



109 SW 9th Street, 3rd Floor
Topeka, Kansas 66612-1280

Dale A. Rodman, Secretary
Steve Stankiewicz, Program Manager

Phone: (785) 296-2142
Fax: (785) 296-6418
Email: records@kda.ks.gov
www.ksda.gov

Sam Brownback, Governor

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.



APPLICATION FOR CHEMIGATION USER'S PERMIT (CUP)

(PLEASE PRINT OR TYPE)

1. Permit to be issued to: _____ New Renewal No. _____
Must be owner or operator of land on which chemigation is to be used

Address: _____
 Street (or R.R. & Box No.) City County State ZIP
 Land Phone _____ Cell Phone _____ Fax _____
 E-mail Address _____
 SSN (if individual): _____ Fed. Tax I.D. No. (if business): _____

2. (Check One) Individual Partnership Corporation Association Other (explain) _____
 List the names and addresses of the officers or partners.

Name: _____ Title/Office: _____ Birth Date: _____
 Address: _____
 Street (or R.R. & Box No.) City County State ZIP
 Name: _____ Title/Office: _____ Birth Date: _____
 Address: _____
 Street (or R.R. & Box No.) City County State ZIP

(Attach a separate sheet, if necessary)

3. For each POINT OF DIVERSION (PDIV) which supplies water to an irrigation distribution system to be used for chemigation under this permit, list the legal description, Water Right File number, county abbreviation, and type of system.
DO NOT REPORT CENTER PIVOT LOCATIONS.

Legal Description of PDIV ¼ ¼ ¼ Section/Township/Range	Water Right File No.	County Abbrev.	System Type (Check One) (cp=center pivot; dp=drip; fl=flood; o=other/explain)			
1 _____	_____	_____	cp	dp	fl	o
First PDIV Fee: \$75						
Additional PDIV Fee: \$15 each						
2 _____	_____	_____	cp	dp	fl	o
3 _____	_____	_____	cp	dp	fl	o
4 _____	_____	_____	cp	dp	fl	o
5 _____	_____	_____	cp	dp	fl	o
6 _____	_____	_____	cp	dp	fl	o

(Attach a separate sheet, if necessary)

4. **Chemigation Equipment Operator (CEO).** List operator(s) who will be operating chemigation equipment under this User's Permit:

Name	(Check One)	
_____	<input type="checkbox"/> New/Expired *	<input type="checkbox"/> Currently Certified CEO No. _____ **
_____	<input type="checkbox"/> New/Expired *	<input type="checkbox"/> Currently Certified CEO No. _____ **

(Attach a separate sheet, if necessary)

* CEO Application + Exam Answer Sheet + \$25 must be enclosed with this application.
 ** DO NOT SUBMIT PAYMENT IF CEO CURRENTLY CERTIFIED.

5. Applicant Signature: I hereby certify that each of the above irrigation systems has been equipped with all of the required chemigation equipment specified by the Kansas Chemigation Safety Law as outlined in the INFORMATION AND REQUIREMENTS leaflet. I certify that all systems added to my permit comply with the PLAN FOR HANDLING TAILWATER and the PLAN FOR USING REQUIRED ANTI-POLLUTION DEVICES submitted with this application. I have read the INFORMATION AND REQUIREMENTS and am aware that copies of the Kansas Chemigation Safety Law and Regulations are available upon request.

Signature (Required): _____ Date (Required): _____

_____ KDA TR No	CHP (\$75 1 st PDIV)	\$ _____
_____ Date Rec'd	WS (\$15 ea. add'l)	\$ _____
_____ Check No	CHE (\$25 ea.)	\$ _____
_____ Check Amount	Refund	\$ _____
	This Application Amt.	\$ _____

PERMIT NO.	_____
ISSUED DATE	_____
REGION	_____



Kansas Department of Agriculture
 Records Center - Chemigation
 1320 Research Park Dr.
 Manhattan, KS 66502
 785-564-6700

PLAN FOR USING REQUIRED ANTI-POLLUTION DEVICES

The Kansas Chemigation Safety Law (*K.S.A. 2-3301 et seq.*) requires that irrigation systems which are used to apply pesticides, fertilizers, or other chemicals, or animal wastes, must be equipped with certain functional anti-pollution devices. These devices are listed below.

