove the storage container if the storage container is an underground storage container.

A sump that has a capacity of more than 50 gallons is considered an underground storage container for this purpose. The operator shall notify the department at least 3 business days before the operator removes an underground storage container, and shall permit the department to take soil samples upon request.

(b) An operator shall comply with par. (a) within 2 years after a storage container is abandoned, except that:

1. If the storage container was abandoned prior to November 1, 2006, the operator shall comply with par. (a) within 2 years of November 1, 2006.
2. If the storage container is abandoned under par. (c) 4., the operator shall comply with par. (a) before the closing date for the sale of the storage container site unless the purchaser agrees to comply with par. (a) within 2 years after the abandonment date under par. (c) 4.

(c) A storage container is abandoned, for purposes of this subsection, if any of the following apply:

1. The operator removes the storage container from service, with the intent of doing so permanently.
2. The storage container is out of service for more than 6 months because of a weakness or leak.
3. The storage container is out of service for more than 2 years for any reason.
4. The operator contracts to sell the storage container site to a person who is not an operator.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

- (11) A conservation vent is a vent which is normally closed, but will open either under internal pressure or vacuum. A conservation vent is not required on mobile containers less than 400 gallons in capacity or rinsate tanks. Conservation vents are also not required on polyethylene pesticide storage tanks, provided the pesticide product stored is not volatile enough to cause significant evaporative losses.
- (13) Facilities must be maintained to minimize discharges. Recordkeeping requirements are covered under s. ATCP 33.80.
- (14) Filling ports of abandoned containers must be disconnected from the storage system, and the valve must be removed to prevent the inadvertent use of the container. A plug should be placed in all valve openings so these openings will not be forgotten if the tank is later reused.

Manholes are not required to be left open, but if they are left open, it is highly recommended that the manholes be protected against entrance by children and animals through the use of fencing, screening or similar methods.

**ATCP 33.22 Dry fertilizer or pesticide storage structures. (1) GENERAL.** Structures used to store dry bulk fertilizer or dry bulk pesticide shall be designed, constructed, inspected and maintained to withstand the pressure of stored product, to prevent discharges, and to prevent precipitation from contacting stored product.

**(2) INDOOR STORAGE REQUIRED.** An operator shall store dry bulk fertilizer and dry bulk pesticide on a portland cement concrete surface in a fully enclosed building, except that the operator may store the following products outdoors:

(a) Products that are fully enclosed in durable sealed weatherproof packages or containers.

(b) Potassium chloride, or another fertilizer product specifically authorized in writing by the department, if all of the following apply:

1. The product is stored on an asphalt concrete or portland cement concrete surface that will contain any precipitation runoff that may come in contact with the stored product.
2. The product is fully covered by a waterproof cover that prevents exposure to precipitation.

**(3) REMOVING PRODUCT FROM STORAGE STRUCTURE.** An operator shall remove all bulk fertilizer and bulk pesticide from a dry bulk fertilizer or dry bulk pesticide storage structure if any of the following apply:

(a) The structure is no longer used to store dry bulk fertilizer or dry bulk pesticide.

(b) The operator transfers ownership of the structure to a person who is not an operator.

(c) The department orders the removal or demolition of the storage structure, as part of a discharge cleanup under ch. ATCP 35.

(d) The operator fails to maintain the structure according to sub. (1).

**(4) SECURITY.** Structures used to store dry bulk fertilizer or dry bulk pesticide shall be secured against access by unauthorized persons when the operator is not present at the storage facility.

**(5) LABELING STORAGE BINS AND CONTAINERS.** (a) An operator shall label every storage bin and container used to store dry bulk fertilizer or dry bulk pesticide.

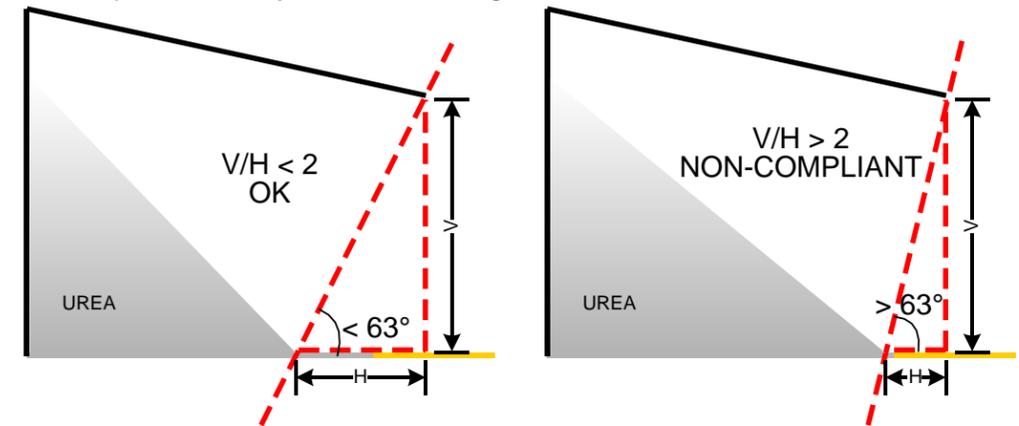
(b) A fertilizer label under par. (a) shall include the name or grade of the fertilizer, as required by s. 94.64 (2) (d), Stats.

(c) A pesticide label under par. (a) shall comply with the federal insecticide, fungicide and rodenticide act as amended (7 USC 136 to 136y) and regulations issued under that act. The label shall include the identification number of the pesticide producing establishment from which the pesticide originated.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

(1) Dry bulk pesticide storage is not a common practice in Wisconsin at this time. For questions concerning provisions of this section, please contact the department. For short term or occasional outdoor storage, well anchored polyethylene film may suffice as a suitable cover. Where storage is anticipated for a longer period or on an annual basis, a more durable covering is recommended.

(2) A building protected by an overhang with a maximum angle of 63° from the front edge of the fertilizer to the overhang may be considered to be fully enclosed. To meet the 63° maximum angle, the ratio of the vertical distance from the floor/ground to the overhang to the horizontal distance from the fertilizer edge to the overhang lip can be no greater than 2:1. This is to reduce the contact of fertilizer with rainwater. However, if the precipitation is still coming in contact with dry fertilizer, the system is not compliant as a fully enclosed building



This is not to be confused with security; if a facility has accessible exposed fertilizer; a fence or other methods of security is still needed. Further, any fertilizer build up or accumulation in the gravel outside the building must be recovered and disposed of properly.

Another means to satisfy “indoor” storage is the use of roll-up curtains, commonly made of polyethylene and commonly used in cattle or dairy barns. The use of such curtains is only applicable if the facility actually has the curtain lowered during precipitation events, or at least lowered enough to meet the above overhang to back-set ratio.

To clarify, outdoor storage of potash does not require written DATCP authorization.

(4) Security of a dry fertilizer bin or structure may be provided by locked cattle gates across the facility entrance, or similar gates across each open bin. It is not necessary to fence the entire facility to meet the security standard for dry bulk fertilizer, nor do the gates have to be a minimum of 5' tall.

The use of roll-up curtains for keeping out precipitation will also satisfy the requirements for security, provided that the hand-crank or electric switch and motor for raising and lowering the curtain is secured against use by unauthorized persons.

## Subchapter IV — Mixing and Loading Pads

**ATCP 33.30 Mixing and loading pads required.** (1) Except as provided in s. ATCP 33.32 (8) or (9) or s. ATCP 33.34 (6), all handling of bulk fertilizer or bulk pesticide at a storage facility shall be conducted over a mixing and loading pad.

(2) A mixing and loading pad shall be constructed and maintained to catch, contain and allow recovery of reasonably foreseeable discharges that may result from the handling of the bulk fertilizer or pesticide.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.32 Mixing and loading pad for liquid products.** Except as provided in sub. (8) or (9), a mixing and loading pad used for liquid fertilizer or pesticide shall comply with all of the following:

(1) PUMP CONTAINMENT. A mixing and loading pad shall extend beneath any pump that the operator uses to transfer liquid fertilizer or pesticide, unless the pump is located within a secondary containment structure that complies with s. ATCP 33.42.

(2) APPURTENANCE CONTAINMENT. A mixing and loading pad shall extend beneath any appurtenance or plumbing connection through which the operator transfers liquid fertilizer or pesticide, unless one of the following applies:

(a) The appurtenance or connection is located within a secondary containment structure that complies with s. ATCP 33.42.

(b) The appurtenance or connection is threaded, welded or permanently band-clamped.

(3) DESIGN, CONSTRUCTION AND MAINTENANCE; GENERAL. A mixing and loading pad shall comply with all of the following requirements:

(a) It shall be liquid-tight.

(b) It shall have the capacity required in sub. (4).

(c) It shall be constructed of materials specified in sub. (5).

(d) It shall be served by a pump and storage container that comply with s. ATCP 33.50.

(e) If it drains to a sump, the sump shall comply with s. ATCP 33.36.

(f) It shall be designed, constructed and maintained to withstand all foreseeable load conditions, including the filled weight of all vehicles, storage containers, appurtenances, pumps and equipment that may be used or located within it.

(g) It shall be protected against precipitation runoff from surrounding surfaces.

(h) It may not have any precipitation drain through which spilled fertilizer or pesticide could be discharged. Any precipitation drain that exists on November 1, 2006 shall be permanently sealed within 6 months after that date.

(i) It shall be inspected and maintained as provided in subs. (6) and (7).

### 33.32(1)

Transfer of bulk product from a delivery vehicle to a storage container at the facility is handling and must be performed over a pad that meets all the requirements of this section. Facility operators may consider these pads loading pads, as opposed to mixing and loading pads, but the requirements are the same.

