

Colorado Department of Agriculture
Conservation Services Division

Water Quality Control Concerning Agricultural Chemicals and Ground Water

8 CCR 1206-1

I. COMMERCIAL FERTILIZERS

Part 1.0 Definitions

These definitions apply to Parts 1 through 10.

- 1.1. "Agricultural Chemicals" for commercial fertilizer means fertilizer material, mixed fertilizer, or any other substance containing one or more essential available plant nutrients which is used for its plant nutrient content and which is designed for use and has value in promoting plant growth. It does not include untreated animal and untreated vegetable manures, untreated peat moss, and untreated peat humus, soil conditioners, plant amendments, agricultural liming materials, gypsum, and other products exempted by regulation of the commissioner.
- 1.2. "Appurtenances" means all valves, pumps, fittings, pipes, hoses, metering devices, mixing containers, and dispensing devices which are connected to a storage container, or which are used to transfer bulk fertilizer into or out of a storage container.
- 1.3. "Bulk fertilizer" means any fertilizer which is transported or held in an individual container in undivided quantities of greater than fifty-five (55) U.S. gallons liquid measure or one hundred (100) pounds net dry weight.
- 1.4. "Bulk fertilizer storage facility" means any facility or site where:
 - (a) Liquid fertilizer is being stored in any container or series of interconnected containers having a capacity greater than five thousand (5,000) gallons and is stored for a period of 30 consecutive days or more at one site; or
 - (b) Fifty-five thousand (55,000) pounds or more, in the aggregate, of formulated product or combination of formulated products of bulk dry fertilizer are stored for a period of 30 consecutive days or more at one site.

Any bulk fertilizer storage facility within 300 feet of another bulk fertilizer storage facility shall be considered one facility.
- 1.5. "Dry fertilizer" means any fertilizer which is in solid form prior to any application or mixing for application.
- 1.6. "Impervious" means that the structure shall be maintained so that liquid fertilizer or water does not move through it at a rate that exceeds 1×10^{-7} centimeters per second (~0.0035 inches per day).
- 1.7. "Liquid fertilizer" means any fertilizer in liquid form, and includes solutions, emulsions, suspensions and slurries.

- 1.8. "Mixing and loading area" means a physical site where fertilizers are transferred, loaded, unloaded, mixed, repackaged, refilled or where fertilizers are cleaned, washed or rinsed from containers or application, handling, storage or transportation equipment in conjunction with a bulk fertilizer storage facility.
- 1.9. "Mobile container" means any storage container designed for transportation.
- 1.10. "Primary containment" means the storage of bulk liquid fertilizer in storage containers at a storage facility.
- 1.11. "Secondary containment" means any structure used to contain product spills from primary containment and prevent runoff or leaching.
- 1.12. "Sump" means a shallow reservoir or area at the lowest point of the bulk fertilizer storage facility or mixing and loading area that allows for the temporary collection and retrieval of liquid.
- 1.13. "Storage container" means:
 - (a) A container used for the storage of bulk fertilizer; or
 - (b) A nurse tank, or other mobile container used for the storage of bulk fertilizer.

Part 2.0 Scope of These Rules

- 2.1. These rules apply where:
 - (a) Liquid fertilizer is being stored in any container or series of interconnected containers having a capacity greater than five thousand (5,000) gallons and is stored for a period of 30 consecutive days or more at one site; or
 - (b) Fifty-five thousand (55,000) pounds or more, in the aggregate, of formulated product or combination of formulated products of bulk dry fertilizer are stored for a period of 30 consecutive days or more at one site.

Any bulk fertilizer storage facility within 300 feet of another bulk fertilizer storage facility shall be considered one facility.

(For liquid fertilizers, Parts 3 and 5–8 apply; for dry fertilizers, Parts 4–8 apply)

- 2.2. Anhydrous ammonia is specifically exempt from these rules.
- 2.3. Operation of the bulk fertilizer storage facilities and mixing and loading areas are regulated by these rules.
- 2.4.
 - (a) Fertilizer facilities subject to these rules must be in compliance the following number of years after the effective date of these rules (September 30, 1994):

Liquid Fertilizer Secondary Containment	5 years
---	---------

This copy of the text of the rules and regulations for "Water Quality Control Concerning Agricultural Chemicals and Ground Water" is provided as a convenience to the public by the Colorado Department of Agriculture and does not constitute an official publication of these Rules. The official version of these Rules is published by the Office of the Secretary of State in the Colorado Code of Regulations at 8 CCR 1206-1 and may be obtained from the following website: <http://www.sos.state.co.us/CCR/Welcome.do>.

Liquid Fertilizer Mixing and Loading Areas	5 years
Dry Fertilizer Storage	5 years
Dry Fertilizer Mixing and Loading Areas	5 years
Liquid Fertilizer Secondary Containment* ≥100,000 gallon tanks	10 years
*Leak detection as per ¶ 3.5 shall be in place within three (3) years.	

- (b) New facilities or expansion of existing facilities constructed three (3) years after the effective date of these rules (September 30, 1994) shall be in compliance with these rules prior to beginning operations.

2.5 All bulk fertilizer storage facilities are required to have a mixing and loading area.

Part 3.0 Liquid Fertilizer

SUBPART A Secondary Containment for the Storage of Liquid Fertilizer

3.1. All liquid fertilizer storage containers must be stored in a facility that meets the following requirements:

3.2. The secondary containment structure shall provide at least the capacity of the largest storage container within the secondary containment structure, plus the total volume of discharged liquid which would be displaced by the submerged portions of all other storage containers, appurtenances, fixtures and materials located within the secondary containment structure, if the structure were filled to capacity with discharged liquid, **plus:**

- (a) When unprotected from precipitation, an additional twenty-five percent of the capacity of the largest storage container located within the secondary containment structure.
- (b) When protected from precipitation, an additional ten percent of the capacity of the largest container located within the secondary containment structure.

3.3. Fertilizer discharges or precipitation accumulations in a secondary containment structure shall be immediately recovered such that the capacity listed in ¶ 3.2 above is available at all times. Fertilizer material recovered shall be utilized for its original intended purpose. The facility shall have items on hand and readily available to recover discharges to the maximum extent possible.

3.4. General Requirements

- (a) All primary containment shall be located within a secondary containment structure.
- (b) Structural materials and integrity shall provide secondary containment which meets or exceeds the requirements of these rules.

This copy of the text of the rules and regulations for "Water Quality Control Concerning Agricultural Chemicals and Ground Water" is provided as a convenience to the public by the Colorado Department of Agriculture and does not constitute an official publication of these Rules. The official version of these Rules is published by the Office of the Secretary of State in the Colorado Code of Regulations at 8 CCR 1206-1 and may be obtained from the following website: <http://www.sos.state.co.us/CCR/Welcome.do>.