I. **ALL irrigation systems used for chemigation, including animal wastes, must be equipped with the following:**

- 1) INTERLOCK SYSTEM between the power system of the injection unit, the irrigation pumping plant and the pivot, if involved (*K.S.A. 2-3305*);
- 2) MAINLINE CHECK VALVE that is automatic with positive closure between the water source and the point of injection (*K.S.A. 2-3305*) (*K.A.R. 4-20-5*);
- 3) VACUUM RELIEF DEVICE between the Mainline Check Valve and the irrigation pump (*K.S.A. 2-3305*);
- 4) AUTOMATIC LOW PRESSURE DRAIN between the Mainline Check Valve and the irrigation pump, which is flush/recessed or has a dam (*K.S.A. 2-3305*); and
- 5) 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 (*K.A.R. 5-3-5c: Specifications for Check Valves, Oct. 7, 1991*).

II. **In addition to the devices listed above (items 1 through 5), injection equipment used for fertilizer and chemicals other than pesticides, must also be equipped with the following:**

- 6) CHEMICAL INJECTION LINE CHECK VALVE installed on the output side of the injection pump (*K.S.A. 2-3305*);
- 7) MANUALLY OPERATED VALVE on the supply tank (*K.A.R. 4-20-6*);
- 8) STRAINER located on the suction (intake) side of the injection pump (*K.A.R. 4-20-6*); and
- 9) CALIBRATION DEVICE of sufficient volume to accurately calibrate the injection pump (*K.A.R. 4-20-6*).

III. **In addition to the devices listed above (items 1 through 9), injection equipment used for PESTICIDES (insecticides, herbicides, fungicides, etc.) must also be equipped with the following:**

- 10) an AIR BLEEDER VALVE on the injection line adjacent to the Chemical Injection Line Check Valve, for removing air trapped in the injection pump and high pressure injection line (*K.A.R. 4-20-6*);
- 11) a POSITIVE DISPLACEMENT INJECTION PUMP (Ex.: a diaphragm or piston pump) (*K.A.R. 4-20-6*);
and
- 12) any other equipment required by the pesticide's label or labeling (*K.A.R. 4-20-6*).

VERIFICATION OF COMPLIANCE		
I hereby certify that each irrigation system listed on my application for a Chemigation User's Permit has been equipped with all of the required anti-pollution devices.		
Chemigation User's Permit Holder Name (<i>If individual, Last/First/Middle Initial</i>)	Title, if officer of Org.	
Signature (<i>Required</i>)	Date (<i>Required</i>)	OFFICE USE ONLY CUP No.

SUBMISSION OF THIS PLAN IS REQUIRED BY THE KANSAS CHEMIGATION SAFETY LAW



Kansas Department of Agriculture
 Records Center - Chemigation
 1320 Research Park Dr.
 Manhattan, KS 66502
 785-564-6700

PLAN FOR HANDLING TAILWATER

Definition: Excess irrigation water which reaches the lower end of a field. Tailwater is reused to irrigate crops.

(Check One)

No. I hereby certify that the irrigation system(s) listed on my Application for Chemigation User's Permit does not produce tailwater or other accumulations of water.

Yes. I hereby certify that the irrigation system(s) listed on my Application for Chemigation User's Permit does produce tailwater or other accumulations of water containing chemicals. I have completed **Section A** below.

(Print)
 Chemigation User's Permit Holder Name (If Individual, Last/First/Middle) _____

FOR OFFICE USE ONLY
CUP No. _____

Signature (Required) _____ Date _____

SECTION A (Must be completed if your system produces tailwater)

If your system(s) produces tailwater, type or print in the spaces provided below the legal description of each point of diversion to the nearest 10 acres, and the number of acres under chemigation. Your plan should describe the precautions taken and methods used to assure that water containing pesticides, fertilizers or other chemicals, or animal wastes, does not leave the area intended for treatment. Then, DRAW A DIAGRAM of each irrigation system listed on this sheet: show the location of each wellhead or point of diversion, pivot point(s), tailwater pit(s), and the direction of flow/slope.

