

Approved 2-9-88
Date

MINUTES OF THE SENATE COMMITTEE ON ENERGY & NATURAL RESOURCES

The meeting was called to order by Senator Merrill Werts at
Chairperson

8:00 a.m./~~p.m.~~ on February 2, 1988 in room 123-S of the Capitol.

All members were present except:
Senator Vidricksen - Excused

Committee staff present:

Ramon Powers - Research Laura Howard - Research
Don Hayward - Revisor Raney Gilliland - Research
Nancy Jones - Secretary

Conferees appearing before the committee:

Stanley Grant, Secretary, KDHE
Ron Hammerschmidt, Director Bureau of Environmental Remediation
Charlene Stinard, Natural Resource Council
Margaret Ahrens, Sierra Club
Vic Studer, Kansas Rural Center
Mary Ann Bradford, League of Women Voters
James Turner, Kansas League of Savings

A motion was made by Senator Thiessen to approve minutes of the January 21, 22, 26 and 27 meetings, seconded by Senator Hayden. Motion carried.

Hearing for proponents on:

SB 455 - Enacting the Environmental Contamination Response Act

Chairman Werts called upon Secretary Grant to explain the bill and reasons for requesting introduction.

Secretary Grant testified that SB 455 arose out of testimony provided to the interim committee by KDHE. Not included in the Governor's budget proposal is establishment of a state-wide environmental registry which carries a significant fiscal impact. Secretary Grant believes the registry concept should be studied for another year and KDHE is prepared to propose an amendment deleting that portion of the bill. With this one exception, Secretary Grant feels passage of the legislation is important. (Attachment I)

Ron Hammerschmidt testified that SB 455 will provide authority and procedures for dealing with changes in contamination problems not recognized under the Kansas Superfund authority. Understanding of the vulnerability of the groundwater resources and the necessary level of protection have increased substantially in recent years. Contamination problems are being identified more rapidly and obstacles which reduce ability to respond must be removed. Mr. Hammerschmidt summarized the provisions of Sections 2 thru 10 and stated SB 455 provides an opportunity to enact comprehensive and progressive legislation concerning remediation of environmental contamination in the state and recommends passage of the bill. (Attachment II)

Jim Turner testified in support of efforts being taken for remedial action on contamination sites in SB 455, but he has reservations about priority lien rights to real property as provided in the bill. As written, serious questions are posed to future lending within the state as well as possible impairment of existing contracts. Mr. Turner feels penalties should be paid from assets of the responsible individual rather than responsibility to those with prior lien rights. Mr. Turner concluded with a request to delete lines 401 through 403 of Section 9 from SB 455. (Attachment III)

CONTINUATION SHEET

MINUTES OF THE SENATE COMMITTEE ON ENERGY & NATURAL RESOURCES,
room 123-S, Statehouse, at 8:00 a.m.~~p.m.~~ on February 2, 1988.

A joint statement was presented by representative of four organizations as follows:

Margaret Ahrens stated establishment of the registry prevents fraudulent selling of contaminated property and protects property owners with the inclusion of the right of appeal to the Department and a court of law. Ms. Ahrens testified in support of the access authority granted the Department in SB 455.

Charlene Stinard testified in support of the expanded definition of contamination in this bill and single agency responsibility for clean up. Liability aspects included in the bill assures remediation will be funded by responsible parties rather than by state funds.

Vic Studer testified as supporting clearly stated rules and regulations as this will benefit everyone under the specific guidelines to be followed by the Department.

Mary Ann Bradford stated that all organizations presenting this testimony agree that parties responsible for contamination should bear the costs of remediation. Ms. Bradford also favors continuing intensive study be made of SB 455 as new concepts of environmental law are involved. (Attachment IV)

Meeting adjourned. The next meeting will be February 3, 1988.

2-2-88

Guest List

Stan Grant	KDHE
James Power	KDHE
Dennis Murphy	KDHE
Gary K. Hulitt	KDHE
Bernard A. Koch	Wichita Chamber
Don Tannahill	Professional Lawn Care Assoc. of ^{Mid} America
Dick E. Weiser	Kan. Termite & Pest Control Association
Ed Reinert	League Women Voters
Margaret Ahrens	Ks. Chapter Sierra Club
MaryAnn Bradford	League of Women Voters
Viv Studer	KS Rural Center
Charlene Stinard	Ks Natural Resource Council
Leland E. Polp	DWR, KSBA
W. A. Hawkins, Jr.	Plant Health Div., K.S.B.A.
Dale Lambson	" "
Joe Lieber	Ks Co-op Council
Shelley Sutton	KS Engineering Society
Nathy Allen Duncan	
Lee D. Morris	KLSI
Mary Pinkerton	KCC
Ross Martin	KPC
Charles Hickey	Ks Oil Marketers Assn.
Rebecca Rice	Ameco
Jan Johnson	Budget Division
Ron Gaches	Boeing
Rob Hodges	KCCI
Janet Stubbs	HBAK
Tom Sumell	Kansas Fertilizer & Chemical Assn.

JERRY COOPER
James R. Turvek
Dave Corliss
William L. Mitchell
Bernie Laverentz
JOE HARRINS
JIM YOUNG
Diane Silver
Lee Eisenhower
Kenneth M. Wilke
Don Schuack
John Strickler
Bee Juller
Shawn McGrath
Jim Wang
Lisbeth Buyer
John Wang
Tom Whitaker

KGSE
Ks. League of Savings
Lg. of Municipalities
KANSAS LAND TITLE ASSN.
Chemical Waste Management
Ks WATER OFFICE
CHEMICAL WASTE MANAGEMENT
People - Beers
Ks LP-Gas Assoc.
Ks. Bd of Agriculture
ICJ OGRA -
Governor's office
Kansas Farm Bureau
KWO
Ks Bankers Assoc.
Ks Natural Resource Council
Ks Land Title Assn
Ks Motor Carriers Assn

SENATE BILL 455

Final Copy
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2/13/89

INTRODUCTORY TESTIMONY BY STANLEY C. GRANT, SECRETARY, KDHE

MR. CHAIRMAN; MEMBERS OF THE COMMITTEE:

I WOULD LIKE TO OFFER SOME OPENING COMMENTS REGARDING SB 455, AND THEN ASK DR. RON HAMMERSCHMIDT, DIRECTOR OF THE BUREAU OF ENVIRONMENTAL REMEDIATION AT KDHE, TO ADDRESS THE MORE TECHNICAL ASPECTS OF THIS LEGISLATION.

SB 455 WAS PROPOSED AS A COMPREHENSIVE ENVIRONMENTAL REMEDIATION ACT WHICH GREW OUT OF TESTIMONY PROVIDED BY KDHE STAFF TO THE INTERIM COMMITTEE ON ENERGY AND NATURAL RESOURCES LAST FALL.

THOUGH WE BELIEVE VERY MUCH IN THE ENVIRONMENTAL CONCEPTS THIS BILL WOULD PROVIDE, WE RECOGNIZE THAT A CERTAIN PART OF THIS LEGISLATION IS NOT INCLUDED IN THE GOVERNOR'S BUDGET PROPOSAL. THAT PORTION OF THE BILL ESTABLISHING A STATE-WIDE ENVIRONMENTAL REGISTRY WHICH WOULD RECORD ENVIRONMENTAL CONDITIONS ON PROPERTY RECORDS WHEREVER NECESSARY, WAS NOT INCLUDED IN THE GOVERNOR'S BUDGET RECOMMENDATIONS FOR 1989.

WE FULLY SUPPORT ALL OF THE REMAINING PORTIONS OF THIS BILL. THE REGISTRY IS AN IMPORTANT CONCEPT, BUT IT CARRIES A SIGNIFICANT FISCAL IMPACT. WE BELIEVE THE CONCEPT SHOULD BE DISCUSSED AND PERHAPS STUDIED FOR ANOTHER YEAR. WE ARE PREPARED TO SEEK AN AMENDMENT TO DELETE THE PORTION OF THE BILL PERTAINING TO THE REGISTRY.

ATTACH I
2-2-89

EXCEPT FOR THE REGISTRY, PASSAGE OF THE BILL IS IMPORTANT AS ENABLING LEGISLATION FOR WATER PLAN PROPOSALS IDENTIFIED IN THE GOVERNOR'S BUDGET MESSAGE. THOUGH THERE IS A SMALL FISCAL STATEMENT IN THE REMAINDER OF THE BILL, THAT AMOUNT IS COVERED IN THE GOVERNOR'S MESSAGE.

I WOULD PROPOSE THAT DR. HAMMERSCHMIDT GIVE HIS PREPARED TESTIMONY NOW AND WHEN HE IS FINISHED WE WILL STAND FOR YOUR QUESTIONS, IF THAT MEETS YOUR APPROVAL.

THANK YOU. DR. HAMMERSCHMIDT.

STATE OF KANSAS



DEPARTMENT OF HEALTH AND ENVIRONMENT

Forbes Field

Topeka, Kansas 66620-0001

Phone (913) 296-1500

Mike Hayden, *Governor*

Stanley C. Grant, Ph.D., *Secretary*

Gary K. Hulett, Ph.D., *Under Secretary*

Testimony Presented to

Senate Energy and Natural Resources

by

The Kansas Department of Health and Environment

Senate Bill 455

Background:

It has been three years since the legislature created the Hazardous Waste Cleanup Fund, also known as the Kansas Superfund. During those three years both state and federal programs for responding to environmental contamination problems have changed significantly. Senate Bill 455 will provide authority and procedures for dealing with some of the problems that have arisen related to the cleanup of this contamination.