- (c) The walls and floor of a secondary containment structure shall be designed according to good engineering practices and shall be constructed of materials that are compatible with the fertilizer, or that resist or are treated to resist corrosion due to exposure from the fertilizer.
- (d) The secondary containment structure shall be constructed to a water permeability rate not to exceed 1×10^{-7} centimeters per second (~0.0035 inches per day) or a citation provided that identifies a material's specification that when followed will provide an equivalent permeability.
- (e) The walls and floor of the secondary containment structure must be maintained as impervious to liquids for the usable life of the structure.
- (f) The floor of the secondary containment structure must support the gravity loads of full tanks.
- (g) The walls of the secondary containment structure must withstand static and dynamic hydraulic loads from the equilibrium liquid level.
- (h) The walls of the secondary containment structure adjacent to tanks must withstand dynamic hydraulic loads from liquid gushing from a ruptured tank.
- (i) The floor of the secondary containment structure shall be designed to drain liquids to a sump.
- (j) Sumps shall be drained only by a manually activated pump. Automatic pumps may be used during the inactive season provided all tanks in the secondary containment structure are empty.
- (k) Sumps shall be constructed of materials which are watertight and resist corrosion or are treated to resist corrosion from fertilizers.
- (l) The secondary containment structure shall not have an outlet or gravity drain through the wall or floor.
- (m) No piping shall be installed through the containment wall or floor.
- (n) Walls of the secondary containment structure shall be of such a height as to allow easy inspection of the tank(s) from outside the containment as well as easy egress from the containment area.
- (o) There shall be sufficient clearance between each tank and between the tank and the wall of the secondary containment structure to allow for visual inspection of tanks from all sides.
- (p) Electrical controls in the secondary containment structure shall be elevated above the level of the containment wall.
- (q) Synthetic Liners.

- (1) The facility manager must obtain written confirmation of compatibility, durability, and a written estimate of the life of the synthetic liner from the manufacturer. This document must be kept at the facility as a permanent record.
 - (2) Synthetic liners shall be installed as per manufacturer's specifications and under the supervision of a qualified representative of the manufacturer, and all seams shall be tested, and repaired if necessary, in accordance with the manufacturer's recommendations.
- (r) Prefabricated Facilities.
- (1) A prefabricated secondary containment structure shall be composed of a rigid prefabricated basin having both a base and walls constructed of steel, reinforced concrete or synthetic materials which are resistant to corrosion, puncture or cracking.
 - (2) A written confirmation of compatibility and estimate of life expectancy from the basin manufacturer shall be kept on file at the nearest local office from which the storage structure is administered.
 - (3) The prefabricated facility shall be designed and installed to withstand all foreseeable loading conditions, including the tank load.

3.5. Exemptions

- (a) A liner need not be installed directly under a storage container having a capacity of one hundred thousand (100,000) gallons or more which has been constructed on-site and put into use prior to the effective date of this rule (September 30, 1994) provided that one (1) of the following alternative procedures are complied with, certified to in writing by an official of the company which owns the container, and the certificate is filed with the Commissioner:
- (1) Alternative 1 shall be as follows:
 - (i) A second bottom made of steel shall be constructed for the storage container. The second bottom shall be placed over the original bottom and a layer of smooth, fine gravel or coarse sand having a minimum thickness of six (6) inches;
 - (ii) The original bottom of the storage container shall be tested for leaks before the sand layer or second bottom is installed. A record of the test shall be kept on file at the storage facility;
 - (iii) The newly constructed bottom shall be tested for leaks before any liquid fertilizer is stored on the newly constructed bottom. A record of the test shall be kept on file at the storage facility or at the nearest local office from which the storage facility is administered;
 - (iv) There shall be a method by which leaks from the newly constructed bottom into the sand layer may readily be detected; and

- (v) The newly constructed bottom shall be tested at least once every five (5) years for leaks. A record of the tests shall be kept at the storage facility.
- (2) Alternative 2 shall be as follows:
- (i) The container shall be emptied, cleaned, and tested for leaks. The walls and floor of the container shall be tested to assure that welds and thickness of steel plates are sound and adequate to contain the fertilizers. A record of the inspection, test results, and of any repairs made shall be maintained by the owner or operator;
 - (ii) The interior floor and wall areas of the container shall be coated with an approved liner to inhibit corrosion. A record of this procedure shall be maintained by the owner or operator; and
 - (iii) An approved test for leaks shall be conducted every five (5) years thereafter. A record of the test findings and of indicated repairs and maintenance shall be maintained by the owner or operator.
- (3) Alternative 3 shall be as follows:
- (i) Monitoring devices shall be installed in angled borings in the unsaturated earth materials under each tank. These monitoring devices shall constitute a leak detection system for each tank in advance of the point at which any leak would reach ground water; and
 - (ii) The number, length, and depth of each boring shall be determined on the basis of site characteristics. The array of monitoring devices under each tank shall constitute the best practical early warning detection system for tank leakage.
- (b) The exemption as stated in ¶ 3.5 (a) expires ten years after the effective date (September 30, 1994) of this rule and at that time full compliance with Subpart A ¶ 3.1 through ¶ 3.4 is required.
- (c) The secondary containment requirements under this rule do not apply to rail cars which are periodically moved to and from a bulk fertilizer storage facility.

SUBPART B Mixing and Loading Areas for Liquid Fertilizer

All mixing and loading area operations for liquid fertilizers must take place on a pad that meets the following requirements:

3.6. Capacity

The mixing and loading pad shall provide at least the following capacity:

- (a) The pad shall be of adequate size and design to contain 125% of the volume of the largest container to be loaded or unloaded if unprotected from precipitation or 110% of the volume of the largest container to be loaded or unloaded if protected from precipitation.

- (b) If any storage container or mobile container to be loaded or unloaded has a capacity of greater than 1200 gallons the containment volume need only be large enough to hold a minimum of 1500 gallons if unprotected from precipitation or 1320 gallons if protected from precipitation. If the primary use of the pad is to load and unload spray equipment and associated support vehicles and bulk transport vehicles use the pad only for occasional delivery of fertilizers then the pad size shall be determined by the volume of the largest container on the spray equipment or support vehicles provided the pad is designed so that bulk transport vehicles can conduct their occasional operations with all their appurtenances over the pad.
- 3.7. Fertilizer discharges or precipitation accumulations on a mixing and loading pad shall be immediately recovered such that the capacity listed in paragraph 3.6(a) is available at all times. Fertilizer material recovered shall be utilized for its original intended purpose. The facility shall have items on hand and readily available to recover discharges to the maximum extent possible.
- 3.8. General Requirements
- (a) Provided the required containment capacity of 3.6 (a) is met, pads need only be large enough so that the tank and appurtenances are physically over the pad provided no flushing of the boom system occurs.
 - (b) Pads for mixing and loading areas shall be constructed of reinforced concrete or other material so as to form an impervious barrier between the fertilizer handling area and the surrounding earth.
 - (c) The mixing and loading pad shall be designed to prevent storm water runoff from moving onto or across the mixing and loading pad.
 - (d) The mixing and loading pad shall not have any outlet points.
 - (e) The pad shall be constructed to a permeability rate that does not exceed 1×10^{-7} centimeters per second (~0.0035 inches per day) or a citation provided that identifies a material's specification that when followed will provide an equivalent permeability.
 - (f) The pad must be maintained as impervious for the usable life of the structure.
 - (g) The pad must be able to handle the wheel loads of any vehicles using it.
 - (h) Mixing and loading pads shall be designed to drain liquids to a sump.
 - (i) Sumps shall be drained only by a manually activated pump during the operating season of the facility. Automatic pumps may be used during the inactive season.
 - (j) Sumps shall be constructed of materials which resist corrosion or are treated to resist corrosion from fertilizers.
 - (k) Rail cars unloading liquid fertilizer at bulk fertilizer storage facilities are not required to meet the provisions of ¶ 3.6 and ¶ 3.8 (a)–(j) provided adequate catch basins are placed under the valves to recover drips and leaks.

