

# **Attachment H**

be in writing and set forth the basis for the request. The written request must be submitted to Brie Wilkins, Bureau of Air and Radiation, not later than the close of business July 5 in order for the Secretary of Health and Environment to consider the request.

Roderick L. Bremby  
Secretary of Health  
and Environment

Doc. No. 030780

#### State of Kansas

### Department of Health and Environment

#### Request for Comments

The Kansas Department of Health and Environment is soliciting comments regarding a proposed air quality operating permit. Ferroloy, Inc. has applied for a Class II operating permit in accordance with the provisions of K.A.R. 28-19-540. Emissions of volatile organic compounds (VOCs) were evaluated during the permit review process. The purpose of a Class II permit is to limit the potential-to-emit for these pollutants to below major source thresholds.

Ferroloy, Inc., Wichita, owns and operates a grey and ductile castings facility located at 515 E. 29th St. East, Wichita.

A copy of the proposed permit, permit application, all supporting documentation and all information relied upon during the permit application review process is available for public review for a period of 30 days from the date of publication during normal business hours at the KDHE, Bureau of Air and Radiation, 1000 S.W. Jackson, Suite 310, Topeka; and a copy of the proposed permit can be reviewed at the Wichita-Sedgwick County Department of Community Health, 1900 E. 9th, Wichita. To obtain or review the proposed permit and supporting documentation, contact Ann Spitz, (785) 291-3271, at the KDHE central office; and to review the proposed permit only, contact Randy Owen, (316) 268-8448, at the Wichita Department of Environmental Health. The standard departmental cost will be assessed for any copies requested.

Direct written comments or questions regarding the proposed permit to Ann Spitz, KDHE, Bureau of Air and Radiation, 1000 S.W. Jackson, Suite 310, Topeka, 66612-1366. In order to be considered in formulating a final permit decision, written comments must be received before the close of business July 5.

A person may request a public hearing be held on the proposed permit. The request for a public hearing shall be in writing and set forth the basis for the request. The written request must be submitted to Brie Wilkins, Bureau of Air and Radiation, not later than the close of business July 5 in order for the Secretary of Health and Environment to consider the request.

Roderick L. Bremby  
Secretary of Health  
and Environment

Doc. No. 030777

#### State of Kansas

### Department of Health and Environment

#### Notice of Hearing on Proposed Administrative Regulations

The Kansas Department of Health and Environment, Division of Environment, Bureau of Water, will conduct public hearings at the following locations on the following dates to consider the adoption of new administrative regulations addressing municipal, commercial and industrial wastewater lagoon requirements (K.A.R. 28-16-160 through 28-16-174):

#### August 19, 7 p.m.

Memorial Hall Auditorium  
120 S.W. 10th Ave., Topeka

#### August 25, 7 p.m.

Dodge City Community College Auditorium  
(Little Theater)  
2501 N. 14th Ave., Dodge City

#### August 26, 7 p.m.

Sedgwick County Extension Education Center  
7001 W. 21st St. North, Wichita

The time period between the publication of this notice and the last scheduled hearing constitutes the public comment period for the purpose of receiving written public comments on the proposed new administrative regulations. All interested parties may submit written comments prior to the scheduled hearings to Donald Carlson, Kansas Department of Health and Environment, Bureau of Water, 1000 S.W. Jackson, Suite 420, Topeka, 66612-1367. All interested parties will be given a reasonable opportunity to present their views orally on the proposed regulatory action during the hearings. Because of the expected level of public participation at the hearings, KDHE recommends that individuals proposing to present oral testimony at the public hearings provide the hearing officer with a written copy of their comments and recommendations at the hearing. This will ensure that KDHE receives the individual's complete comments and recommendations in the event the hearing officer must limit the extent of oral presentations in order to give all parties an opportunity to present their views at the hearing. The public comment period will officially close at the conclusion of the last scheduled hearing.

Any individual with a disability may request accommodation in order to participate in the public hearings and may request the proposed new regulations and regulatory impact statement in an accessible format. Requests for accommodation should be made at least five working days in advance of the hearing by contacting Dorothy Geisler at (785) 296-5545 or by fax at (785) 296-0086.

