

KANSAS CHEMIGATION SAFETY LAW INFORMATION AND REQUIREMENTS

This leaflet sets forth some of the requirements of the Kansas Chemigation Safety Law and the Regulations established for its administration as they pertain to Chemigation User's Permits. Copies of the Law and Regulations are available upon request from the Kansas Department of Agriculture's Records Center, Chemigation Section.

I. Qualifying for a Permit

WHO IS REQUIRED TO HAVE A PERMIT

A Chemigation User's Permit (CUP) is required for all those who engage in chemigation. "Chemigation means any process whereby pesticides, fertilizers, or other chemicals or animal wastes are added to irrigation water applied to land or crops, or both, through an irrigation distribution system." Any user of the chemigation process shall register and obtain a Chemigation User's Permit before using the process. Permits are issued to persons who own or operate the land on which chemigation is to be used. A permit may be issued to a corporation or partnership, provided the names and addresses of the officers or partners are recorded on the application.

HOW TO QUALIFY FOR A PERMIT

1. Submit an Application for Chemigation User's Permit. (CSL-100)
2. Submit a Plan for Using Required Anti-Pollution Devices. (CSL-457)
3. Submit a Plan for Handling Tailwater or Other Accumulations of Water. (CSL-120)
4. Pay applicable fees.
5. Pass a Chemigation Equipment Operator Certification exam provided by the Secretary of Agriculture, complete an application and pay required fee. Or have one or more employees who are certified Chemigation Equipment Operators.

COMPLETING APPLICATION FORM

1. Follow the instructions printed on the back of the application.
2. Print or type the name of the desired permit holder in the space provided. If individual: last name, first name, middle initial. If a corporation or partnership: provide Federal Tax I.D. Number, and names and addresses of the officers or partners.
3. List the legal description (¼ ¼ ¼ Section/Township/Range), water right file number, county, and type of system of each irrigation well or other water point of diversion in the spaces provided. **Do not record location of the center pivots.**
4. Sign and date the application.

APPLICABLE FEES

Chemigation User's Permit: \$75 for first PDIV, plus \$25 for each **additional** PDIV, per year. Permit fees are required whenever the chemigation process is used. Chemigation Equipment Operator (CEO): \$25 for five years. Both CUP and CEO fees may be combined and one check issued. To calculate fees, please use the *CHEMIGATION FEE SCHEDULE AND CALCULATION TABLE* provided on the form to avoid over/under payments. Payment may be made by Money Order or check payable to the **Kansas Department of Agriculture**, or by DISCOVER, AMERICAN EXPRESS, VISA OR MASTERCARD, which charges an additional convenience fee of 2.25% of the total remitted amount. Sending currency through the mail is discouraged.

PERMIT
EFFECTIVE
PERIOD AND
RENEWAL

1. Each Chemigation User's Permit expires on December 31 of the year of issue.
2. A Chemigation User's Permit may be renewed annually, whenever the chemigation process will be performed. Renewal documents are mailed in December only to CUP holders who chemigated within the current year.

II. Responsibilities of Permit Holder

ANTI-
POLLUTION
DEVICES
(GENERAL)

1. Anyone using the chemigation process, including animal waste, must first install anti-pollution devices on the irrigation equipment being used. "Anti-pollution devices" are mechanical equipment used to reduce hazards to the environment in cases of malfunction of the equipment during chemigation. These include:
 - a. WATER LINE CHECK VALVE – Main water line check valves shall be automatic, quick-closing devices capable of preventing the backflow of water-chemical mixtures into the source of water supply during times of system failure or equipment shutdown;
 - b. VACUUM RELIEF DEVICE – A functional vacuum relief device shall be used between the water line check valve and the irrigation pump to reduce the chance of chemicals being back-siphoned into the water source;
 - c. INSPECTION PORT – An easily accessible inspection port shall be located between the pump discharge and the check valve, and situated so the automatic low pressure drain can be observed through the port, and the check valve flapper can be physically manipulated. The port shall have a minimum four-inch diameter orifice or viewing area;
 - d. AUTOMATIC LOW PRESSURE DRAIN – An automatic low pressure drain shall be installed between the water line check valve and the irrigation pump. The drain must be flush or recessed or have a dam installed upstream of the drain;
 - e. INTERLOCK – An interlock system shall be used between the power system of the injection unit, the irrigation pumping plant and the pivot, if involved; the interlock shall function so that if the irrigation pump stops, the injection pump will also stop.
2. Anti-pollution devices shall be maintained in a functional state for any irrigation system used in the chemigation process.