The prevention of environmental contamination is the primary focus of environmental regulatory programs in the state. Of particular concern is the prevention of groundwater contamination in the state. However because of numerous past activities, there are a number of problems which we must address now. As we have begun to examine closely the quality of the public water supply wells, private water wells and groundwater in the state, it has become apparent that environmental contamination does exist. The operation of sanitary landfills, the poor design and operation of septic tank systems, the failure to take proper precautions in the production of oil and gas, the improper handling and disposal of hazardous materials, and the storage of petroleum and other chemicals in underground tanks have all contributed to environmental contamination in the state. In general this contamination has not occurred as the result of malice or disregard for the law, rather it has occurred as the result of a lack of awareness on the part of the responsible parties. Over the past decade our understanding of the vulnerability of our groundwater resources and the level of protection that must be used has increased substantially.

Unfortunately, we find ourselves in a situation where we are identifying problems faster than we can resolve them due to constraints of federal, state and private funds. That isn't to suggest that we should lessen efforts to detect contamination. Rather it means that we should make every effort to remove or reduce obstacles that hinder or reduce our ability to respond to such

ATTACH II
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problems in an efficient and timely manner. We should make every effort to perform necessary remedial actions in the most cost-effective manner. Senate Bill 455 provides a number of authorities which will facilitate and improve our ability to perform the remediation of environmental contamination.

State Remediation Program:

In 1987 KDHE submitted the Report on Contamination Sites in Kansas. That report included detailed information regarding the type and extent of contamination at each site, the priority for action at each site and the status of the site. The sites listed in this report occur in all parts of the state. The types of contamination are varied and numerous. Cleanup of some sites will be fairly straightforward. Other sites will require the use of innovative, state-of-the-art remediation techniques. When possible we attempt to identify the RESPONSIBLE PARTY at a site and have this party perform the site cleanup. Our approach to contaminated sites has been simple in theory:

- 1) Conduct a preliminary investigation to identify the problem and any Responsible Parties
- 2) Determine the nature of risks to the public health and safety, and potential for further environmental contamination.
- 3) Work with the Responsible Party to develop and implement a suitable cleanup.
- 4) In the event that the Responsible Party is unable to perform this work, or if there is not a known Responsible Party, appropriate Federal or State funds are used to perform the cleanup.

While we have been able to identify a financially solvent Responsible Party for many of the projects at contaminated sites, there are numerous cases in which there is no available Responsible Party. For every project such as the Boeing Military Airplane Company which is handled in a professional manner by the Responsible Party, there is a site like the High Plains Chemical facility where there is no viable party to perform the cleanup. Senate Bill 455 contains a number of provisions which will help the department perform the remediation of environmental contamination in the state.

Bill Provisions:

Section 2 states the definitions for several key words and phrases. These include:

- Contaminant
- Contaminated site
- Release.

Section 3 states the powers of the Secretary of Health and Environment under this bill. Included are:

- 1.) To require the submission of information.
- 2.) To determine if remedial action is needed.
- 3.) To gain access to sites.
- 4.) To control access to sites if necessary to protect public health.
- 5.) To assign personnel and resources for activities authorized under this act.
- 6.) To develop contracts or agreements for remedial actions or maintenance.
- 7.) To expend money from a variety of funds.
- 8.) To issue administrative orders.
- 9.) To perform cost recovery actions.
- 10.) To adopt rules and regulations as needed.
- 11.) To assess penalties.

Section 4 establishes the Contaminated Site Registry. This section defines the process for:

- 1.) Placing a site on the Registry
- 2.) Investigation of sites
- 3.) Removal of a site from the list.

This section also requires the department to file notice with the County Register of Deeds that a site is on the Contaminated Site Registry and the annual publication of the Site Registry.

Section 5 provides for:

- 1.) The investigation of contaminated sites.
- 2.) The identification of Responsible Parties.
- 3.) The participation of the Department in CERCLA, SARA and LUST programs.

In addition this section also:

- 1.) Defines the responsibilities of these Parties.
- 2.) Establishes Site Access authority for the Department.
- 3.) Requires the development and adoption of Site Cleanup Standards by the department.

Section 6 creates the Environmental Contamination Response Fund and provides for the management of state and Federal funds for environmental remediation activities. This section also abolishes the Pollutant Discharge Cleanup Fund and the Hazardous Waste Cleanup Fund.

Section 7 contains several provisions:

- 1.) Establishes criteria for Responsible Parties.
- 2.) States strict liability standards in proportion to the contribution of each party at a site.
- 3.) Provides for triple cost recovery in the event that a Responsible Party does not cooperate in site activities.

Section 8 establishes criminal penalties for activities resulting in contamination and authorizes fines for violations of the act.

Section 9 defines the status of the state as a lien holder for recovery of remediation expenses.

Section 10 provides for the right of any affected party to appeal any action taken by the department under this bill through the standard administrative and judicial process.

Conclusion and Recommendation:

Senate Bill 455 is a comprehensive environmental contamination response act which provides the Department with authorities needed to address environmental contamination in the state. These authorities include: Site Access, Development of a Site Registry, Cost Recovery and Adoption of Cleanup Standards. In addition, this bill defines Responsible Parties, and the Liability of these Responsible Parties. In addition, Senate Bill 455 clearly delineates the authority of the Secretary of Health and Environment to perform environmental remediation within the state. All of these authorities and statutory definitions are needed to address environmental contamination in Kansas. Current state law does not address many of the issues that are raised in conjunction with the remediation of environmental contamination. This bill provides necessary authorities and definitions for the department. These authorities are necessary to perform investigations at potentially contaminated sites, and to plan and implement remedial activities at these sites. Senate Bill 455 also empowers the state to recover the costs of these investigations and remedial activities from financially viable responsible parties. In addition, this bill provides clear and precise direction for environmental remediation activities in the state.

Senate Bill 455 provides a unique opportunity for the legislature to enact comprehensive and progressive legislation concerning the remediation of contaminated ground and surface water and soil. The authorities contained in Senate Bill 455 are similar to provisions in the CERCLA and SARA Federal statutes and the statutes of other states. These authorities are not as broad as those of other states. For example one state requires the approval of the state environmental protection agency for all transfers of industrial property within the state. The proposed legislation will however sufficiently increase the ability of the state to respond to the challenges posed by the contaminated sites throughout the state. The effects of the passage of Senate Bill 455 will be felt by both current and future generations. The passage of Senate Bill 455 is necessary for the improvement of the environment of this state, and the protection of the public health of its citizens. Both of these factors are essential to the continued health and well being of Kansas and its citizens.

Presented by:
Ronald F. Hammerschmidt, Ph.D.
Director
Bureau of Environmental Remediation
February 2, 1988

**Testimony on the Environmental Remediation
Program in Kansas**

Presented to the Special Committee on Energy and Natural Resources

**By: Dennis Murphey
Bureau of Environmental Remediation
Kansas Department of Health
and Environment**

August 11, 1987

Background

It has been three years since the legislature created the Hazardous Waste Cleanup Fund, otherwise known as the Kansas Superfund. During that three year period both the state and federal programs for responding to environmental contamination problems have gone through significant transitions. I would like to take a few minutes today to review KDHE activities related to contaminated sites, to discuss the relationship of the state and federal Superfund programs, and to identify several issues appropriate for statutory resolution which have arisen during our implementation of the state superfund program.

Certainly the prevention of groundwater contamination and other forms of environmental contamination is the primary focus of our environmental regulatory efforts. However, we recognize that numerous activities of society over the past few decades have created a legacy of environmental problems with which we are struggling today. Although in general we continue to be the fortunate beneficiaries of substantial quantities of good quality groundwater in Kansas, we have identified numerous local areas where the quality of groundwater has been degraded to such an extent that it is not usable for many beneficial uses such as human consumption and/or irrigation. As we have begun looking closer at the quality of our public water supply wells, private water wells, and groundwater near many facilities where activities have the potential to contaminate soil and groundwater, we have confirmed many of our suspicions and serious concerns. The operation of our sanitary landfills, the storage of petroleum products and chemicals in underground tanks, the poor design and operation of septic tank systems, the failure to take proper precautions in the production of oil and gas, the improper handling of hazardous wastes, the careless discarding of small quantities of cleaning solvents and degreasers, and the inappropriate management of agricultural chemicals and their residuals are but a sampling of the types of activities which have created substantial environmental contamination problems. In general such problems have occurred, not through malice or willful disregard for the law, but rather as a result of lack of awareness of the consequences of certain activities. Over the past decade our understanding of the fragility of our groundwater resources and the level of care we must exercise as a society to protect them has grown substantially.

Unfortunately, we have found ourselves in a situation where we are identifying problems faster than we can resolve them, given current levels of federal, state, and private funding. That isn't to suggest that we should reduce our efforts to monitor public water supplies or the quality of groundwater near potential sources of contamination. It does mean that it is essential for us to critically review our efforts to ensure that we eliminate any obstacles which reduce our ability to respond as efficiently

and timely as possible, that we maximize the results of every dollar spent to correct environmental problems, and that to the extent possible we allocate the cost of cleanup to the party(s) responsible for creating the contamination. These precepts have been a guiding philosophy of our state program. I hope to raise a number of significant policy issues where your actions can facilitate our efforts and provide us with a clearer indication of legislative intent. But first, let me discuss briefly the relationship of our state program with the federal Superfund.

The Federal Superfund Program

EPA uses Cooperative Agreements to provide federal funds to states for their participation in the Superfund Program. Support can be provided for preliminary investigation of sites to gather sufficient information to determine whether a site is eligible to be included on the National Priority List (NPL). It is clear that few Kansas sites will ever be eligible for cleanup using the federal Superfund. Of the last 14 sites investigated under a Cooperative Agreement only 3 of them scored high enough to even be considered for the NPL.

