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**TITLE 355 STATE CHEMIST OF THE STATE  
OF INDIANA**

LSA Document #04-312(F)

**DIGEST**

Amends 355 IAC 2-1-1 to correct spelling of word sieve. Amends 355 IAC 2-1-6 to reduce font size required on label when Boron guarantee is made. Amends 355 IAC 2-2-1 to make editorial change to approving individual. Adds 355 IAC 2-2-1.5 to provide definition of appurtenance not previously defined in rule. Amends 355 IAC 2-2-6 to include dry with fluid in field operations. Amends 355 IAC 2-2-9 editorial change for clarification by removing and/or. Amends 355 IAC 2-2-10 to make editorial change to provide clarification. Amends 355 IAC 2-2-13 to make editorial change which clarifies intent. Amends 355 IAC 2-2-14 to make editorial change to remove gender specific reference. Amends 355 IAC 2-2-15 to make editorial change for clarification. Amends 355 IAC 2-2-17 to make editorial change and indicate scope includes all storage locations and be more directive relevant to materials used for storage. Amends 355 IAC 2-3-6 to make editorial change for clarification. Amends 355 IAC 2-3-8 to providing clarification for compliant piping and that requiring containment and further specifies requirement for underground piping. Amends 355 IAC 2-3-11 to make editorial change to simplify requirements. Amends 355 IAC 2-3-12 to set time frame for compliance. Amends 355 IAC 2-4-1 to make editorial change for clarification. Amends 355 IAC 2-5-1 to make editorial change for clarification and expands the state chemist authority to accept compliant alternative means as specified under IC 15-3-3-12(b). Amends 355 IAC 2-5-2 to make editorial change for clarification. Amends 355 IAC 2-5-3 to make editorial change for clarification. Amends 355 IAC 2-5-4 to make editorial change for clarification. Amends 355 IAC 2-5-6 to make editorial change for clarification. Amends 355 IAC 2-5-8 to clarify specific cutoff date for exemption and make editorial changes. Amends 355 IAC 2-5-12 to make editorial changes for clarification. Amends 355 IAC 2-5-12.5 to make editorial changes for clarification. Amends 355 IAC 2-5-13 to make editorial changes which eliminates records keeping and required inspection. Amends 355 IAC 2-6-1.5 to make editorial changes for clarification. Amends 355 IAC 2-9-1 to make editorial changes for clarification. Repeal 355 IAC 2-4-4, 355 IAC 2-5-14, 355 IAC 2-6-2, and 355 IAC 2-8 as sections are no longer necessary or applicable. Effective 30 days after filing with the Secretary of State.

<b>355 IAC 2-1-1</b>	<b>355 IAC 2-4-1</b>
<b>355 IAC 2-1-6</b>	<b>355 IAC 2-4-4</b>
<b>355 IAC 2-2-1</b>	<b>355 IAC 2-5-1</b>
<b>355 IAC 2-2-1.5</b>	<b>355 IAC 2-5-2</b>
<b>355 IAC 2-2-6</b>	<b>355 IAC 2-5-3</b>
<b>355 IAC 2-2-9</b>	<b>355 IAC 2-5-4</b>
<b>355 IAC 2-2-10</b>	<b>355 IAC 2-5-6</b>
<b>355 IAC 2-2-13</b>	<b>355 IAC 2-5-8</b>
<b>355 IAC 2-2-14</b>	<b>355 IAC 2-5-12</b>
<b>355 IAC 2-2-15</b>	<b>355 IAC 2-5-12.5</b>
<b>355 IAC 2-2-17</b>	<b>355 IAC 2-5-13</b>
<b>355 IAC 2-3-4</b>	<b>355 IAC 2-5-14</b>
<b>355 IAC 2-3-6</b>	<b>355 IAC 2-6-1.5</b>
<b>355 IAC 2-3-8</b>	<b>355 IAC 2-6-2</b>
<b>355 IAC 2-3-11</b>	<b>355 IAC 2-8</b>
<b>355 IAC 2-3-12</b>	<b>355 IAC 2-9-1</b>