Copies of the proposed new regulations and the regulatory impact statement containing the economic impact and environmental benefit statements may be obtained from the Kansas Department of Health and Environment, Bureau of Water, at (785) 296-5545. Copies of the proposed new regulations, the regulatory impact statement and KDHE's "Kansas Sensitive Groundwater Areas for

Wastewater Lagoons - November 1, 2003" may be accessed on KDHE's Bureau of Water home page located at [www.kdhe.state.ks.us/water](http://www.kdhe.state.ks.us/water) or at [www.kdhe.state.ks.us/indust/ProposedLinerRegs.htm](http://www.kdhe.state.ks.us/indust/ProposedLinerRegs.htm). Individuals with questions pertaining to the proposed new regulations can obtain assistance by calling (785) 296-5545. A summary of the proposed new regulations and their regulatory impact follows:

There will be no initial or annual cost required for implementing and enforcing the proposed regulations by other agencies. The initial and annual cost and increased paperwork of implementing the proposed new regulations, by KDHE, is expected to be minimal.

**K.A.R. 28-16-160. Definitions.** This regulation provides a listing of terms and their definitions used in administering the proposed new regulations. Key terms defined in the regulations include "Equus Beds," "groundwater," "groundwater separation distance," "impermeable synthetic membrane liner," "maximum soil liner seepage rate" or "specific discharge," "maximum synthetic membrane liner leakage rate" and "sensitive groundwater areas." Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is primarily administrative in nature. The proposed new regulation does not subject the affected parties to additional costs of compliance.

**K.A.R. 28-16-161. Municipal and commercial lagoons: general provisions.** This regulation prohibits new or modified lagoons if groundwater separation is 10 feet or less; establishes a maximum soil liner seepage rate less than 1/4 inch per day unless constructed over sensitive groundwater areas, including the Equus Beds; and establishes a maximum soil liner seepage rate less than 1/10 inch per day for lagoons constructed over sensitive groundwater areas, excluding the Equus Beds. New or modified lagoons over the Equus Beds are required to employ, at a minimum, a single, impermeable synthetic membrane liner. New or modified lagoons over the Equus Beds may employ a constructed soil liner if groundwater separation is greater than 10 feet, in situ soils can provide an effective pollution barrier to protect groundwater, the constructed soil liner can provide a maximum soil liner seepage rate less than 1/10 inch per day, and the design provides for the installation and sampling of groundwater monitoring wells. The regulation allows use of a single, impermeable synthetic membrane liner in lieu of a constructed soil liner. The regulation grandfathers existing municipal and commercial wastewater lagoons except if environmental or public health threats exist or if KDHE orders improvements to be implemented to address noncompliance with statutory, regulatory or permit requirements. The regulation requires a permit to construct, operate or maintain a municipal or commercial wastewater lagoon. The regulation contains four major provisions that would provide for an environmental benefit. While the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed, the four provisions do provide for an environmental benefit. The projected increased capital and

annual costs associated with the implementation of this regulation is expected to be less than \$2,452,000 per year to municipal and commercial facilities.

**K.A.R. 28-16-162. Industrial lagoons: general provisions.** This regulation prohibits new or modified lagoons if groundwater separation is 10 feet or less; allows earthen lagoons for domestic sewage treatment with a maximum soil liner seepage rate less than 1/4 inch per day and the lagoon is not constructed over sensitive groundwater areas, including the Equus Beds; and allows for earthen lagoons for domestic sewage treatment with a maximum soil liner seepage rate less than 1/10 inch per day if constructed over sensitive groundwater areas, excluding the Equus Beds. New or modified lagoons over the Equus Beds, used solely for domestic sewage, are required to employ a single, impermeable synthetic membrane liner. New or modified lagoons over the Equus Beds, used solely for domestic sewage, may employ a constructed soil liner if groundwater separation is greater than 10 feet, in situ soils can provide an effective pollution barrier to protect groundwater, the constructed soil liner can provide a maximum soil liner seepage rate less than 1/10 inch per day, and the design provides for the installation and sampling of groundwater monitoring wells. The regulation allows the use of a single, impermeable synthetic membrane liner in lieu of a constructed soil liner for domestic sewage. The regulation allows the use of lagoons with a soil liner if the maximum soil liner seepage rate is less than 1/4 inch per day for specific industrial process wastewaters. The regulation lists specific industrial process wastewaters, considered to have a low pollution potential, which may be directed to earthen lagoons with soil liners. The regulation incorporates provisions of KDHE's Policy Memorandum #90-2. The regulation establishes a maximum monitored or calculated leakage rate to be the more stringent of either 1/64 inch per day or the liner manufacturer's criteria for the material and installation procedures specified for the membrane liner. The regulation grandfathers existing industrial lagoons except if environmental or public health threats exist or KDHE orders improvements to be implemented to address noncompliance with statutory, regulatory or permit requirements. The regulation requires a permit to construct, operate or maintain an industrial wastewater lagoon. The regulation establishes three general classes of industrial wastewater lagoons with specific lagoon liner requirements. The proposed regulation does not promulgate or amend contaminant-specific standards for which a risk analysis might be completed. The projected increased capital and annual costs associated with the implementation of this regulation is expected to range from \$893,238 to \$658,050 per year for industrial facilities.