Once sites have been submitted as candidates for the NPL they can be designated as state-lead or EPA-lead. At state-lead sites, EPA can provide additional funding for the state to conduct a remedial investigation/feasibility study (RI/FS) to determine the full extent of the problem and to evaluate the alternative approaches to resolving it. If the site is an EPA-lead project, then a limited amount of funds can be provided to the state for its participation in the project through review of workplans, provision of comments to EPA, and assistance in public information activities.

After completion of the RI/FS, a record of decision is prepared by the EPA Regional Administrator (with input from the state) and a public hearing is scheduled to discuss the proposed course of remedial action. Then a detailed remedial design is prepared and implemented.

If no responsible party is willing and able to implement the remedial action, then 90% of the cost for its implementation will be federally funded, contingent upon a state match of 10% of the total cost. If the site was owned and operated by the state or a local unit of government, then the cost share becomes 50%. In either case the state must also commit to operation and maintenance activities at the site after the first year (or after 10 years in the case of groundwater clean-ups).

In the past three years the federal Superfund program has matured considerably, partially as a result of the 1986 Superfund Amendments and partially due to lessons learned through trial and error. Over that same time span our relationship with the Region

VII Superfund program has likewise evolved. They are providing more financial support for state activities at NPL sites and have been more responsive to our input and recommendations.

A new source of federal resources to address contamination problems is the Leaking Underground Storage Tank (LUST) Trust Fund. Funding is available for state programs to investigate leaking tanks and to support enforcement and remedial activities. KDHE is currently negotiating with EPA for such funds.

The State Program

In January of this year KDHE submitted to you the 1987 Report on Contamination Sites in Kansas. It included a substantial amount of information regarding the inventory of known contaminated sites, a preliminary ranking system to aid in establishing priorities for departmental action, and a brief description of the status at each site. At that time the inventory contained 332 sites. However, since the inventory is a dynamic document to which sites are continually being added or deleted, a number of additional sites have been identified through various means--the activities of KDHE's Bureau of Water Protection and Waste Management, complaints from private citizens, and contacts from banks and other financial institutions regarding bankrupt commercial/industrial facilities, just to mention a few.

In the recent past the term contaminated sites might have brought to mind only the NIES site near Furley. However, as a result of the cessation of use of numerous public supply wells, the notification to many private well users that their water supply is contaminated to an extent that it is not recommended for long-term consumption without additional treatment, KDHE meetings with citizens and local officials to discuss contamination problems, KDHE staff presentations to the Kansas Water Office's Basin Advisory Committee meetings, and local media focus upon environmental issues, the public's level of awareness regarding contamination sites has grown considerably. From Galena to Menlo, from Coffeyville to Fairview, from Kansas City to Wichita, Kansans are being personally confronted with the impacts of environmental contamination on a daily basis. By its very nature, the remediation program brings KDHE into contact with people who are directly affected by environmental problems. However, through personal experience many Kansans are becoming more knowledgeable of the consequences of mishandling chemicals and products which allow us to enjoy our high standard of living.

In the long term one of the most productive uses of state resources to address/prevent environmental contamination problems would be to develop an environmental curriculum for the public school system. If we actively educate our children regarding the relationship between personal actions of individuals and the quality of our environment, perhaps the next generation would have a greater appreciation of the impacts upon society that

their actions at home and in the workplace might have. No single approach is a panacea, but environmental education holds the potential to positively impact the behavior of many people in ways which will reduce the number of sites requiring remediation in the future.

Although I would like to see our efforts to prevent environmental contamination sites be so successful that a comprehensive waste management strategy could be developed for Kansas that would identify no need for a remedial program at KDHE, the unfortunate reality is that it will be many years before the remedial staff can work themselves out of a job. The cleanup and disposal of waste materials and contaminated soil can be completed within reasonably short time periods. But groundwater cleanup projects can take many years, even decades, to reduce the contaminant concentrations to levels that are acceptable for human consumption.

Our approach to contaminated sites has been simple and straight forward in theory: 1) conduct a preliminary investigation sufficient to identify any responsible parties and to determine whether any short-term risks require immediate resolution, 2) work with the responsible parties to eliminate all sources of contamination, to assure that the full extent of the problem is identified, and to ensure that a satisfactory remediation plan is developed and implemented, 3) failing to identify a responsible party or one who is willing and capable of correcting the problem, utilize federal resources such as the Superfund and the new LUST Trust Fund, and 4) failing to achieve a response by either of the above methods, utilize state resources to respond to those situations which are critical due to the present risk or where prompt action can provide a cost-effective resolution.

Unfortunately, in practice the situations are not nearly so simple and direct. While we have been fortunate in achieving a high level of cooperation from parties who have been identified as the source of a contamination problem, in many cases it is virtually impossible to identify responsible parties. In other cases the responsible parties may be bankrupt, unwilling to accept responsibility for corrective action, or incapable of providing the remedy.

-- For every situation such as Boeing Military Airplane Company in Wichita where a private party discovers trichloroethylene in groundwater, promptly reports it to KDHE, proceeds to rapidly investigate the extent of the problem, and works cooperatively with the department to implement a cleanup program, there is a situation such as the High Plains Chemical site in Menlo where the toxic

remains of a bankrupt aerial applicator of pesticides lies exposed to the environment and unsuspecting passersby, with no viable party to clean up the mess and secure the area.

- In contrast to an area such as 29th and Mead in north Wichita where a collection of industries has begun a process which holds the prospect of a voluntary, cooperative effort to resolve a regional groundwater contamination problem, there is a Pester refinery site in El Dorado where corrective action awaits the resolution of disputes regarding the status of environmental cleanup costs vs. secured creditor claims in a bankruptcy court in Iowa. In addition disputes are ongoing among various previous owners of the site regarding who is truly "responsible" for the problems, with no site work in progress.
- While at the Kansas State Penitentiary former waste lagoons have been properly closed and groundwater monitoring has identified no further problems requiring action, at Cherokee County none of the mining companies which were responsible for creation of the region's groundwater and surface water quality problems have taken any corrective action.
- Although Sherwin Williams has made a major resource commitment in cleaning up problems at their Coffeyville facility resulting from decades of operating a lead smelter and pigment manufacturing operation, in Fairview it appears that the organic chemical contamination which has rendered some private wells unsafe for long-term consumption and has the potential to affect the Rural Water District wells if not resolved, may have been the result of parties unidentifiable or no longer financially viable.
- Even though Riley County officials have agreed to provide alternate water to residents whose private wells have been contaminated or are threatened by the leachate from the county's sanitary landfill and are moving forward to develop a remedial action plan and new system for managing the county's solid waste, there are communities such as Galva and Abilene where public water supply wells have been taken out of service due to contamination with no immediate resolution available to the communities.

The point of using these specific examples is merely to illustrate that the remedial program has been a mixture of successes and frustrations. As a state official and an environmentalist, it is very satisfying to participate in the projects which lead to the resolution of contamination problems which are causing or threaten to cause harm to Kansas citizens and our irreplaceable nature resources. However, the problems which lead to protracted litigation, impasses between the department and responsible parties regarding the appropriate remedy, or a decision that no resolution of the problem is technically or economically possible, provide an equally intense sense of dissatisfaction. It is our sincere hope that through an open discussion of various issues related to the program you as the policy making body and KDHE as the executive agency responsible for implementation of public policy can enhance the operation of the remedial program and make it more responsive to the needs of Kansas.

I will identify critical issues, cite specific examples to illustrate the particular points and suggest statutory remedies which have been implemented in other states or which seem appropriate to our situation in Kansas. In other areas I will be able only to identify the obstacle to program efficiency without a specific approach to resolution. In all cases the objective is to foster public discussion on issues of import to us all.

I. Responsible Parties. A statutory definition of responsible parties would provide clarification to the department and the private sector regarding responsibility for remediation of contaminated sites. At present we are dependent upon virtually non-existent case law on this point in Kansas. The department just recently settled a cost recovery action involving the Mark IV Fiberglass site in Stanley. Rather than litigate for the full amount with a considerable degree of uncertainty regarding the court's perspective as to responsibility in the absence of clear legislative intent, we accepted \$50,000 of a total state expense of \$99,126 from a party who is the current site owner but whose actions did not directly result in the abandonment of the wastes on site. We hope to initiate action against previous site owners or operators for the remainder of the state's expense from the Hazardous Waste Cleanup Fund to remove and dispose of the hazardous wastes on site. One approach is to parallel the federal Superfund language and clearly state that a current site owner or operator is responsible for the present conditions at the site if the person knew or should have known that such conditions existed at the time of purchase. An expressed right of joinder can be given which allows a current owner to implead other parties whose actions partially resulted in the problem, so they are required to participate in the solution. This issue comes up time and time again with no clear answer as to who is a responsible party in Kansas.

II. Multiple Parties. Sites which involve more than one facility/responsible party pose substantial difficulties both for the parties and for the department. In many cases a significant amount of finger-pointing goes on among the parties, with little substantive corrective action taking place. In the case of Strother Field and the Potwin refinery/tank farm sites a considerable amount of time was lost while the various parties debated their respective degrees of liability for the corrective action. Eventually both projects proceeded. At Strother Field General Electric initiated a groundwater cleanup on the north end of the field and at Potwin several of the various companies involved have begun a jointly-funded investigation. At the 29th and Mead site in north Wichita, a regional groundwater problem in a square mile area which includes approximately 70 businesses, we have encouraged the various companies to work collectively and cooperatively with KDHE to carry out the necessary investigation and cleanup. At this point the prospects for success look very promising.