SECTION 1. 355 IAC 2-1-1 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-1-1 Degree of fineness of unacidulated phosphate materials; registration and labeling**

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-4; IC 15-3-3-5

Sec. 1. Degree of Fineness of Unacidulated Phosphatic Materials. Rock phosphate, soft phosphate with colloidal clay, basic slag and other materials, the availability of which is related to particle size, shall be registered and labeled as to the percentage that will pass U. S. Standard ~~Seive~~ Sieve Series Number 100 (100 mesh, dry ~~seive~~ sieve method). Sec. 4a [IC 15-3-3-4(a)]. (State Chemist of the State of Indiana; Fertilizer Law Rule 1; filed Sep 14, 1953, 7:00 a.m.: Rules and Regs. 1954, p. 6; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3570)

SECTION 2. 355 IAC 2-1-6 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-1-6 Boron-containing fertilizers; warning requirements**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-4; IC 15-3-3-5**

Sec. 6. When any compound of boron is incorporated in a commercial fertilizer, a special warning tag or statement must be furnished to the purchaser and shall contain the following:

(1) The word "WARNING" in letters at least ~~one (1)~~ **three-fourths (¾)** inch in height.

(2) A statement describing the crops for which the fertilizer is to be used.

(3) A statement declaring use of the fertilizer on any other crops or under conditions other than those recommended may result in serious injury to the crops.

The tag or statement must be attached to or printed on the bag or other container in which the fertilizer is sold. For bulk fertilizers, the statement must be placed on the invoice or other document that shall accompany delivery and be supplied to the purchaser at the time of delivery as provided in IC 15-3-3-5(b). (State Chemist of the State of Indiana; Fertilizer Law Rule 6; filed Sep 14, 1953, 7:00 a.m.: Rules and Regs. 1954, p. 7; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3360, *eff one hundred twenty (120) days after filing with secretary of state*; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3571)

SECTION 3. 355 IAC 2-2-1 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-2-1 "Approved" defined**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 1. As used in this article, "approved" means approval by the ~~Indiana~~ state chemist ~~or his agent~~ except where otherwise stated. (State Chemist of the State of Indiana; 355 IAC 2-2-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, *eff one hundred twenty (120) days after filing with secretary of state*; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3571)

SECTION 4. 355 IAC 2-2-1.5 IS ADDED TO READ AS FOLLOWS:

**355 IAC 2-2-1.5 "Appurtenance" defined**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

**Sec. 1.5. As used in this article, "appurtenance" means any:**

**(1) valve;**

**(2) pump;**

**(3) fitting;**

**(4) pipe;**

**(5) hose;**

**(6) metering device; or**

**(7) mechanical device;**

**that is connected to a storage container or is used to transfer a material into or out of such container.** (State Chemist of the State of Indiana; 355 IAC 2-2-1.5; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3571)

SECTION 5. 355 IAC 2-2-6 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-2-6 "Field operations" defined**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 6. As used in this article, “field operations” means the application of bulk (**dry or fluid**) fertilizer to soil or plants in the course of normal agricultural or horticultural practice. (*State Chemist of the State of Indiana; 355 IAC 2-2-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1389, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3571*)

SECTION 6. 355 IAC 2-2-9 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-2-9 “Low pressure nitrogen solutions” defined**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 9. As used in this article, “low pressure nitrogen solutions” means an aqueous solution of ammonium nitrate, ~~and/or urea, and/or or~~ other nitrogen carriers containing various quantities of free ammonia exceeding two percent (2%) by weight. Aqua ammonia and nonpressure nitrogen solutions, commonly referred to as twenty-eight percent (28%), thirty percent (30%), or thirty-two percent (32%) nitrogen solutions are excluded from this definition. (*State Chemist of the State of Indiana; 355 IAC 2-2-9; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3571*)

SECTION 7. 355 IAC 2-2-10 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-2-10 “Operational area” defined**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 10. As used in this article, “operational area” means an area or areas at a ~~fluid bulk fertilizer~~ storage facility where fertilizers are:

(1) transferred, loaded, unloaded, **or** mixed; or ~~where fertilizers are~~

(2) cleaned or washed from containers, or application, storage, or transportation equipment.