An operator distributing to a farmer from a mobile container is not required to unload the mobile container over a mix/load pad. This includes delivery to a farm tank (provided the farmer is invoiced before or at the time of delivery) or in-field delivery to commercial application equipment. Regardless of who owns the product, the loading of a mobile container (i.e. a tender trailer tank) from another mobile container (i.e. a semi-tanker) must be performed over a mix/load pad if the newly loaded container (the tender trailer, in this example) is used to haul product to various locations for the purpose of distribution. By definition, that loading site becomes a storage facility. The only way such a situation would be compliant without a pad is if the mobile container from which the product is unloaded has a capacity less than 500 gallons and is unloaded for no more than 3 persons.

Unless the mix/load pad is for the temporary storage requirements under § ATCP 33.40(2)(b), no loading pad is required at facilities where the only bulk fertilizers and bulk pesticides on site are minibulks, provided that the facility distributes the minibulks without opening or transferring product from the minibulks on site.

(2) The mix/load pad must be large enough to contain spillage from all portions of the vehicle involved in the loading process, but the entire vehicle need not be over a spill containment surface. Any surface of a vehicle from which product could leak or drip must be over the spill containment surface. If a transfer is being made from one vehicle to another, both vehicles or the at-risk portions of those vehicles must be located over a pad.

(3) Curbing may consist of a pad sloping to a sump or catch basin, if the pad slope or drainage around the pad will prevent discharges or rainwater from flowing off the pad and rainwater from flowing onto the pad. **Pads constructed for use as secondary containment must have a curb with a minimum height of 4 inches.**

Cracks and seams in concrete that are of measurable size should be sealed with caulking or similar chemically compatible substance. Hairline cracks do not require sealing if they remain closed throughout all seasons and are limited in extent. Many fertilizer materials are corrosive to concrete. Sealing of a concrete pad may significantly increase its resistance to such deterioration. In addition, asphalt pads must be maintained at least on an annual basis to fill in cracks and seal the surface of the pad. Refer to Appendix 1 (page 37) for caulk recommendations.

The department recommends against the use of vehicle scales and related scale pits for mixing and loading pad purposes. However, such scales and related scale pits, in use for mix/load pad purposes prior to November 1, 2006, may be used as a mix/load pad provided the requirements of this rule and of ch. ATCP 92 – Weights and Measures, are both met. Chapter ATCP 92 requires a ten foot long level concrete approach on each end of the scale. Curbing or slopes must either be beyond the ten foot approach or incorporated in the approach in a manner acceptable under ch. ATCP 92. If any bulk product is spilled into the scale pit, care must be taken to clean the scale pit safely and promptly. Materials spilled in a scale pit may corrode scale parts, resulting in inaccuracies or failure.

**(4) CAPACITY.** The capacity of a mixing and loading pad under this section, including the capacity of any sump to which the mixing and loading pad drains, shall be at least 1,000 gallons or 125 percent of the capacity of the largest storage container loaded or unloaded at the storage facility, whichever is less. This subsection does not apply to a mixing and loading pad that was in use prior to November 1, 2006 and complies with capacity requirements that were in effect at that time, unless the operator substantially alters the mixing and loading pad.

**(5) CONSTRUCTION MATERIALS.** (a) Except as provided in par.

(b), a mixing and loading pad shall be constructed of portland cement concrete. A portland cement concrete mixing and loading pad constructed on or after November 1, 2006 shall meet the standards specified in chapters 5 and 6 of the *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)*.

**Note:** The *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)* were written by Professor David W. Kammel of the department of biological systems engineering, university of Wisconsin-extension. Copies are on file with the department and the revisor of statutes. Copies are available from the department, at no charge, at the following address:

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(b) A mixing and loading pad that was in use prior to November 1, 2006 may be constructed of asphalt concrete, provided that it is not used after December 31, 2009.

**(6) CONSTRUCTION INSPECTION.** If a concrete mixing and loading pad is constructed on or after November 1, 2006, the operator or a person chosen by the operator shall inspect the construction for conformity to the design specifications filed with the department under s. ATCP 33.10 (1). The person conducting the inspection shall inspect and approve the construction of the soil sub-base, the laying of structural steel, and the laying of waterstop materials and devices before concrete is poured. The operator shall provide a copy of the inspection report and approval to the department.

**Note:** The department recommends that construction inspection be performed by a qualified person experienced in reading plans and inspecting construction.

**(7) INSPECTION AND MAINTENANCE.** (a) An operator shall inspect a mixing and loading pad at least semi-annually, and shall maintain the mixing and loading pad as necessary, to ensure compliance with this section.

(b) Whenever an operator repairs a mixing and loading pad, the operator shall make the repair according to good engineering practice and manufacturer specifications, using materials approved by the department.

(c) An operator shall remove a mixing and loading pad if the operator cannot maintain it in compliance with this section, or if corrective action is needed to remove contamination from beneath the pad. An operator shall remove a leaking mixing and loading pad unless the pad is repaired and remains liquid-tight for at least 2 years after the date of repair.

- (4) Rainwater accumulations at the loading area, whether into an underground or above-ground catch basin, must be removed prior to commencing loading operations if the required pad capacity is not available.
- (5) The department may provide a variance to the material requirements of the rule under s. ATCP 33.02, provided the alternative material and its construction can be shown to provide equivalent protection for waters of the state.
- (7)(c) An operator will be given the opportunity to repair a leaking sump/pad/structure, and the two year interval will not be effective until the sump/pad/structure has been verified as having been successfully repaired.

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**(8) PUMPING LIQUID PRODUCTS FROM RAIL CARS.** Section ATCP 33.30 and subs. (1) through (7) do not apply to the pumping of liquid bulk fertilizer or liquid bulk pesticide from a rail car to a storage container, provided that all of the following apply:

(a) The hose or pipeline from the rail car outlet valve to the pump is equipped with a shut-off valve, unless the pump can draw from no other hose or pipeline.

(b) The hose or pipeline from the pump to the storage container is equipped with an automatic check valve to prevent back flow. The check valve shall be located as close to the pump effluent port as possible, consistent with good engineering practice.

(c) All of the following are located over one or more spill containment basins that comply with par.(d):

1. The rail car outlet valve.

2. The pump.

3. Every valve or plumbing connection that is located between the rail car outlet valve and the storage container, unless the valve or plumbing connection is threaded, welded, fused or permanently band-clamped.

(d) Every containment basin under par. (c) is liquid-tight, and is constructed of durable rigid material that is chemically compatible with any liquid that may be discharged to it. The basin shall have a capacity of at least 75 gallons, or a capacity at least equal to the capacity of the appurtenances that may discharge to it, whichever is greater. A containment basin may be permanent or portable. The operator shall routinely inspect and maintain the basin to ensure compliance with this paragraph.

(e) If the operator pumps the fertilizer or pesticide from the rail car to another mobile container, the other mobile container is parked on a mixing and loading pad that complies with this section.

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**(9) LOADING LIQUID BULK PESTICIDE INTO ANHYDROUS AMMONIA NURSE TANK.** Section ATCP 33.30 and subs. (1) through (7) do not apply to the loading of liquid bulk pesticide into an anhydrous ammonia nurse tank if all of the following apply:

(a) The operator loads the bulk pesticide from a storage container that is located over a mixing and loading pad that complies with this section, or over a secondary containment structure that complies with s. ATCP 33.42.

(b) The operator uses a positive displacement pump to transfer the pesticide to the anhydrous ammonia nurse tank. The pump shall be located over a mixing and loading pad that complies with this section, or over a secondary containment structure that complies with s. ATCP 33.42. The pump shall be rated to deliver no more than 3 gallons per minute at a pressure of no more than 250 psi. The pump shall be equipped for manual shutdown, in addition to automatic shutdown under par. (c) 2.

(c) The pump under par. (b) is equipped with electronic controls that do all of the following:

1. Prevent pump operation until the operator manually pre-sets the pumping volume and engages a separate manual starter switch.

2. Automatically stop the pump when the pre-set volume has been pumped.

(d) The hose from the pump to the anhydrous ammonia nurse tank meets all of the following requirements:

1. It is no longer than 12 feet and has an inside diameter of not more than 1/2 inch.

2. It has a rated operating pressure of at least 1,200 psi with a burst strength of at least 5,000 psi.

3. It has a check valve near its nurse tank end, and a manually operated valve and coupling to connect it to the nurse tank.

(e) The operator tests the connection between the hose and nurse tank before loading pesticide into the nurse tank, to ensure that the connection does not leak.

**Note:** The most common pesticide products loaded into anhydrous ammonia are nitrapyrin based products.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.34 Mixing and loading pad for dry products.** Except as provided in sub. (6), a mixing and loading pad used for dry fertilizer or pesticide shall comply with all of the following:

**(1) CONVEYOR CONTAINMENT.** A mixing and loading pad shall extend beneath any conveyor used to load or unload dry bulk fertilizer or dry bulk pesticide, unless the conveyor is fully enclosed within a housing that contains all spillage from the conveyor.

**Note:** Section ATCP 33.62 requires that the unloading chute or conveyor be equipped with a dust control system or device to further minimize the risk of discharge.

**(2) PORTLAND CEMENT OR ASPHALT CONCRETE CONSTRUCTION.** A mixing and loading pad shall be constructed of portland cement or asphalt concrete.

**(3) STRUCTURAL CAPABILITY.** A mixing and loading pad shall be designed, constructed and maintained to withstand all foreseeable load conditions, including the filled weight of all vehicles, application equipment or and other equipment that may be used or located on it.

**(4) MIXING AND LOADING PAD INSPECTION AND MAINTENANCE.** An operator shall inspect a mixing and loading pad at least semi-annually, and shall maintain the mixing and loading pad as necessary, to ensure compliance with this section. Whenever an operator repairs a mixing and loading pad, the operator shall make the repair according to good engineering practice and manufacturer specifications.

**(5) MIXING AND LOADING PAD REMOVAL.** An operator shall remove a mixing and loading pad if the operator cannot maintain it in compliance with this section, or if corrective action is needed to remove contamination from beneath the pad.