A clear statement in our statutes confirming that strict, joint and several liability is the law in Kansas would enhance our prospects for remediation by lessening the burden of proof upon the state with respect to responsibility of various parties. Also, in those cases where one or more of a group of multiple parties is willing to go forward with appropriate action, it would give us an additional tool to "encourage" any recalcitrant parties to participate with them. It should also provide the state with a stronger basis for cost recovery actions.

III. Cost Recovery. Even in cases where the responsible party is known, there are circumstances where it does not seem appropriate to seek cost recovery for moneys expended from the Hazardous Waste Cleanup Fund. The most obvious situation is that where the evidence clearly indicates that the responsible party does not have the financial resources to reimburse the fund. In the case of the High Plains Chemical site it was apparent that the corporation which had ceased operations a few years earlier had no tangible assets other than the contaminated facility and equipment. The former principal of the company was an elderly resident of the VA Hospital in Topeka living on a government pension. A cost recovery appeared to be an exercise in throwing good money after bad so we elected not to file. In another situation a 70 year-old deaf-mute couple in Kansas City applied a dosage of DDT to their yard that was 100 x the normal application rate used when DDT was legal. After consultation with the Center for Disease Control in Atlanta it was decided to erect a temporary fence to exclude children and small animals from the premises until an excavation of the top 4-6 inches of soil from the yard could be accomplished. The fencing and soil removal were performed at state expense and no cost recovery was initiated. Certainly we operate from the presumption that cost recovery will be attempted, but it would be preferable for statutory language

to indicate that the department could exercise some flexibility in determining whether to seek cost recovery so that our limited legal resources would not be used in futile or inappropriate attempts.

IV. Triple Cost Recovery. In the federal Superfund program a major incentive for voluntary cleanup by responsible parties is the potential for EPA to obtain from the responsible parties three times its costs in a federally-funded cleanup. Since we only have a reimbursement level cost recovery provision in our state law there is little incentive for a recalcitrant responsible party to initiate a cleanup. He can defer any action to the state, take his chances on successfully defending himself against a cost recovery action, and at the very worst be liable only for the actual cost of cleanup (plus legal expenses). Although most responsible parties are willing to work with the state to clean up their sites, a triple cost recovery provision would be a valuable tool to utilize for responsible parties who, without good cause refuse to implement a necessary cleanup. It would be selectively applied, similar to the use of administrative penalties in other programs.

V. Transfer of Contaminated Property. Because of the difficulties posed to the state in obtaining a cleanup of contaminated sites where ownership has been transferred and due to the potential liability to a) subsequent purchasers, b) the financial institutions carrying the mortgages for such property, and c) governmental entities who may acquire title through tax default or other mechanism, some states have enacted a variety of responses:

- 1) Establishment of a site registry including all known contaminated sites, adopted after extensive public hearings. The registry is provided to all local governing bodies of each city and county in which there is a contaminated site and to all other interested persons.

- 2) Establishment of a site registry with rights of appeal by any owner of a site proposed for listing. After sites are listed on the registry a notice is filed with the county recorder of deeds, so that until the site has been properly closed any prospective purchaser will be given notice that it is on the state registry. A few states have even gone so far as to restrict the sale, conveyance, or title transfer of all sites on their registry without written approval of the state environmental agency.

3) A couple of states require environmental audits of all property used for certain types of industrial activity before they can be legally transferred. If the audit reveals any contamination onsite, it must be cleaned up or a consent order for remedial action must be signed with the state environmental agency before transfer.

In Kansas we have compiled a state listing of contaminated sites that has involved no public hearings and which is primarily a management tool for the agency as well as an informational document for the legislature and other interested parties. Our site list does not have the status of a formal state registry. Transfer of contaminated property has certainly occurred in Kansas, the most notable case being the NIES site near Furley. Other sites such as John's Sludge Pond in Wichita, Barton Solvents in Valley Center and the Diel Farm involved the transfer to a municipality, a commercial operation and a private individual, respectively. The department has no desire to restrict the transfer of property, but it may be prudent to consider a more formal site registry, similar to that utilized in Missouri. Although some people will oppose such a concept based upon the stigma associated with a particular piece of property (and those adjacent to it) when it is listed on the registry, it does provide an element of notice which may prevent an inadvertent purchase of a problem by an otherwise unknowing and innocent party.

VI. Access. In most cases businesses and private individuals have been willing to provide KDHE with access to their property for purposes of investigation or cleanup. However, there have been cases, such as High Plains Chemical where the property owner resisted departmental attempts to gain access to the site to collect samples of soil and groundwater. In other cases such as Vulcan Materials Company and Cessna Aircraft Company in Wichita, adjacent landowners delayed the investigations for considerable time periods by refusing to grant access for drilling monitor wells. Statutory language granting KDHE the clear right of access to private property for purposes of site investigation or cleanup would streamline our efforts and improve the efficiency of the program. In times past I have heard various people express concern that the department might use such authority abusively. I assure you that such authority would be used only when an obvious need existed to gather data with regard to a contamination investigation or cleanup necessary to protect the public health and environment.

VII. Clean-Up Standards. The issue of "how clean is clean?" continues to be a difficult one for state and federal programs. A number of different approaches have been used for soil and groundwater media to establish a non-zero concentration which triggers the requirement for a cleanup to be performed and establishes the cut-off point at which the cleanup is deemed

complete. A few states with sizable staffs involved in their remedial programs have utilized an individual risk assessment approach--that is, they evaluate the type of risk associated with the contaminant(s) at the site, the type of receptor that may be susceptible to harm by the contaminant(s), and the pathways of exposure. Then, on a case-by-case basis, they establish site specific cleanup levels. While in theory this is perhaps the most ideal approach--matching the cleanup level to each individual site based upon some prescribed acceptable level of risk--in practice it is technically difficult to do. It is rather subjective, it can result in considerable controversy over the risk assessment methodology used, and it is very resource intensive. Therefore, some states with smaller staffs responsible for overseeing many sites have simplified the process by adopting a multiplier approach for soil contaminants. That is, they identify a cleanup standard of 3 or 5 or some other multiplier times the normal background level for naturally occurring contaminants. For synthetic compounds not naturally existing in soils, they apply a multiplier based upon water quality criteria: drinking water standards, aquatic toxicity levels, etc. This approach does not directly correlate with the health or environmental risks associated with a particular contamination site, but it is a much simpler and objectively measureable approach for the regulatory agency, the responsible party(s) and the public. With respect to groundwater, the comparable approach is to establish numerical groundwater standards similar to surface water standards.

At present, our remediation program has utilized target cleanup concentrations for groundwater which have been reasonably well received by the private sector. While the numbers are quite low for many constituents, they provide an objective criteria which allows for selection of technology for cleanup and provides a basis through groundwater flow modelling, for projecting the time frame required to complete a satisfactory remedial program. The two factors can then be combined to allow a cost projection to be made by the responsible party, so that they are not committing to an open-ended process with no finite conclusion.

With respect to soil cleanup criteria we have thus far utilized a best-judgement mixture of approaches embodying elements of both the multiplier method and a simplistic, informal risk assessment approach. For example, in Coffeyville off-site soil sampling around the former Sherwin Williams facility has indicated substantially elevated levels of lead, cadmium, arsenic, and barium in the soil of private residences, an elementary school, a hospital, and a municipal park. After consulting with the Center for Disease Control (CDC) and Agency for Toxic Substances Disease Registry (ATSDR) in Atlanta--two agencies who consult with EPA and state agencies on health risks posed by environmental contamination problems--and being advised that there was no short-term health risk posed by the observed levels, KDHE and

representatives of Sherwin Williams met with interested members of the community to discuss the results and explain the follow-up actions to be taken. A medical evaluation plan is being developed which will involve measurement of blood lead levels to determine if any long-term health impacts have resulted from the elevated soil contamination levels. This data, in combination with analytical results of cadmium concentrations in locally grown garden produce, will be factored into the decision upon soil remediation methods and acceptable cleanup levels.

Therefore it is appropriate to consider statutory language authorizing the Secretary to adopt cleanup standards for the state. Such standards would be subject to a public participation process to ensure that all interested parties could provide their comments. In any case it would be necessary to ensure that some flexibility was incorporated into the application of such standards so that the department and responsible parties are not locked into specific numerical values in cases where there is good cause to vary from them. It is important to understand that cleanup will not be technically or financially feasible at all sites. In some cases containment or institutional controls may be the best or only viable approach. We will coordinate our efforts with the Division of Water Resources where it is appropriate to restrict water use in certain areas due to contamination.

An additional benefit to the state from the adoption of cleanup standards is the presumption that such standards will apply at federal Superfund sites in Kansas. Under the 1986 Superfund Amendments and Reauthorization Act (SARA), EPA must consult with the states to determine the "applicable, relevant, and appropriate requirements" (ARARs) for cleanup at Superfund sites. If cleanup standards have been adopted as formal regulations by the state, EPA must either apply them at federal sites or justify why they should not be applied. In the event that a state does not have adopted standards, EPA may apply criteria of its own choosing and any more stringent criteria must be enforced by the state. Since EPA gives no recognition to the fact that under Kansas water law all groundwater belongs to the state and is held in trust for the citizens, they may allow significantly higher contaminant levels to remain in some groundwater if there is no present use of that water which would be adversely impacted.