SUBPART C Operations of Liquid Fertilizer Primary and Secondary Containment Facilities and Mixing and Loading Areas

Storage Containers and Appurtenances - Liquid Fertilizer

3.9. General Requirements

- (a) Storage containers and appurtenances shall be constructed, installed and maintained so as to prevent the unintentional discharge of liquid fertilizer.
- (b) Storage containers and appurtenances shall be constructed of materials which are resistant to corrosion, puncture or cracking.
- (c) Materials used in the construction or repair of storage containers and appurtenances may not be of a type which reacts chemically or electrolytically with stored fertilizer in a way which may weaken the storage container or appurtenance or create a risk of discharge.
- (d) Metals used for valves, fittings and repairs on metal containers shall be compatible with the metals used in the construction of the storage container, so that the combination of metals does not cause or increase corrosion which may weaken the storage container or its appurtenances, or create a risk of discharge.
- (e) Storage containers and appurtenances shall be designed to handle all operating stresses, taking into account static head, pressure buildup from pumps and compressors, and any other physical stresses to which the storage containers and appurtenances may be subject in the foreseeable course of operations.
- (f) Storage containers and appurtenances, including pipes, shall be protected against reasonably foreseeable risks of damage by trucks and other moving vehicles engaged in the loading and unloading of liquid fertilizer.

3.10. Appurtenances

- (a) Every storage container connection, except a safety relief connection, shall be equipped with a shut-off valve located on the storage container or at a distance from the storage container consistent with standard engineering practice.
- (b) Except during use periods, shut-off valves shall be left closed and secured.
- (c) Pipes and fittings shall be adequately supported to prevent sagging and possible breakage from gravity and other forces which may be encountered in the ordinary course of operations.
- (d) A flexible connection is required between the plumbing and the tank to reduce risk of rupture.

3.11. Liquid Level Gauging Device

- (a) Every storage container shall be equipped with a device by which the level of liquid in the storage container can be readily and safely determined. However, a liquid level gauging

device is not required if the level in a storage container can be readily and reliably measured by other means.

- (b) Liquid level gauging devices shall be secured in a safe manner.

3.12. Prohibited Materials

- (a) Storage containers and appurtenances used for the storage of nitrogen solutions may not be constructed of copper, brass, zinc, or copper base alloys.
- (b) Storage containers and appurtenances used for the storage of liquid fertilizers containing phosphates or chlorides may not be constructed of aluminum or aluminum alloys.
- (c) Storage containers and appurtenances used for the storage of low pH (< 5.0) fertilizers may not be constructed of ferrous metals other than stainless steel unless the materials are coated or treated with protective substances which are adequate to inhibit corrosion.
- (d) Storage containers and appurtenances used for the storage of phosphoric acid may not be constructed of ferrous materials other than 316 or 317 stainless steel unless the container is lined with a suitable substance to prevent corrosion.
- (e) Other material may be used in (a) – (d) if approved by the manufacturer.

3.13. Abandoned Containers

- (a) Storage containers used at a bulk fertilizer storage facility to hold bulk liquid fertilizer shall be considered abandoned if they have been out of service for more than 6 months because of a weakness or leak, or have been out of service for any reason for more than 2 years.
- (b) Abandoned storage containers shall be thoroughly cleaned.
- (c) Wash water containing fertilizer shall be utilized for the original intended purpose of the product.

3.14. Anchoring of Storage Containers

Storage containers shall be anchored, elevated or secured by other means to prevent flotation or instability which might occur as a result of liquid accumulations within the secondary containment structure.

3.15. Filling

Storage containers may not be filled beyond the capacity for which they are designed, taking into account the density of the liquid being stored and thermal expansion during storage.

Part 4.0 Bulk Dry Fertilizer

4.1. Storage

- (a) Bulk dry fertilizer shall be stored inside a structure that prevents contact with precipitation.

- (b) The floor of the bulk dry fertilizer storage area shall be constructed of materials that prevent the downward movement of fertilizer materials or the upward movement of moisture through the floor.

4.2. Mixing and loading area and operations

- (a) All loading, unloading, mixing and handling of dry fertilizer shall be done on a mixing and loading pad.
- (b) The mixing and loading pad shall be of a size and design that will contain the fertilizer being mixed or loaded and allow for collection of spilled material and facilitate easy cleanup.
- (c) Pads for mixing and loading areas shall be constructed of material so as to form a barrier between the fertilizer handling area and the surrounding earth and facilitate easy cleanup of spills.
- (d) The pad must be maintained as a barrier between the product and the surrounding earth for the usable life of the structure.
- (e) The pad must be able to handle the wheel loads of any vehicles using it.
- (f) All spills shall be immediately cleaned up.

4.3. Rail cars unloading bulk dry fertilizer at bulk fertilizer storage facilities are not required to meet the provisions of ¶ 4.1 or ¶ 4.2 (a)–(e). However, all spills shall be immediately cleaned up.

4.4. The facility and area shall be maintained in a good state of repair.

Part 5.0 Operations

5.1. Security

- (a) All fertilizer in the facilities shall be secured against access by unauthorized persons.
- (b) Valves on storage containers shall be locked and secured except when persons responsible for the facility security are present at the facility.
- (c) Valves on empty storage containers need not be secured.

5.2. Inspection and Maintenance

Secondary containment structures, storage containers, appurtenances and mixing and loading areas should be visually inspected regularly and maintained as necessary to assure compliance with these rules.

5.3. Site Closure and Discontinuation of Operation.

- (a) The Colorado Department of Agriculture must be notified of the permanent discontinuation of operations at any bulk fertilizer storage facility and mixing and loading area within 7 days of closure.

- (b) When a bulk fertilizer storage facility is closed or operations are discontinued:
 - (1) All fertilizer, rinsates, wash waters, and other materials containing fertilizer shall be removed from the facility site and utilized for the original intended purpose of the product; and
 - (2) All storage containers shall be thoroughly cleaned by triple rinsing or the equivalent.

Part 6.0 Site Plan Design and Construction

- 6.1. The facility shall comply with all applicable local, state and federal building codes and zoning requirements.
- 6.2. Bulk fertilizer storage facilities and mixing and loading areas must be designed and constructed so as to meet the requirements of these rules.
- 6.3. In order to comply with this part, any facility constructed or remodeled on or after September 30, 1994, must be inspected for compliance with the design plan;

and:

- (a) Said design must be signed and sealed by an engineer registered in the state of Colorado, in accordance with Title 12, Article 25, Part 1 of The Colorado Revised Statutes; or
- (b) Said design must be from a source approved by the Commissioner and must be made available for public use.

Part 7.0 New Technologies

- 7.1. To best aid the improvement of containment technology:
 - (a) The Colorado Department of Agriculture may allow the use of containment processes or techniques that satisfy the requirements of these rules although an engineer need not sign or seal them, provided the operator proves to the satisfaction of the Department that the process or technique has a reasonably substantial chance for success prior to implementation.
 - (b) The process or technique may continue to be used for a maximum of two years with an annual review by the Department. After two years the process or technique must be signed and sealed by an engineer or discontinued.
 - (c) If the technique or procedure fails or if during or at the conclusion of the two years the experimental process or technique is deemed unacceptable by the Department, it shall be discontinued and the operation must be brought into compliance with these rules within two years.