**(6) UNLOADING DRY FERTILIZER FROM RAIL CARS.** Section ATCP 33.30 and subs. (1) through (5) do not apply to the unloading of dry bulk fertilizer from bottom-unloading rail cars, provided that the operator unloads the fertilizer over one of the following:

(a) A fixed or portable containment basin or a portland cement or asphalt concrete pad. The containment basin shall be made of durable rigid material, and shall effectively contain any dry fertilizer that may be discharged during the unloading process. The operator shall routinely inspect and maintain the containment basin or pad to ensure compliance with this paragraph.

(b) A well-maintained tarpaulin, if the fertilizer is unloaded prior to December 31, 2009 and the facility utilized a well-maintained tarpaulin for dry fertilizer or pesticide unloading from railcars prior to November 1, 2006.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

33.34

For both truck and railcar unloading systems (for loading into a facility or transloading to other vehicles), the mixing and loading pad will often include a "pit" in which a hopper and conveyor are located. Section ATCP 33.30 (page 27), which requires that a mixing and loading pad be constructed to catch, contain and allow recovery of reasonably foreseeable discharges, applies to both dry and liquid mixing and loading pads. In order to meet this requirement, dry fertilizer loading "pits", which are not sumps under Subchapter V, are permissible under the rule, but both the design and management of the "pit" determines its compliance.

An operator is required to recover all spillage that collects on or in a containment surface at least by the end of the business day on which the spillage collected. It is recognized that truck and rail-unload pits or basins are not always easily accessible to allow for end-of-the-day recovery. The intent of the rule is to protect groundwater by keeping spillage out of soil. So, at a minimum, such pits or basins must be addressed according to the following scenarios:

- The pit is not subject to spillage, meaning the unload transfer system is completely housed, with no leaks. Obviously, if there is no spillage, the requirement for end-of-the-day recovery is not applicable.
- The pit is not subject to water or liquid from any source (runoff or direct precipitation from above, or groundwater from below). End-of-the-day recovery is preferred, but the facility should clean out the pit of any spillage at least on annual basis.
- The pit is subject to spillage and to water or liquid entering it. End-of-the day recovery according to § ATCP 33.52(2) is required. Combined visual evidence that water has been in the pit and observation of spilled fertilizer in the pit is sufficient to identify this issue as a (potential) violation.

## Subchapter V — Sumps

**ATCP 33.36 Sumps; general.** If a mixing and loading pad or secondary containment structure drains to a sump, the sump shall be all of the following:

- (1) Designed, constructed and maintained to contain liquid that drains to the sump.
- (2) Liquid-tight.
- (3) Constructed according to s. ATCP 33.38.
- (4) Served by a pump and storage container that comply with s. ATCP 33.50.
- (5) Inspected and approved at the time of construction, in the same manner as a mixing and loading pad inspected under s. ATCP 33.32 (6), if the sump is constructed of portland cement concrete on or after November 1, 2006. The operator shall provide DATCP with a copy of the inspection report and approval.
- (6) Routinely inspected and maintained to ensure compliance with this section.
- (7) Repaired, when necessary, according to good engineering practice and manufacturer specifications.
- (8) Removed if it cannot be maintained in compliance with this section, or if corrective action is needed to remove contamination from beneath the sump. An operator shall remove a leaking sump unless the sump is repaired and remains liquid-tight for at least 2 years after the date of repair.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.38 Sump construction. (1) GENERAL.** Except as provided in sub. (2):

(a) A sump that is part of a mixing and loading pad, or part of a portland cement concrete secondary containment structure, shall be constructed of portland cement concrete and shall meet the standards specified in chapters 5 and 6 of the *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)*.

**Note:** The *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)*, written by Professor David W. Kammel, department of biological systems engineering, university of Wisconsin-extension, is on file with the department and the revisor of statutes. Copies are available from the department, free of charge, at the following address:

Department of Agriculture, Trade and Consumer Protection  
Agricultural Resource Management Division  
P.O. Box 8911  
Madison, WI 53708-8911  
Phone: (608) 224-4500  
Web: <http://www.datcp.state.wi.us>

- (b) A sump shall have a capacity of not more [than] 50 gallons.
- (c) A sump may not be more than 2 feet deep, or have a depth that exceeds its shortest width.
- (d) The walls and floors of a sump shall be at least as thick, at every point, as the mixing and loading pad or secondary containment structure floor that drains to the sump.
- (e) A sump that is part of a mixing or loading pad shall form part of a continuous surface, having an area of at least 15 feet by 15 feet and a capacity of at least 250 gallons, which is free of construction and control joints.

- (8) An operator will be given the opportunity to repair a leaking sump/pad/structure, and the two year interval will not be effective until the sump/pad/structure has been verified as having been successfully repaired.

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(f) If a sump is constructed as part of a concrete mixing and loading pad or concrete secondary containment structure, it shall be constructed in a continuous concrete pour with that pad or structure.

(g) No pipes or openings may extend through a sump. This does not prohibit a surface trough or rim indentation needed to accommodate a pipe or hose connection required under s. ATCP 33.50.

(h) A sump shall be readily accessible for inspection. Pumps, collection basins or other equipment placed in the sump shall be readily removable, so that all surfaces of the sump can be easily inspected.

**(2) EXEMPTION.** Subsection (1) does not apply to a sump that was in service prior to November 1, 2006 if all of the following apply:

(a) The sump is not substantially altered on or after November 1, 2006.

(b) The sump does not receive runoff from any mixing and loading pad or secondary containment structure that is constructed or substantially altered on or after November 1, 2006.

(c) The sump meets construction standards that applied at the time of its construction.

(d) The operator pressure tests any underground piping or conduit connected to the sump to ensure that the piping or conduit is liquid-tight. The operator shall perform a pressure test at least annually and shall keep a written record of the pressure test results.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

### **Subchapter VI — Secondary Containment Structures**

**ATCP 33.40 Secondary containment required. (1) GENERAL.** Except as provided in sub. (2), all of the following shall be located within a secondary containment structure that complies with s. ATCP 33.42:

(a) Storage containers.

(b) Storage container shut-off valves under s. ATCP 33.20 (2) (a).

(c) Liquid level gauging devices under s. ATCP 33.20 (3).

**(2) EXEMPT STORAGE CONTAINERS.** No secondary containment is required under sub. (1) for any of the following:

(a) An empty storage container that has been thoroughly cleaned and rinsed. A pesticide container is thoroughly cleaned and rinsed if all exterior surfaces of the container are free of pesticide residues and all inside surfaces are triple rinsed.

(b) A mobile container kept at a storage facility for fewer than 7 days if all of the following apply:

1. Loading and unloading of the mobile container complies with ss. ATCP 33.30 and 33.32.

2. The storage facility has at least one storage container that has unused capacity greater than the total capacity of the mobile container.

(c) A mini-bulk container if the exterior surfaces of the mini-bulk container are clean and one of the following applies:

1. The mini-bulk container is triple rinsed.

2. The mini-bulk container is equipped with a device to prevent the container from being triple rinsed.

(d) An abandoned storage container if the operator complies with s. ATCP 33.20 (14).

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

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**ATCP 33.42 Secondary containment structures; standards.** A secondary containment structure required under s. ATCP 33.40 (1) shall comply with all of the following requirements:

**(1) CONSTRUCTION STANDARDS; GENERAL.** (a) A secondary containment structure shall take one of the forms authorized in s. ATCP 33.44.

(b) A secondary containment structure shall be designed, constructed and maintained to contain potential discharges of liquid fertilizer or pesticide from storage containers and appurtenances located within the structure.

(c) A secondary containment structure shall have the capacity required in sub. (2). An operator shall notify the department at least 7 business days before installing an additional storage container in a secondary containment structure, or replacing an existing storage container in a secondary containment structure with a larger storage container.

(d) A secondary containment structure shall comply with applicable wall height requirements in sub. (3).

(e) A secondary containment structure shall be designed, constructed and maintained to do all of the following:

1. Withstand the full hydrostatic head of any liquid discharged within the structure.
2. Prevent liquid in the structure from moving to groundwater or other waters of the state.

(f) A secondary containment structure shall have a coefficient of permeability of not more than  $1 \times 10^{-6}$  cm/sec.

(g) A secondary containment structure shall be designed to withstand the filled weight of all storage containers, appurtenances, pumps and equipment that may be used or located within it.

(h) A secondary containment structure may not have any opening through which precipitation or other liquids may drain from the structure. This paragraph does not apply to any of the following:

1. A tank-in-tank that complies with s. ATCP 33.44 (9).
2. A bladder tank that complies with s. ATCP 33.44 (10).
3. An opening for a pipe that extends through the wall of a secondary containment structure constructed prior to November 1, 2006, provided that the operator complies with s. ATCP 33.20 (2) (d) 2. or the secondary containment structure has adequate containment capacity as required under sub. (2) below the level of the opening.

**(2) CAPACITY.** (a) The capacity of a secondary containment structure, including all portions of the structure to which a liquid may freely flow, shall be at least equal to the sum of all the following:

1. One hundred and twenty five percent of the capacity of the largest storage container in the secondary containment structure if the secondary containment structure is not fully enclosed in a building, or 110% of the capacity of the largest storage container in the secondary containment structure if the secondary containment structure is enclosed in a building.

2. The total volume of discharged liquid that would be displaced by the submerged portions of all other storage containers, fixtures and materials located within the secondary containment structure, if the structure were filled to capacity with discharged liquid.

(b) Paragraph (a) does not apply to a bladder tank that complies with s. ATCP 33.44 (10).

**(3) WALL HEIGHT.** (a) Except as provided in pars. (b) to (d), a secondary containment structure shall have walls at least 4 inches high but not more than 4 feet high, measured from the interior floor of the secondary containment structure.

(b) Paragraph (a) does not apply to an earthen-lined structure that complies with s. ATCP 33.44 (6), a tank-in-tank that complies with s. ATCP 33.44 (9), or a bladder tank that complies with s. ATCP 33.44 (10).