VII. Use of the Hazardous Waste Cleanup Fund. Over the past two years, the legislature has provided the department with flexibility to use the HWCF for hazardous waste cleanup and for the activities eligible for funding from the Pollutant Discharge Cleanup Fund. This has enabled us to utilize funds for environmental contamination problems other than those strictly related to materials meeting the statutory definition of hazardous waste. If we are limited to hazardous waste sites, we can not utilize the fund to respond to problems related to PCBs, saltwater, petroleum, or many other chemical products which

constitute a majority of our known contaminated sites. If the current Hazardous Waste Cleanup Fund and Pollutant Discharge Cleanup Fund were combined into a single Environmental Contamination Response Fund with authority to utilize it for a number of activities including design and implementation of remedial action and contractual services necessary to supplement our staff expertise, it would allow us to be responsive to a wider array of contamination problems which constitute a risk to our citizens and natural resources.

IX. Liability. In several of our requests for bids from contractors to perform state-funded remedial work, we have experienced difficulties because of concerns regarding the absence of statutory language limiting the liability of contractors to negligent acts or omissions. In order to increase the potential bidders for state-funded work and to protect state employees from undue potential liability in their work, a statutory amendment limiting the liability of persons performing environmental remediation work to negligence would be desirable.

X. LUST Trust Fund. In order to remain eligible to receive federal funds for remediation of contamination problems resulting from underground tanks, the state must have statutory authority to do cost recovery from responsible parties. In addition the recovered funds must be placed into a dedicated fund to be used only for additional remedial activities related to underground tanks. Since these funds are an important resource to the state we are recommending that the legislature adopt such provisions.

These are several significant issues which have arisen during our efforts in the past couple of years to implement an effective remedial program, and we believe they are amenable to legislative action. Certainly they merit public discussion and I suspect they will be of considerable interest to a variety of parties including local units of government, industry, bankers/mortgage companies, environmental interest groups, and citizens who have been directly impacted by environmental contamination problems. There are many other issues which could be included in further discussions of this general subject area: 1) what should be the state's role in resolving contamination problems in public and private water supply wells, 2) should any liability to the state for remedial costs constitute a lien on property with priority over all other encumbrances, 3) should the costs of cleanup of contaminated sites constitute an administrative expense in bankruptcy proceedings with priority over secured creditors, 4) is there a more equitable method for funding an Environmental Contamination Response Fund rather than state general funds, and 5) if the state uses its funds to initiate a groundwater cleanup, how can the ongoing operation and maintenance expenses be provided?

Another major issue which does not require statutory resolution, but will in the near future require legislative action is the need for state matching funds for federal Superfund cleanups. Feasibility studies for the Arkansas City and Cherokee County Superfund sites are presently in progress and within the next six to eighteen months it is likely that EPA will be prepared to commit federal funds for remedial action. However, no federal money will be committed until the state agrees to provide its share of 10% matching funds. Therefore we anticipate that a request for such funds will be submitted, possibly during the next regular session. Although the cost share is 10% and the remedial costs are unknown at present, it is likely that the state share will be substantial, particularly for Cherokee County. Every site and its remedial plan is different, but the average cost of Superfund cleanups nationwide is approximately \$6-8 million. Between now and the time that a decision is required regarding matching funds for specific projects there is an opportunity to discuss and resolve a couple of basic questions: 1) should local units of government participate in the cost share for projects within their jurisdiction and benefiting their constituents, 2) are there financing mechanisms other than mere appropriation of state general funds which should be considered?

The resolution of environmental contamination problems is a inherently complex and complicated business. Over the last three years we have made considerable progress. With your help in addressing the issues identified, we can eliminate obstacles to our efforts and provide a program that is more responsive to the needs of Kansas. We can work with your staff and the Revisor's Office to prepare draft statutory language for your consideration, if you so desire. We appreciate your consideration of this important subject.

Kansas Water Plan

Quality Section

Sub-section: Water Pollution—Remediation

Kansas Water Office
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***Approved
by the
Kansas Water Authority***

September 1986

WATER POLLUTION— REMEDICATION

INTRODUCTION

The state has authority to prevent and abate pollution of surface and groundwaters. There are several programs in the state that are designed to remediate damage from pollution of water. Remediation refers to a range of efforts taken in response to an environmental contamination incident. If an imminent threat to public health, welfare or the environment exists, emergency actions are taken. A remediation program includes site investigation to determine the source and extent of contamination and the development of the course of action to be taken in dealing with the contamination. Necessary protective and corrective actions may consist of one or more steps such as monitoring, containment and clean-up. The Kansas Department of Health and Environment administers several programs to identify and deal with water contamination. In addition, the Department of Health and Environment is involved in clean-up of pollution from oil and gas activities in cooperation with the Kansas Corporation Commission. The Mined-Land Conservation and Reclamation Board, a unit of the Kansas Corporation Commission, operates a joint federal and state remediation program.

The Kansas Department of Health and Environment is presently developing a Comprehensive Groundwater Quality Protection Strategy. An advisory Task Force has been formed consisting of approximately 44 organizations, interest groups and state and federal agencies. The strategy may include such subjects as aquifer classification, groundwater quality standards, analysis of managerial, statutory, organizational and programmatic activities for groundwater quality protection and recommended changes in programs and/or legislation to promote groundwater quality protection. New policy initiatives will be reviewed by the Kansas Water Authority and, if appropriate, will be incorporated into the State Water Plan.

CONCEPTS

Modern society has a myriad of substances that have the potential to contaminate surface and groundwaters in varying degrees. Public concern over water quality issues has been growing steadily in recent years. As the number of point source pollution incidents increase, they are touching the lives of an increasing number of citizens.

Most surface water pollution is readily detectable through our senses—a fish kill occurs, a foul smell is noticed, the water is off-color. In addition, Kansas Department of Health and Environment has an ex-

tensive surveillance system whereby samples are collected and analyzed to determine the presence or absence of pollutants. Locations representing over 20,000 miles of streams and 120,000 acres of publicly-owned lakes or surface water impoundments are regularly monitored. When detected, surface water contamination is usually easily traced to the source. Surface waters have a natural cleansing process so that in a relatively short time, a surface source can recover, assuming the source of pollution is stopped.

Groundwater pollution, on the other hand, is not easy to detect and once polluted, remains that way for a very long time. Expensive, concentrated clean-up efforts must occur if the polluted resource is to be reclaimed. Statewide, more than 80 percent of all Kansas citizens rely on groundwater for their water supply.

Clearly, prevention is the method of choice in protecting groundwater, but even with regulatory programs in place for many years, a large number of groundwater pollution events from point source have occurred. The nature of the pollutants, the degree of pollution, the existing or potential damage to the environment and the risks to human and animal life vary greatly from site to site.

Existing pollution control laws do not specifically require the state to clean-up contamination when a responsible party is not identified or cannot or will not undertake clean-up operations. In addition, the existing remediation programs operate independently of each other. There is no centralized standard for prioritizing contamination from various sources or for preparing plans and obtaining funding for remediation efforts. More importantly, there are inadequate resources to make investigations of contamination sites and to prepare and implement remedial plans.

The state's water contamination remediation program must clearly define the state's responsibility to respond to pollution from point sources. In addition, a complete state program to deal with remediation must include the following elements:

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to identify and investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Each of the state's major programs that deal with remediation have been reviewed in context with these desired elements.

Volatile Organic Chemicals Screening Program:

The Volatile Organic Chemicals Screening Program includes the sampling and laboratory analysis of 50 to 150 water wells per month with the highest priority on public water supply wells. Each sample is tested for 29 different volatile organic chemicals. Early in 1985 the Kansas Department of Health and Environment issued a memorandum entitled, "Program Strategy Addressing Volatile Organic Chemicals in Kansas Groundwater." This procedural memorandum out-

lines the sampling strategy, data analysis and administrative actions necessary to sufficiently screen Kansas groundwater. Public water supply wells were selected as the first priority. The strategy established a two-tiered approach to determine necessary actions when volatile organic chemicals were detected in a sample. The Kansas notification level is the concentration at which the consumer should be notified of the presence of volatile organic chemicals by the water supply owner and the Department of Health and Environment may require corrective action. The Kansas action level is the concentration at which the provision of both notice to consumers and preventive or corrective actions is mandatory and shall be provided by the public water supply owner.

Review of Needed Elements
Volatile Organic Chemicals Screening Program

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

Farmstead Well Contamination Study:

The Farmstead Well Contamination Study is a well water quality screening program to obtain a reliable estimate of the number of farmstead wells in Kansas that are contaminated by volatile organic chemicals, nitrates, metals and/or pesticides and to obtain infor-

mation about the farmstead activities that may contribute to such contamination. Though initial results are preliminary, no significant contamination has been found. The results will be evaluated to determine necessary protective and/or corrective action.

Review of Needed Elements
Farmstead Well Contamination Study

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

Federal and State Hazardous Waste Program: ¹

There are two environmental statutes jointly administered by the Environmental Protection Agency and the Kansas Department of Health and Environment under either program delegation or on a contractual basis which are designed specifically to deal with hazardous wastes. The Resource Conservation and Recovery Act mandates effective management of hazardous waste from "cradle to grave." The Comprehensive Environmental Response, Compensation and Liability Act, or "Federal Superfund," was designed to deal with the past mismanagement of those wastes. Presently, four Kansas sites are on the federal superfund National Priority List. There are seven additional Kansas sites identified as potential candidates

for the National Priority List. Each of the 11 sites has been identified as having a potential for groundwater contamination.

Projects which do not qualify for the federal superfund are handled under the priorities of the state superfund program or by a private party. The state's potential problem sites list currently contains 316 sites. Thirty-three remedial actions are either completed or underway by responsible parties, and nine projects were initiated with funds provided by the Kansas Legislature through the Hazardous Waste Clean-up Fund (state superfund). In addition, there are 20 sites which are being considered for removal from the list.