**K.A.R. 28-16-163. Required hydrogeologic information for new or modified municipal, commercial, or industrial wastewater lagoons.** This regulation establishes the minimum number and depth of borings or excavations that are required; specifies information to be obtained during the hydrogeologic site investigation; exempts erosion-control ponds associated with construction activities from the hydrogeologic information require-

(continued)

ments; and requires KDHE notification prior to conducting any field work and requires the field work be conducted by an engineer or geologist licensed to practice in Kansas. Within the context of the regulatory impact statement, the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed. The projected increased capital and annual costs associated with the implementation of this regulation is expected to be \$56,121 per year for approximately 13 proposed municipal, commercial and industrial lagoon sites.

**K.A.R. 28-16-164. Municipal, commercial, and industrial wastewater treatment system lagoons: soil liner design.** This regulation requires soil data and calculations be submitted with construction plans and specifications documenting the capability of meeting the maximum soil liner seepage criteria, and requires a minimum thickness of one foot of natural soil or constructed soil liner be provided. Within the context of the regulatory impact statement, the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed. The costs associated with this regulation have been previously summarized in K.A.R. 28-16-163 above.

**K.A.R. 28-16-165. Municipal, commercial, and industrial soil liners: postconstruction testing.** This regulation requires the development and submission for approval a postconstruction soil liner testing protocol; requires that within 45 days of completing construction, a certification by a licensed professional engineer be provided to KDHE that the lagoon was constructed in accordance with KDHE-approved plans and specifications; requires within eight months of KDHE authorizing use of the lagoon, postconstruction testing and submission of a certification to KDHE by a licensed professional engineer confirming whether the maximum allowable soil liner seepage rate was exceeded; and requires KDHE notification prior to conducting postconstruction testing. While the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed, the regulation does provide an environmental benefit by monitoring the construction of the soil liner and assuring the construction of the soil liner system was completed in accordance with KDHE-approved plans and specifications. The projected increased capital and annual costs are expected to be \$231,280 per year for approximately 28 municipal, commercial and industrial sites that will employ a soil liner system.

**K.A.R. 28-16-166. Requirements for impermeable synthetic membrane liners in municipal or commercial wastewater treatment system lagoons.** This regulation establishes a minimum liner thickness of 30 mils; requires a certification from the liner manufacturer regarding compatibility for use with the proposed wastewater, confirming the liner is UV resistant, and providing an estimated leakage, permeability or transmissivity rate for the product and installation method that will be specified; establishes basic construction requirements including lagoon embankment compaction, liner anchoring, liner installation, the development and use of a seam testing pro-

tol, providing a minimum of two feet of soil beneath the liner or bedding material, installation of the liner by an experienced contractor or use of an individual with experience in supervising liner installation; requires the development of a contingency plan for operating the lagoon when repairs or routine maintenance is required; and requires compliance with the secretary's direction to cease operations when the secretary determines an imminent or potential threat to public health or the environment exists. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is administrative in nature. Refer to the fiscal impact related to synthetic membrane liners summarized in K.A.R. 28-16-161. If a synthetic membrane liner were to be employed, an additional \$110 per site would be required to specify postconstruction testing protocols to be employed.

**K.A.R. 28-16-167. Requirements for impermeable synthetic membrane liners in industrial wastewater treatment system lagoons.** This regulation requires use of a primary and secondary liner with an intermediate leak detection and monitoring system; requires a minimum liner thickness of 30 mils for each liner; requires a certification from the manufacturer regarding compatibility for use with the proposed wastewater, confirming the liner is UV resistant, and providing an estimated leakage, permeability or transmissivity rate for the product and installation method specified; requires a minimum of two lagoon cells be provided; requires the leak detection and monitoring system provide for a maximum travel time for fluid penetrating the liner to reach the leak detection monitoring location within 24 hours; requires the leak detection system be capable of dewatering a minimum pumping rate of 10 times the maximum allowable synthetic membrane liner leakage rate; establishes basic construction requirements including lagoon embankment compaction, anchoring of the primary and secondary liners, and liner installation in accordance with the manufacturer's instructions; requires the development and implementation of a seam testing protocol; requires a minimum of two feet of soil beneath the secondary liner or liner bedding material; requires the development of a contingency plan to address repairs or routine maintenance of the liner; and requires compliance with the secretary's direction to cease operations when the secretary determines an imminent or potential threat to public health or the environment exists. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment. Refer to the fiscal impact related to synthetic membrane liners summarized in K.A.R. 28-16-162. An additional \$110 per site would be required to specify postconstruction testing protocols to be employed.