(*State Chemist of the State of Indiana; 355 IAC 2-2-10; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3571*)

SECTION 8. 355 IAC 2-2-13 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-2-13 “Secondary containment” defined**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 13. As used in this article, “secondary containment” means any structure, ~~including dikes such as a dike,~~ used to contain ~~product spills~~ **fertilizer discharges** from bulk storage containers and prevent run-off or leaching. (*State Chemist of the State of Indiana; 355 IAC 2-2-13; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3572*)

SECTION 9. 355 IAC 2-2-14 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-2-14 “State chemist” defined**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 14. As used in this article, “state chemist” means the Indiana state chemist or ~~his~~ **an** appointed agent. (*State Chemist of the State of Indiana; 355 IAC 2-2-14; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3572*)

SECTION 10. 355 IAC 2-2-15 IS AMENDED TO READ AS FOLLOWS:

### 355 IAC 2-2-15 "Storage container" defined

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 15. (a) As used in this article, "storage container" means the following:

- (1) A container used for the storage of fluid bulk fertilizer.
- (2) A rail car, nurse tank, or other mobile container used for the storage of fluid bulk fertilizer.

(b) ~~"Storage container"~~ **The term** does not include the following:

- (1) A mobile container storing fluid bulk fertilizer at a storage facility for less than fifteen (15) days, if this storage is incidental to the loading or unloading of a storage container at the storage facility.
- (2) A mobile container located other than on property owned, operated, or controlled by an owner or operator of a storage facility.
- (3) A container used solely for emergency storage of leaking fertilizer containers. ~~that are fifty-five (55) gallons or smaller.~~  
*(State Chemist of the State of Indiana; 355 IAC 2-2-15; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1390, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3572)*

SECTION 11. 355 IAC 2-2-17 IS AMENDED TO READ AS FOLLOWS:

### 355 IAC 2-2-17 "Storage facility location registry" defined

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 17. As used in this article, "storage facility location registry" means the annual listing of all ~~fluid bulk fertilizer and/or dry bulk fertilizer~~ storage facilities **at any location** in Indiana by the state chemist as derived from written notification ~~of such from the storage facility. location by the facility's owner, operator, or person in charge.~~ *(State Chemist of the State of Indiana; 355 IAC 2-2-17; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1391, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3572)*

SECTION 12. 355 IAC 2-3-4 IS AMENDED TO READ AS FOLLOWS:

### 355 IAC 2-3-4 Prohibited materials

**Authority:** IC 15-3-3-12

**Affected:** IC 15-3-3-7

Sec. 4. (a) Storage containers and appurtenances ~~may~~ **shall** not be constructed of copper, brass, zinc, or copper base alloys.

(b) Storage containers and appurtenances used for the storage of fluid fertilizers containing phosphates or chlorides ~~may~~ **shall** not be constructed of aluminum or aluminum alloys.

(c) Storage containers and appurtenances used for the storage of low (less than five (5)) pH fluid fertilizers ~~may~~ **shall** not be constructed of ferrous materials other than "316" or "317" stainless steel unless the materials are coated or treated with protective substances ~~which that~~ are adequate to inhibit corrosion.

(d) Storage containers and appurtenances used for the storage of low pressure nitrogen solutions ~~may~~ **shall** not be constructed of mild steel, fiberglass, polyolefins, or plastic. This prohibition does not extend to nonpressure solutions, commonly referred to as twenty-eight percent (28%), thirty percent (30%), or thirty-two percent (32%) nitrogen solutions. This prohibition against the use of mild steel does not extend to aqua ammonia.

(e) Storage containers and appurtenances used for the storage of phosphoric acid ~~may~~ **shall** 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.

