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Kansas Chemigation Safety

Article 20. – CHEMIGATION

Kansas Administrative Regulations

4-20-3. Records and reports. (a) Each person using a chemigation process shall keep records regarding each application of any chemical other than water or animal waste. The records shall contain the following information:

- (1) the type of chemical used;
- (2) the amount of active ingredient used;
- (3) the date of use;
- (4) the legal description of the location of the water supply or the point of diversion of the water supply;
- (5) the total number of acres treated by means of chemigation;
- (6) the type of crop to which the chemical was applied; and
- (7) the EPA registration number for each pesticide applied and the name of the target pest stated as the common name for the pest or pests. When pesticides are applied for the control of weeds, the target pests may at a minimum be identified as grassy or broadleaf weeds. Records required under this section shall be retained by the holder of the chemigation user permit for a period of not less than two years from the date of application.

(b) Each person using a chemigation process to apply animal wastes through the person's chemigation system shall keep records regarding each application of animal waste. The records shall contain the following information:

- (1) the date of application; and
- (2) the location of the water supply used for chemigation or the legal description of the point of diversion.

(c) Each application for renewal of a chemigation user permit shall be accompanied by a copy of the records for chemigation use during the previous year as described in paragraphs (a) and (b) of this regulation.

(d) Each chemigation permit holder shall report immediately both to the secretary of the board of agriculture and to the secretary of health and environment all spills, accidents, system malfunctions, or other situations involving actual or potential contamination of either groundwater or surface water.

(Authorized by K.S.A. 1988 Supp. 2-3309; implementing K.S.A. 1988 Supp. 2-3303; effective, T-86-27, Aug. 19, 1985; effective May 1, 1986; amended March 26, 1990.)

4-20-4. Permits. No individual shall supervise more than 10 operating chemigation units at one time. Each individual possessing a chemigation user permit shall be responsible for insuring that those persons who work under his or her direct supervision and who handle pesticides:

- (a) are knowledgeable in the use of the pesticide;
- (b) are knowledgeable concerning the proper calibration methods for the pesticide;
- (c) are knowledgeable regarding the injection devices and anti-pollution devices being used in the system;
- (d) follow all applicable directions on the pesticide's label; and
- (e) use all safety precautions pertaining to that pesticide. (Authorized by K.S.A. 1985 Supp. 2-3309; implementing K.S.A. 1985 Supp. 2-3306; effective, T-86-27, Aug. 19, 1985; effective May 1, 1986; amended May 1, 1987.)

4-20-5. Waterline check valves. (a) Each waterline check valve required by K.S.A. 2-3305, and amendments thereto, shall be constructed and installed in accordance with the requirements specified in K.A.R. 5-6-13a.

(b) Each check valve and all required components shall be maintained in an operating condition that prevents backflow into the source of water supply whenever a foreign substance could reasonably be expected to be introduced into the water system.

(c) Each chemigation installation, unit, or system that can serve as a conduit for chemicals, effluent, or any substance while water is not being pumped shall also be equipped with a positive closing gate valve or its equivalent. This valve shall be located between the check valve and the point at which chemicals, effluents, or other substances enter the water distribution system and shall be closed whenever chemicals, effluents, or other substances enter the distribution system and water is not being pumped. (Authorized by K.S.A. 2-3309; implementing K.S.A. 2-3305; effective, T-86-27, Aug. 19, 1985; effective May 1, 1986; amended March 26, 1990; amended Oct. 24, 2003.)

4-20-6. Injection equipment. (a) The injection equipment used shall be constructed and maintained in a manner which prohibits application of any pesticide at a rate which exceeds the maximum rate of application recommended by the pesticide's label or labeling and which prohibits application of any fertilizer or animal wastes at any rate which exceeds the planned application rate. Injection equipment shall be calibrated before each chemigation application.

(b) Chemigation users who apply only animal wastes through their irrigation distribution systems are required to install only those anti-pollution devices required by K.S.A. 2-3305.

