

Approved February 18, 1988
Date

MINUTES OF THE HOUSE COMMITTEE ON ENERGY AND NATURAL RESOURCES

The meeting was called to order by Representative Dennis Spaniol at
Chairperson

3:30 ~~xxx~~ p.m. on February 11, 1988 in room 526-S of the Capitol.

All members were present except:

Representative Sifers (excused)

Committee staff present:

Raney Gilliland, Legislative Research
Laura Howard, Legislative Research
Theresa Kiernan, Revisor of Statutes' Office
Betty Ellison, Committee Secretary

Conferees appearing before the committee:

Dale Lambley, Director, Division of Plant Health,
State Board of Agriculture
Alex Hawkins, Pesticide Use Law Administrator, Division of Plant
Health, State Board of Agriculture
David Pope, Chief Engineer-Director, Division of Water Resources,
State Board of Agriculture

Chairman Dennis Spaniol began the meeting by recognizing Representative Grotewiel. He had a bill request relative to franchise fees charged by utilities. Staff was requested to draft a bill and present it to the committee for consideration as a committee bill.

The hearings on non-point sources of contamination were continued from the previous day.

Dale Lambley, Director of the Division of Plant Health, distributed information relative to chemigation. He introduced Alex Hawkins, Pesticide Use Law Administrator, who along with Mr. Lambley and David Pope, Chief Engineer-Director of the Division of Water Resources, responded to numerous questions of the committee regarding groundwater protection. (Attachment 1)

Mr. Lambley invited the committee to attend a forum sponsored by the State Board of Agriculture. The forum was to be on "Agriculture and Our Environment" with attention being given to Water Quality. The forum was scheduled for March 1, 1988 in the Historical Society Auditorium.

The Chairman announced that due to committee interest in chemigation, he would appoint a seven-member subcommittee to study and recommend changes in the chemigation law. The subcommittee would be chaired by Representative Holmes, with the following members on it: Representative Mollenkamp, Representative Guldner, Representative Patrick, Representative Charlton, Representative Lacey, Representative Fry.

The minutes of February 8, 1988 were distributed.

The meeting was adjourned at 5:00 p.m.

The next meeting of the House Energy and Natural Resources will be held on February 16, 1988 at 3:30 p.m. in Room 526-S.

KANSAS CHEMIGATION SAFETY LAW

K.S.A. 2-3301. Citation of act. This shall be known and may be cited as the "Kansas Chemigation Safety Law."

K.S.A. 2-3302. Definitions. As used in this act:

- (a) "Chemigation" means any process whereby pesticides, fertilizers, or other chemicals are added to irrigation water applied to land or crops, or both, through an irrigation distribution system.
- (b) "Board" means the state board of agriculture.
- (c) "Secretary" means the secretary of the state board of agriculture.
- (d) "Operating chemigation equipment" for the purposes of this act shall include, but not be limited to:
 - (1) Preparing solution and filling the chemical supply container;
 - (2) calibrating of injection equipment;
 - (3) starting and stopping equipment when injection of chemicals is involved; and
 - (4) supervision of the chemigation equipment to assure its safe operation.
- (e) "Anti-pollution devices" means mechanical equipment used to reduce hazard to the environment in cases of malfunction of the equipment during chemigation and includes but is not limited to interlock, waterline check valve, chemical line closure device, vacuum relief device and automatic low pressure drain.
- (f) "Supervision" means the attention given to the chemigating system during its operation when chemicals are being applied.
- (g) "Direct supervision" means supervision with ability to change the procedures.
- (h) "Irrigation distribution system" means any device or combination of devices having a hose, pipe or other conduit which connects directly to any source of ground or surface water, through which water or a mixture of water and chemicals is drawn and applied to land. The term does not include any handheld hose sprayer or other similar device which is constructed so that an interruption in water flow automatically prevents any backflow to the water source. For the purpose of this act it does not include greenhouse irrigation or residence yards.
- (i) "Calibration device" means equipment of sufficient accuracy to determine the rate of chemical application.

K.S.A. 2-3303. Requirements for chemigation users. Persons applying any chemical by the chemigation process in an irrigation system shall:

- (a) Register with the secretary;
- (b) use anti-pollution devices; and
- (c) keep records and make reports as deemed appropriate by the secretary.