**Review of Needed Elements
Federal and State Hazardous Waste Program**

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

Oil and Gas Regulatory Program: ¹

Regulation of activities related to oil and gas production is the responsibility of the Kansas Corporation Commission. The program currently regulates by permit and inspects over 450 surface ponds (used in conjunction with brine injection systems) and over 2,600 emergency ponds (spill or leak containment structures). The statutes provide the authority to close and eliminate ponds which are actual or potential pollution sources. The large majority of brine produced by oil and gas production is disposed of through underground injection wells or used in repressuring operations. Currently about 5,100 injection wells and 3,300 repressuring systems are permitted. Requirements for injection and repressuring wells are to en-

sure protection of fresh and usable waters, by establishing maximum injection pressures and specifying minimum depths of injection. Regulatory responsibilities also include inspection of oil and gas well completions and pluggings of abandoned wells.

The clean-up of pollution from oil and gas activities is a joint responsibility of the Kansas Corporation Commission and the Kansas Department of Health and Environment. The responsibilities of each agency in instances where pollution results from any oil or gas activity will be detailed in a Memorandum of Understanding which will be prepared pursuant to section 38 of House Bill 3078 of the 1986 Kansas Legislative Session.

Review of Needed Elements Oil and Gas Regulatory Program

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

Underground Injection Control Program: ¹

The Underground Injection Control Program is authorized and required by the Federal Safe Drinking Water Act for the purpose of preventing pollution of underground water supplies by injection or flow of potential contaminants through wells. The program is operated by the Kansas Department of Health and Environment under delegation from the U.S. Environmental Protection Agency except that the regulation of brine wells related to the oil and gas industry falls under the Kansas Corporation Commission regulatory program. The Underground Injection Control

Program incorporates extensive requirements for location, construction, operation, maintenance, monitoring and reporting for all wells which fall within program definitions. Currently included under federal and state law are wells used for waste disposal, recharge, solution mining and thermal exchange. Permits are required for well construction and operation and contain specific monitoring, testing and reporting requirements. Inspections of construction and operation are performed by the Kansas Department of Health and Environment district office staff.

Review of Needed Elements Underground Injection Control Program

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

Petroleum and Chemical Storage Tank Program: ⁴

Above and below ground tanks for storage of chemicals and petroleum products are regulated by the Kansas Department of Health and Environment for the purpose of preventing pollution of surface water, groundwater and soil. A large percentage of existing storage tanks, many of which have been in place several decades, were installed without liners, leak detectors, or special measures to prevent corrosion. The Department of Health and Environment inves-

tigates several tank leakage problems each year and anticipates that the problem with older tanks will continue to increase. The current regulatory program requires the approval of construction and installation plans for all new tanks over 1,000 gallons. This program will be modified as necessary to incorporate the requirements of the federal underground storage tank program which will regulate new and existing underground petroleum and hazardous chemical storage tanks beginning in 1986.

Review of Needed Elements Petroleum and Chemical Storage Tank Program

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

Pollution Spill Program: ¹

The Pollution Spill Program operated by the Kansas Department of Health and Environment requires that all spills of oil, hazardous or other polluting substances that are or have the potential for contaminating surface water, groundwater or soil be reported to the Department of Health and Environment. The Kansas Department of Health and Environment's Spill Program involves notification, documentation and reporting of incidents to cooperating agencies, as appropriate, and field response to the spill site to assess the severity of the incident and the need for remedial

actions. State statutes provide that the owner or responsible party is liable for all costs of remediation, including repayment for damages to resources of the state. If the responsible party refuses or is unavailable or unable to undertake remedial actions, the Department of Health and Environment is authorized to proceed with remediation using the Water Pollution Clean-up fund and collect repayment from the responsible party. Remediation costs are reimbursed to the Clean-up Fund. Recovery of damages to natural resources may be required by the Department of Health and Environment to restore the resource.

Review of Needed Elements Pollution Spill Program

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

Mined-Land Conservation and Reclamation Program:

Since 1968, the Mined-Land Conservation and Reclamation Program within the Kansas Corporation Commission has had the authority to regulate coal mining activities and reclamation of mined lands. Since 1977, the Federal Abandoned Mined Land Pro-

gram has been in effect to reclaim priority portions of pre-law mining activities. Fifty percent of a 35 cents per ton assessment for each ton of coal mined is transferred into the federal Abandoned Mined Land Program, which is returned to Kansas for use in reclamation efforts.

Review of Needed Elements
Mined-Land Conservation and Reclamation Program

1. Methods to evaluate and rank-order sites in terms of severity.
2. Methods to develop remedial plans and budget estimates.
3. Adequate funding to investigate contamination, prepare remedial plans and initiate priority remedial operations.
4. Adequate enforcement powers.
5. Adequate public notice procedures.
6. Adequate public information program.

Yes	No
X	
X	
	X
X	
X	
	X

POLICY ISSUES, OPTIONS AND RECOMMENDATIONS

Analysis of the eight major state remediation programs indicates far more strengths than weaknesses. Clearly, much progress is being made in state efforts to resolve existing known pollution problems. There remain, however, areas where improvements can be made. There needs to be a clarification of the state's responsibility to take remedial action in cases of pollution. There is also a need to develop adequate resources and standard procedures to identify and evaluate contamination sites, and to prepare remedial plans and budgets. An adequate funding source for all investigation, evaluation and remediation efforts needs to be developed, as does an adequate public information system.

Issue 1
State's Responsibility for Remediation of Water Contamination

K.S.A. 65-171v states that "whenever a water pollutant is discharged intentionally, accidentally or inadvertently and the Secretary of Health and Environment or his or her authorized representative determines that the discharged material must be collected, retained or rendered innocuous, and if a discharger refuses to undertake clean-up operations or if the responsible discharger is unknown at the time,

the Secretary . . . may enter into an agreement with a person to conduct the necessary clean-up operations." There is a need to clearly specify that the state must accept responsibility to take all necessary remedial action when a responsible party is not available or cannot or will not conduct such operations. This would not alleviate the responsible party of their financial responsibilities. The current law indicates that any person determined responsible for or causing the discharge shall be responsible for repayment of the costs of the clean-up work.

Recommendation: K.S.A 65-171v should be amended to specifically require the Secretary of Health and Environment to initiate remedial operations when a responsible party is unknown or cannot or will not conduct the necessary remedial operations. Any person determined responsible would still be responsible for repayment of the costs of the clean-up work.

Issue 2
Methods to Evaluate and Rank-Order Sites in Terms of Severity

All programs reviewed have adopted measures to evaluate sites. Some programs developed in recent years (VOC Screening, Hazardous Waste, Farmstead

Wells, Mined-Land Reclamation) have adopted formal written protocols for site evaluation. Some older programs, while following a standard procedure, do not have formal, written protocols. There is a need to assure that all programs follow similar procedures and a need to rank-order all problems together rather than developing several separate lists.

Recommendation: A standard procedure should be developed for evaluating and rank-ordering water quality problems. An example of steps in such a protocol are:²

- a) Identify pollution site and apply emergency correction measures to protect public health, welfare and the environment.
- b) Sample collection.
- c) Interview of area residents.
- d) Field observations.
- e) Check for sources of pollution.
- f) Coordinate with local officials.
- g) Review published material for soil conditions, surface and subsurface geology and groundwater conditions.
- h) Report findings of initial site investigation and data analysis.

Issue 3 Method to Develop Remedial Plans and Budget Estimates

All existing programs have the capability to develop remedial plans and budget estimates. However, there is no standard procedure for the process.

Recommendation: The Department of Health and Environment and the Kansas Corporation Commission should adopt a standard protocol for remediation planning and budgeting. An example of such a protocol is given in Table 1.²

Issue 4 Adequate Funding to Initiate Priority Remedial Operations

There are four existing funds which can be used for one or more clean-up programs. As of June 30, 1985, the balances in the three funds administered by the Kansas Department of Health and Environment were as follows:

Pollution Discharge Clean-up Fund	\$15,049
Hazardous Waste Clean-up Fund	\$ 660
Pollution Abatement Gift Fund	\$ 2,527

A fourth source of funds is the Conservation Fee Fund, administered by the Kansas Corporation Commission, which can be used for oil and gas related problems. The balance in this fund stood at \$2,392,121 on June 30, 1985.

These funds cannot be used for investigations to identify contamination, evaluate the severity and extent of contamination or to prepare remedial plans. The number and severity of existing contamination is unknown; the costs to manage the problems are even

more unclear. However, it is clear that existing funding is grossly inadequate to deal with the problems.

Recommendation: The Pollution Discharge Clean-Up, Hazardous Waste Clean-Up and Pollution Abatement Gift funds should be combined into a single fund. This fund and the Conservation Fee Fund should both be made available for use for investigations to identify, evaluate and prioritize contamination sites and to prepare remedial plans. The Department of Health and Environment and the Kansas Corporation Commission should submit investigation and remediation program budgets annually based upon the priority problems and plans prepared in accordance with recommendations in Issues 1 and 2 above.

Issue 5 Adequate Enforcement Powers

There appears to be adequate enforcement powers in all programs with one possible exception. There have been instances when program administrators have experienced difficulty in obtaining access to private property to conduct investigations and remediation efforts. Clearly, the state has the legal responsibility for protecting water quality. If there is any question regarding the state's authority to obtain reasonable access to private property to carry out its responsibilities, it should be clarified in the statutes.

Recommendation: Legislation should be prepared that clearly establishes the authority of the state to obtain access to private property in order to conduct investigations and remedial actions relating to water pollution.