(f) Storage containers and appurtenances used for the storage of fluid fertilizers containing potassium chloride (muriate of potash) shall not be constructed of ferrous materials other than stainless steel unless ~~one (+) of the following shall occur: the containers and appurtenances are:~~

- (1) ~~The containers and appurtenances are~~ coated or treated with protective substances ~~which that~~ are adequate to inhibit corrosion;

or

(2) ~~The containers and appurtenances are used for storage periods of not more than six (6) months each and are completely emptied between storage periods, cleaned, and inspected for leaks prior to before being refilled for any subsequent period.~~  
*(State Chemist of the State of Indiana; 355 IAC 2-3-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3572)*

SECTION 13. 355 IAC 2-3-6 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-3-6 Security**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 6. (a) Storage containers and appurtenances shall be secured to provide reasonable protection from wildlife, vandalism, and unauthorized access. ~~which may result in damage and a subsequent discharge. Such~~ **The security shall be provided by fencing, lighting, or other approved means.**

(b) Valves on storage containers shall be locked or otherwise secured except when persons responsible for facility security are present at the facility.

(c) Valves on mobile fertilizer containers ~~containing fertilizer product and parked overnight~~ at a storage facility shall be locked or secured except when persons responsible for facility security are present. ~~at the facility.~~

(d) Valves on empty containers need not be secured. *(State Chemist of the State of Indiana; 355 IAC 2-3-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3573)*

SECTION 14. 355 IAC 2-3-8 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-3-8 Pipes and fittings**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 8. Pipes and fittings shall be adequately supported to prevent sagging and possible breakage because of gravity and other forces ~~which that~~ may be encountered in the ordinary course of operations. **All hoses and piping, except for schedule 80 or greater or made of stainless steel, shall be located in a contained area or double sleeved. Underground piping is permitted providing the piping is:**

**(1) made of stainless steel;**

**(2) enclosed in secondary containment (a pipe within a pipe); or**

**(3) hydrostatically tested annually.**

*(State Chemist of the State of Indiana; 355 IAC 2-3-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1392, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3573)*

SECTION 15. 355 IAC 2-3-11 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-3-11 Inspection and maintenance**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 11. (a) ~~The operator of a storage facility shall routinely inspect and maintain storage facilities;~~ Storage containers and appurtenances **shall be maintained** to minimize the risk of a discharge or spill.

(b) ~~The operator shall inspect valves and other appurtenances for leakage at least weekly whenever facilities are in use for storage.~~

(c) ~~A written record of all inspections and maintenance shall be made on the day of the inspection or maintenance.~~

(d) Inspection and maintenance records shall be kept at the storage site or at the nearest local office from which the storage site is administered. (State Chemist of the State of Indiana; 355 IAC 2-3-11; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3361, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3573)

SECTION 16. 355 IAC 2-3-12 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-3-12 Compliance with effective date of rule**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 12. (a) This rule shall become effective upon the date of adoption.

(b) (a) Full compliance with this rule by newly established storage facilities shall be required immediately upon the effectiveness of this rule.

(c) (b) Full compliance by existing storage facilities shall be required no later than ~~twelve (12) months~~ **two (2) years** from date of adoption. **effectiveness of this rule.** (State Chemist of the State of Indiana; 355 IAC 2-3-12; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3573)

SECTION 17. 355 IAC 2-4-1 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-4-1 Loadout and unloading pads**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 1. (a) Areas used for the loading of fluid fertilizer into storage containers or for unloading fluid fertilizer from storage containers into mobile containers shall be curbed and paved with reinforced concrete or other suitable material that provides an impervious surface and is approved by the state chemist. ~~Operational area~~ **All** activities at the fluid fertilizer storage facility shall be carried out within this area. ~~Such activities include the loadout and unloading of fluid fertilizer to and from:~~

- ~~(1) storage containers;~~
- ~~(2) application equipment;~~
- ~~(3) mobile containers;~~
- ~~(4) equipment;~~
- ~~(5) container washing; and~~
- ~~(6) other similar activities.~~

(b) The operational area containment shall be constructed and reinforced to ~~handle~~ **support** at least the foreseeable maximum gross load, including **the following:**

- (1) The product.**
- (2) Equipment that ~~utilize~~ utilizes the operational area.**
- (3) The mobile container. ~~and~~**
- (4) The motor vehicle.**