(c) For those chemigation users who apply fertilizers and other chemicals, injection equipment shall include:

- (1) a manually operated valve on the supply tank;
 - (2) a strainer on the suction side of the injection pump; and
 - (3) a calibration device of sufficient volume to accurately calibrate the injection pump.
- (d) For pesticides, the following additional pieces of equipment shall be used;

- (1) an air bleeder valve on the injection line;
- (2) a positive displacement injection pump; and

(3) any other equipment required by the pesticide's label or labeling. (Authorized by K.S.A. 1988 Supp. 2-3309; implementing K.S.A. 2-3305 as amended by L. 1989, Ch. 7, Sec. 3; effective, T-86-27, Aug. 19, 1985; effective May 1, 1986; amended March 26, 1990.)

4-20-7. Vacuum relief device and automatic low-pressure drain. The vacuum relief device and automatic low-pressure drain shall be properly installed and shall be fully operational whenever the chemigation process is being used. These devices shall not be blocked, capped or otherwise modified in any manner which prevents their proper operation in any manner to render them inoperable. (Authorized by K.S.A. 1988 Supp. 2-3309; implementing K.S.A. 2-3305 as amended by L. 1989, Ch. 7, Sec. 3; effective March 26, 1990.)

4-20-8. Chemical injection line and checkvalve. The point at which any chemical, fertilizer or animal waste is injected into the irrigation distribution system shall be located on the downstream side of any waterline checkvalve. The chemical injection line shall contain a checkvalve which shall be located between the chemical injection pump and the point at which any chemical or fertilizer enters the irrigation distribution system. (Authorized by K.S.A. 2-3309; implementing K.S.A. 1988 Supp. 2-3305 as amended by L. 1989, Ch. 7, Sec. 3; effective March 26, 1990.)

4-20-11. Civil penalties. (a) The process for issuing and processing civil penalties shall follow the procedure established in K.A.R. 4-13-60 and in K.A.R. 4-13-62 through 4-13-65, except for the following:

(1) The provision of K.A.R. 4-13-62(b) shall be replaced by the provisions of subsection (b) in this regulation.

(2) The terms "state and federal pesticide laws" and "pesticide law" contained in K.A.R. 4-13-60 and K.A.R. 4-13-62 through 4-13-65 shall be replaced by the term "the Kansas chemigation safety law," as the context requires.

(3) The term "pesticide business licensee" shall be replaced by the term "person" or "swine facility," as the context requires.

(b) The amount of civil penalty assessed for each violation shall be within the following ranges:

(1) For each violation of K.S.A. 2-3305, and amendments thereto, the civil penalty shall be not less than \$100 and not more than \$5,000.

(2) For each violation of K.S.A. 2-3308(a)(2), (a)(3), or (a)(4), and amendments thereto, the civil penalty shall be not less than \$100 and not more than \$5,000.

(3) For each violation of K.S.A. 2-3313(a) or (b) or of K.S.A. 2-3313(f) or (i), and amendments thereto, the civil penalty shall be not less than \$100 and not more than \$5,000.

(4) For each violation of K.S.A. 2-3308, and amendments thereto, not covered in paragraph (b)(2) in this regulation, the civil penalty shall be not less than \$100 and not more than \$1,000.

(5) For each violation of K.S.A. 2-3313, and amendments thereto, not covered in paragraph (b)(3) in this regulation, the civil penalty shall be not less than \$100 and not more than \$1,000.

(6) For each application of waste in violation of K.S.A. 2-3318, and amendments thereto, the civil penalty shall be not less than \$100 and not more than \$5,000.

(c) For any subsequent occurrence of a violation for which a civil penalty has been assessed within a three-year period, the civil penalty assessed for this violation shall be the maximum amount for the category listed. (Authorized by K.S.A. 2007 Supp. 2-3309; implementing K.S.A. 2-3308 and 2-3317; effective March 26, 1990; amended, T-4-12-29-98, Jan. 1, 1999; amended April 23, 1999; amended April 4, 2003; amended July 18, 2008.)

4-20-12. Certified chemigation equipment operator examination. (a) Examinations for certified chemigation equipment operators shall be provided by the Kansas state board of agriculture. A grade of 75% correct answers shall be required to pass the examination.