**K.A.R. 28-16-168. Postconstruction testing of municipal, commercial, and industrial impermeable synthetic membrane liners.** This regulation requires development and submission for approval of a liner testing protocol; requires that within 45 days of completing construction, a certification, by a licensed professional engineer, be provided to KDHE that lagoon construction and liner installation was done in conformance with KDHE-approved

plans and specifications; requires within two months of KDHE authorization for use of the lagoon, postconstruction testing and submission of a certification to KDHE by a licensed professional engineer confirming whether the maximum synthetic membrane liner leakage rate criteria was exceeded; and requires KDHE notification prior to conducting postconstruction leakage testing. Within the context of the regulatory impact statement, the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed. The proposed regulation will have an environmental benefit by ensuring the adequacy of the impermeable liner. The projected increased capital and annual costs are estimated to be \$10,060 per lagoon. Total estimated annual cost is \$70,420 for approximately seven municipal, commercial and industrial sites that will employ an impermeable synthetic membrane liner system.

**K.A.R. 28-16-169. Minimum standards of design, construction, and maintenance.** This regulation requires conformance with KDHE's "Minimum Standards of Design for Water Pollution Control Facilities" (1978), and establishes that the proposed regulations control if there happens to be a conflict between the minimum standards of design and the proposed regulations. Within the context of the regulatory impact statement, the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed. The proposed regulation does not subject the affected parties to additional costs of compliance.

**K.A.R. 28-16-170. Water, oil, or gas wells.** This regulation requires the identification of water, oil or gas wells within 600 feet of any proposed lagoon location; requires a notation on construction plans and specifications of wells that cannot be located but are suspected of being within the proposed construction area warning contractors of their existence; and requires KDHE to be notified if a well that had not been previously identified and located is encountered during construction. Construction activities in the vicinity of the well are to be terminated until such time as the well can be properly investigated, decommissioned and plugged. Within the context of the regulatory impact statement, the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed. The regulation will provide an environmental benefit by preventing the potential for a direct conduit to groundwater. The estimated cost ranges from \$6 to \$25.74 per site.

**K.A.R. 28-16-171. Monitoring wells.** This regulation allows KDHE to require use of monitoring wells and requires that the location, design and proposed construction be approved by KDHE prior to installation. Installation of monitoring wells is to be done by a KDHE-licensed water well contractor. The regulation requires, when directed by KDHE, development of a groundwater sampling and monitoring protocol. Within the context of the regulatory impact statement, the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis

might be completed. The cost to install a three-well monitoring system is estimated at \$4,598 for shallow wells (50 ft.) and \$10,133 for deep (150 ft.) wells. Annual sampling and analysis is estimated at \$206 and annual reporting to KDHE at \$20.

**K.A.R. 28-16-172. Plan and specification approval; permit issuance.** This regulation provides that KDHE approvals are not a defense for noncompliance or pollution, and prohibits deviation from KDHE-approved plans and specifications unless the proposed deviation is authorized by KDHE prior to implementation. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is administrative in nature. The proposed regulation does not subject the affected parties to additional costs of compliance.

**K.A.R. 28-16-173. Municipal, commercial, and industrial wastewater lagoons: closure requirements.** This regulation requires KDHE be notified of termination of operations or proposed lagoon closure; requires the operator to maintain a valid and effective water pollution control permit until closure is completed and approved by KDHE; requires the development and submission, for KDHE approval, of a closure plan for the lagoon; lists required elements to be addressed by the closure plan; requires periodic updating of the closure plan when conditions at the facility change or when directed by KDHE; and requires that closure be completed within one year of KDHE's authorization to initiate closure. Within the context of the regulatory impact statement, the proposed regulation does not promulgate or amend contaminant-specific standards or program requirements for which a risk analysis might be completed. Notification costs range from \$3 to \$15.37. Maintenance of a viable water pollution control permit may require payment of an annual fee ranging from \$60 to \$320 depending on the type of permit involved. Development of a closure plan is estimated at \$550 for municipal or commercial facilities and at \$500 for industrial facilities.

**K.A.R. 28-16-174. Variance of specific requirements.** This regulation requires the submission of variance requests to be in writing. Variance requests are to set forth the rationale for the variance and how the proposed alternative provides for protection of public health and the environment. The regulation allows for the granting of a variance if the request meets the intent of the regulations and provides for the protection of public health and the environment. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is administrative in nature. The proposed regulation does not subject the affected parties to additional costs of compliance.