The curbed and paved area shall have a minimum width of ten (10) feet, ~~and~~ a minimum length of twenty (20) feet, **and a minimum capacity of at least seven hundred fifty (750) gallons of discharged fluids.** Any fill or unloading point of the mobile container shall be positioned over the paved area during loading or unloading. ~~to assure retention of any discharge.~~

(c) With the exception of secondary containment areas lined with synthetic or soil liners, and wherever sufficient capacity required in 355 IAC 2-5-1(c) and ~~provisions of~~ this rule are complied with, the ~~diked~~ secondary containment area described in 355 IAC 2-5 may be designed for and jointly used ~~in lieu~~ **instead** of a separate operational area containment.

(d) ~~The operational area containment shall form or drain into a liquid-tight catch basin. If operational area containment drains to a sump, the catch basin may include the sump and an aboveground container; provided a pump is installed that automatically transfers the contents of the sump into an aboveground container. Such containers used for the temporary storage of liquids collected from~~

the operational area containment shall be located within secondary containment. **Operational areas shall not have a relief outlet or valve. The base shall slope to a collecting spot where liquid can be discharged, by a manually activated pump, for use in the blending process or for proper disposal in accordance with all applicable regulations.**

~~(e)~~ The curbed surface and catch basin shall be of adequate design and size to contain a combined total of at least seven hundred fifty (750) gallons of discharged fluid.

~~(f)~~ **(e)** All liquids shall be promptly removed or recovered from the operational area containment such that the capacity required in subsection ~~(e)~~ **(b)** is available at all times when operations, as referenced in 355 IAC 2-2-10, are taking place.

~~(g)~~ **(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 or unloading of fluid bulk fertilizer.~~ **operating in the area.**

~~(h)~~ **(g)** This section does not apply to mobile containers used to nurse field operations when at a field unloading site.

~~(i)~~ **(h)** Alternative means, including portable operational area containment systems ~~that meet meeting~~ the capacity requirement, of subsection ~~(e)~~ shall be permitted ~~to serve as operational area containment systems if recommended by the manufacturer and approved for this use by the state chemist with prior approval.~~

~~(j)~~ The operator of a storage facility shall routinely inspect and maintain the ~~(i)~~ Operational area containment system. Such inspections shall be conducted at least weekly during operational periods. **maintained as necessary to assure compliance with this rule.**

~~(k)~~ A written record of all inspections and maintenance shall be made on the day of the inspection or maintenance. Inspection and maintenance records shall be kept at the storage site or at the nearest local office from which the storage site and operational area is administered. *(State Chemist of the State of Indiana; 355 IAC 2-4-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1393, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3361, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3574)*

SECTION 18. 355 IAC 2-5-1 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-5-1 General requirements**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-2; IC 15-3-3-7**

Sec. 1. (a) ~~Primary storage of Fluid bulk fertilizer~~ **storage containers** shall be located within a ~~diked area~~ **secondary containment** constructed with a base, perimeter wall, and sloped floor. ~~drain, except as noted in sections 9 through 12 of this rule~~ An exception for a sloped floor ~~drain~~ may be granted ~~prior existing diked areas providing other requirements of this rule are met.~~ **by the state chemist.**

(b) The ~~diked containment~~ area shall be separate from a secondary containment area for other materials and used only for containment of ~~primary storage of fluid bulk fertilizer containers~~ or other **fertilizer related** equipment. ~~used in the operational area provided the minimum containment requirement noted in subsection (e) is maintained at all times.~~ This subsection shall not prohibit the storage within the diked area of anhydrous ammonia when stored in compliance with rules adopted under IC 15-3-2. Adjoining secondary containment areas may share common walls.

(c) ~~The diked area for Secondary containment of storage facilities~~ not protected from rainfall shall ~~contain at all times~~ **have a minimum capacity** of one hundred percent (100%) of the volume of the largest storage container within the ~~diked contained~~ area plus the volume ~~occupied displaced~~ by all the other tanks, equipment, and appurtenances in the area up to the safe design level of the ~~dike containment structure~~ plus a freeboard of six (6) inches.