(b) Examinations for chemigation equipment operator certification shall test the applicant's knowledge in those subject areas set out in K.S.A. 2-3306 as amended and supplemented involving chemigation practices associated with the applicant's agricultural operation and the applicant's legal responsibility as a certified chemigation equipment operator. (Authorized by K.S.A. 1988 Supp. 2-3309; implementing K.S.A. 1988 Supp. 2-3306 as amended by L. 1989, Ch. 7, Sec. 5; effective March 26, 1990.)

4-20-13. Certificates and pocket cards. A certificate and pocket card shall be issued to each certified person upon satisfactory completion of the requirements for certification. Such certificate and pocket card shall show the applicator's name, type of certificate issued, the expiration date of the certification and other pertinent information. The certified chemigation equipment operator shall produce such

February 2010

certificate or pocket card when requested to do so by any law enforcement official, the secretary or any authorized representative of the secretary. (Authorized by K.S.A. 1988 Supp. 2-3309; implementing K.S.A. 1988 Supp. 2-3306 as amended by L. 1989, Ch. 7, Sec. 5; effective March 26, 1990.)

4-20-14. Report of address change by certified chemigation equipment operators. Each certified chemigation equipment operator shall notify the secretary of any change in the operator's mailing address by the 10th day of the month following the month during which such change occurred. (Authorized by K.S.A. 1988 Supp. 2-3309; implementing K.S.A. 1988 Supp. 2-3306 as amended by L. 1989, Ch. 7, Sec. 5; effective March 26, 1990.)

4-20-15. Agronomic application rates. The agronomic application rate for swine waste shall be the amount of waste required for plant nutrition and for the nutrient-holding capacity of the surfaces or soils to which swine waste is applied, as determined by sound agronomic methods. Sound agronomic application rates shall be determined in consultation with Kansas state university. Sound agronomic methods may include the rate derived from the calculations from the form prescribed by the secretary of agriculture in K.A.R. 4-21-1 and K.A.R. 4-21-7. (Authorized by K.S.A. 2-3305, K.S.A. 2-3309; implementing K.S.A. 2-3318, as amended by L. 2002, ch. 181, sec. 14 and K.S.A. 2001 Supp. 65-1,182; effective, T-4-12-29-98, Jan. 1, 1999; effective April 23, 1999; amended April 4, 2003.)

REGULATIONS REFERENCED IN K.A.R. 4-20-5 (Waterline Check Valves)

5-3-5c. Check valves. (a) All diversion works not subject to regulation under the Kansas chemigation safety law, K.S.A. 2-3301 et seq. and amendments thereto, into which any type of chemical or other foreign substances will be injected into the water pumped from the diversion works shall be equipped with an in-line, automatic, quick-closing check valve capable of preventing pollution of the source of the water supply.

(b) Each check valve required by the chief engineer shall be constructed and installed in accordance with the requirements specified in K.A.R. 5-6-13a.

(c) Each check valve and all required components shall be maintained in an operating condition that prevents backflow into the source of water supply whenever a foreign substance could reasonably be expected to be introduced into the water system. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 82a-706, K.S.A. 82a-706a, K.S.A. 82a-712; effective May 1, 1980; amended May 1, 1981; amended Oct. 24, 2003.)

5-6-13a. Check valve specifications. The Kansas department of agriculture, division of water resources' document titled "check valve specifications," dated March 14, 2003, is hereby adopted by reference. (Authorized by K.S.A. 82a-706a; implementing K.S.A. 82a-706, K.S.A. 82a-706a, and K.S.A. 82a-712; effective Oct. 24, 2003.)

Adoption by reference K.A.R. 5-6-13a

Check Valve
Specifications

Division of Water Resources
Kansas Department of Agriculture
109 SW 9th Street, 2nd Floor
Topeka, KS 66612

March 14, 2003

General:

(1) An acceptable check valve shall be one that is automatic, quick closing, and seals tightly to prevent the back flow of water and the substances mixed with water into the source of water supply.