(c) A secondary containment structure that was in use prior to November 1, 2006 may have walls more than 4 feet high if the structure provides safe access to storage containers and appurtenances, and a safe exit in the event of a discharge.

(d) A secondary containment structure that was in use prior to November 1, 2006 may have walls less than 4 inches high, provided that the structure meets the capacity requirements in sub. (2).

(2) The required capacity can be summarized as 1.25 times the largest container, plus the displaced based of all other containers in the dike. The largest container's capacity is based on actual capacity, not the firm's maximum fill level. One cubic foot contains 7.48 gallons.

For example:

An outdoor secondary containment system with a 3.5 foot wall contains:

4 tanks:                    2-12' diameter, 30,000 gallons  
                                   (3.5' at 12' diameter = 2961 gallons per tank base)  
                                   2-11' diameter 20,000 gallons  
                                   (3.5' at 11' diameter = 2488 gallons per tank base)

Required capacity:	1.25 x 30,000 =	37,500	
	1 x 2961	2,961	
	2 x 2488	<u>4,796</u>	
		45,437	gallons

For the 3.5 foot wall height, the required square footage is:

$$\frac{45,437 \text{ gallons}}{7.48 \text{ gallons/ft}^3} = 6075 \text{ ft}^3 \qquad \frac{6075 \text{ ft}^3}{3.5 \text{ ft}} = 1736 \text{ square feet}$$

A general rule for containment structures that have sand or gravel underneath tanks is that the displaced volume of the gravel is equivalent to half of the volume occupied by the gravel.

(3) A mixing and loading pad built after November 1, 2006 and used for secondary containment must still meet the 4" wall requirement.

Cracks and seams in concrete that are of measurable size should be sealed with caulking or similar chemically compatible substance. See the caulk compatibility chart on page 37 (Appendix 1). Hairline cracks do not require sealing if they remain closed (hairline, as opposed to widening for any reason) throughout all seasons and are limited in extent.

Earthen walls with a horizontal to vertical slope of at least 3 to 1 may be protected by a vegetative cover. They may not show signs of slumping or erosion. Steeper walls should be graveled or paved.

**(4) STORAGE CONTAINER LOCATION.** (a) Except as provided in par. (b), all storage containers in a secondary containment structure shall be located at least 24 inches from the walls of the structure and at least 24 inches from each other.

(b) Paragraph (a) does not apply to any of the following:

1. Storage containers installed in a secondary containment structure constructed prior to November 1, 2006.
2. Bladder tanks.
3. Mini-bulk containers.

**(5) INSPECTION AND MAINTENANCE.** An operator shall do all of the following:

(a) Routinely inspect and maintain a secondary containment structure to ensure compliance with this subchapter.

(b) Repair a secondary containment structure, when necessary, according to good engineering practice and manufacturer specifications.

(c) Remove a secondary containment structure if the operator cannot maintain it in compliance with this subchapter, or if corrective action is needed to remove contamination from beneath the structure. An operator shall remove a leaking secondary containment structure unless the structure is repaired and remains liquid-tight for at least 2 years after the date of repair.

**(6) LIQUID PESTICIDE STORED WITH OTHER MATERIALS.** (a) Except as provided in par. (b), only the following materials may be stored in the same secondary containment structure with liquid bulk pesticide:

1. Other liquid pesticides.
2. Pesticide diluting agents.
3. Pesticide rinsate.
4. Empty pesticide containers.
5. Recovered pesticide discharges.

(b) Liquid bulk pesticide may be stored in the same secondary containment structure with bulk fertilizer or dry bulk pesticide if either of the following applies:

1. The secondary containment structure contains only mini-bulk or mobile storage containers, or both.
2. The secondary containment structure is located within a fully enclosed building.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

(5) Inspection of concrete should include checking for both new and previously sealed cracks for chemical erosion, and for exposure of reinforcing. The condition of steel anchoring should also be checked since failure of a single anchor on a tank may cause as much or more damage as no anchoring.

Inspection of soil or soil-bentonite dikes should include a check for slumping of walls, erosion or other wall damage. Freeze/thaw cycles and drying will cause cracks to develop in a soil liner over a period of several years. It may be necessary to reconstruct the liner more frequently than the 15 year interval the code requires.

Inspection of a synthetic liner should include a physical inspection of the liner material itself by carefully digging down to the liner and looking for signs of chemical breakdown, flaking, peeling, delamination, and even damage (holes) caused by rodents or other animals.

(5)(c) An operator will be given the opportunity to repair a leaking sump/pad/structure, and the two year interval will not be effective until the sump/pad/structure has been verified as having been successfully repaired

(6) In a warehouse or open-floor area used as secondary containment, the common storage of bulk fertilizer, bulk pesticide and their respective rinsates or recovered discharges is allowed provided the bulk products are stored in:

- minibulks, only, or
- mobile containers for less than 7 days.

See § 33.42(7).

**ATCP 33.44 Secondary containment structures; forms of construction.** A secondary containment structure shall take one of the forms authorized in this section.

**(1) CONCRETE STRUCTURES.** (a) A secondary containment structure may be constructed of concrete.

(b) A concrete secondary containment structure constructed on or after November 1, 2006 shall be constructed of portland cement concrete and shall comply with standards specified in chapters 5 and 6 of the *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)*.

**Note:** The *Wisconsin minimum design standards for concrete agrichemical containment (February, 2005)*, written by professor David W. Kammel, department of biological systems engineering, university of Wisconsin-extension, is on file with the department and the revisor of statutes. Copies are available from the department at the following address:

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Madison, WI 53708-8911  
Phone: (608) 224-4500  
Web: : <http://www.datcp.state.wi.us>

(c) If a concrete secondary containment structure is constructed on or after November 1, 2006, the operator or a person chosen by the operator shall inspect the construction for conformity to the design specifications filed with the department under s. ATCP 33.10 (1). The person conducting the inspection shall inspect and approve the construction of the soil sub-base, the laying of structural steel, and the laying of waterstop materials and devices before concrete is poured. The operator shall provide a copy of the inspection report and approval to the department.

**Note:** The department recommends that construction inspection be performed by a qualified person experienced in reading plans and inspection construction.

**(2) CONCRETE BLOCK STRUCTURES.** A secondary containment structure may have walls constructed of prefabricated Portland cement concrete blocks if all of the following apply:

(a) Spaces within the blocks are filled with portland cement concrete and the blocks are joined with mortar.

(b) The floor of the structure is made of poured portland cement concrete.

(c) The structure was constructed prior to November 1, 2006.

(d) The structure is not used after November 1, 2007.

**(3) STRUCTURES WITH SYNTHETIC LINERS.** A secondary containment structure may be constructed of earth or other materials if the structure is fully lined with a synthetic liner and all of the following apply:

(a) The operator installs the liner and tests liner seams according to manufacturer specifications. A qualified representative of the liner manufacturer shall perform or supervise the installation and testing.

(b) The liner is at least 30 mils (0.8 millimeter) thick.

(c) The manufacturer certifies in writing that the liner is chemically compatible with all fertilizers or pesticides that the operator may store within the secondary containment structure. The operator may not store, within the liner, any fertilizer, pesticide or chemical for which the liner is not certified.

(3)(c) Specific information on which liners have been certified by various manufacturers as compatible with various fertilizer and pesticide products may be obtained by contacting our office. Generally, the use of a synthetic liner for *pesticide* secondary containment purposes is infeasible due to a lack of compatibility.

(d) The liner manufacturer guarantees liner effectiveness until a date specified by the manufacturer. The operator may not use the liner beyond that date unless the operator conducts an inspection of the liner within the first year after that date, and at least once every 5 years thereafter. Each inspection shall comply with all of the following requirements:

1. The operator shall remove all gravel and geotextile from those portions of the liner that are not covered by storage containers, and shall inspect those portions of the liner.

2. The operator shall remove a storage container, and inspect those portions of the liner that were covered by the storage container, if an inspection under subd. 1. discloses a problem that extends under the storage container.

3. A department inspector shall attend the inspection.

(e) The operator repairs and maintains the liner and seams, as necessary, to ensure that the liner complies with this subsection and remains effective. The operator shall perform repairs according to manufacturer specifications. A qualified representative of the liner manufacturer shall perform or personally supervise each repair.

(f) The liner rests on one of the following bases, installed according to good engineering practice to provide stable support for the liner:

1. A synthetic geotextile.

2. A layer of soil, sand or smooth gravel at least 6 inches (15.24 centimeters) thick. The layer shall consist of particles less than ½ inch in diameter, and shall be free of sharp objects that may penetrate the liner.

(g) The liner is separated, by both of the following, from every storage container whose weight bears on the liner:

1. A synthetic geotextile that rests on the liner.

2. A layer of soil, sand or smooth gravel at least 3 inches (7.62 centimeters) thick that rests on the synthetic geotextile. If the soil, sand or gravel is held in place by a steel, synthetic or other structure, the geotextile liner under subd. 1. shall extend beneath that structure.

(h) The liner is protected, as necessary, against damage from human and motor vehicle traffic.

(i) The liner is protected against damage from sunlight and other sources, as necessary, according to manufacturer recommendations.

(d) If a facility is unable to comply with the requirements of the rule as written, then the facility has the responsibility to request, in writing, a variance, as provided under § ATCP 33.02. The request must include a clear description of how the facility can not comply with this section, how the proposed alternative inspection procedure will provide protection for waters of the state equivalent to the rule requirements, and a statement, by a professional engineer, certifying that the alternative measure will provide equivalent protection for waters of the state.

(i) A synthetic liner is not required to be covered entirely by a layer of geotextile felt, gravel or soil. Early synthetic liners were required to be covered to protect them from breakdown due to exposure to ultraviolet (UV) light. Modern synthetic liners are generally guaranteed by their manufacturers regardless of exposure to UV light. The department generally recommends against covering liners (except immediately around and under storage containers) for the following reasons:

- In the case of a spill, the soil or gravel layer makes complete cleanup virtually impossible.
- The absence of a soil or gravel layer makes detection of a tank leak far easier.
- The absence of a soil or gravel layer makes damage detection and repair far more feasible. If there is a layer of soil or gravel over the liner, not only would detection of a problem be virtually impossible, but so would repair.