Roderick L. Bremby  
Secretary of Health  
and Environment

Doc. No. 030750



# K A N S A S

RODERICK L. BREMBY, SECRETARY

DEPARTMENT OF HEALTH AND ENVIRONMENT

KATHLEEN SEBELIUS, GOVERNOR

May 19, 2004

Ms. Barbara Nemec  
Secretary of State's Office  
Memorial Hall, 120 SW 10<sup>th</sup> Street  
Topeka, Kansas 66612

Dear Ms. Nemec:

Please find enclosed two copies of the new industrial wastewater lagoon requirement regulations, KAR 28-16-160 thru 28-16-174. Also enclosed is a copy of the regulatory impact statement.

There will be three public hearings on these regulations on the following days:

August 19, 2004 - 7:00 p.m.  
Memorial Hall Auditorium  
120 SW 10<sup>th</sup> Street  
Topeka, Kansas

August 25, 2004 - 7:00 p.m.  
Dodge City Community College Auditorium (Little Theater)  
2501 N. 14<sup>th</sup> Avenue  
Dodge City, Ks. 67801

August 26, 2004 - 7:00 p.m.  
Sedgwick County Extension Education Center  
7001 W 21<sup>st</sup> Street North  
Wichita, Ks. 67212

OFFICE OF THE SECRETARY

CURTIS STATE OFFICE BUILDING, 1000 SW JACKSON ST., STE. 540, TOPEKA, KS 66612-1368

Voice 785-296-0461

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<http://www.kdhe.state.ks.us>

Barbara Nemeč  
May 19, 2004  
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Please publish the enclosed Notice of Hearing regarding these regulations in the June 3, 2004 issue of the Kansas Register. If you have any questions, please call Sandy McAdam at 6-6917.

Sincerely,



Roderick L. Bremby  
Secretary

RLB:sm

Enclosures

c: Sen. Dwayne Umbarger  
Bill Wolff  
Ron Hammerschmidt  
Karl Mueldener  
/ Don Carlson

**STATE OF KANSAS  
DEPARTMENT OF HEALTH AND ENVIRONMENT**

**Notice of Hearing on Proposed New Administrative Regulations**

The Kansas Department of Health and Environment (KDHE), Division of Environment, Bureau of Water, will conduct public hearings at the following locations on the following dates:

1. August 19, 2004 at 7:00 p.m.  
Memorial Hall Auditorium  
120 SW 10<sup>th</sup> Ave.  
Topeka, Kansas 66612
  
2. August 25, 2004 at 7:00 p.m.  
Dodge City Community College Auditorium  
(Little Theater)  
2501 N. 14<sup>th</sup> Avenue  
Dodge City, KS 67801
  
3. August 26, 2004 at 7:00 p.m.  
Sedgwick County Extension Education Center  
7001 W. 21<sup>st</sup> Street North  
Wichita, KS 67212

to consider the adoption of new administrative regulations addressing municipal, commercial, and industrial wastewater lagoon requirements (K.A.R. 28-16-160 thru 28-16-174).

A summary of the proposed new regulations and their regulatory impact follows:

There will be no initial or annual cost required for implementing and enforcing the proposed regulations by other agencies. The initial and annual cost and increased paperwork of implementing the proposed new regulations, by KDHE, is expected to be minimal.

**K.A.R. 28-16-160. Definitions.**

K.A.R. 28-16-160 provides a listing of terms and their definitions used in administering the proposed new regulations. Key terms defined in the regulations include "Equus beds", "Groundwater", "Groundwater separation distance", "Impermeable synthetic membrane liner", "Maximum soil liner seepage rate" or "specific discharge", "Maximum synthetic membrane liner leakage rate", and "Sensitive groundwater areas". Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is primarily administrative in nature. The proposed new regulation does not subject the affected parties to additional costs of compliance.

**K.A.R. 28-16-161. Municipal and commercial lagoons: general provisions.**

Prohibits new or modified lagoons if groundwater separation is 10 feet or less. Establishes a maximum soil liner seepage rate less than 1/4 inch per day unless constructed over sensitive groundwater areas, including the Equus Beds. Establishes a maximum soil liner seepage rate less

than 1/10 inch per day for lagoons constructed over sensitive groundwater areas, excluding the Equus Beds. New or modified lagoons over the Equus Beds are required to employ, at a minimum, a single impermeable synthetic membrane liner. New or modified lagoons over the Equus Beds may employ a constructed soil liner if groundwater separation is greater than 10 feet, in situ soils can provide an effective pollution barrier to protect groundwater, the constructed soil liner can provide a maximum soil liner seepage rate less than 1/10 inch per day, and the design provides for the installation and sampling of groundwater monitoring wells. The regulation allows use of a single impermeable synthetic membrane liner in lieu a constructed soil liner. The regulation grandfathered existing municipal and commercial wastewater lagoons except if environmental or public health threats exist or KDHE orders improvements to be implemented to address noncompliance with statutory, regulatory, or permit requirements. The regulation requires a permit to construct, operate, or maintain a municipal or commercial wastewater lagoon. The regulation contains four major provisions which would provide for an environmental benefit. While the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed, the four provisions do provide for an environmental benefit. The projected increased capital and annual costs associated with the implementation of this regulation is expected to be less than \$2,452,000 per year to municipal and commercial facilities.