Part 8.0 Connections to Water Supplies

This copy of the text of the rules and regulations for "Water Quality Control Concerning Agricultural Chemicals and Ground Water" is provided as a convenience to the public by the Colorado Department of Agriculture and does not constitute an official publication of these Rules. The official version of these Rules is published by the Office of the Secretary of State in the Colorado Code of Regulations at 8 CCR 1206-1 and may be obtained from the following website: <http://www.sos.state.co.us/CCR/Welcome.do>.

- 8.1. An air gap separation or a reduced pressure principle back flow prevention assembly shall be installed in the water supply line that serves the facility.

Part 9.0 Reserved for future use

Part 10.0 Reserved for future use

II. PESTICIDES

Part 11.0 Definitions

These definitions apply to Parts 11 through 18.

- 11.1. "Agricultural Chemical" for pesticides means any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest or any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant; except that the term "pesticide" shall not include any article that is a "new animal drug" as designated by the United States Food and Drug Administration.
- 11.2. "Appurtenances" means all valves, pumps, fittings, pipes, hoses, metering devices, mixing containers, and dispensing devices which are connected to a storage container, or which are used to transfer bulk pesticide into or out of a storage container.
- 11.3. "Bulk pesticide" means any pesticide which is transported or held in an individual container in undivided quantities of greater than fifty-five (55) U.S. gallons liquid measure or one hundred (100) pounds net dry weight.
- 11.4. "Bulk pesticide storage facility" means any facility or site where pesticides are being stored in bulk for a period of more than 15 consecutive days. Any bulk storage facility within 300 feet of another bulk pesticide storage facility shall be considered one facility for the purpose of determining the number of consecutive days in storage.
- 11.5. "Dry pesticide" means any pesticide which is in solid form prior to any application or mixing for application, and includes formulations such as dusts, wettable powders, dry flowable powders, and granules.
- 11.6. "Impervious" means that the structure shall be maintained so that liquid pesticide or water does not move through it at a rate that exceeds 1×10^{-7} centimeters per second (~0.0035 inches per day).
- 11.7. "Liquid pesticide" means any pesticide in liquid form, and includes solutions, emulsions, suspensions and slurries.
- 11.8. "Mixing and loading area" means a physical site where pesticides are transferred, loaded, unloaded, mixed, repackaged, refilled or where pesticides are cleaned, washed or rinsed from containers or application, handling, storage or transportation equipment. Any mixing and loading area within 300 feet of another mixing and loading area shall be considered one mixing and loading area for the purpose of determining the threshold amount of formulated product or active ingredient of pesticides.
- 11.9. "Mobile container" means any storage container designed for transportation.

- 11.10. "Primary containment" means the storage of bulk liquid pesticides in storage containers at a storage facility.
- 11.11. "Secondary containment" means any structure used to contain product spills from primary containment and prevent runoff or leaching.
- 11.12. "Sump" means a shallow reservoir or area at the lowest point of the bulk pesticide facility or mixing and loading area that allows for the temporary collection and retrieval of liquid.
- 11.13. "Storage container" means:
- (a) A container used for the storage of bulk pesticide; or
 - (b) A nurse tank, or other mobile container used for the storage of bulk pesticide.

Part 12.0 Scope of These Rules

- 12.1. These rules apply to:
- (a) All operating bulk pesticide storage facilities, commercial or private, with the exception that portable refillable containers that are approved by the Environmental Protection Agency and have a capacity of greater than 56 gallons and less than 660 gallons are exempt from secondary containment.
 - (b) All mixing and loading areas, commercial or private, where any of the following are handled in any one year period:
 - (1) Five hundred (500) gallons or more, in the aggregate, of formulated product or combination of formulated products of liquid pesticides;
 - (2) Three thousand (3,000) pounds or more, in the aggregate, of formulated product or combination of formulated products of dry pesticides; or
 - (3) One thousand five hundred (1,500) pounds or more, in the aggregate, of active ingredients of pesticides.

(For liquid pesticides, Parts 13 and 15–17 apply; for dry pesticides, Parts 14–17 apply)

- 12.2. These rules do not apply to:
- (a) Field mixing and loading of pesticides; or
 - (b) Loading and unloading of unopened containers; or
 - (c) Facilities storing pesticides used for water treatment at public water systems, which are systems used to provide the public with piped water for human consumption, and domestic wastewater treatment works.
- 12.3. Operation of the bulk pesticide storage facilities and mixing and loading areas are regulated by these rules.

12.4.

- (a) Pesticide facilities subject to these rules must be in compliance the following number of years after the effective date of these rules (September 30, 1994):

Liquid Pesticide Secondary Containment	3 years
Liquid & Dry Pesticide Mixing and Loading Areas	3 years
Dry Pesticide Storage	3 years

- (b) New facilities or expansion of existing facilities constructed three (3) years after the effective date of these rules (September 30, 1994) shall be in compliance with these rules prior to beginning operations.

12.5. All bulk pesticide storage facilities are required to have a mixing and loading area.

Part 13.0 Liquid Pesticides

SUBPART A Secondary Containment for the Storage of Liquid Pesticides

- 13.1. All bulk liquid pesticide must be stored in a facility that meets the following requirements:
- 13.2. The secondary containment structure shall provide at least the capacity of the largest storage container within the secondary containment structure, plus the total volume of discharged liquid which would be displaced by the submerged portions of all other storage containers, appurtenances, fixtures and materials located within the secondary containment structure, if the structure were filled to capacity with discharged liquid, **plus:**
- (a) When unprotected from precipitation, an additional twenty-five percent of the capacity of the largest storage container located within the secondary containment structure.
- (b) When protected from precipitation, an additional ten percent of the capacity of the largest container located within the secondary containment structure.
- 13.3. Pesticide discharges or precipitation accumulations in a secondary containment structure shall be immediately recovered such that the capacity listed in ¶ 13.2 above is available at all times. Pesticide discharges, rinsates, or precipitation containing pesticide material recovered may be utilized for its intended purpose if it can be applied according to label or properly disposed of according to state or federal law. The facility shall have items on hand and readily available to recover discharges to the maximum extent possible.
- 13.4. General Requirements
- (a) All primary containment shall be located within a secondary containment structure.
- (b) Structural materials and integrity shall provide secondary containment which meets or exceeds the requirements of these rules.
- (c) The walls and floor of a secondary containment structure shall be designed according to good engineering practices and shall be constructed of materials that are compatible with

the pesticide, or that resist or are treated to resist corrosion due to exposure from the pesticide.