Issue 6 Adequate Public Notice Procedures

All programs reviewed have either formal or informal public notice procedures if water pollution problems represent a threat to the public health. There is no standard procedure followed by all programs.

Recommendation: A standard procedure for public notice should be adopted by the Department of Health and Environment and the Kansas Corporation Commission.

Issue 7 Adequate Public Information Program

Public information efforts regarding incidents of water pollution are limited. The public should be made aware, on a regular basis, of all major problems, the risks associated with the problems and what remediation efforts are planned or underway.

Recommendation: The Department of Health and Environment and the Kansas Corporation Commission should prepare an annual report for the Legislature which identifies and describes priority problems, risks and remediation efforts by basin. This report should be made available to the Kansas Water Authority, the basin advisory committees and the public.

**An Example of a Standard Procedure for
Water Pollution Remediation and Budget Preparation**

SITE INVESTIGATION

- I. Legal Investigation
 - a) Determine liability
 - b) Determine responsible party
 - c) Determine legal needs of clean-up project
- II. If appropriate establish Multi-discipline Task Force
 - a) Task Force members
 - i. Water related state agencies
 - ii. Water related local agencies
 - iii. Private parties
- III. Develop funding sources
 - a) Liable party
 - i. K.S.A. 65-171(v)
 - b) Federal
 - i. Environmental Protection Agency
 - ii. Department of Interior
 - c) State
 - i. Water Office (Planning and research funds)
 - ii. Geological Survey (Research funds)
 - iii. Department of Health and Environment (K.S.A. 65-171(w))
 - d) Local
 - i. Counties
 - ii. Cities
 - iii. Groundwater Management Districts
 - e) Private
- IV. Identify Area of Pollution
 - a) Use existing data and water wells to develop a general outline of polluted area
 - b) Compile a bedrock map, water level map, location map, area of known pollution map, cross section of the area, location map of site water wells
 - c) Evaluate data and determine areas where additional data are needed
- V. Detailed Site Investigation
 - a) Establish a data collection and monitoring system
 - b) Outline area and extent of pollution at the site
 - i. Use existing wells
 - ii. Temporary test holes
 - iii. Permanent observation wells
 - c) Report findings and conclusions of site investigation

DECISION POINT

- a) Evaluation of findings and conclusions of site investigations
- b) Based on the evaluation of the site investigation's findings and conclusions decide if next phase is initiated

AQUIFER RESTORATION

- I. Restoration Methods
 - a) Containment
 - b) Withdrawal
 - c) In-place
- II. Treatment of polluted groundwater withdrawn
 - a) Granulated activated carbon
 - b) Aerobic biological
 - c) Air stripping
 - d) Chemical treatment
 - e) Combined ozonation/ultraviolet radiation
 - f) Ion exchange
 - g) Reverse osmosis
 - h) Ultrafiltration
 - i) Wet-air oxidation
 - j) Deep injection well disposal
- III. Use of Polluted Groundwater Withdrawn
 - a) Blending or mixing with better quality of water
 - b) Secondary recovery of oil
 - c) Industrial
- IV. Economic Analysis of Restoration Project
 - a) Determine cost-benefit ratios for restoration methods
 - b) Determine impact of pollution on site economy
- V. Design and Construction of Restoration and Treatment Method
- VI. Implement Restoration and Treatment Method
- VII. Monitor and Record Results

Issue 8
Responsibility for Clean-Up
of Pollution From Oil
and Gas Activities

A Memorandum of Understanding to define the responsibilities of the Kansas Department of Health and Environment and the Kansas Corporation Commission in instances where pollution results from any oil or gas activity will be established as required by section 38 of House Bill 3078 of the 1986 Session of the Kansas Legislature.

Recommendation: The Memorandum of Understanding should be prepared, to the extent feasible, in context with the recommendations in this sub-section of the Kansas Water Plan. The Memorandum of Understanding should be reviewed periodically by the Kansas Water Authority.

SUMMARY OF POLICY RECOMMENDATIONS

All recommendations outlined above are components of a coordinated and comprehensive approach to water contamination remediation. The recommended policies are:

1. Require the state to initiate remedial procedures when a responsible party is unknown or cannot or will not undertake necessary action. Any person determined responsible would still be responsible for repayment of the cost of the clean-up work;
2. Require the preparation of standard procedures for evaluating and ranking problems;
3. Require standard procedures for remedial plan development and budget preparations;
4. Allow the use of the clean-up funds for investigations and preparation of remedial plans and require annual submission of investigation and remedial plans and budget proposals for priority problems to the Legislature;
5. Clearly establish the authority of the state to gain access to private property for site investigations and remedial actions;
6. Require the development of standard procedures for public notice regarding health risks;
7. Require that status report be published annually identifying and describing priority problems, risks and mitigation efforts, by basin and
8. The Memorandum of Understanding between the Kansas Department of Health and Environment and the Kansas Corporation Commission relating to contamination from oil and gas activities should be prepared in context with the proposed comprehensive water contamination remediation statute. The Memorandum of Understanding should be reviewed periodically by the Kansas Water Authority.

PLAN IMPLEMENTATION

LEGISLATIVE ACTION

K.S.A 65-171v should be amended as necessary to incorporate the above policy recommendations to implement a comprehensive contamination remediation program.

ADMINISTRATIVE ACTION

A number of administrative actions are required to implement this sub-section. These are:

1. The Kansas Department of Health and Environment and the Kansas Corporation Commission should develop a standard protocol for evaluating and rank-ordering water quality problems;
2. The Kansas Department of Health and Environment and the Kansas Corporation Commission should adopt a standard protocol for remediation plan development and budget preparation;
3. The Kansas Department of Health and Environment and the Kansas Corporation Commission should annually submit investigation and remediation program budgets for priority problems to the Legislature;
4. The Kansas Department of Health and Environment and the Kansas Corporation Commission should adopt a standard procedure for public notice;
5. The Kansas Department of Health and Environment and the Kansas Corporation Commission should prepare annual reports for each river basin describing priority problems and remediation efforts;
6. The Kansas Department of Health and Environment and the Kansas Corporation Commission should incorporate the recommendations of this plan into the Memorandum of Understanding required by House Bill 3078 and
7. The Kansas Water Authority should review the Memorandum of Understanding periodically, beginning in this fiscal year.

FINANCIAL REQUIREMENTS

Standard protocols can be developed using present staff and resources.

The Pollution Discharge Clean-up, Hazardous Waste Clean-up and Pollution Abatement Gift funds should be combined into a single fund. Funds for investigations and remediation projects will be requested on a priority basis.

TIME SCHEDULE

Legislation should be introduced in January, 1987.


REFERENCES

1. *Kansas Department of Health and Environment*, Summary of Water Quality Protection Program, March, 1986 (Editorial changes have been made for clarification).
2. *Equus Beds Groundwater Management District No. 2*, Comments on Lower Arkansas Issue Paper, February 10, 1986.

State of Kansas
DEPARTMENT OF HEALTH AND ENVIRONMENT
Bureau of Water Protection

M E M O R A N D U M

TO: Jim Power Secretary Grant
Gyula Kovach Undersecretary Hulett
Karl Mueldener Bob Moody
Dennis Murphey Ron Hammerschmidt
Russell Broxterman Don Snethen
Dr. Roger Carlson Rod Geisler
John Irwin Don Carlson
Dave Romano Jerry Stoltenberg
Dave Waldo Mike Tate
District Engineers District Geologists
SWD - Buck Buchanan SWD - Don Ubel
SCD - Jerry Grant SCD - Ralph O'Conner
SED - Rex Heape SED - Bill Thornton
NED - Ray Kenny NED - Marvin Glotzbach
NCD - Dean Strowig NCD - Dale Robl
NWD - Bob Thompson NWD - Mike Larsen

FROM: Margaret M. Regan 

DATE: November 9, 1987

SUBJECT: Revised KNL/KAL; AKNL/AKAL

Attached is a list containing amendments to the December 1986 list. Please review and comment by November 30, 1987. The legend contains an extensive explanation of each abbreviation.

The list is divided into two major parts: (1) KNL/KAL concentrations and (2) AKNL/AKAL concentrations (alternate aquatic life protection levels). KNL/KAL values apply to fresh, groundwater aquifers. AKNL/AKAL would apply to alluvial aquifers and/or specific aquifers which surface through springs or seeps and become contributors to surface waters of the state.

The two-tier system is maintained. the Kansas Notification Level (KNL/AKNL) concentration constitutes administrative confirmation that groundwater contamination exists. Concentrations below the Kansas Action Level (KAL/AKAL) would be required in cleanup of entire plumes of contamination. In the case of a public water supply consumer notification may be required above the KNL, and is mandatory above the KAL. In addition, a public water supply owner may be required to take appropriate mandatory action when contaminants are present at concentrations above the KAL/AKAL.

Human health was given first priority in selecting KNL/KAL values. KAL values were chosen with the following priorities in mind.

1. Promulgated Drinking Water Standards.
2. Proposed drinking water standards (primarily inclusive).
3. 10^{-5} cancer risk level.
4. Human health risk other than carcinogenesis.

In general, KNL values were derived from the KAL value. The KNL is 1/10 of the KAL value. Exception: the KNL value for THMs are their respective quantification levels. *

Subsequent to assignment of human health criteria, alternate aquatic life values (AKNL/AKAL) were assigned to those parameters whose KNL/KAL would not be stringent enough to protect aquatic life. The AKAL values represent acute exposure levels. The AKNL values represent chronic exposure levels.

Please reference the second attachment "Compiled Table of Chemical References" for all available sources of data.