**(4) PREFABRICATED STRUCTURES.** A secondary containment structure may consist of one or more basins pre-fabricated of steel or rigid synthetic material if all of the following apply:

(a) The steel or synthetic material resists corrosion, puncture and cracking. Prefabricated steel structures shall be at least 1/8 inch thick at every point.

(b) The steel or synthetic material is chemically compatible with all fertilizers or pesticides that may be stored within the basin. The basin manufacturer shall certify chemical compatibility in writing, and the operator shall submit a copy of the certification to the department.

(c) If 2 or more basins are connected to form the secondary containment structure, the connection permits free movement of any discharged liquid between the basins.

**(5) STEEL STRUCTURES CONSTRUCTED IN PLACE.** A secondary containment structure may be constructed of steel, if it is constructed in place. A steel secondary containment structure constructed on or after November 1, 2006 shall be at least 1/8 inch thick at every point.

**(6) STRUCTURES WITH EARTHEN LINERS.** (a) A secondary containment structure may be constructed of earth or other materials if one of the following applies and the structure has an earthen liner that complies with par. (b):

1. The structure was in use prior to November 1, 2006.

2. The structure contains only fertilizer storage containers that were constructed on site.

(b) An earthen liner under par. (a) shall comply with all of the following:

1. The liner shall be designed and constructed, according to good engineering practice, to achieve a coefficient of permeability of not more than  $1 \times 10^{-6}$  cm/sec.

2. The liner shall be at least 6 inches (15 centimeters) thick.

3. The liner shall be covered by an inorganic soil layer not less than 6 inches (15 centimeters) thick.

4. The liner shall be maintained to prevent cracking.

5. The liner may not be constructed of silt, silty sand or other frost-susceptible soils.

6. If the liner is made of natural soil, not less than 50% by weight of the natural soil shall pass through a number 200 soil sieve and not less than 95% by weight of the natural soil shall pass through a number 4 sieve. A natural soil liner shall contain not more than 2% organic material and shall have a plasticity index of at least 15.

7. The liner, if treated with bentonite, shall have a uniform mixture of natural soil and bentonite. The natural soil shall have a plasticity index of at least 12. Not less than 30% by weight of the natural soil shall pass through a number 200 soil sieve, and not less than 95% by weight of the natural soil shall pass through a number 4 soil sieve. Not less than 90% by weight of the bentonite shall pass through a number 80 soil sieve, and the soil-bentonite mixture shall contain at least 5% bentonite by weight.

8. The liner shall be reconstructed at least once every 15 years.

9. The operator shall remove storage containers from the secondary containment structure before reconstructing or recompacting the liner, except that the operator is not required to remove a storage container that has a capacity of 50,000 gallons or more.

10. Before the operator reconstructs or recompacts the liner, the operator shall analyze the liner material for compliance with subs. 6. and 7., and to determine whether corrective action is required under ch. ATCP 35.

(4) A statement of compatibility must be provided for each product stored in a prefabricated secondary containment structure. If a prefabricated system is constructed locally, a section of an old tank is used for pesticide storage, or if no specific basin manufacturer exists, the chemical compatibility statement may come from the manufacturer of the pesticide(s) being stored. The base of such a prefabricated structure should show no signs of cracking or puncture near the container supports or corners joining the walls.

The department will accept the following materials as compatible with fertilizer and pesticides for secondary containment purposes: high-density polyethylene (HDPE), stainless steel, mild steel thicker than 1/4 inch, and concrete. Although concrete prefabricated containment structures are allowed, a facility wishing to use one should be aware that prefabricated concrete structures are often constructed to a lesser standard of permeability and leak-resistance than the standards for poured concrete structures in this rule.

(5) Angle-iron/concrete structures are not compliant with the revised rules, and DATCP will not permit new angle-iron/concrete structures to be constructed or used. The rule specifies conditions for concrete structures and steel structures, but not hybrids of the two forms of construction. Variances will not be provided for this type of structure.

DATCP will allow continued use of existing angle-iron/concrete structures, provided compliance with the rest of the rules is maintained. Also, § ATCP 33.42(5)(c) – (the “two-year” language”) does not apply in this case because the “form of construction” is not technically compliant in the first place. So if DATCP observes such an angle iron.concrete secondary containment structure to be leaking, the structure can no longer be used.

(6) Soils to be used for liner purposes should be analyzed for the properties necessary to make a good liner. In order to meet the permeability requirements of the rule, the liner material must be compacted under specific moisture conditions with specialized equipment. Material selection, facility design and liner construction should all be conducted under the supervision of a soils engineer. The department recommends that a facility constructing a soil liner maintain documentation on all testing and construction conducted to ensure compliance.

(b)(9) Soil liners must be reconstructed every 15 years to ensure that discharged liquids are not being released to the environment. Failure to empty large tanks during reconstruction constitutes uncontained storage.

(b)(10) Liner material should be removed and stockpiled. Samples of the liner material should be analyzed for nitrate/nitrite-nitrogen, ammonia/ammonium-nitrogen and for the physical permeability characteristics required by this rule. Unless the nutrient levels are unacceptable or the permeability characteristics no longer meet the requirements of the rule, the liner material can be replaced as in the original construction.

**(7) BUILDING FLOOR; MINI-BULK AND MOBILE CONTAINERS.** A warehouse or other building may be used as a secondary containment structure for all of the following if the building complies with this section and can contain a discharge of liquid fertilizer or pesticide:

- (a) Mini-bulk containers of fertilizer or pesticide.
- (b) Mobile containers kept in the building for not more than 7 days.

**(8) MIXING AND LOADING PADS USED FOR SECONDARY CONTAINMENT.** An operator may use a mixing and loading pad as a secondary containment structure if the mixing and loading pad complies with s. ATCP 33.32 and this section.

**(9) TANK-IN-TANK.** An operator may use a tank-in-tank, without any other secondary containment structure, if all of the following apply:

- (a) A liquid level monitoring device automatically stops the flow of fertilizer or pesticide into the inner tank when the inner tank is filled to the maximum level allowed under s. ATCP 33.20 (9).
- (b) The tank-in-tank is equipped to ensure safe and effective detection and recovery of liquid leaked from the inner tank to the outer tank.
- (c) The operator inspects the tank-in-tank and leak detection system at least monthly.
- (d) The operator does all of the following in response to a leak:
  1. Promptly reports the leak to the department.
  2. Empties the tank-in-tank no later than a date specified by the department in writing.
  3. Thoroughly cleans the tank-in-tank, and has it repaired by a person certified to perform repairs under API 653, before restoring the tank-in-tank to service.

(7) Pesticide minibulk containers may be stored with other materials, such as seed, in a warehouse or open-floor area, provided there is adequate horizontal separation between the two commodities and the non-pesticide commodities are elevated (on pallets, for example) such that any pesticide discharge, catastrophic or otherwise, will not contaminate the other material or its packaging. Adequate separation-and-elevation satisfies the requirements of Wis. Admin. Code § 33.42(6) for *minibulk containers, only*. No such provision exists for pesticide containers larger than 350 gallons.

A facility might use a warehouse or large open-floor area to provide secondary containment of bulk containers larger than 350 gallons, but the following rule requirements would still have to be met:

- No other materials other than those allowed by § ATCP 33.42(6) are permitted to be stored in the warehouse or open-floor area. The separation-and-elevation provision allowed for minibulk containers does not apply to containers larger than 350 gallons.
- Containers would have to be protected against vehicular traffic, including forklifts, per § 33.20(8). If protection would be provided by bumper posts, the posts' installation would have to be designed such that the posts did not create an opening through or along which discharges could flow, especially considering the different expansion and contraction rates of steel and concrete.
- A warehouse built but not used as a secondary containment structure prior to November 1, 2006 must still meet requirement of § ATCP 33.42(3), which requires a minimum curb or wall height of 4".
- A concrete-floor warehouse built but not used as a secondary containment structure prior to November 1, 2006 as well as any concrete-floor warehouse built after November 1, 2006 to be used as secondary containment must meet the design requirements of § 33.44(1)(b), which requires concrete structures be designed and constructed according to *Wisconsin Minimum Design and Construction Standards for Concrete Mixing and Loading Pads and Secondary Containment Structures*.

(8) A mixing and loading pad used as secondary containment must also satisfy the requirements of § 33.20(8), which requires that all containers be protected against vehicular traffic.

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**(10) BLADDER TANK.** An operator may use a bladder tank, without any other secondary containment structure, if all of the following apply:

(a) The outer steel part of the bladder tank complies with s. ATCP 33.20.

(b) The bladder within the tank is at least 40 mils thick.

(c) The manufacturer certifies that the bladder is chemically compatible with all materials that may be stored in it, and will withstand normal operational stresses without failing.

(d) A qualified installer installs the bladder tank and its appurtenances.

(e) All appurtenances that extend through both the bladder and the tank have shut-off valves. The shut-off valves shall be enclosed within a structural steel box that can withstand the maximum hydrostatic head pressure of liquid within the bladder tank. The box shall be readily accessible to the operator, but secured against unauthorized access.

(f) A liquid level monitoring device automatically stops the flow of fertilizer or pesticide into the bladder when the bladder is filled to the maximum level allowed under s. ATCP 33.20 (9).

(g) There is room for a person to enter the space between the bladder and tank when the bladder is empty.

(h) The tank has a soft liner to protect the bladder from contact with the steel interior surface of the tank.

(i) The tank is equipped to ensure safe and effective detection and recovery of liquid leaked from the bladder to the tank.

(j) The operator inspects the tank and leak detection system at least monthly.