ANTI-
POLLUTION
DEVICES AND
CHEMICAL
INJECTION

1. Anti-pollution devices and injection equipment for fertilizers and chemicals other than pesticides shall also include:
 - a. CHEMICAL INJECTION LINE CHECK VALVE – A chemical injection line check valve shall be installed in the injection line; this device shall be used to prevent the flow of water from the irrigation system into the chemical supply tank and to prevent gravity flow from the chemical supply tank into the irrigation system.
 - b. A manually-operated valve on the chemical supply tank;
 - c. A strainer located on the suction side of the chemical injection pump;
 - d. A calibration device of sufficient volume to accurately calibrate the injection pump.
2. Additional injection equipment for PESTICIDES (insecticides, herbicides, fungicides, etc.) shall include:
 - a. An air bleeder valve for the injection pump and high pressure injection line;
 - b. A positive displacement injection pump (such as a diaphragm or piston pump);
 - c. Any other equipment required by the pesticide's label or labeling.
3. The injection equipment used shall be constructed and maintained in a manner which ensures application of pesticides within label recommendations and application of fertilizers within the planned application rate. Injection equipment shall be calibrated before each chemical application.

4. Any individual operating chemigation equipment under a Chemigation User's Permit shall be responsible for the safe operation of such chemigation equipment and any such equipment shall be considered to be under the direct supervision of the Chemigation User's Permit holder.

CHEMIGATION EQUIPMENT OPERATOR'S CERTIFICATION

1. A Chemigation User's Permit may not be issued to any person unless that person is a certified Chemigation Equipment Operator, or has in his or her employ at least one certified Chemigation Equipment Operator.
2. A certified chemigation Equipment Operator is an individual who has successfully completed an examination provided by the Kansas Department of Agriculture. The certification manual and examination can be obtained from the Kansas Department of Agriculture. An applicant for certified Chemigation Equipment Operator is required to correctly answer at least 75% of the questions to pass the examination.
3. The certification period is for five years and expires on December 31 of the fourth calendar year after the year of issue. The fee for the five-year certification is \$25.
4. A certificate and pocket card will be issued to each certified person upon his or her satisfactory completion of the requirements for certification. The certified Chemigation Equipment Operator shall produce such certificate or pocket card when requested to do so by any law enforcement official, the Secretary of Agriculture or any authorized representative of the Secretary of Agriculture.

SUPERVISION

1. Anyone obtaining a Chemigation User's Permit shall have in his or her employ at least one certified Chemigation Equipment Operator who shall be responsible for the supervision of the chemigation equipment to ensure its safe and accurate operation.
2. No certified Chemigation Equipment Operator shall supervise more than ten (10) operating chemigation units at one time, or additional certified Chemigation Equipment Operators must be employed.

RECORDS AND REPORTS

1. Each person using the chemigation process shall keep records regarding each application of any chemical other than water or animal waste. The records shall contain the following:
 - a. The type of chemical used;
 - b. The amount of active ingredient used;
 - c. The date of use;
 - d. The legal description of the location of the water supply or the water point of diversion;
 - e. The total number of acres treated by means of chemigation;
 - f. The type of crop to which the chemical was applied; AND, in the case of pesticides:
 - g. The EPA registration number of each pesticide applied;
 - h. The name of the target pest stated as the common name of the pest or pests.
(Example: Southwestern Cornborer, Grassy weeds, etc.)
2. Persons who apply only animal waste shall keep records regarding each application of animal waste through the irrigation system. The records shall contain the following information:
 - a. Beginning date of use;
 - b. The legal description of the location of the water supply or the water point of diversion;
 1. The gallons pumped, or approx. gallons per minute pumped;

2. Acres treated;
 3. Crop (if any).
 3. Record gallons, or hours pumped and approximate gallons per minute;
 4. Records required under this section shall be obtained by the holder of the Chemigation User's Permit for a period of not less than two years from the date of application.
 5. Each application for renewal of a Chemigation User's Permit must be accompanied by a copy of the records for chemigation use during the previous year as described above.
- NOTE: The blank report forms accompany the issuance of the User's Permit renewal information. All Chemical Use Report forms must be completed and returned, whether chemigation was performed in the reporting year, or whether chemigation will not be performed in the coming year.

**SPILLS AND
ACCIDENTS**

The chemigation permit holder shall report immediately to the Secretary 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 ground or surface water. Failure to do so could result in the assessment of civil penalties of up to \$5,000 per day.

**MANAGEMENT AND SUPERVISION ARE THE KEY FACTORS
TO SUCCESSFUL CHEMIGATION**

REMINDER



- Maintain Safety Equipment
- Inspect Safety Equipment Before Each Chemigation Event
- Wear Personal Protective Equipment
- Calibrate the Injection Pump
- Flush the System After Chemigation

KEEP THIS LEAFLET FOR YOUR REFERENCE PURPOSES

All correspondence should be directed to:
Kansas Department of Agriculture, Records Center/Chemigation Section, 109 SW 9th St., 3rd Floor, Topeka, KS 66612-1281

Waterline Check Valve Requirements

K.A.R. 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.