K.S.A. 2-3304. Registration of chemigation users; permit; fee; renewal.

- (a) On or before December 31, 1985, any user of the chemigation process shall register and obtain a chemigation user's permit before using the process.
- (b) Registration shall consist of making application on a form supplied by the secretary. Such application shall include, but not be limited to:
 - (1) The name of the persons to which a permit is to be issued (owner or operator of land on which chemigation is to be used);
 - (2) a plan for using anti-pollution devices;
 - (3) a plan for handling tail water or accumulations of water;
 - (4) the number and locations (legal description) of wellheads which may be involved in the chemigation process and surface water supply withdrawal points, not to include siphon tubes; and
 - (5) payment of fees.
- (c) Registration required prior to December 31, 1985, shall not require paragraphs (2), (3) or (4) of subsection (b).
- (d) Full registrations submitted during 1986 shall be effective for 1987. The application fee for a chemigation user's permit shall be \$50. A chemigation user's permit may be renewed each year upon making an application, payment of the application fee and completing the report form providing information used in chemigation the previous year.
- (e) Any person chemigating on or after January 1, 1987, shall be in full compliance with this act.

K.S.A. 2-3305. Functional anti-pollution devices, requirements. Functional anti-pollution devices shall be used in the chemigation process according to the following criteria:

- (a) Waterline check valves shall be automatic, quick-closing device capable of preventing the backflow of water chemical mixtures into the source of water supply during times of system failure or equipment shutdown;
- (b) a chemical line device shall be in the injection line; this device shall be capable of positive closure to prevent liquid flow from either direction;

- (c) 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 the entire system will be shut down simultaneously in the event of malfunction;
- (d) a functional vacuum relief device shall be provided to reduce the chance of chemical being back-siphoned into the water source;
- (e) an automatic low pressure drain shall be used between the waterline valve and the irrigation pump; and
- (f) the use of a separate injection system; this system shall include:
 - (1) Chemical supply tank with manually operated valve;
 - (2) in-line strainer;
 - (3) positive displacement injector pump;
 - (4) air bleeder valve for injection pump; and
 - (5) calibration device.

K.S.A. 2-3306. Responsibility of chemigation equipment operator; safety information provided by secretary.

- (a) Any individual operating chemigation equipment under a chemigation user 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 permit holder.
- (b) The secretary shall provide information on a periodic basis to each person holding a chemigation user permit to point out safety matters concerning chemigation safety which shall include, but not be limited to the following:
 - (1) The proper use of anti-pollution devices;
 - (2) preparing the chemical solution and filling the chemical supply container;
 - (3) calibrating of injection equipment;
 - (4) supervision of chemigation equipment to assure its safe operation;
 - (5) environmental and human hazards that may be involved in chemigation;
 - (6) protective clothing and respiratory equipment;
 - (7) general precautions to be followed in disposal of containers and decontamination of the equipment;
 - (8) handling of tail water and other accumulations of water containing chemicals;

- (9) information of procedures to be followed should chemicals inadvertently enter the water supply source as a result of the chemigation process;
- (10) label information, especially chemigation instructions;
- (11) applicable state and federal laws and regulations; and
- (12) any other subject which the secretary deems necessary.

K.S.A. 2-3307. Access to premises by secretary; inspections, samples and search warrants; enforcement of criminal and civil provisions of act.

- (a) For the purpose of carrying out the provisions of this act, the secretary or the secretary's agent or the county or district attorney or their agents may enter any premises at any reasonable time in order to:
 - (1) Have access for the purpose of inspecting any equipment subject to this act;
 - (2) inspect or sample water, lands and crops reported to be exposed to chemicals;
 - (3) inspect or investigate complaints or injury to humans, crops or land;
 - (4) sample chemicals being applied or to be applied; or
 - (5) observe the use and application of chemicals.

Should the secretary, the secretary's agent or the county or district attorney or their agents be denied access to any land where such access was sought for the purpose authorized, the secretary or the county or district attorney may apply to any court of competent jurisdiction for a search warrant authorizing access to such land for such purposes. The court, upon such application, may issue the search warrant for the purposes requested.

- (b) The enforcement of the criminal provisions of this act shall be the duty of, and shall be implemented by, the county or district attorneys of the various counties or districts. In the event a county or district attorney refuses to act, the attorney general shall so act. The secretary is charged with the duty of enforcing all other provisions of this act.