(k) The operator does all of the following in response to a leak:

1. Promptly reports the leak to the department.

2. Empties the bladder and tank no later than a date specified by the department in writing.

3. Has the bladder repaired by a qualified person before restoring the bladder tank to service.

4. Cleans affected portions of the bladder, soft liner and interior tank surface before restoring the bladder tank to service.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

## Subchapter VII — Discharges and Precipitation

**ATCP 33.50 Available pump and storage container.** An operator shall have, readily available at a storage facility, one or more functional pumps that the operator can use to remove liquid from every mixing and loading pad, sump or secondary containment structure at the storage facility. Each pump shall be plumbed or have a readily available hose connection to a storage container that complies with s. ATCP 33.20, so that recovered liquid can be pumped to the storage container. The pump shall self-activate, or shall be susceptible to immediate activation by the operator, whenever needed. The storage container shall have, at all times, an unused capacity of at least 200 gallons.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.52 Discharges and precipitation. (1) DISCHARGE RESPONSE; GENERAL.** The operator of a storage facility shall do all of the following whenever there is a discharge:

(a) Take immediate and appropriate action to mitigate any risks that the discharge may pose to public health and the environment.

**Note:** A release of rinsate is considered a discharge. See ATCP 33.01 (10) and (28).

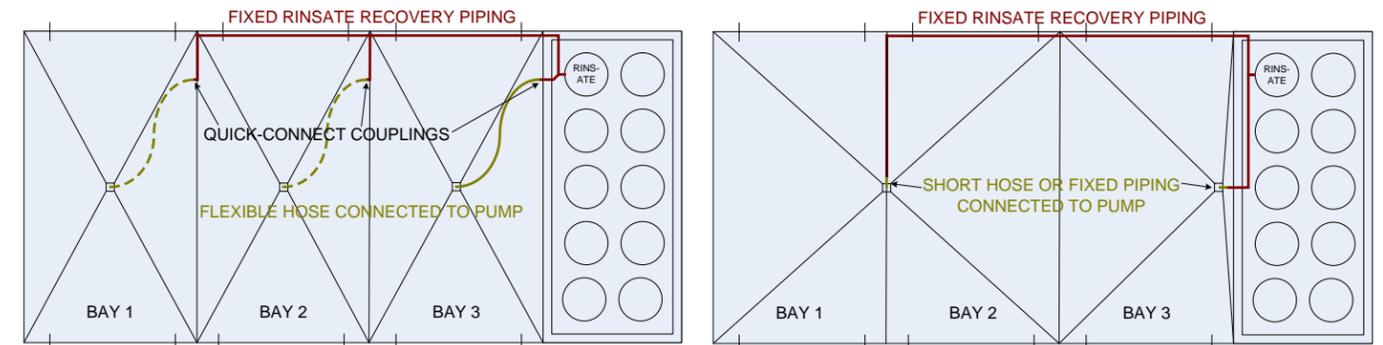
(b) Report the discharge to the Wisconsin department of natural resources if a report is required under ch. NR 706.

**Note:** If a discharge is fully contained in a mixing and loading pad, sump or secondary containment structure, a discharge report is not required under ch. NR 706 unless the discharge poses an immediate threat to human health.

### ATCP 33.50

The intent of the rule is to protect the waters of the state. The following strategies are proposed to meet the intent for both mixing and loading pads and secondary containment structures:

- Mix/load pads and outdoor pesticide secondary containment structures: a readily available pump plumbed to tank in secondary containment structure is required as shown below. The rinsate storage container must have an available capacity of 200 gallons whenever the pad is in use for loading. A multiple bay loading building is not required to have multiples of 200 gallons rinsate storage capacity. Rinsate/precipitation must be recovered by the end of the day on which it collects or sooner to maintain containment capacity, prevent instability of containers, minimize risk of discharge to the environment, and to prevent vehicles from driving through the rinsate/precipitation.



This figure shows how a single flexible hose may be “quick-connected” to any of three different fixed plumbing lines to the rinsate tank. This would require a shut-off valve at each connection so that liquid pumped from one sump is not dumped into another.

This figure shows solid plumbing and dedicated pumps in each sump.

In both figures, it is recommended that the rinsate storage container be top filled with an air-gap or that the plumbing line just outside the tank’s shut-off valve be equipped with a single check valve to minimize the possibility of backflow from the storage container to any of the sumps.

- Indoor secondary containment structure: a pump is still required, but DATCP may provide enforcement discretion when considering what constitutes ‘readily available’. In general, an indoor secondary containment structure will have an adjacent mix/load pad, for which a rinsate tank is already required.
- Outdoor fertilizer secondary containment structure: the allowance for other options under § ATCP 33.52(3) must be considered.
  - If the facility is meeting the requirements of 33.52(3) by sampling and analyzing collected precipitation for “non-immediate” management options, then the facility must still have a pump available, but not necessarily immediately available. Further, the pump is not required to be permanently plumbed to a storage container, but a storage container is still required in case the facility needs to use the recovery pump to prevent instability of containers and minimize risk of discharge to the environment.
  - If a facility is not meeting the alternative requirements of § ATCP 33.52(3), then rinsate/precipitation must be recovered by the end of the day on which it collects or sooner to maintain containment capacity, prevent instability of containers and minimize risk of discharge to the environment.

**(2) CONTAINED DISCHARGE OR PRECIPITATION.** Except as provided in sub. (3), an operator shall recover any unfrozen discharge or unfrozen precipitation that collects in a mixing and loading pad, sump or secondary containment structure. The operator shall recover the unfrozen discharge or precipitation by the end of the first business day in which the collected discharge or precipitation is present in the mixing and loading pad, sump or secondary containment structure. The operator shall take earlier action to recover the collected discharge or precipitation if earlier action is necessary to do any of the following:

- (a) Maintain the effective discharge containment capacity of a mixing and loading pad, sump or secondary containment structure.
- (b) Prevent instability of storage containers.
- (c) Minimize the risk of a discharge to the environment.
- (d) Prevent vehicles from driving through discharges, rinsate or collected precipitation on the mixing and loading pad.

**33.52(2)**

An operator is required to recover all spillage that collects on or in a containment surface at least by the end of the business day on which the spillage collected. It is recognized that truck and rail-unload pits or basins for dry fertilizer transfer are not always easily accessible to allow for end-of-the-day recovery. The intent of the rule is to protect groundwater by keeping spillage out of soil. So, at a minimum, such pits or basins must be addressed according to the following scenarios:

- The pit is not subject to spillage, meaning the unload transfer system is completely housed, with no leaks. Obviously, if there is no spillage, the requirement for end-of-the-day recovery is not applicable.
- The pit is not subject to water or liquid from any source (runoff or direct precipitation from above, or groundwater from below). End-of-the-day recovery is preferred, but the facility should clean out the pit of any spillage at least on annual basis.
- The pit is subject to spillage and to water or liquid entering it. End-of-the day recovery according to § ATCP 33.52(2) is required. Combined visual evidence that water has been in the pit and observation of spilled fertilizer in the pit is sufficient to identify this issue as a (potential) violation.

**(3) PRECIPITATION CONTAINED IN FERTILIZER SECONDARY CONTAINMENT STRUCTURE.**

Subsection (2) does not apply to precipitation that has collected in a fertilizer secondary containment structure, provided that the operator uses at least one of the following methods to manage that collected precipitation:

(a) The operator may recover all of the collected precipitation, and transfer it to a storage container in the secondary containment structure by the end of the first business day in which the collected precipitation is present in the secondary containment structure.

(b) The operator may store the collected precipitation in the fertilizer secondary containment structure until the precipitation can be properly used according to s. ATCP 33.56 or until it evaporates, provided that the operator complies with sub. (4).

(c) The operator may apply the collected precipitation to a vegetative filter strip at or adjacent to the storage facility, provided that all of the following apply:

1. The operator applies the collected precipitation according to a written plan approved by the department. The plan shall consider the volume of liquid to be applied, the nutrient content of the liquid, the nutrient utilization capacity of the filter strip, and seasonal conditions that may affect that utilization capacity.

2. The operator maintains living vegetation on the entire filter strip.

3. The operator complies with sub. (4).

(d) The operator may discharge the collected precipitation to areas of the storage facility from which there is no potential for direct runoff to waters of the state, provided that all of the following apply:

1. The operator complies with sub. (4).

2. None of the samples analyzed under sub. (4) (b) contains more than 20 milligrams of total nitrogen per liter.

(e) An operator may discharge the collected precipitation to a public wastewater treatment system, provided the operator has written permission from the authority that operates the system.

(f) An operator may discharge the collected precipitation to surface water, via a storm sewer or other conduit, if the operator has written permission from the Wisconsin department of natural resources.

**(4) SAMPLE TESTING AND FOLLOW-UP.** An operator who uses any of the management methods under sub. (3) (b) to (d) shall do all of the following:

(a) Obtain at least one sample of collected precipitation in each of the months of April, June, August [and] October.

(b) Have the samples under par. (a) analyzed, at a laboratory certified by the Wisconsin department of natural resources under ch. NR 149, for nitrate/nitrite-nitrogen and ammonia/ammonium-nitrogen.

(c) If any sample analyzed under par. (b) contains more than 200 milligrams of total nitrogen under par. (b) per liter, notify the department and implement a department-approved plan to manage collected precipitation containing more than 200 milligrams of total nitrogen per liter.

(d) Keep accurate records of all analytical results under par. (b).

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

(3) Rainwater management options are only applicable provided the facility has not had a known release in a secondary containment. Facilities are encouraged to use nitrogen test strips to assist them in determining whether a release has occurred between the required laboratory samples.

Provided the facility has not had a known release in a secondary containment, management of rainwater is dictated by the results of the last rinsate/precipitation sample analyzed. Further, a facility may sample as often as they want. For example, a facility that gets a sample result greater than 20 mg/L sample on April 10 may sample again on April 15. If the April 15 sample has less than 20 mg/L total nitrogen, then the facility may pump the water over the wall.