(Amended 10-24-03)

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

K.A.R. 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. *(Amended 10-24-03)*

K.A.R. 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.

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

Check Valve Specifications

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.

Swine Waste

K.S.A. 2003 Supp. 2-3318. Application of swine waste; authority of secretary; nutrient utilization plans, review and approval; penalties for violations. (a)

Regardless of whether irrigation water is added, whenever swine waste is applied to crops or land, the secretary is authorized to investigate, inspect or conduct any manner of examination or review of the application of swine waste. No swine waste shall be applied to crops or land in excess of agronomic application rates.

(b) The secretary shall review and approve all nutrient utilization plans that provide for the application of swine waste to crops or land and that are submitted by swine confined feeding facilities pursuant to K.S.A. 65-1,182 and amendments thereto if the plans demonstrate that swine waste will be applied pursuant to agronomic application rates and include all required information. Nutrient utilization plans shall be submitted on a form required by the secretary. The secretary shall notify the secretary of health and environment when a nutrient utilization plan has been approved and whether the approval is conditioned on any amendments or revisions to the plan.

(c) Failure of the operator of a swine confined feeding facility to implement a nutrient utilization plan approved by the secretary shall be considered a violation of the Kansas chemigation safety law for which the secretary may suspend a permit pursuant to K.S.A. 2-3310 and amendments thereto or may impose a civil penalty pursuant to K.S.A. 2-3317 and amendments thereto, or both.

(d) This section shall be part of and supplemental to the Kansas chemigation safety law.

K.S.A. 2-3302(k)

"Agronomic application rates" means the method and amount of swine waste defined by the secretary that in the secretary's discretion best protects the environment, including consideration of the crops or soil to which swine waste may be applied and the economic impact associated with any application of swine waste. (*Amended 5-7-1998*)



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CHEMIGATION LICENSING

CHEMIGATION USER'S PERMIT (CUP). Application of chemicals (pesticide or fertilizer), or blending effluent with fresh water, through an irrigation system is regulated under the Kansas Chemigation Safety Law. Any user of the chemigation process is required to register and obtain a CUP *before* chemigating. Permits are issued to persons who own or operate the land on which chemigation is to be performed. Only the wells/points of water diversion (PDIV) are permitted, **not center pivot locations**. Instructions for completing the application are printed on the reverse side of the application. The permit is valid for one year, expiring on December 31, and is renewable annually by meeting the same requirements as for a new permit.

ANTI-POLLUTION DEVICES AND TAILWATER PLANS REQUIRED BY KCSL. The following forms are required by the Kansas Chemigation Safety Law and must be submitted with the application, CSL-100.

- CSL-457, Plan for Using Required Anti-Pollution Devices
- CSL-120, Plan for Handling Tailwater

CHEMIGATION EQUIPMENT OPERATOR (CEO). A CEO is an individual who has successfully passed an open-book examination based on the manual, "*Chemigation in Kansas, Certified chemigation Equipment Operator Examination Manual*," with a grade of 75 percent or greater, and paid the fee. The pesticide applicator training/certification program and the chemigation certification program are totally separate requirements. The CEO certification is valid for five years, expiring on December 31 of the fourth calendar year after the year of issue, and is renewable by meeting the same requirements as for a new certificate.

FEES. CUP fees are due annually on PDIV's to be used in the chemigation process. Fee for the first PDIV is \$75, plus \$15 for each additional PDIV. Fee for a CEO five-year certification is \$25. All fees may be combined into one payment (Ex.: 4 PDIV's + 1 CEO = \$145 total, or \$75 + \$45 + \$25). As an aid to eliminate over/under payments, please perform all calculations by using the "Chemigation Fee Schedule and Calculation Table" printed at the bottom of the application instruction page. Payment may be made by check or Money Order payable to *Kansas Department of Agriculture*, or by DISCOVER credit card. DISCOVER is the only credit card accepted. Do not send cash.

BATTERY OF WELLS. For the purpose of chemigation permit requirements, a battery of wells is considered to be one PDIV. A battery of wells is described by KAR 5-1-1n as: "Two or more wells connected to a common pump by a manifold, or not more than four wells in the same local source of supply within a 300-foot radius circle that are being operated by pumps not to exceed a total maximum rate of diversion of 800 gallons per minute and that supply water to a common distribution system." PDIV's that are batteries are so referenced by our Division of Water Resources.