(d) ~~Diked~~ Secondary containment ~~areas~~ protected from rainfall ~~are is~~ not required to ~~provide~~ **have** the freeboard noted in subsection (c) but shall comply with all other requirements. ~~therein.~~

(e) ~~Diked~~ Secondary containment areas constructed prior to enactment of this rule before July 6, 1991, and which have having a capacity of a minimum of one hundred ten percent (110%) of the volume of the largest storage container within the ~~diked contained~~ area plus the volume ~~occupied displaced~~ by all the other tanks in the area up to the safe design level of the ~~dike containment structure~~ shall be deemed to be in compliance with this rule. Any such storage facility, ~~shall~~, upon alteration of the secondary containment area or increases in storage container volume, **shall** be brought into full compliance within ninety (90) days of alteration or increase.

(f) Tile drainage **shall not be permitted** within or ~~underlying the area to be diked shall be eliminated.~~ **under secondary containment.**

**(g) Alternative means, with prior approval, shall be permitted.** (*State Chemist of the State of Indiana; 355 IAC 2-5-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1394, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3575*)

SECTION 19. 355 IAC 2-5-2 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-5-2 Walls**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 2. (a) The walls of a secondary containment facility shall be:

- (1) constructed of earth, steel, concrete (precasted modules or poured), or solid masonry; and ~~be~~
- (2) designed to withstand a full hydrostatic head of any discharged liquid and weight load of material used in construction.

(b) Cracks and seams shall be sealed to prevent leakage.

(c) Walls constructed of earth or other permeable materials shall be lined as provided under sections 3 through 7 of this rule.

(d) Earthen walls shall have a horizontal-to-vertical slope of at least three (3) to one (1), unless a steeper slope is consistent with good engineering practice. ~~and shall be packed and protected from erosion. An exterior slope of thirty (30) degrees and~~ All interior slopes shall be protected with:

- (1) flat road stone or a similar crushed stone material; or
- (2) a minimum of six (6) inches of vegetative soils planted and maintained with shallow rooted grasses.

(e) The top of earthen walls shall be no less than two and one-half (2.5) feet wide.

(f) Walls may not exceed six (6) feet in height above interior grade unless provisions are made for:

- (1) normal access and necessary emergency access to ~~tanks, storage containers,~~ valves, and other equipment; and ~~for~~
- (2) safe exit from ~~the secondary containment. facility.~~

(g) Walls constructed of concrete or solid masonry shall rest upon:

- (1) a floating base of concrete prepared as in section 4 of this rule; or ~~upon~~
- (2) suitable concrete footings ~~which that~~ extend below the average frost depth. ~~to provide structural integrity.~~

Joints between walls and base ~~must shall~~ be made watertight. (*State Chemist of the State of Indiana; 355 IAC 2-5-2; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3362, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3575*)

SECTION 20. 355 IAC 2-5-3 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-5-3 Lining; general**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 3. The base of a secondary containment facility and any earthen walls ~~of the facility~~ shall be lined with:



- (1) concrete;
- (2) steel;
- (3) an approved synthetic liner; or
- (4) a clay soil liner. ~~designed to limit permeability of the base and walls. Liners shall meet the requirements of this rule.~~

*(State Chemist of the State of Indiana; 355 IAC 2-5-3; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3576)*

SECTION 21. 355 IAC 2-5-4 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-5-4 Concrete liners**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 4. Concrete liners shall be designed according to good engineering practices to withstand any foreseeable loading conditions, including a full hydrostatic head of discharged fluid and static loads of storage containers, including appurtenances, equipment, and contents. Cracks and seams shall be sealed. ~~to prevent leakage.~~ *(State Chemist of the State of Indiana; 355 IAC 2-5-4; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3576)*

SECTION 22. 355 IAC 2-5-6 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-5-6 Synthetic liners**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 6. (a) Synthetic liners and installation plans shall be approved by the state chemist. The installation plan shall address proposed protection of the synthetic liner from mechanical damage, **vandalism, wildlife**, and deterioration from exposure to the sun **according to meet** the manufacturer's recommendations. A synthetic liner ~~may~~ **shall** not be approved by the state chemist until the manufacturer of the liner provides ~~the state chemist with~~ a written confirmation of compatibility and ~~a written~~ estimate of the life of the liner.