**ATCP 33.54 Managing recovered discharges, rinsate and collected precipitation. (1)**

Liquid recovered under s. ATCP 33.52, if held by the operator pending use or disposal, shall be held in a storage container that complies with s. ATCP 33.20 and is located in a secondary containment structure that complies with s. ATCP 33.42.

(2) Dry fertilizer or pesticide recovered under s. ATCP 33.52, if held by the operator pending use or disposal, shall be handled in a manner that complies with s. ATCP 33.22.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.56 Use and disposal of recovered material. (1) SAFE USE OR DISPOSAL.** An operator shall safely use or dispose of material recovered under s. ATCP 33.52. Use and disposal shall comply with applicable federal, state and local regulations.

(2) PESTICIDES. An operator may not sell, distribute or apply any material recovered under s. ATCP 33.52 as a pesticide unless that sale or distribution complies with ch. ATCP 29.

Note: An operator must obtain a permit under s. ATCP 35.03 before landspreading material recovered from the environment as part of an environmental remediation under ch. ATCP 35.

(3) FERTILIZERS. (a) Except as provided in par. (b), an operator may not sell or distribute any material recovered under s. ATCP 33.52 as a fertilizer or soil or plant additive unless that sale or distribution complies with ch. ATCP 40.

(b) Notwithstanding ch. ATCP 40, an operator may apply to land free of charge, or distribute free of charge to a landowner for application to that person's land, rinsate recovered under s. ATCP 33.52 if the operator discloses to the landowner the types of fertilizer or soil or plant additives contained in that rinsate.

Note: If rinsate contains pesticide, an operator must also comply with sub. (2). An operator must obtain a permit under s. ATCP 35.03 before landspreading material recovered from the environment as part of an environmental remediation under ch. ATCP 35.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

ATCP 33.54

Facilities may not store recovered rainwater or rinsate in any container located outside secondary containment. Recovered precipitation (from a mix/load pad or secondary containment structure) or rinsate that is to be held (stored) at the facility must be held in a compliant storage container, and that compliant storage container must be located within a compliant secondary containment structure. The exemption under § ATCP 33.40(2)(b) allowing mobile containers to be stored or located outside secondary containment for less than seven days is not applicable to recovered precipitation or rinsate.

The seven-day exemption for mobile containers was to allow application sprayers that are pulled out of fields due to weather-related delays to be stored up to 7 days at a facility. The material in these sprayers already has intended use locations, and it is not intended to be "stored". Holding of rinsate or precipitation in a mobile container at the facility until the facility can determine a use or disposal method is storage.

Further, under § ATCP 33.40(2)(b)2, the 7-day exemption for mobile containers to be stored outside secondary containment only applies if the facility has a compliant mix/load pad and at least one storage container that has unused capacity greater than the total capacity of the mobile container in question (if the mobile container develops a leak, the facility can drive it onto the pad and offload it to the other containers). To meet this exemption, the facility must have an even larger container with unused capacity available. Therefore, the requirement under § ATCP 33.54 must already have been met.

A facility may recover rinsate or precipitation directly into a mobile container, but only if 1) the mobile container is immediately driven off the facility and the rinsate or precipitation is used (field spread or nursed to sprayers) or properly disposed of, or 2) the mobile container is left on the mix/load pad, and the pad meets all the requirements of a secondary containment structure under §§ ATCP 33.40, 33.42 and 33.44.

A facility may be testing precipitation collected in a *fertilizer* secondary containment structure and recovering that precipitation to a mobile container. If the last sample result shows total nitrogen less than 20 mg/L, the mobile container is not required to be located within secondary containment (or over a mix/load pad acting as secondary containment).

**ATCP 33.58 Discharge response preparedness. (1) DISCHARGE RESPONSE PLAN REQUIRED.** (a) The operator of a storage facility shall have a written discharge response plan for all of the following:

1. Discharges at the storage facility.
2. Discharges, at locations outside the storage facility, from mobile containers shipped from the storage facility.

(b) An operator shall do all of the following, with respect to a discharge response plan under par. (a):

1. Review and amend the plan, as necessary, at least once each year.
2. Keep a copy of the plan readily available at the storage facility and at the nearest local office from which the operator administers the storage facility.
3. Make the plan available to the department for inspection and copying upon request.
4. Notify the local fire department, police department and emergency planning committee of the plan and any plan revisions, and provide them with copies upon request.

**Note:** Federal law under 42 USC 11002 and 11003 requires response plans for certain chemicals. A single response plan may satisfy requirements under sub. (1) and federal law.

**(2) PLAN CONTENTS.** A discharge response plan under sub. (1) shall include all of the following:

(a) The identity, address and telephone number of the individual who is responsible for managing the storage facility.

(b) The spill reporting telephone number (1-800-943-0003) maintained by the department of natural resources and department of military affairs emergency management division.

(c) The telephone number of the department's agricultural resource management division (608-224-4500), or the identity and telephone number of the division's local environmental enforcement specialist.

(d) The names and telephone numbers of 2 local excavation contractors and 2 local earth hauling contractors.

(e) A map or diagram of the storage facility. The map or diagram shall include all of the following:

1. The location of each fertilizer storage container or bin, and the name or grade of fertilizer stored in that container or bin.
2. The location of each pesticide storage container or bin, other than a mini-bulk container, and the name of the pesticide product stored in that container or bin.
3. The location of each mini-bulk container storage area.

(f) Procedures for responding to discharges at the storage facility.

(g) Procedures for responding to discharges from mobile storage containers shipped from the storage facility.

(h) Procedures for using or disposing of recovered discharges.

- (1) The plan must be complete enough that someone remotely familiar with the facility would be able to respond to a discharge using information contained within the plan. Several persons have assembled generic plans for use by individual firms to meet the requirements of these rules or of SARA regulations. Forms of this type can be used. In addition, a single discharge response plan may be used for both department and SARA regulations, provided that all information required by this rule is included in the plan.

Although all information needed for the plan does not have to be in the plan itself, the location of additional information must be specifically identified in the plan and readily accessible in a spill situation. When additional copies of the plan are available at other locations, all information must be provided in these other copies and these copies must be kept current.

- (b)1 The plan is not required to be amended whenever products in storage containers or bins change. The facility should make note in those areas of the plan of the possible contents in the containers based on the time of season.

- (b)2 The plan must be kept at the facility even when the plan is undergoing revisions.

- (2)(c) To ensure speaking with a live person, as opposed to leaving a voice-mail message, it is recommended that the plan be equipped with the main DATCP Ag Resource Management Division number, (608) 224-4500.

- (d) A contractor that performs both excavation and earth hauling services need only be referenced once. However, the names and telephone numbers of two such contractors are necessary in the plan.

- (g) Because spills that occur at locations remote from a facility are more prevalent than at-facility spills, an operator should consider aspects of spill response that are specific to remote spills.

**(3) EQUIPMENT, SUPPLIES AND TRAINED PERSONNEL.** (a) Pumps, recovery containers, personal protective equipment, and other necessary equipment and supplies shall be readily available for any discharge response that may reasonably be needed.

(b) Persons employed at a storage facility shall be trained in discharge response procedures. Trained personnel shall be readily available to implement a discharge response.

(c) An operator may arrange with a local fire department or other persons to provide equipment, supplies and personnel required under pars. (a) and (b) if the operator makes those arrangements in advance as part of the operator's discharge response plan.

(d) An operator shall have available, at the storage facility, absorbent materials that may be used to control and clean up small liquid discharges.

(e) An operator shall decontaminate equipment and supplies, as necessary, after using them to control and recover a discharge.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.60 Transporting bulk fertilizer and bulk pesticide. (1) GENERAL.** An operator shall transport bulk fertilizer and bulk pesticide in a manner that prevents reasonably foreseeable and preventable hazards to persons, property and the environment.

**(2) TRANSPORT VEHICLES.** Containers and appurtenances used to transport bulk fertilizer or bulk pesticide shall be securely anchored to transport vehicles so that stresses from normal vehicle operation will not cause a discharge and will not cause the containers and appurtenances to move independently of the vehicle. Equipment, tools and other items carried on transport vehicles shall be secured against damaging contact with containers or appurtenances.

**(3) PROTECTION AGAINST DAMAGE OR ACCESS.** Containers and appurtenances used to transport bulk fertilizer or bulk pesticide shall be protected from damage or destruction, and shall be secured against access by the general public and animals.

**(4) DEFECTIVE CONTAINERS.** An operator may not transport bulk fertilizer or bulk pesticide in a visibly broken, defective or improperly sealed container unless that container is enclosed in another container that effectively prevents the discharge of fertilizer or pesticide.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.62 Dust control in dry product loading.** An operator shall use a loading chute or other dust control device to unload dry bulk fertilizer or dry bulk pesticide from storage containers to transport vehicles or application equipment, so that the air gap between the load-out equipment and the top rim of the transport vehicle or application equipment being filled does not exceed 2 feet.

History: CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

33.58(3)

Necessary equipment should be available within 24 hours of spill discovery. In many situations, more immediate access is needed. The discharge response plan should identify at a minimum the name and 24 hour phone numbers of equipment sources and what equipment is available from each source. Absorbent materials include such things as commercial absorbents, sawdust, dry sand or lime chips.