K.S.A. 2-3308. Unlawful acts; criminal penalties.

- (a) Any person who engages in chemigation without first obtaining a permit as provided in this act upon conviction shall be deemed guilty of a misdemeanor.

- (b) Any person who engages in chemigation on a suspended or revoked permit upon conviction shall be deemed guilty of a misdemeanor.
- (c) Any person who tampers with, or otherwise damages in any way, equipment specified in this act upon conviction shall be deemed guilty of a misdemeanor.
- (d) Any permit holder who fails to immediately notify the secretary of any actual or suspected accident resulting from the use of chemigation upon conviction shall be deemed guilty of a misdemeanor.
- (e) Any person who has been convicted of a misdemeanor under this section shall be sentenced to pay a fine which shall be fixed by the court in a sum not exceeding \$500.

K.S.A. 2-3309. Administration of act; employees; rules and regulations.

- (a) The state board of agriculture shall administer this act and the secretary of the board shall have authority to employ such qualified persons deemed necessary to carry out the provisions of this act.
- (b) The secretary shall adopt, within 60 days after the effective date of this act, such rules and regulations the secretary deems necessary to carry out the provisions of this act.

K.S.A. 2-3310. Denial, suspension, revocation or modification of permits; grounds; procedures. The secretary, after notice and opportunity for a hearing, may deny, suspend, revoke or modify the provisions of any permit issued under this act, if the secretary finds that the applicant, registrant or permit holder has:

- (a) Been convicted of or pleaded guilty to a violation of this act or the Kansas pesticide law, or has been convicted of or pleaded guilty to a felony under the laws of this state or of the United States, if the board determines, after investigation, that such person has not been sufficiently rehabilitated to warrant the public trust;
- (b) failed to comply with any provision or requirement of this act or any rule and regulation adopted thereunder; or
- (c) had any certificate, registration or permit issued under this act or the Kansas pesticide law revoked.

K.S.A. 2-3311. Same; notice and hearing requirements; hearing officers; decision and order by secretary.

- (a) Before any chemigation user registration or chemigation user's permit shall be revoked, denied renewal or before it shall be suspended for any cause, the secretary shall inform the registrant or holder of the permit of the date and place of hearing upon the proposed revocation, denial or suspension. The notice of hearing shall be sent to the registrant or permit holder at least 15 days prior to the hearing date

and shall be served upon the registrant or permit holder by letter sent to such person's address as shown by the records of the secretary, setting out the time and place of the hearing and alleged grounds for revocation or suspension. The registrant or permit holder shall have the right to appear in person and by counsel and to testify and introduce evidence. If such person fails to appear, the matter may be heard in such person's absence. Any such hearing may be conducted by the secretary or by a hearing officer duly appointed by the secretary.

- (b) The secretary is authorized to appoint a hearing officer to make investigations and conduct hearings. Such hearing officer shall have the power to administer oaths in the making of investigations or conducting of hearings and the secretary may provide for a record to be made of any hearing or investigation. The hearing officer shall report such officer's findings and recommendations to the secretary. The secretary may consider the records made by the hearing officer, or if the secretary desires, the secretary may hear additional evidence and hold further hearings or make further investigations. The decision and order of the secretary shall have the same force and effect as though the entire hearing and investigation had been held before the secretary. The decision and order shall become effective on the date set by the secretary. Service of a copy of the decision and order shall be in the same manner as provided for notice of hearing.

K.S.A. 2-3312. Same; appeal of secretary's decision and order; procedures. The registrant or permit holder shall have 30 days after a copy of the decision and order of the secretary revoking or suspending a chemigation user registration or chemigation user's permit or denying or declining to issue or to renew such registration or permit has been posted within which to appeal from such decision and order to the district court of the county of the official residence of the secretary. Such an appeal shall be taken by serving upon the secretary a written notice of appeal specifying the decision and order appealed from, with a demand for certified copies of all pertinent papers on file in the secretary's office relating to the decision and order of the secretary. Such service may be had by certified mail or personal service upon the secretary. Such an appeal shall be perfected by filing with the clerk of the district court, a copy of the notice of appeal together with proof of service. Within 30 days after receipt by the secretary of the notice of appeal, the secretary shall file with the clerk of the district court a certified transcript of all pertinent papers, files and proceedings relating to the decision and order from which the appeal is taken.