- (d) The secondary containment structure shall be constructed to a water permeability rate not to exceed 1×10^{-7} centimeters per second (~0.0035 inches per day) or a citation provided that identifies a material's specification that when followed will provide an equivalent permeability.
- (e) The walls and floor of the secondary containment structure must be maintained as impervious to liquids for the usable life of the structure.
- (f) The floor of the secondary containment structure must support the gravity load of full tanks.
- (g) The walls of the secondary containment structure must withstand static and dynamic hydraulic loads from the equilibrium liquid level.
- (h) The walls of the secondary containment structure adjacent to tanks must withstand dynamic hydraulic loads from liquid discharged from a ruptured tank.
- (i) The floor of the secondary containment structure shall be designed to drain liquids to a sump.
- (j) Sumps shall be drained only by a manually activated pump. Automatic pumps may be used during the inactive season provided all tanks in the secondary containment structure are empty.
- (k) Sumps shall be constructed of materials which are watertight and resist corrosion or are treated to resist corrosion from pesticides.
- (l) The secondary containment structure shall not have an outlet or gravity drain through the wall or floor.
- (m) No piping shall be installed through the containment wall or floor.
- (n) The walls of the secondary containment structure shall be of such a height as to allow easy inspection of the tank(s) from outside the containment as well as easy egress from the containment area.
- (o) There shall be sufficient clearance between each tank and the wall of the secondary containment structure to allow for visual inspection of tanks from all sides.
- (p) Electrical controls in the secondary containment structure shall be elevated above the level of the containment wall.
- (q) Clay, natural soil-clay mixtures, clay-bentonite mixtures, or prefabricated bentonite liners shall not be used to contain any bulk pesticide.
- (r) Synthetic Liners.

- (1) The facility manager must obtain written confirmation of compatibility, durability, and a written estimate of the life of the synthetic liner from the manufacturer. This document must be kept at the facility as a permanent record.
 - (2) Synthetic liners shall be installed as per manufacturer's specifications and under the supervision of a qualified representative of the manufacturer, and all seams shall be tested, and repaired if necessary, in accordance with the manufacturer's recommendations.
- (s) Prefabricated Facilities.
- (1) A prefabricated secondary containment structure shall be composed of a rigid prefabricated basin having both a base and walls constructed of steel, reinforced concrete or synthetic materials which are resistant to corrosion, puncture or cracking.
 - (2) A written confirmation of compatibility and estimate of life expectancy from the basin manufacturer shall be kept on file at the nearest local office from which the storage structure is administered.
 - (3) The prefabricated facility shall be designed and installed to withstand all foreseeable loading conditions, including the tank load.

SUBPART B Mixing and Loading Areas for Liquid Pesticide

All mixing and loading area operations for liquid pesticides must take place on a pad that meets the following requirements:

13.5. Capacity

The mixing and loading pad shall provide at least the following capacity:

- (a) The pad shall be of adequate size and design to contain 125% of the volume of the largest container to be loaded or unloaded if unprotected from precipitation or 110% of the volume of the largest container to be loaded or unloaded if protected from precipitation.
 - (b) If any storage container or mobile container to be loaded or unloaded has a capacity of greater than 1200 gallons the containment volume need only be large enough to hold a minimum of 1500 gallons if unprotected from precipitation or 1320 gallons if protected from precipitation. If the primary use of the pad is to load and unload spray equipment and associated support vehicles and bulk transport vehicles use the pad only for occasional delivery of pesticides then the pad size shall be determined by the volume of the largest container on the spray equipment or support vehicles provided the pad is designed so that bulk transport vehicles can conduct their occasional operations with all their appurtenances over the pad.
- 13.6. Pesticide discharges or precipitation accumulations on a mixing and loading area shall be immediately recovered such that the capacity listed in ¶ 13.5 is available at all times. Pesticide discharges, rinsates, or precipitation containing pesticide material recovered may be utilized for its intended purpose if it can be applied according to the label or properly disposed of according

to state or federal law. The facility shall have items on hand and readily available to recover discharges to the maximum extent possible.

13.7. General Requirements

- (a) Provided the required containment capacity of ¶ 13.5. is met, pads need only be large enough so that the tank and appurtenances are physically over the pad provided no flushing of the boom system occurs.
- (b) Pads for mixing and loading areas shall be constructed of liquid-tight, reinforced concrete or other material so as to form an impervious barrier between the pesticide handling area and the surrounding earth.
- (c) The mixing and loading pad shall be designed to prevent storm water runoff from moving onto or across the mixing and loading pad.
- (d) The mixing and loading pad shall not have any outlet points.
- (e) The pad shall be constructed to a permeability rate that does not exceed 1×10^{-7} centimeters per second (~0.0035 inches per day) or a citation provided that identifies a material's specification that when followed will provide an equivalent permeability.
- (f) The pad must be maintained as impervious for the usable life of the structure.
- (g) The pad must be able to handle the wheel loads of any vehicles using it.
- (h) Mixing and loading pads shall be designed to drain liquids to a sump.
- (i) Sumps shall be drained only by a manually activated pump during the operating season of the facility. Automatic pumps may be used during the inactive season.
- (j) Sumps shall be constructed of materials which are watertight and resist corrosion or are treated to resist corrosion from pesticides.

SUBPART C Operations of Liquid Pesticide Primary and Secondary Containment Facilities and Mixing and Loading Areas

Storage Containers and Appurtenances - Liquid Pesticide

13.8. General Requirements

- (a) Primary storage containers and appurtenances shall be constructed, installed and maintained so as to prevent the unintentional discharge of liquid pesticide.
- (b) Primary storage containers and appurtenances shall be constructed of materials which are resistant to corrosion, puncture or cracking.
- (c) Materials used in the construction or repair of storage containers and appurtenances may not be of a type which reacts chemically or electrolytically with stored pesticide in a way which may weaken the storage container or appurtenance, create risk of discharge, or adulterate the pesticide.

- (d) Metals used for valves, fittings and repairs on metal containers shall be compatible with the metals used in the construction of the storage container, so that the combination of metals does not cause or increase corrosion which may weaken the storage container or its appurtenances, or create a risk of discharge.
- (e) Primary storage containers and appurtenances shall be designed to handle all operating stresses, taking into account static head, pressure buildup from pumps and compressors, and any other physical stresses to which the storage containers and appurtenances may be subject in the foreseeable course of operations.
- (f) Primary storage containers and appurtenances, including pipes, shall be protected against reasonably foreseeable risks of damage by trucks and other moving vehicles engaged in the loading and unloading of liquid pesticide.

13.9. Appurtenances

- (a) Every storage container connection, except a safety relief connection, shall be equipped with a shut-off valve located on the storage container or at a distance from the storage container consistent with standard engineering practice.
- (b) All wetted parts inside shut-off valves, and all connections from the storage container to the shut-off valve, shall be made of stainless steel or the pesticide manufacturer's recommended material.
- (c) Except during use periods, shut-off valves shall be left closed and secured.
- (d) Pipes and fittings shall be adequately supported to prevent sagging and possible breakage from gravity and other forces which may be encountered in the ordinary course of operations.
- (e) A flexible connection is required between the plumbing and the tank to reduce risk of rupture.

13.10. Liquid Level Gauging Device

- (a) Every storage container shall be equipped with a device by which the level of liquid in the storage container can be readily and safely determined. However, a liquid level gauging device is not required if the level in a storage container can be readily and reliably measured by other means.
- (b) Liquid level gauging devices shall be secured, in a safe manner.
- (c) External sight gauges are prohibited.

13.11. Prohibited Materials

- (a) Storage containers and appurtenances may not be made of polyvinyl chloride.
- (b) A storage container may not be made of ferrous metals, unless:
 - (1) The container is made of stainless steel; or

- (2) The container has a protective lining which inhibits corrosion and which does not react chemically with the stored pesticide; or
- (3) Ferrous metal is the pesticide manufacturer's recommended material for the container.