DIAGRAM FOR HANDLING TAILWATER

(Legal Description) Acres under Chemigation _____		(Legal Description) Acres under Chemigation _____
(Legal Description) Acres under Chemigation _____		(Legal Description) Acres under Chemigation _____

(If more than four POD's, use this as your master to make additional copies)

SUBMISSION OF THIS PLAN IS REQUIRED BY THE KANSAS CHEMIGATION SAFETY LAW



Kansas Department of Agriculture
 Records Center - Chemigation
 1320 Research Park Dr.
 Manhattan, KS 66502
 785-564-6700

Chemigation Chemical Use Report CSL-400 CONVERSION TABLE GUIDE

IMPORTANT: Data entered on form CSL-400 Chemigation Chemical Use Report should be in Pounds. Please perform calculations to convert ounces, pints, quarts, gallons and tons, to pounds, using this table as a guide.

THIS TABLE IS FOR YOUR USE ONLY – DO NOT RETURN WITH COMPLETED CHEMICAL USE REPORTS

SCALE	CHEMIGATION PESTICIDES (# A.I./Gal.)			CHEMIGATION FERTILIZERS (#/Gal.)
	1 gallon = 128 fluid ounces 8 pints 4 quarts 1 ton = 2,000 pounds	*A.I. = Active Ingredient (from chemical label)	Baythroid.....2 Capture.....2 Dual II.....7.8 Lorsban.....4 Mustang.....1.5 Mustang Max.....0.8	Penncap-M.....2 Pounce.....3.2 Prowl.....3.3 Treflan.....4 Trilin.....4 Warrior.....1

PESTICIDES	
FROM OUNCES TO POUNDS oz. per acre x total acres = total ounces total oz. divided by 128 oz. (1 gal.) = total gallons total gals. x pds. A.I. per gal. = total pds. A.I. applied	Warrior CONVERSION EXAMPLE 3.8 oz. per acre on 132 acres = 3.9 pounds
FROM PINTS TO POUNDS pts. per acre x total acres = total pints total pts. divided by 8 pts. (1 gal.) = total gallons total gals. x pds. A.I. per gal. = total pds. A.I. applied	Treflan EC CONVERSION EXAMPLE 122 pts. on 122 acres = 61 pounds
FROM QUARTS TO POUNDS qts. per acre x total acres = total quarts total qts. divided by 4 (1 gal.) = total gallons total gals. x pds. A.I. per gal. = total pds. A.I. applied	Treflan EC CONVERSION EXAMPLE 1 qt. per acre on 130 acres = 130 pounds
FROM GALLONS TO POUNDS total gals. x pds. A.I. per gal. = total pds. A.I. applied	Capture 2EC CONVERSION EXAMPLE 3 gals. on 64 acres = 6 pounds
FERTILIZERS	
ACTUAL POUNDS PER ACRE TO TOTAL POUNDS PRODUCT No. actual pds. per acre x total acres treated = total pds. actual. total pds. actual divided by (.32, or .28, etc.) = pds. total product.	Do NOT record actual pounds, or actual pounds of each nutrient. Record TOTAL LBS (Gross Wt.) product/blend applied.
FROM GALLONS TO POUNDS gal. per acre x total acres treated = total gallons total gals. x pds. per gal. = total pds. product applied	CONVERSION EXAMPLE 1200 gals. of 28% on 135 acres = 12,804 lbs.
POUNDS PER ACRE TO TOTAL POUNDS PRODUCT pds. per acre x acres treated = total pds. product applied	CONVERSION EXAMPLE 100 pds. per acre of 32% on 56 acres = 5,600 pounds
FROM TONS TO POUNDS total tons applied x 2,000 = total pds. product applied	CONVERSION EXAMPLE 5.45 tons on 120 acres = 10,900 pounds

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)