K.S.A. 2-3313. Unlawful acts. It shall be unlawful for any person required to be registered to hold a permit under the provisions of this act to:

- (a) Make a pesticide use or application not in accordance with the directions for use shown on the label registered under the Kansas agricultural chemical act and by the federal environmental protection agency:

- (b) knowingly use ineffective or improper equipment or materials;
- (c) refuse or neglect to keep and maintain records required by this act or refuse or neglect to make records available when and as required by this act;
- (d) make false or fraudulent records or reports;
- (e) use fraud or misrepresentation in making an application for or renewal of a registration or permit issued under the provisions of this act;
- (f) refuse or neglect to comply with any limitations or restrictions on or in a duly issued registration or permit;
- (g) aid, abet or conspire with any person to evade any of the provisions of this act or allow a registration or permit issued under the provisions of this act to be used by a person not named on the registration or permit;
- (h) impersonate any state, county or city inspector or official, as acting in their official capacity;
- (i) use the chemigation method of pesticide, fertilizer or other chemical material without regard to public health, safety or welfare; or
- (j) use the chemigation process without proper registration or permit issued under the provisions of this act.

K.S.A. 2-3314. **Injunctive relief for violations of act.** The district courts of Kansas shall have jurisdiction to restrain violations of this act by injunction without the institution of criminal proceedings. The injunction shall be issued without bond.

K.S.A. 2-3315. **Chemigation fee fund; expenditures.** The secretary shall remit all moneys received under this act to the state treasurer at least monthly. Upon receipt of any such remittance, the state treasurer shall deposit the entire amount thereof in the state treasury and the same be credited to the chemigation fee fund. All expenditures from the chemigation fund shall be made in accordance with appropriation acts upon warrants of the director of accounts and reports issued pursuant to vouchers approved by the secretary of the state board of agriculture or by a person or persons designated by the secretary.

K.S.A. 2-3316. **Subpoena power.** The secretary may issue subpoenas to compel the attendance of witnesses or production of books, documents and records anywhere in the state in any hearing affecting the authority or privilege granted by a registration or permit issued under the provisions of this act.

KANSAS CHEMIGATION SAFETY LAW 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. 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; and
- (5) the EPA registration number for each pesticide applied.

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 application for renewal of a chemigation user permit shall be accompanied by a report on a form supplied by the secretary. The report shall include:

- (1) the name and address of the permit holder;
- (2) the name and total quantity of each chemical applied during the chemigation process during the preceding year; and
- (3) the total number of acres treated by means of chemigation.

(c) 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 ground water or surface water. (Authorized by L. 1985, Ch. 5, Section 9; implementing L. 1985, Ch. 5, Section 3; effective, T-86-27, August 19, 1985; effective May 1, 1986.)

4-20-4. Permits. (a) 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, August 19, 1985; effective May 1, 1986; amended May 1, 1987.)

4-20-5. Waterline check valves. Each functional waterline check valve shall be constructed and installed in accordance with K.A.R. 5-3-5c.

(Authorized by L. 1985, Ch. 5, Section 9; implementing L. 1985, Ch. 5, Section 5; effective, T-86-27, August 19, 1985, effective May 1, 1986.)

4-20-6. Injection equipment. The injection equipment used shall be constructed and maintained in a manner which insures application of pesticides within label recommendations and application of fertilizers within the planned application rate. Injection equipment shall be calibrated before each chemigation application.

(Authorized by L. 1985, Ch. 5, Section 9; implementing L. 1985, Ch. 5, Section 5; effective, T-86-27, August 19, 1985; effective May 1, 1986; amended May 1, 1987.)

DIVISION OF PLANT HEALTH - KANSAS STATE BOARD OF AGRICULTURE

C H E M I G A T I O N

KANSAS CHEMIGATION SAFETY LAW

INFORMATION AND REQUIREMENTS

This leaflet sets forth some of the requirements of the Kansas Chemigation Safety Law and the regulations promulgated for its administration, as they pertain to chemigation under full compliance. Copies of the Law and Regulations are available upon request from the Division of Plant Health.

I. Qualifying for a Permit

WHO IS
REQUIRED TO
HAVE A
PERMIT?