**K.A.R. 28-16-162. Industrial lagoons: general provisions.**

Prohibits new or modified lagoons if groundwater separation is 10 feet or less. Allows earthen lagoons for domestic sewage treatment with a maximum soil liner seepage rate less than 1/4 inch per day and the lagoon is not constructed over sensitive groundwater areas, including the Equus Beds. Allows for earthen lagoons for domestic sewage treatment with a maximum soil liner seepage rate less than 1/10 inch per day if constructed over sensitive groundwater areas, excluding the Equus Beds. New or modified lagoons over the Equus Beds, used solely for domestic sewage, are required to employ a single impermeable synthetic membrane liner. New or modified lagoons over the Equus Beds, used solely for domestic sewage, may employ a constructed soil liner if groundwater separation is greater than 10 feet, in situ soils can provide an effective pollution barrier to protect groundwater, the constructed soil liner can provide a maximum soil liner seepage rate less than 1/10 inch per day, and the design provides for the installation and sampling of groundwater monitoring wells. The regulation allows the use of a single impermeable synthetic membrane liner in lieu of a constructed soil liner for domestic sewage. The regulation allows the use of lagoons with a soil liner if the maximum soil liner seepage rate is less than 1/4 inch per day for specific industrial process wastewaters. The regulation lists specific industrial process wastewaters, considered to have a low pollution potential, which may be directed to earthen lagoons with soil liners. The regulation incorporates provisions of KDHE's Policy Memorandum #90-2. The regulation establishes a maximum monitored or calculated leakage rate to be the more stringent of either 1/64 inch per day or the liner manufacturer's criteria for the material and installation procedures specified for the membrane liner. The regulation grandfathered existing industrial lagoons except if environmental or public health threats exist or KDHE orders improvements to be implemented to address noncompliance with statutory, regulatory, or permit requirements. The regulation requires a permit to construct, operate, or maintain an industrial wastewater lagoon. The regulation establishes three general classes of industrial wastewater lagoons with specific lagoon liner requirements. The proposed regulation does not promulgate or amend contaminant specific standards for which a risk analysis might be completed. The projected increased capital and annual costs associated with the implementation of this regulation is expected to range from \$893,238 to \$658,050 per year for industrial facilities.

**K.A.R. 28-16-163. Required hydrogeologic information for new or modified municipal,**

**commercial, or industrial wastewater lagoons.**

The regulation establishes the minimum number and depth of borings or excavations that are required. The regulation specifies information to be obtained during the hydrogeologic site investigation. The regulation exempts erosion control ponds associated with construction activities from the hydrogeologic information requirements. Requires KDHE notification prior to conducting any field work and requires the field work be conducted by an engineer or geologist licensed to practice in Kansas. Within the context of the regulatory impact statement the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed. The projected increased capital and annual costs associated with the implementation of this regulation is expected to be \$56,121 per year for approximately 13 proposed municipal, commercial and industrial lagoon sites.

**K.A.R. 28-16-164. Municipal, commercial, and industrial wastewater treatment system lagoons: soil liner design.**

Requires soil data and calculations be submitted with construction plans and specifications documenting the capability of meeting the maximum soil liner seepage criteria. The regulation requires a minimum thickness of one foot of natural soil or constructed soil liner be provided. Within the context of the regulatory impact statement the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed. The costs associated with this regulation have been previously summarized in K.A.R. 28-16-163 above.

**K.A.R. 28-16-165. Municipal, commercial, and industrial soil liners: postconstruction testing.**

The regulation requires the development and submission for approval a postconstruction soil liner testing protocol. Requires that within 45 days of completing construction, a certification by a licensed professional engineer, be provided to KDHE that the lagoon was constructed in accordance with KDHE approved plans and specifications. Requires within eight months of KDHE authorizing use of the lagoon, postconstruction testing and submission of a certification to KDHE, by a licensed professional engineer confirming whether the maximum allowable soil liner seepage rate was exceeded. Requires KDHE notification prior to conducting postconstruction testing. While the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed, the regulation does provide an environmental benefit by monitoring the construction of the soil liner and assuring the construction of the soil liner system was completed in accordance with KDHE approved plans and specifications. The projected increased capital and annual costs are expected to be \$231,280 per year for approximately 28 municipal, commercial, and industrial sites which will employ a soil liner system.