13.12. Venting

Each bulk liquid pesticide storage container shall be equipped with a vent or other device designed to relieve excess pressure, prevent losses by evaporation and exclude precipitation.

13.13. Storage with other commodities

- (a) No other commodity, except liquid pesticide, pesticide diluent, empty pesticide containers, or pesticide discharges recovered (from the bulk pesticide storage facility or the mixing and loading area), may be stored within the secondary containment structure.
- (b) The bulk liquid pesticide secondary containment structure may share a wall or portion of a wall with a bulk liquid fertilizer secondary containment structure.

13.14. Labeling of Storage Containers

Every storage container shall bear a label stating, with regard to the current contents of the container:

- (a) The complete product label required by the United States Environmental Protection Agency;
- (b) The total capacity of the bulk storage tank; and
- (c) The label required under this section shall be placed on the storage container so as to be visible from outside of the secondary containment structure. The label shall be kept in readable condition.

13.15. Abandoned Containers

- (a) Primary storage containers used at a bulk pesticide storage facility to hold bulk liquid pesticide or separate bulk pesticide rinsate shall be considered abandoned if they have been out of service for more than 6 months because of a weakness or leak, or have been out of service for any reason for more than 2 years.
- (b) Abandoned aboveground containers shall be thoroughly cleaned.
- (c) Wash water containing pesticide shall be utilized for the original intended purpose of the product.

13.16. Anchoring of Storage Containers

Storage containers shall be anchored, elevated or secured by some other means to prevent floatation or instability which might occur as a result of liquid accumulations within the secondary containment structure.

13.17. Filling

Storage containers may not be filled to more than 95% of capacity **unless:**

- (a) The storage container construction or location provides constant temperature control; or
- (b) The storage container is an approved portable refillable container; or
- (c) Manufacturers' specifications allow it.

Part 14.0 Bulk Dry Pesticides

14.1. Storage

- (a) Bulk dry pesticide shall be stored inside a sound structure that prevents contact with precipitation.
- (b) The floor of the bulk dry pesticide storage area shall be constructed of materials that prevent the downward movement of pesticide materials or the upward movement of moisture through the floor.
- (c) Materials used in the walls and floors must resist or be treated to resist corrosion due to exposure to the pesticide.

14.2. Mixing and loading area and operations

- (a) All loading, unloading, mixing and handling of dry pesticide shall be done on a mixing and loading pad.
- (b) The mixing and loading pad shall be of a size and design that will contain the pesticide being mixed or loaded and allow for collection of spilled material and facilitate easy cleanup.
- (c) Pads for mixing and loading areas shall be constructed of material so as to form a barrier between the pesticide handling area and the surrounding earth and facilitate easy cleanup of spills.
- (d) The pad must be maintained as a barrier between the product and the surrounding earth for the usable life of the structure.
- (e) The pad must be able to handle the wheel loads of any vehicles using it.
- (f) All spills shall be immediately cleaned up.

14.3. The facility and area shall be maintained in a good state of repair.

Part 15.0 Operations

15.1. Security

- (a) All pesticides in the facilities shall be secured against access by unauthorized persons.

- (b) Valves on storage containers shall be locked and secured except when persons responsible for the facility security are present at the facility.
- (c) Valves on empty storage containers need not be secured.

15.2. Inspection and Maintenance

Every secondary containment structure, storage containers, appurtenances, mixing and loading areas should be visually inspected regularly and maintained as necessary to assure compliance with these rules.

15.3. Site Closure and Discontinuation of Operation.

- (a) The Colorado Department of Agriculture must be notified of the permanent discontinuation of operations at any bulk pesticide storage facility or mixing and loading area within 7 days of closure.
- (b) When a bulk pesticide storage facility or mixing and loading area is closed or operations are discontinued:
 - (1) All pesticides, rinsates, wash waters, and other materials containing pesticides shall be removed from the facility site and utilized for the original intended purpose of the product if it can be applied according to label or properly disposed of according to state or federal law.
 - (2) All storage containers shall be thoroughly cleaned by triple rinsing or the equivalent.

Part 16.0 Site Plan Design and Construction

- 16.1. The facility shall comply with all applicable local, state and federal building codes and zoning requirements.
- 16.2. Bulk pesticide storage facilities and mixing and loading areas must be designed and constructed so as to meet the requirements of these rules.
- 16.3. In order to comply with this part, any facility constructed or remodeled on or after September 30, 1994, must be inspected for compliance with the design plan;

and:

- (a) Said design must be signed and sealed by an engineer registered in the state of Colorado, in accordance with Title 12, Article 25, Part 1 of The Colorado Revised Statutes; or
- (b) Said design must be from a source approved by the Commissioner and must be made available for public use.

Part 17.0 New Technologies

- 17.1. To best aid the improvement of containment technology:

- (a) The Colorado Department of Agriculture may allow the use of containment processes or techniques that satisfy the requirements of these rules although an engineer will not sign or seal them, provided the operator proves to the satisfaction of the Department that the process or technique has a reasonably substantial chance for success.
- (b) The process or technique may continue to be used for a maximum of two years with an annual review by the Department. After two years the process or technique must be signed and sealed by an engineer or discontinued.
- (c) If the technique or procedure fails or if during or at the conclusion of the two years the experimental process or technique is deemed unacceptable by the Department or the engineer, it shall be discontinued and the operation must be brought into compliance with these rules within two years.

Part 18.0 Connections to Water Supplies

18.1. An air gap separation or a reduced pressure principle back flow prevention assembly shall be installed in the water supply line that serves the facility.

Part 19.0 Reserved for future use

Part 20.0 Reserved for future use

Part 21.0 Statements of Basis, Specific Statutory Authority and Purpose

21.1 July 28, 1994 – Effective September 30, 1994

The following rules are hereby promulgated by the Commissioner of the Department of Agriculture pursuant to his authority under § 25-8-205.5(3)(b), C.R.S. (1993 Supp.).

The purpose of these rules is to implement the provisions of § 25-8-205.5 (3) (b) (1993 Supp.), also known as SB 90-126, by adopting minimum performance standards and requirements for: 1) secondary containment of bulk pesticides, 2) mixing and loading pads where threshold amounts of pesticides are handled, 3) secondary containment of bulk commercial fertilizers stored in threshold amounts, 4) mixing and loading pads where secondary containment is required for commercial fertilizers, and 5) management of these facilities.

These rules will help achieve the overall purpose of SB 90-126, which is “to provide for the management of agricultural chemicals to prevent, minimize, and mitigate their presence in groundwater”, by intercepting spills or leaks that may occur during the storage or handling of agricultural chemicals.

The process for drafting the regulations and how to allow maximum input and feedback from potentially regulated parties and utilize existing knowledge to its fullest extent was considered. It was determined to begin the development of the regulations by gathering information from other states with similar laws, industry standards, similar federal regulations and from individuals who had built secondary containment and mixing and loading facilities. Second, a work group consisting of advisory committee members and other individuals with experience in pesticide and fertilizer facilities was formed to evaluate this information, provide input and develop draft regulations. Third, the draft was presented to the full advisory committee for review and revision. Fourth, the revised draft regulations were presented at a series of meetings held throughout the state to receive feedback. The feedback from the meetings was presented

to the work group and the advisory committee. The appropriate changes were then made and the regulations were prepared for the formal hearings.