1. A Chemigation User's Permit is required for all those who engage in chemigation. "Chemigation" means any process whereby pesticides, fertilizers, or other chemicals are added to irrigation water applied to land or crops, or both, through an irrigation distribution system.
2. On or before December 31, 1985, any user of the chemigation process shall register and obtain a Chemigation User's Permit before using the process. Any person chemigating on or after January 1, 1987 shall be in full compliance.

* * * *

HOW DOES
ONE QUALIFY
FOR A
PERMIT?

1. Be 18 years of age or older by January 1 of year of permit issue
2. Submit a completed application for Chemigation User's Permit
3. Submit a plan for using required anti-pollution devices
4. Submit a plan for handling tailwater or accumulations of water
5. Pay required fees: Application fee = \$50.00 per permit
6. Permits are only issued to individuals who own or operate the land on which chemigation is to be used. Only one permit may be issued to an individual. An individual having a chemigation user permit may supervise no more than 10 chemigation units (wells).

* * * *

PERMIT
EFFECTIVE
PERIOD,
PERMIT
RENEWAL

1. Full registrations submitted during 1986 shall be effective for 1987. A Chemigation User's Permit may be renewed each year upon making an application, payment of the application fee, and completing the report form providing information on each chemical used in chemigation the previous year.
2. The renewal report shall include:
 - a. The name and address of the permit holder.
 - b. The name and total quantity of each chemical applied by the chemigation process during the preceding year.
 - c. The total number of acres treated by means of chemigation.
3. The chemigation permit holder shall report immediately to the secretary all spills, accidents, system malfunctions, or other situations involving actual or potential contamination of either ground water or surface water.

* * * *

COMPLETING
APPLICATION
FORM

1. Please supply all the information requested.
2. Follow the instructions printed on the back of the application.
3. Print or type your full name in the space provided.
4. Sign and date the application and return all four (4) copies.
5. Pay applicable fees. Make check or money order payable to Kansas State Board of Agriculture. Sending currency through the mail is discouraged.

* * * *

II. Responsibilities of Permit Holder

REPORT OF
ADDRESS
CHANGE -
CHANGING
LOCATION OF
WELL HEADS

1. Anyone obtaining a Chemigation User's Permit shall be required to notify the Kansas State Board of Agriculture of:
 - a. Any change in mailing address.
 - b. Any change (from that submitted on the original application) in the location of the well heads involved in the chemigation process.
2. Such notification is to be made by the tenth of the month following the month during which the change occurred.

* * * *

ANTI-
POLLUTION
DEVICES

1. Anyone using the chemigation process shall be required to install anti-pollution devices on chemigation equipment being used in the process. "Anti-pollution devices" means mechanical equipment used to reduce hazard to the environment in cases of malfunction of the equipment during chemigation and includes, but is not limited to:
 - a. 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 the entire system will be shut down simultaneously in the event of malfunction.
 - b. Mainline checkvalve -- main water line checkvalves 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.
 - c. Chemical line closure device -- A chemical line closure device shall be installed in the injection line; this device shall be capable of positive closure to prevent liquid flow from either direction.
 - d. Vacuum relief device -- A functional vacuum relief device shall be provided to reduce the chance of chemical being back-siphoned into the water source.

ANTI-
POLLUTION
DEVICES

- e. Automatic low pressure drain -- An automatic low pressure drain shall be installed between the water line checkvalve and the irrigation pump.
2. Anti-pollution devices shall be maintained in a functional state for any irrigation system used in the chemigation process.

* * * *

CHEMICAL
INJECTION

1. Persons involved in the chemigation process shall use a separate chemical injection system. This system shall include:
 - a. Chemical supply tank with manually operated valve;
 - b. In-line strainer;
 - c. Positive displacement injection pump;
 - d. Air bleeder valve for injection pump; and
 - e. Calibration device.
2. Any individual operating chemigation equipment under the Chemigation User's Permit shall be responsible for the safe operation of such chemigation equipment, any such equipment shall be functional and shall be considered to be under the direct supervision of the Chemigation User's Permit holder.