(b) Synthetic liners shall have a minimum thickness of thirty (30) mils (eight-tenths (0.8) millimeters) and be chemically compatible with the materials being stored within the containment ~~and operational~~ areas.

(c) Synthetic liners shall be installed under the supervision of a qualified representative of the manufacturer, and all field constructed seams shall be tested and repaired ~~if necessary~~, in accordance with the manufacturer's recommendations. *(State Chemist of the State of Indiana; 355 IAC 2-5-6; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1395, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3363, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3576)*

SECTION 23. 355 IAC 2-5-8 IS AMENDED TO READ AS FOLLOWS:

### **355 IAC 2-5-8 Exemptions**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 8. (a) A liner need not be installed directly under a storage container having a capacity of one hundred thousand (100,000) gallons or more that has been constructed on-site and put into use ~~prior to the effective date of this rule~~ **before July 6, 1991**, provided that one (1) of the following alternative procedures are complied with, certified to in writing by an official of the company who owns the container, and the certificate is filed with the state chemist:

(1) Alternative 1 shall be as follows:

(A) A second bottom made of steel shall be constructed for the storage container ~~The second bottom shall be~~ **and** placed over the original bottom and a layer of smooth, fine gravel or coarse sand having a minimum thickness of six (6) inches.

(B) 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.

(C) The newly constructed bottom shall be tested for leaks before any fluid 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.

(D) There shall be a method by which leaks from the newly constructed bottom into the sand layer may readily be detected.

(E) 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:

(A) 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 submitted to the state chemist and maintained by the owner or operator.

(B) The interior floor and at least twelve (12) inches of the wall areas of the container above the floor shall be coated with an approved liner to inhibit corrosion. A record of this procedure shall be submitted to the state chemist and maintained by the owner or operator.

(C) 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:

(A) 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.

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

(C) Each monitoring plan under this alternative shall be implemented only upon review and approval of the state chemist.

(b) The secondary containment requirements under this rule do not apply to rail cars ~~which that~~ are periodically moved to and from the storage facility.

(c) The state chemist may recognize other methods that provide equivalent protection. (*State Chemist of the State of Indiana; 355 IAC 2-5-8; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1396, eff one hundred twenty (120) days after filing with secretary of state; errata filed May 10, 1991, 2:30 p.m.: 14 IR 1730; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3363, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3576*)

SECTION 24. 355 IAC 2-5-12 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-5-12 Drainage from contained areas within dikes; elephant rings instead of a diked containment area**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 12. (a) Individual storage containers not exceeding three thousand (3,000) gallons may be contained within a secondary storage container (elephant ring) ~~in lieu~~ **instead** of a diked containment area. ~~The elephant ring serves as a second containing wall in the event that the primary storage container develops a leak.~~

(b) Both the primary storage container and the elephant ring shall be fabricated of material compatible with:

(1) each other; and ~~with~~

(2) the fertilizer being stored.

~~Dissimilar metals between the primary storage container and the elephant ring contribute to electrolytic corrosion and such use is prohibited.~~

(c) The height of the elephant ring wall shall not exceed four (4) feet. The volume contained within the secondary storage walls up to the working height of the elephant ring shall be sufficient to contain a volume equal to the volume contained in the primary storage container plus the volume displaced by any equipment, that is, pumps or meters, placed within the secondary containment vessel up to the safe storage level of the elephant ring, plus a freeboard of six (6) inches, which freeboard is exempted if the containment system is protected from rainfall.

(d) The elephant ring shall be free of leaks and structural defects. The base shall be:

(1) protected from corrosion, both from inside and outside; and ~~shall be underlain by a concrete pad or with eight (8) inches of compacted gravel beneath four (4) inches of compacted sand or as recommended by the manufacturer of the elephant ring and approved by the state chemist.~~

**(2) designed according to good engineering practices.**

(e) All piping connections to the primary storage container shall be:

**(1) made over the wall of the elephant ring; and shall be**

**(2) adequately supported and braced.**

Pumps and other fixtures, if located within the elephant ring containment structure, shall be placed on an elevated platform.