Formal hearings were held in five locations around the state to provide the maximum opportunity for input. The hearings were held in Lamar, Alamosa, Grand Junction, Sterling and Lakewood. The final hearing in Lakewood was held in conjunction with an Agricultural Chemicals and Groundwater Protection Advisory Committee meeting to allow members of the committee to hear some of the testimony first hand.

Following the hearings the advisory committee discussed the comments received at all of the hearings as well as written comments submitted and changes were made that were appropriate based on the testimony.

The major issues encountered were neither exclusively factual nor exclusively policy. Consequently these issues were considered as both factual and policy.

- 1) The original statutory language that required development of the regulations was the major issue during the drafting and public meeting phase of development. The language was inconsistent with the manner in which the terms are commonly used in industry. This caused extreme difficulty in developing workable rules and regulations. Also, it was difficult for potentially regulated parties to determine whether compliance would be necessary since the thresholds were difficult to understand. SB 90-126 was amended by SB 93-114 during the 1993 legislative session to address this issue. Thresholds were changed to terms commonly used by agricultural chemical users and separate thresholds were established for pesticides and fertilizers.
- 2) The Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is currently developing similar regulations for the secondary containment of bulk pesticides. The EPA published their draft regulations on February 11, 1994. The state's proposed regulations were developed working as closely with EPA as possible to prevent discrepancies. A thorough review of the Federal draft regulations has been completed to identify any major conflicts between the two sets of regulations. No significant changes were made to the state's proposed regulations as a result of this review.
- 3) In determining the type of standards to require, it was decided to use performance specifications as opposed to prescribing type and size of materials. This will allow creativity and tailoring for each individual facility so long as performance is maintained. It will also allow for the use of new technology without a change being required in the regulations. The proposed regulations contain separate requirements for pesticides and commercial fertilizers. This allows for more relevant standards that take into account the different requirements in handling required by the labeling of the agricultural chemicals. Also, separate standards were developed for dry agricultural chemicals and liquid agricultural chemicals. This was done to address the inherent difference in their physical properties and they way they move when a spill or leak occurs.
- 4) Many of the concepts and technology for containment are relatively new and are therefore being continuously refined and changed. In order to not restrict evolution of technology and designs provisions were made for new technologies.
- 5) The law requires at least a three-year phase-in period for compliance with the rules and regulations. However in reviewing the costs involved, logistics and labor required, it was determined a graduated compliance schedule would be appropriate. This will allow entities to spread cost and work scheduling over a longer period of time.

- 6) Since performance specifications do not prescribe specific construction practices and because the Colorado Department of Agriculture does not have authority to approve construction plans prior to the facility being built, it was decided to require that plans be signed and sealed by a registered engineer in the State of Colorado. This will allow individuals to have some assurance that the facility will meet the requirements while insuring for the State that the facilities will perform adequately. A "Colorado" registered engineer was required since the engineering board requires all people who do engineering in Colorado to have a Colorado license.

One issue with the engineering requirement was the concern of this cost to operators of a facility. To address this issue it was decided to attempt to have generic plans that are available throughout the United States signed and sealed by a registered engineer in Colorado and to make these publicly available. This will minimize the cost and prevent each individual needing a facility from having to hire an engineer and develop a new set of plans.

- 7) Many secondary containment facilities and mixing and loading pads have already been built around the state. Most of these facilities will meet the proposed regulations, however some may not meet all of the requirements. In order to address the issue, grandfathering existing facilities for a period of time was debated. However, it was determined that a separate set of requirements would have to be developed to make sure all existing facilities to be grandfathered would at least meet some minimal requirements. Because of this it was determined that the graduated phase-in schedule could be used as a means of grandfathering and would give sufficient time for existing facilities to come into compliance without the need for transitional regulations.
- 8) In both the proposed commercial fertilizer and pesticide rule, whether secondary containment is required is a function of the size of the container and how long material is stored in the container. A short period of time is allowed for storing product above established quantity thresholds before secondary containment is required. This is to allow for handling or temporary storage of product such as may occur when a semi-trailer is delivering material but is not unloaded immediately or for nurse trucks and tanks that are not permanent to stay in an area for a small amount of time without needing secondary containment. The proposed regulations specified 15 days for both pesticide and commercial fertilizer.

During the hearings, comments were received that indicated 15 days for commercial fertilizer tanks was too short of a time frame. The use of "tip tanks", tanks with a capacity of ~6,000 gallons that are moved on trailers and set up at various locations, are used fairly extensively in the state to supply fertilizer to application equipment particularly during planting time. These 6,000 gallon tanks exceed the threshold for secondary containment of 5,000 gallons. These tanks are utilized primarily to avoid hauling many small truck loads to a particular area during the time of application and are very useful in Colorado since many times there are large distances between the supplier and the application site. These tanks are set up in this location until application is completed and then moved to another area.

Unpredictable weather conditions was cited as the main reason that 15 days was too short of a time. A storm could delay application several days and could result in needing the product at one site longer than 15 days. Testimony received stated that these tanks provide a valuable service to the dealer and the producer. It prevents hauling a large number of small loads to one site which requires more loading and unloading of product increasing the risk of a spill or leak as well as an increased risk of more transportation related accidents. Temporary secondary containment of storage tanks of this size is not easily accomplished. If it was set up it would be very expensive based on the time it would be utilized. Since these tanks are not intended to be permanent storage, are in place for a relatively short period of time and in view of the associated risks of

hauling and handling many loads of product it was decided based on this testimony, to extend the time period for commercial fertilizers to 30 days before secondary containment would be required.

- 9) Comments were received that due to the fact fertilizer and pesticide tanks for chemigation are often located near wells, they should in all cases, regardless of the size of the container and amount of time they would be in place, should be required to have secondary containment and a mixing and loading pad. However, the law dictates minimum thresholds where the regulations for secondary containment apply and exempts field mixing and loading from the regulations. In most situations, filling and emptying chemigation tanks is field mixing and loading. Chemigation tanks larger than the minimum threshold would require secondary containment.
- 10) The issue of how to contain rail cars which are in place longer than the threshold amount of time and whether a mixing and loading pad would be required under rail cars unloading in storage tanks requiring secondary containment was addressed. Rail cars were exempted from secondary containment and mixing and loading pad requirements. This is due to the fact it would be extremely difficult logistically due to the size of the containment or mixing and loading area that would be required. If the fertilizer and/or pesticide dealer cannot move the cars a secondary containment facility or mixing and loading pad would be required for each car. Also, the siding that the rail cars utilize is usually owned by the railroad company which may or may not authorize building such a facility. Provisions were made to require catch basins under the valves to recover leaks or drips when loading or unloading occurs.
- 11) Requirements for location of facilities with respect to wells, vulnerable water tables, surface water supplies and flood plains were considered. However, it was decided not to establish requirements. This was done to prevent conflict with local ordinances and zoning regulations that could deal with this issue on a site specific basis. Also, a properly constructed, maintained and operated facility should prevent any escape of agricultural chemicals that could contaminate a nearby water supply.