* * * *

SUPERVISION

1. Anyone obtaining a Chemigation User's Permit shall be responsible for supervision of the chemigation equipment to ensure its safe and accurate operation. "Supervision" means the attention given to the chemigation system during its operation when chemicals are being applied. "Direct supervision" means supervision with the ability to change the procedures.
2. No person having a Chemigation User's Permit shall supervise more than ten (10) operating chemigation units at one time.
3. Each person possessing a Chemigation User's 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 that pesticide
 - b. Follow all directions on the pesticide's label
 - c. Use all safety precautions pertaining to that pesticide.

* * * *

RECORDS AND
REPORTS

1. Each person using a chemigation process shall keep records regarding each application of any chemical other than water. The records shall contain the following information:

RECORDS AND REPORTS

- 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 point of diversion of the water supply
- e. The EPA registration number of each pesticide applied.

2. Records required under this section shall be retained by the holder of the Chemigation User's Permit for a period of not less than two years from the date of application.

* * * *

REFERENCE

KEEP THIS LEAFLET FOR YOUR REFERENCE PURPOSES

* * * *

PREPARED BY

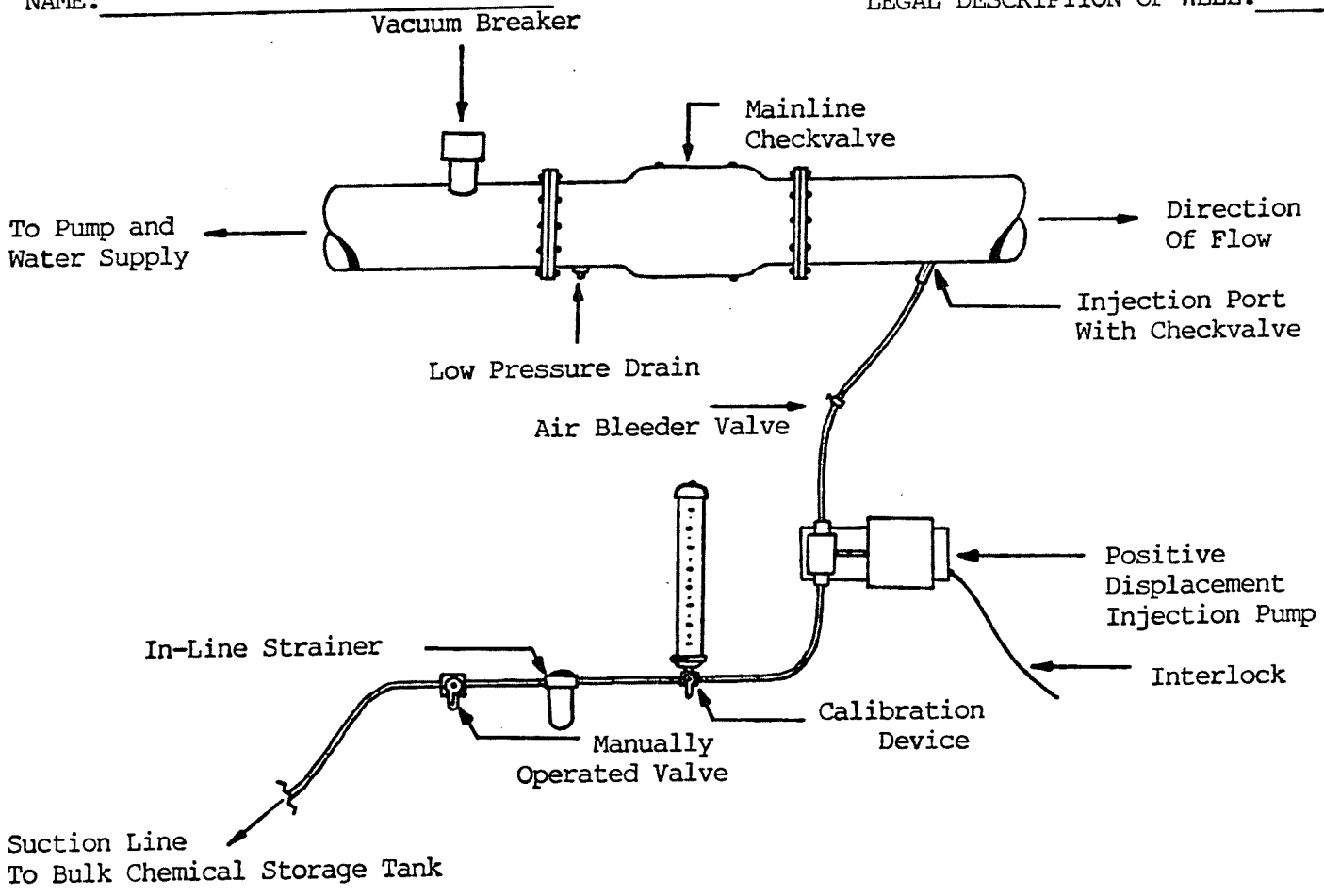
KANSAS STATE BOARD OF AGRICULTURE
 Division of Plant Health
 109 SW 9th Street
 Topeka, Kansas 66612-1281
 Telephone: (913) 296-2263