(f) Accumulations of liquids shall be drained from the elephant ring over the wall of the container by means of a manually operated pump ~~and disposed of~~ **for use in the blending process or for proper disposal** in accordance with all applicable regulations.

(g) ~~Inspection and maintenance of the primary storage container and of the Elephant ring rings shall be conducted and records of inspections and maintenance maintained as established in section 13 of~~ **of necessary to assure compliance with** this rule. *(State Chemist of the State of Indiana; 355 IAC 2-5-12; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1397, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3364, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3577)*

SECTION 25. 355 IAC 2-5-12.5 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-5-12.5 Drainage from contained areas within dikes**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 12.5. (a) ~~Diked~~ **Secondary containment** areas shall not have a relief outlet or valve. The base shall slope to a collecting spot where liquid can be discharged, by a manually activated pump, for use in the blending process or for proper disposal in accordance with all applicable regulations.

(b) ~~Any~~ Accumulated liquids shall be promptly removed from the ~~diked~~ **secondary containment** area. *(State Chemist of the State of Indiana; 355 IAC 2-5-12.5; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3364, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3577)*

SECTION 26. 355 IAC 2-5-13 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-5-13 Inspection and maintenance**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 13. (a) Every Secondary containment shall be ~~inspected by the operator of the storage facility at intervals of not greater than six (6) months and be~~ maintained as necessary to assure compliance with this rule.

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

(c) ~~(b)~~ All secondary containment areas shall be maintained free of debris and foreign matter. *(State Chemist of the State of Indiana; 355 IAC 2-5-13; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1398, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3578)*

SECTION 27. 355 IAC 2-6-1.5 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-6-1.5 Storage and handling**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 1.5. (a) Dry bulk fertilizer, stored indoors, shall be in a sound structure having a cover or roof top, sidewalls, and ~~a~~ **an impervious** base sufficient to prevent contact with precipitation and surface waters. Temporary outdoor storage shall be allowed for a maximum of thirty (30) days providing material be covered with a tarpaulin, or other suitable covering, to prevent seepage of run-

off.

(b) All loading, unloading, mixing, and handling of dry bulk fertilizer shall be performed over an impervious surface that allows for recovery of discharged product unless performed ~~in the at a field of application.~~ **unloading site.** Fertilizer that is discharged shall be promptly recovered. (*State Chemist of the State of Indiana; 355 IAC 2-6-1.5; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3578*)

SECTION 28. 355 IAC 2-9-1 IS AMENDED TO READ AS FOLLOWS:

**355 IAC 2-9-1 Facility registry**

**Authority: IC 15-3-3-12**

**Affected: IC 15-3-3-7**

Sec. 1. The ~~owner, operator, or person in charge of a bulk fertilizer~~ storage facility shall notify the state chemist each year of the facility's location and status. Notice shall include the following:

- (1) ~~The~~ Facility's mailing address.
- (2) ~~The~~ Owner or manager.
- (3) ~~The~~ Type of facility.
- (4) ~~The~~ Rated or calculated capacity of all bulk tanks and dry storage units. ~~and their~~
- (5) **Facility's** physical location.

Notice shall be made upon forms furnished by the state ~~chemist's office.~~ **chemist.** (*State Chemist of the State of Indiana; 355 IAC 2-9-1; filed Mar 8, 1991, 2:45 p.m.: 14 IR 1400, eff one hundred twenty (120) days after filing with secretary of state; filed Apr 23, 1998, 9:20 a.m.: 21 IR 3365, eff one hundred twenty (120) days after filing with secretary of state; readopted filed Jun 20, 2001, 3:20 p.m.: 24 IR 3822; filed Aug 10, 2005, 1:00 p.m.: 28 IR 3578*)

SECTION 29. THE FOLLOWING ARE REPEALED: 355 IAC 2-4-4; 355 IAC 2-5-14; 355 IAC 2-6-2; 355 IAC 2-8.

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