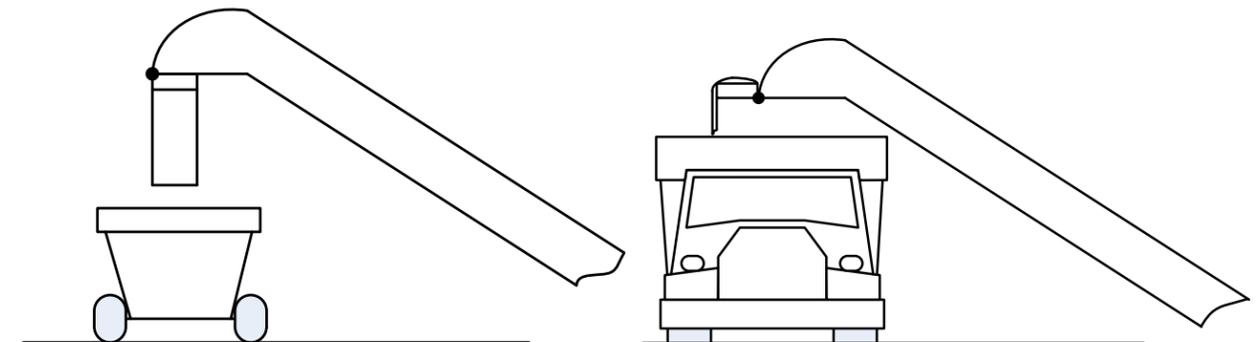
All persons employed by the storage facility must be aware of the existence of the plan and must know the location of the plan. Persons involved in the bulk storage operation itself must be familiar with the content of the response plan.

33.60(2)

Stresses due to a traffic accident are not considered stresses from normal vehicle operation.

33.62

Below is a drawn example of a possible dust chute for both trucks and buggies. The black dot is intended to denote the hinge around which the "box" can be moved out of the way for truck loading.



**ATCP 33.70 Environmental assessments. (1) ASSESSMENT REQUIRED.** An operator shall conduct an assessment under sub. (2) whenever any of the following structures used for liquid bulk fertilizer or liquid bulk pesticide leaks, is removed, or remains out of use for more than 5 years:

- (a) A mixing and loading pad.
- (b) A sump.
- (c) A secondary containment structure.

**(2) NATURE AND SCOPE OF ASSESSMENT.** (a) An assessment under sub. (1) shall assess all of the following:

- 1. Whether there have been any discharges to the environment.
- 2. The extent and severity of any environmental contamination caused by the discharges under subd. 1.

(b) The assessment under sub. (1) shall include sampling and analysis of soils, groundwater and other media, as necessary.

**(3) RECORD AND REPORT.** An operator shall file with the department a written report of each assessment under this section. The record and report shall indicate the nature, scope and findings of the assessment.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.80 Records. (1) RECORDS REQUIRED.** An operator shall make and keep all of the following records:

- (a) Records of API 653 inspections required under s. ATCP 33.20 (1) (f) 2.
- (b) Records of inspection and maintenance required under ss. ATCP 33.20 (13), 33.32 (7), 33.36 (6) and 33.42 (5).
- (c) Records of pressure tests required under ss. ATCP 33.20 (2)(d) 1. and 33.38 (2) (d).
- (d) Precipitation sample test records required under s. ATCP 33.52 (4).

**(2) RECORD RETENTION.** An operator shall retain the records under sub. (1) (a) for as long as the operator owns, operates or controls the storage facility . An operator shall retain the records under sub. (1) (b) to (d) for at least 3 years.

**(3) RECORD LOCATION; INSPECTION AND COPYING.** An operator shall retain the records under sub. (1) at the storage facility, or at the nearest local office from which the operator administers that storage facility. The operator shall make the records available to the department for inspection and copying upon request.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

**ATCP 33.82 Real estate sale or lease; disclosure.** An operator shall do all of the following before the operator sells or leases, for another use, real estate that has been used for a storage facility:

- (1)** Notify the department of the sale or lease.
- (2)** Disclose to the purchaser or lessee that the real estate has been used as a storage facility.

**Note:** Section ATCP 33.82 does not relieve the operator of other disclosure requirements that may apply under other law.

**History:** CR 05-108: cr. Register October 2006 No. 610, eff. 11-1-06.

## ATCP 33.82

This rule requires that the operator inform the buyer that the real estate has been used as a storage facility prior to accepting the purchase offer. Sales process begins when the property is listed.

**APPENDIX 1**  
Caulk Compatibility & Recommendations

**Department Guidance**

The following table lists product types that have been used for a variety of crack and joint sealing applications. Some of the products are not suitable especially if the cracked, jointed concrete is moving. Movement is common in this climate. **The products in the yellow or shaded part of the table are the only products approved for crack and joint sealing by the department.**

Type	Advantages	Limitations	Uses
<b>Polysulfide</b>	<b>Submergible, chemical resistant, strong bonding, high movement tolerance</b>	<b>Soft, not suited for heavy traffic. Not as resistant to organic solvents as silicone</b>	<b>Non-traffic portions of mix/load pads and dikes</b>
<b>Polyurethane</b>	<b>Elastic, wear resistant, submergible, excellent adhesion, moderate chemical resistance to dilute alkalis, acids and solvents, moderately priced</b>	<b>Not as resistant to organic solvents as silicone.</b>	<b>Mix/load pads and dikes</b>
Silicone	Chemical resistant to organic solvents, elastic, durable	Lower adhesion, lower resistance to alkali solutions (fertilizer), not submergible	Pesticide-only mix/load pads and dikes
Flexible epoxy	High chemical resistance, durable, high adhesion	Limited flexibility	Generally not suitable for joint filling. Very good as mortar on stable joints or as surfaces sealant
Rigid epoxy	Hard, high chemical resistance, high adhesion	Inflexible	Not for cracks with movement. Very good as mortar on stable joints or as surface sealant.
Acrylic/latex caulk	Inexpensive	Inelastic, non-durable	No recommended uses.
Thermoplastics: Pitches, tars, asphalt mixes	Inexpensive	Short life, become inflexible, brittle.	No recommended uses
Mastics::	Inexpensive	High maintenance	No recommended uses

Criteria for considering a crack or joint sealant:

1. Adequate bonding and tensile strength – product must adhere to the prepared surfaces and withstand anticipated movement.
2. Chemical resistance.
3. Age and weather resistance.
4. Wear resistant, if in traffic area.

Basic Surface Preparation Components: (always follow product specific instructions)

1. Remove failed former sealant, if present.
2. Remove loose material.
3. Widen joint if needed.
4. Sandblast or roughen surfaces
5. Clean and dry. (Some sealants adhere better than others in moist conditions)
6. Follow surface temperature instructions.
7. Install backing rod as needed.

Spending the extra time for proper preparation and the extra money for a quality sealant usually is repaid in savings from a longer lasting repair.

## Appendix 2: Chemical Compatibility for Liquid Fertilizers

Product	Container Material							Plugs, Valves, Tank Inserts							Plumbing					
	Stainless Steel	Mild Steel	Mild Steel with Liner	Aluminum	Fiberglass	Polyethylene or Plastic	Brass or Copper Alloys	Stainless Steel	Cast Nickel Stainless Insert	Fully Lined Metal Stainless Insert	Nylon Ball Valve	Forged Steel	Cast Iron or Mild Steel	Polyethylene or Plastic	Brass or Copper Alloys	Stainless Steel	Forged Steel	Cast Iron or Mild Steel	Galvanized	PVC and Other Synthetics
Urea Ammonium Nitrate (28-32%) <sup>A</sup>	1	2	A	A	A	N	A	A	A	A	N	A	N	A	A	A	1	N	2	
Low Pressure N (>32%)	A	N	2	A	N	N	N	A	A	A	2	A	N	N	N	A	A	2	N	N
Ammonium Thiosulfate (12-0-0-26S)	A	1	2	A	A	A	N	A	A	A	A	A	N	A	N	A	A	1	N	2
Ammonium Polyphosphate (10-34-0/11-37-0)	A	A	A	N	A	A	N	A	A	A	A	A	A	A	N	A	A	A	A	2
Phosphoric Acid (0-52-0 & 0-54-0)	A	N	2	N	2	2	N	A	N	2	N	N	N	2	N	A	N	N	N	N
Potassium Phosphate	A	N	2	N	A	A	N	A	A	A	A	2	N	A	N	A	2	N	N	A
Potassium Hydroxide (caustic)	A	N	2	N	2	2	N	A	2	N	A	N	N	2	N	A	N	N	N	2
Potash Solutions (0-0-30)	A	3	2	N	A	A	N	A	A	A	A	A	N	A	N	A	A	3	N	2
Mixed Fertilizers, Starters	A	3	2	N	A	A	N	A	A	A	A	A	N	A	N	A	A	3	3	2
Acid Fertilizers	A	N	2	N	2	2	N	A	N	2	2	N	N	2	N	A	N	N	N	2

The acceptability of materials for the above purposes is based on recommendations from various industry sources, and is not a recommendation or endorsement by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

- A - Acceptable if compatible with container or appurtenances
- N - Not acceptable because of chemical incompatibility
- 1 - Acceptable if product is treated with corrosion inhibitor
- 2 - Acceptable if warranted by equipment manufacturer for the intended use.
- 3 - Acceptable if cleaned after seasonal use and used to store materials less than 90 days in a row, annually

# Appendix 3: Construction Material Compatibility Between Containers and Appurtenances

Container	Plugs, Valves, Tank Inserts								Plumbing				
	Stainless Steel	Cast Nickel Stainless Insert	Fully Lined Metal Stainless Insert	Nylon Ball Valve	Forged Steel	Cast Iron or Mild Steel	Polyethylene or Plastic	Brass or Copper Alloys	Stainless Steel	Forged Steel	Cast Iron or Mild Steel	Galvanized	PVC and Other Synthetics
Stainless Steel	A	A	N	A	1	N	N	N	A	1	N	N	1
Mild Steel (also lined)	A	A	A	A	A	A	N	N	A	A	A	A	1
Aluminum	A	A	A	A	N	N	N	A	A	A	N	1	1
Fiberglass	A	A	A	A	A	1	1	1	A	A	A	A	1
Polyethylene	A	A	A	A	A	A	A	1	A	A	A	A	1

A - Acceptable if all materials are chemically compatible with the stored products.  
 N - Not acceptable because of differing reactivity or strength.  
 1 - May be acceptable for some products, as recommended by equipment manufacturer.

The acceptability of materials for the above purposes is based on recommendations from various industry sources, and is not a recommendation or endorsement by the Wisconsin Department of Agriculture, Trade and Consumer Protection.