(2) A check valve shall include the following four components:

- (a) a low pressure drain;
- (b) a vacuum relief device;
- (c) an inspection port; and
- (d) the check valve itself.

The check valve may consist of four individual components or a manufactured unit that includes all four of the required components.

(3) Each check valve shall meet the following standards:

- (a) All components shall be constructed of sturdy corrosion-resistant materials or coated with corrosion-resistant materials. The body of the unit shall be internally resistant to water of the quality being diverted, the foreign substances being introduced, and the external environment. All moving parts shall be constructed to operate without binding, distortion or misalignment.
- (b) The check valve shall contain a suitable, automatic, quick-closing, tight-closing mechanism that closes at the moment water ceases to flow away from the diversion works. The mechanism shall, by a mechanical force greater than the weight of the flapper, provide drip-tight closure against reverse flow. The closing force shall be positive and obvious to hand inspection. This requirement shall not be satisfied by hydraulic back pressure.
- (c) A vacuum relief device, functioning as an air vent, shall be installed between the diversion works and the flapper in a position that prevents the entry of insects, animals, flood water or other foreign substances into the vacuum relief device and subsequently the water supply source.
- (d) An automatic low pressure drain shall be installed between the check valve flapper element and the diversion works, and directly beneath the inspection port at the bottom of the horizontal pipe. The installation shall be made so that any fluid which seeps past the flapper element towards the diversion works will drain out through the automatic low pressure drain. The automatic low pressure drain inlet shall not extend inward past the interior pipe wall without the inclusion of an internal dam or other mechanism to force seepage into the drain. The inlet opening of the drain shall be at least three fourths of an inch in diameter and the outside discharge point shall be at least two inches above grade. Any discharge from the drain shall be directed away from the water supply by the natural slope, a pipe, or a trench.
- (e) An inspection port shall be located between the check valve and the water supply diversion works in a manner that allows easy access and full visual and hand access to all components of the check valve and assembly components. The inspection port shall have an orifice or a viewing port of at least four inches in diameter. For installations with diversion works too small to install a four inch diameter inspection port, the check valve and the other required components shall be mounted with quick-connect fittings, flange fittings, dresser couplings, or other fittings designed to allow easy removal and access.
- (f) Systems utilizing a double check valve or reduced-pressure-zone back flow assembly shall be required to adhere, as a minimum, to a standard equivalent to the manufacturer's standards or recommendations for a method of inspection, testing schedule, and rebuilding schedule.

(4) The check valve and all required components shall be maintained in a satisfactory operating condition that prevents backflow into the source of water supply any time a foreign substance could reasonably be expected to be introduced into the water system.

(5) Variances shall be granted only if a low-pressure drain and vacuum relief device cannot be physically placed in the system.

**REGULATIONS REFERENCED IN K.A.R. 4-20-11
(Procedure for Processing Civil Penalties)**

4-13-60. Civil penalty; order. Each order assessing a civil penalty shall include the following:

- (a) A statement reciting each subsection of the act authorizing the assessment of civil penalty;
- (b) a specific reference to each provision of the act or implementing regulation that the respondent is alleged to have violated;
- (c) a concise statement of the factual basis for each violation alleged;
- (d) the amount of the civil penalty to be assessed; and
- (e) the notice of the respondent's right to request a hearing. (Authorized by K.S.A. 2-2467a; implementing K.S.A. 2-2440e; effective Jan. 1, 1989; amended Aug. 22, 1994; amended July 18, 2008.)

4-13-62. Amount of civil penalty. (a) A separate civil penalty shall be assessed for each violation of the pesticide law that results from each independent act or failure to act by any pesticide business licensee or pesticide dealer, or any agent or employee of a pesticide business licensee or pesticide dealer. In determining whether a given violation is independent of and substantially distinguishable from any other violation for the purpose of assessing separate civil penalties, consideration shall be given to whether each violation requires an element of proof not required by another violation. If several violations require the same elements of proof and are not distinguishable, the assessment of separate civil penalties shall be within the discretion of the secretary or the secretary's authorized representative.