**K.A.R. 28-16-166. Requirements for impermeable synthetic membrane liners in municipal or commercial wastewater treatment system lagoons.**

Establishes a minimum liner thickness of 30 mils. Requires a certification from the liner manufacturer regarding compatibility for use with the proposed wastewater, confirming the liner is UV resistant, and providing an estimated leakage, permeability, or transmissivity rate for the product and installation method that will be specified. The regulation establishes basic construction requirements including lagoon embankment compaction, liner anchoring, liner installation, the development and use of a seam testing protocol, providing a minimum of two feet of soil beneath the liner or bedding material, installation of the liner by an experienced contractor or use of an individual with experience in supervising liner installation, and requires the development of a

contingency plan for operating the lagoon when repairs or routine maintenance is required. Requires compliance with the Secretary's direction to cease operations when the Secretary determines an imminent or potential threat to public health or the environment exists. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is administrative in nature. Refer to the fiscal impact related to synthetic membrane liners summarized in K.A.R. 28-16-161. If a synthetic membrane liner were to be employed, an additional \$110 per site would be required to specify postconstruction testing protocols to be employed.

**K.A.R. 28-16-167. Requirements for impermeable synthetic membrane liners in industrial wastewater treatment system lagoons.**

Requires use of a primary and secondary liner with an intermediate leak detection and monitoring system. Requires a minimum liner thickness of 30 mils for each liner. Requires a certification from the manufacturer regarding compatibility for use with the proposed wastewater, confirming the liner is UV resistant, and providing an estimated leakage, permeability, or transmissivity rate for the product and installation method specified. The regulation requires a minimum of two lagoon cells be provided. Requires the leak detection and monitoring system provide for a maximum travel time for fluid penetrating the liner to reach the leak detection monitoring location within 24 hours. Requires the leak detection system be capable of dewatering a minimum pumping rate of 10 times the maximum allowable synthetic membrane liner leakage rate. The regulation establishes basic construction requirements including lagoon embankment compaction, anchoring of the primary and secondary liners, and liner installation in accordance with the manufacturer's instructions. The regulations require the development and implementation of a seam testing protocol. The regulations require a minimum of two feet of soil beneath the secondary liner or liner bedding material. Requires the development of a contingency plan to address repairs or routine maintenance of the liner. Requires compliance with the Secretary's direction to cease operations when the Secretary determines an imminent or potential threat to public health or the environment exists. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment. Refer to the fiscal impact related to synthetic membrane liners summarized in K.A.R. 28-16-162. An additional \$110 per site would be required to specify postconstruction testing protocols to be employed.

**K.A.R. 28-16-168. Postconstruction testing of municipal, commercial, and industrial impermeable synthetic membrane liners.**

Requires development and submission for approval of a liner testing protocol. Requires that within 45 days of completing construction, a certification, by a licensed professional engineer, be provided to KDHE that lagoon construction and liner installation was done in conformance with KDHE approved plans and specifications. Requires within two months of KDHE authorization for use of the lagoon, postconstruction testing and submission of a certification to KDHE by a licensed professional engineer, confirming whether the maximum synthetic membrane liner leakage rate criteria was exceeded. Requires KDHE notification prior to conducting postconstruction leakage testing. Within the context of the regulatory impact statement the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed. The proposed regulation will have an environmental benefit by ensuring the adequacy of the impermeable liner. The projected increased capital and annual costs are estimated to be \$10,060 per lagoon. Total estimated annual cost is \$70,420 for approximately 7 municipal, commercial, and industrial sites which will employ an impermeable synthetic membrane liner system.

**K.A.R. 28-16-169. Minimum standards of design, construction, and maintenance.**

The regulation requires conformance with KDHE's "Minimum Standards of Design for Water Pollution Control Facilities" (1978). Establishes that the proposed regulations control if there happens to be a conflict between the Minimum Standards of Design and the proposed regulations. Within the context of the regulatory impact statement the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed. The proposed regulation does not subject the affected parties to additional costs of compliance.

**K.A.R. 28-16-170. Water, oil, or gas wells.**

Requires the identification of water, oil or gas wells within 600 feet of any proposed lagoon location. Requires a notation on construction plans and specifications of wells that cannot be located but are suspected of being within the proposed construction area warning contractors of their existence. The regulation requires KDHE to be notified if a well that had not been previously identified and located is encountered during construction. Construction activities in the vicinity of the well are to be terminated until such time as the well can be properly investigated, decommissioned, and plugged. Within the context of the regulatory impact statement the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed. The regulation will provide an environmental benefit by preventing the potential for a direct conduit to groundwater. The estimated cost ranges from \$6.00 to \$25.74 per site.