MANAGEMENT AND SUPERVISION ARE THE KEY FACTORS TO SUCCESSFUL CHEMIGATION!

In order to obtain a permit, a PLAN FOR USING REQUIRED ANTI-POLLUTION DEVICES MUST BE SUBMITTED: The plan must include or apply to each wellhead and/or withdrawal point. The required anti-pollution devices are listed in the Chemigation Information Leaflet and on the attached sheet. The plan should include a written description and one or more diagrams showing how each chemigation unit is (or will be) set up and maintained. Indicate which anti-pollution devices are presently installed and which are to be installed at a later date. REMEMBER: All of the required anti-pollution devices must be installed before you can legally use the chemigation process in 1988.

-SAMPLE PLAN-
FOR USING ANTI-POLLUTION
DEVICES

NAME: _____ LEGAL DESCRIPTION OF WELL: _____



REQUIRED ANTI-POLLUTION DEVICES

<u>DEVICE</u>	<u>LOCATION</u>	<u>FUNCTION</u>
Water line checkvalve (Automatic, quick-closing)	In irrigation system between water source and chemical injection point	Prevents backflow of water-chemical mix- ture into the source of water supply during times of system failure or shutdown
Vacuum relief device	Between water source and water line check- valve	Reduces the chance of chemical being drawn back into the water source after closure of water line checkvalve
Automatic low pressure drain	Between water source and water line check- valve	Removes any fluid behind water line checkvalve; drains liquid to prevent freezing
Chemical line closure device	Between injector pump and irrigation water line injection fitting	Prevents liquid from flowing in either direction
Interlock system	Between the power system of the injection unit, the irrigation pumping plant and the pivot (if involved)	Shuts down the entire system in the event of malfunction
Positive Displacement Injector Pump		Assures consistent rate of application
Air Bleeder Valve	At the output side of the injection pump	Removes air trapped on the intake side or within the injector pump which would affect the rate of application
Calibration Device	On the intake side of the injector pump	Measures flow through the pump against the operating pressure of the system
In-line strainer	At input side of injection pump	Helps prevent malfunction of checkvalves in in- jection pump or other valves
Chemical supply tank with manually operated shut-off valve		Holds material to be injected during calibration, equipment changes or emergencies

PLAN FOR HANDLING
TAILWATER OR OTHER
ACCUMULATIONS OF WATER

Using the sample plan (attached), draw a diagram of each irrigation system on this sheet showing the location of each wellhead or point of diversion, pivot point(s) and tailwater pit(s) if applicable and the direction of flow (slope). Type or print the following information in the spaces provided: Your name, the legal description of each well to the nearest 40 acres, the number of acres under chemigation and the type of system (center pivot, drip, flood, etc.). The squares in the diagram below may be used as sections or as quarter sections (show dimensions).

Name: _____

Legal Description
of Well Location

Legal Description
of Well Location

Legal Description
of Well Location

Legal Description
of Well Location

Description of System: _____

A PLAN FOR HANDLING TAILWATER OR WATER ACCUMULATIONS MUST BE SUBMITTED: If your irrigation system produces tailwater or other water accumulations, you must submit a plan which describes the methods used and precautions taken to assure that damage does not occur to persons, property or the environment. The plan must include a diagram showing the location of the wellhead or point of diversion, tailwater pit(s) if applicable, and the direction of flow (slope). A copy of the plan on file with the Soil Conservation Service will be sufficient. If a particular irrigation system does not produce water accumulations or tailwater, indicate that this is the case. No diagram is required in such situations.

SAMPLE PLAN: HANDLING TAILWATER

NAME: _____

LEGAL DESCRIPTION: _____
 #ACRES UNDER CHEMIGATION _____