(b) The amount of each civil penalty shall be within the following ranges:

(1) For each violation of K.S.A. 2-2453(a) or (b) and amendments thereto, the civil penalty shall be not less than \$100 and not more than \$5,000.

(2) For each violation of K.S.A. 2-2454(b), (m), (o), (r), (s), or (t) and amendments thereto, the civil penalty shall be not less than \$100 and not more than \$5,000.

(3) For each violation of K.S.A. 2-2454, and amendments thereto, not covered in paragraph (b)(2), the civil penalty shall be not less than \$100 and not more than \$1,000.

(4) For each violation of K.S.A. 2-2453(c), and amendments thereto, not already covered in paragraph (b) (1), (2), or (3), the civil penalty shall be not less than \$100 and not more than \$1,000.

(c) For each subsequent occurrence of a violation for which a civil penalty has been assessed within a three-year period, the civil penalty assessed for the subsequent violation shall be the maximum amount for the category listed. (Authorized by K.S.A. 2-2467a; implementing K.S.A. 2-2440e, as amended by L. 2009, Ch. 128, §15; effective Jan. 1, 1989; amended Jan. 25, 1993; amended Feb. 5, 2010.)

4-13-63. Criteria to determine dollar amount of proposed civil penalty. In determining the amount of any proposed civil penalty, the gravity of the violation shall be considered by the secretary or the secretary's designee. Factors to be considered shall include:

- (a) The potential of the act to injure humans, pets, domestic animals, wildlife or the environment;
- (b) the severity of potential injuries;
- (c) the extent to which injury actually occurred;

(d) the respondent's history of compliance with state and federal pesticide laws and regulations promulgated thereunder;

(e) any action taken by respondent to remedy the specific violation or to mitigate any adverse health effects or environmental effects which were the result of the violation; and

(f) whether or not the violation involved any misrepresentation or fraud. (Authorized by K.S.A. 2-2467a; implementing K.S.A. 2-2440e; effective Jan. 1, 1989; amended Jan. 25, 1993.)

4-13-64. Informal settlement. (a) Any respondent may request a settlement conference if the respondent timely filed a written request for hearing. The request may be made before the prehearing conference.

(b) If a settlement is reached, the parties shall reduce the settlement to writing and present the proposed written consent agreement to the secretary. The consent agreement shall state that, for the purpose of the proceeding, the following conditions are met:

(1) The respondent admits the jurisdictional allegations and admits the facts stipulated in the consent agreement;

(2) The respondent neither admits nor denies the specific violations contained in the order.

(3) The respondent consents to the assessment of a stated civil penalty.

The consent agreement shall include all terms of the agreement and shall be signed by all parties or their counsel. (Authorized by K.S.A. 2-2467a; implementing K.S.A. 2-2440e; effective Jan. 1, 1989; amended Aug. 22, 1994; amended July 18, 2008.)

4-13-65. Adjusting the amount of the civil penalty. (a) Each respondent shall present all evidence on the issue of adjustment of the civil penalty at the settlement conference. This evidence may include mitigating factors or new evidence not previously known to the agency when the order was issued.

(b) Upon presentation by the respondent of new evidence establishing facts and circumstances that were unknown to the secretary when the order was issued and that relate to the gravity of the violation, the civil penalty may be reduced. If additional facts establish a respondent did not commit a violation, the order shall be amended or vacated.

(c) The burden shall be on the respondent to present evidence of any mitigating factors to support any requested reduction in the amount of the civil penalty. The amount of the civil penalty may be reduced if the reduction serves the public interest.

(d) The amount of a civil penalty shall not be reduced to less than \$100 per offense.

(1) Whether or not a civil penalty is reduced shall be within the sole discretion of the secretary or the secretary's designee.

(2) Reductions shall not occur unless evidence of mitigating factors has been presented by a respondent. (Authorized by K.S.A. 2-2467a; implementing K.S.A. 2-2440e; effective Jan. 1, 1989; amended Aug. 22, 1994; amended July 18, 2008.)