21.2 March 9, 2006 – Effective May 30, 2006

Statutory Authority:

These amendments to the Rules at 8 CCR 1203-12 are adopted by the Commissioner of Agriculture pursuant to his authority under § 25-8-205.5(3)(b), C.R.S. (2005).

Purpose:

The purpose of this rulemaking is to make certain amendments to the Rules to make non-substantive typographical and grammatical corrections, to add a section to contain the statements of basis, specific statutory authority and purpose, and to make minor substantive changes to clarify the meaning, application and effect of the Rules. The Rule will also be moved to the Conservation Services Division section of the CCR and renumbered to 8 CCR 1206-1 to reflect a reorganization in the Colorado Department of Agriculture moving the groundwater protection program to this division.

These amendments make the following substantive changes:

1. Parts 1.6 and 11.6. The definition of “impervious” has been changed to incorporate the numerical impermeability standard mandated for mixing and loading pads and secondary containment structures elsewhere in the Rules.

2. Part 2.4. The greater than sign (>) for 100,000 tanks has been changed to a greater than or equal sign (\geq) to be consistent with the 10-year exemption in Part 3.5(a) of tanks having a capacity of 100,000 gallons or more.
3. New Parts 2.5 and 12.5 have been added to expressly state the implicit requirement in the existing Rules that a mixing and loading area is required if secondary containment is required.
4. Parts 3.2 and 13.2. Subparagraphs (a) and (b) have been revised to clarify that the capacity of the secondary containment structure must be calculated as specified in the Rule. The parenthetical numbers have been deleted to avoid confusion that could occur if a calculated capacity does not exactly equal the stated percentage.
5. Parts 3.4(q)(1) and 13.4(r)(1) have been revised to clarify that it is the facility manager's responsibility to obtain the required confirmation of a liner's compatibility and durability from the manufacturer.
6. Part 13.9. A new subparagraph (e) has been added. This language was inadvertently omitted from the original Rules and corresponds to the existing Part 3.10(d).

Basis:

The factual, legal and policy issues pertaining to the amendment of these Rules are as follows:

1. The original rules were adopted on September 30, 1994.
2. The proposed amendments are the first changes made to the Rules since their adoption.
3. During the ten years that these Rules have been in place, the Department of Agriculture has identified various changes that are needed to clarify their meaning and effect.
4. The proposed changes have been reviewed by the members of the Agricultural Chemicals and Groundwater Protection Committee, an advisory body established by the State Agricultural Commission that is composed of representatives from various stakeholders including the Colorado Water Quality Control Commission, commercial pesticide applicators, the green industry, agricultural chemical suppliers, agricultural producers and the general public. The Committee members unanimously support the adoption of these amendments.

21.3 August 9, 2011 – Effective October 15, 2011

Statutory Authority:

These amendments to the Rules at 8 C.C.R. 1203-12 are adopted by the Commissioner of Agriculture pursuant to his authority under § 25-8-205.5(3)(b), C.R.S. (2010).

Purpose:

The purpose of this rulemaking is to make certain amendments to the Rules to make minor substantive changes to clarify the meaning, application, and effect of the Rules and to make non-substantive typographical and grammatical corrections.

These amendments make the following substantive changes:

1. Parts 3.3, 3.7, 4.2(f), 4.3, 13.3, 13.6, and 14.2(f). The word promptly has been changed to immediately to more clearly reflect the urgent need to clean up discharges, spills, and precipitation accumulations in fertilizer and pesticide secondary containment structures and mixing and loading areas without delay.
2. Parts 3.5(a)(1)(iii), 3.13(a), 3.15, and 13.15. The word fluid has been changed to liquid to be consistent with the remaining text.
3. Parts 6.3 and 16.3. Language has been added to clarify that only facilities constructed on or after the effective date of these rules (September 30, 1994) are subject to the provisions of these parts. Facilities constructed before the effective date of these rules must still comply with all applicable, remaining parts of the rules.
4. Part 12.1(a). This paragraph has been revised to remove outdated references to DOT 57 and MACA 75 pesticide containers and replaced with reference to EPA's new container rule to assure that containers exempted in Colorado meet EPA's standards.
5. Parts 12.1(a) and 13.17(b). The word mini-bulk has been replaced with the words portable refillable containers to reflect a more accurate, commonly used term for these portable pesticide containers.
6. Part 13.15(a). The word bulk has been inserted before the words pesticide rinsate to imply that only pesticide rinsate that is stored in bulk quantities is subject to the provisions of 13.15.

The following Parts contain non-substantive typographical and/or grammatical changes that are intended only to clarify the original wording and meaning of the existing Rules:

1. Part 1.1. The word plan has been changed to plant; the intended word for this part.
2. Parts 3.10(a) and 13.9(a)(b). The word shutoff has been changed to shut-off to be consistent with the remaining text.
3. Parts 3.13(a), 4.0, 4.1(a)(b), 4.3, 13.12, 13.13(b), 13.15(a), 14.0, and 14.1(a)(b). The word bulk has been moved and placed in front of the words liquid/dry to be consistent with remaining text.
4. Parts 6.3 and 16.3 contain punctuation changes only.

Factual and Policy Basis:

The factual, legal and policy issues pertaining to the amendment of these Rules are as follows:

1. The original rules were adopted on September 30, 1994.
2. The proposed amendments are the second changes made to the Rules since their adoption.
3. During the last five years, the Department of Agriculture has identified various changes that are needed to clarify their meaning and effect.
4. The proposed changes have been reviewed by the members of the Agricultural Chemicals and Groundwater Protection Committee, an advisory body established by the State Agricultural Commission that is composed of representatives from various stakeholders including the

Colorado Water Quality Control Commission, commercial pesticide applicators, the green industry, agricultural chemical suppliers, agricultural producers and the general public. The Committee members unanimously support the adoption of these amendments.

21.4 September 17, 2014 – Effective November 14, 2014

Statutory Authority:

This amendment to the Rules published at 8 C.C.R. 1206-1 is adopted by the Commissioner of Agriculture pursuant to his authority under § 25-8-205.5(3)(b), C.R.S.

Purpose:

This amendment adds a new subpart (c) to part 12.2 to exempt from these rules the inspection of bulk pesticide storage and mixing/loading areas at public water treatment systems and domestic wastewater treatment works.

Factual and Policy Basis:

The factual, legal and policy issues pertaining to the amendment of these Rules are as follows:

1. The Department of Agriculture has identified a duplication of State efforts regarding inspection at water treatment facilities and this change is needed to clarify which facilities the CDA will regulate.
2. The Department has determined, in consultation with the CDPHE, that the CDPHE inspection protocol adequately addresses pesticide storage at water treatment facilities.
3. The Department needs to more narrowly focus its rules regarding the storage of bulk pesticides. This change will more clearly define which types of pesticide storage facilities that the CDA will regulate. The rules are intended to focus on agriculturally-related industries and this change will keep the CDA's efforts focused on industries where CDA has its primary expertise.
4. The proposed changes have been reviewed by the members of the Agricultural Chemicals and Groundwater Protection Advisory Committee, an advisory body established by the State Agricultural Commission that is composed of representatives from various stakeholders including the Colorado Water Quality Control Commission, commercial pesticide applicators, the green industry, agricultural chemical suppliers, agricultural producers, and the general public. The Committee members unanimously support the adoption of these amendments.