**K.A.R. 28-16-171. Monitoring wells.**

The regulation allows KDHE to require use of monitoring wells. The regulation requires that the location, design, and proposed construction be approved by KDHE prior to installation. Installation of monitoring wells are to be done by a KDHE licensed water well contractor. The regulation requires, when directed by KDHE, development of a groundwater sampling and monitoring protocol. Within the context of the regulatory impact statement the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed. The cost to install a three well monitoring system is estimated at \$4,598 for shallow wells (50 ft.) and \$10,133 for deep (150 ft.) wells. Annual sampling and analysis is estimated at \$206 and annual reporting to KDHE at \$20.

**K.A.R. 28-16-172. Plan and specification approval; permit issuance.**

The regulation provides that KDHE approvals are not a defense for non-compliance or pollution. The regulation prohibits deviation from KDHE approved plans and specifications unless the proposed deviation is authorized by KDHE prior to implementation. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is administrative in nature. The proposed regulation does not subject the affected parties to additional costs of compliance.

**K.A.R. 28-16-173. Municipal, commercial, and industrial wastewater lagoons: closure requirements.**

Requires KDHE be notified of termination of operations or proposed lagoon closure. Requires the operator to maintain a valid and effective water pollution control permit until closure is completed and approved by KDHE. The regulation requires the development and submission for KDHE approval, a closure plan for the lagoon. The regulation lists required elements to be addressed by the closure plan. Requires periodic updating of the closure plan when conditions at the facility change or when directed by KDHE. The regulations require that closure be completed within one

year of KDHE's authorization to initiate closure. Within the context of the regulatory impact statement the proposed regulation does not promulgate or amend contaminant specific standards or program requirements for which a risk analysis might be completed. Notification costs range from \$3 to \$15.37. Maintenance of a viable water pollution control permit may require payment of an annual fee ranging from \$60 to \$320 depending on the type of permit involved. Development of a closure plan is estimated at \$550 for municipal or commercial facilities and \$500 for industrial facilities.

#### **K.A.R. 28-16-174. Variance of specific requirements.**

Requires the submission of variance requests to be in writing. Variance requests are to set forth the rationale for the variance and how the proposed alternative provides for protection of public health and the environment. The regulation allows for the granting of a variance if the request meets the intent of the regulations and provides for the protection of public health and the environment. Within the context of the regulatory impact statement, this regulation will not have a direct impact on public health or the environment as it is administrative in nature. The proposed regulation does not subject the affected parties to additional costs of compliance.

The time period between the publication of this notice and the last scheduled hearing constitutes the public comment period for the purpose of receiving written public comments on the proposed new administrative regulations. All interested parties may submit written comments prior to the scheduled hearings to Donald Carlson, Kansas Department of Health and Environment, Bureau of Water, 1000 SW Jackson, Suite 420, Topeka, Kansas 66612-1367. All interested parties will be given a reasonable opportunity to present their views orally on the proposed regulatory action during the hearings. Because of the expected level of public participation at the hearings, KDHE recommends that individuals proposing to present oral testimony at the public hearings, provide the hearing officer with a written copy of their comments and recommendations at the hearing. This will ensure that KDHE receives the individuals complete comments and recommendations in the event the hearing officer must limit the extent of oral presentations in order to give all parties an opportunity to present their views at the hearing. The public comment period will officially close at the conclusion of the last scheduled hearing.

Copies of the proposed new regulations, and the regulatory impact statement containing the economic impact and environmental benefit statements may be obtained from the Kansas Department of Health and Environment, Bureau of Water by calling (785) 296-5545. Copies of the proposed new regulations, the regulatory impact statement, and KDHE's "Kansas Sensitive Groundwater Areas for Wastewater Lagoons - November 1, 2003" may be accessed on KDHE's Bureau of Water home page located at [www.kdhe.state.ks.us/water](http://www.kdhe.state.ks.us/water) or at [www.kdhe.state.ks.us/indust/ProposedLinerRegs.htm](http://www.kdhe.state.ks.us/indust/ProposedLinerRegs.htm). Individuals with questions pertaining to the proposed new regulations can obtain assistance by calling (785) 296-5545.

Any individual with a disability may request accommodation in order to participate in the public hearings and may request the proposed new regulations and regulatory impact statement in an accessible format. Requests for accommodation to participate in a hearing should be made at least five working days in advance of the hearing by contacting Dorothy Geisler at (785) 296-5545 or by fax at (785) 296-0086.

Roderick L. Bremby  
Secretary of Health and Environment