The adoption of these levels as proposed standards will produce a significant effect on the Kansas Groundwater Management Plan. Please review these values in this light. A meeting will be held the first week in December to discuss finalizing this list.

dg

L E G E N D

REGULATIONS: PROMULGATED AND PENDING

MCL Maximum Contaminant Levels of the National
 Primary Drinking Water Regulations.

KS REGS Kansas Drinking Water Standards.

pMCL proposed Maximum Contaminant Level.

MCLG Maximum Contaminant Level Goal. The level at
 which "no known or anticipated adverse effect
 on the health of persons occurs and which allows
 an adequate margin of safety." (Formerly rmcl,
 recommended maximum contaminant level of the
 National Primary Drinking Water Regulations.)

prmcl proposed recommended maximum contaminant level.
 Assigned prior to June 19, 1986.

quan limit analytical quantification limit, KDHE Laboratories

ADD KDHE planning to add in the near future.

c reported as combined nitrate and nitrite.

NA not routinely analyzed at KDHE.

NE no limit established at KDHE.

none not applicable to parameter.

t reported as total.

sn	Special Note for Cited Value
----	------------------------------

g	Kansas guideline
scl	secondary maximum contaminant level of the National Secondary Drinking Water Regulations.
sum	total THMs must be less than or equal to 100.
d	derived human health protection.

nq	Note Qualifier: Applicability/Health Effects
----	--

C	at 251-400 mg/l hardness, actual criteria varies with hardness.
cr	chronic health risk.
l	lifetime health risk.
m	mixture value for PAH.
o	one day health risk.
p	at pH 7.1-7.4, actual criteria varies with pH.
r	cancer risk of 10E-6
	Cancer rating
	(r,1) Known human carcinogen.
	(r,2) Probable human carcinogen.
	(r,3) Limited evidence for carcinogenicity (animals only).
s	seven day health risk.
-	ten day health risk.
#	organoleptic criteria.
*	essential dietary nutrient in trace quantities.

HUMAN HEALTH, AQUATIC LIFE, AND AGRICULTURAL RELATED REFERENCES

- A Kansas Water Quality Standards.
- D Environment Canada. 1979. Water Quality Sourcebook, A Guide to Water Quality Parameters.
- DWH Drinking Water and Health, Vol. I-V, National Academy of Sciences, Washington, DC, 1977-1983.
- E Quality Criteria for Water (USEPA, 1976, EPA-440/9-76-023) (Red Book).
- F EPA Water Quality Criteria (FRL 1623-3, November 28, 1980).
- FR EPA Water Quality Criteria (revised: FRL 25-14-2, February 7, 1984).
- G USEPA Final Rule, 40 CFR 141, FRL 1312-2, November 29, 1979. (Trihalomethane standard).
- H USEPA, Ambient Water Quality Criteria, EPA-440/5-84-007.
- HA USEPA 440/5-86-004, September, 1986.
- HB USEPA 440/5-87-003, February, 1987.
- HD USEPA 440/5-86-009, September, 1986.
- HE USEPA 440/5-86-005, September, 1986.
- HH USEPA 440/5-86-007, September, 1986.
- HK USEPA 440/5-86-006, September, 1986.
- ISD Surveillance Index Support Document, EPA Hazard Evaluation Division, (by chemical name) 1981.
- K Trace Substances and Health, A Handbook, Part I (1976) and Part II (1982), Marcel Dekker, Inc., New York, Paul M. Newberne, ed.

L EPA Draft Health Advisories for Drinking Water, 8509.

M EPA Draft Health Advisories for Drinking Water, 8506. Derived by CAG or EPA.

N EPA Draft Health Advisories for Drinking Water, 8507.

NH USEPA 48 FR 45854.

NK USEPA 42 FR 49458.

NPb National Pesticide Information Retrieval System, Chemical Fact Sheet, March 22, 1984.

NPe National Pesticide Information Retrieval System, Chemical Fact Sheet, October 3, 1983.

PTP Priority Toxic Pollutants: Health Impacts and Allowable Limits, Env Health Review #1, Marshall Sittig, ed., Noyes Data Corp., Park Ridge, New York, 1980.

Q Water Quality Criteria (NAS, NAE; USEPA 1972) (Blue Book).

R Federal Register, Vol. 51, No. 47, March 11, 1986.

RD EPA Registration Document, September 28, 1984.

RG EPA Registration Guidance Package, June 1982, p. 8.

RPM Reregistration of Pesticide Products Containing Metribuzen, EPA Office of Pesticide Programs, 1985.

RS Registration Standard, Toxicology and Human Safety, April, 1984.

S Federal Register, Vol. 47, No. 184, Proposed Rules, September 22, 1982.

T Water Quality Advisory on DCPA, EPA Criteria and Standards Division, 1981.

U Federal Register, Vol. 46, No. 180, December 30, 1981.

- VN Federal Register, Vol. 45, Page 79318, November 28, 1980, EPA Ambient Water Quality Criteria.
- W Federal Register, Vol. 50, No. 89, May 8, 1985, and No. 152, August 7, 1985.
- Wb Herbicide Handbook of the Weed Science Society of America, 4th ed., WSSA Herbicide Handbook Committee, Champaign, Illinois, 1979.
- WHO 1967 Evaluations of Some Pesticides in Food, World Health Organization, Geneva, 1968.
- X Federal Register, Vol. 49, No. 139, July 18, 1984.
- Y EPA Final Health Advisories for Drinking Water, 8703.
- Z EPA Draft Health Advisories for Drinking Water, 8708 or 8709 as noted.
- RR EPA Draft Health Advisories for National Pesticide Survey analytes, 8712.
-

DRAFT 880125 Groundwater Contaminant Cleanup Target Concentrations

ANALYTICAL PARAMETER	CAS NUMBER	quan limit	KAL				AKNL / AKAL ALTERNATE AQUATIC LIFE LEVELS						
			KAL	NOTE	REF	SPCL	AKNL	NOTE	REF	AKAL	NOTE	REF	
METALS, ug/l(ppb)													
aluminum	7429-90-0	10.	5000	h(s)	N				150	aq cr R		950	aq ac R
antimony	7440-36-0	NA	143	h	K								
arsenic	7440-382	1	50	h	E	MCL							
barium	7440-39-3	10	1000	h	E	MCL							
beryllium	7440-41-7	10	0.13	h(r*10)	M								
cadmium	7440-43-9	1	5	h(1)	LN	prmcl							
chromium (III)	7440-47-3	1 t	50	h		MCL							
chromium (VI)	7440-47-3	10	50	h	EF	MCL							
copper	7440-50-8	10	1000	h(#)	EF	scl *			26	aq cr V C		42	aq ac V C
@cyanide (free)	74-90-8	10 t	154	h(1)	Y				5.2	aq cr V		22	aq ac V
iron		10	300	h(#)	E	scl *							
lead	7439-92-1	1	50	h	EF	MCL							
manganese	7439-96-5	10	50	h(#)	E	scl							
mercury	7439-97-6	0.5	2	h	E	MCL			0.012	aq cr FR		2.4	aq ac FR
@nickel	7440-02-0	10	150	h(1)	Y								
@selenium	7782-49-2	1	45			MCL *							
silver	7440-22-4	10	50	h	EF	MCL			0.12	aq cr F		19.8	aq ac F C
thallium	7440-28-0	NA	13	h	F								
@zinc		10	5000	h(#)	EF	scl *			231	aq cr HB C		255	aq ac HB C

ANALYTICAL PARAMETER	CAS NUMBER	units	quan limit	KAL			AKNL / ΔKAL ALTERNATE AQUATIC LIFE LEVELS					
				KAL	NOTE	REF SPCL	AKNL	NOTE	REF	AKAL	NOTE	REF
GENERAL CHEMICAL/PHYSICAL												
ammonia, unionized	7664-41-7	as N mg/l	0.01									
asbestos	1332-21-4	mil lng fbr/l	NA	7.1	h						0.07 aq crKS	0.7
boron		mg/l	0.01	50	ag an	Q						
chloride		mg/l	0.1	250	h(#)	Q	sci					
dissolved solids, total		mg/l	none	1000	g		KS					
fluoride		mg/l	0.1	4	h		MCLG					
nitrate	7757-79-1	as N mg/l	0.01	10	h(otcr)	ELY	MCL					
nitrite	7758-09-0	as N mg/l	none	1	h(otcr)	LY	prmcl					
pH	none	std. units	none	5.5-9.5								
phosphorus, total	7723-14-0	as P mg/l	0.01	5	g		KS					
sodium		mg/l	0.1	100	g		KS					
sulfate		mg/l	10.	250	h(#)	Q	sci					

KNL / KAL

AKNL / AKAL
ALTERNATE AQUATIC LIFE LEVELS

ANALYTICAL PARAMETER	quan		KNL	NOTE	REF SPCL	KAL	NOTE	REF SPCL	ALTERNATE AQUATIC LIFE LEVELS					
	CAS NUMBER	limit							AKNL	NOTE	REF	AKAL	NOTE	REF
PESTICIDES														
@Acifluorfen (Blazer)	5094-66-6	NA	0.9			9	h(1)	Y						
@Alachlor (Lasso)	15072-60-8	0.25	0.5	h(r,2)	L	5								
@Aldicarb (Temik)	116-6-1	NE	1			10	h(1)	Y						
Aldrin	309-00-2	0.025	0.0031	h(r)	M	0.031								
@Ametryn	834-12-8	NA	6			60	h(1)	Z						
@Ammonium sulfamate (Ammate)	7773-06-0	NA	150			1500	h(1)	Z						
@Atrazine (AAtrex)	1912-24-9	1.2	0.25			2.5	h(1)	Z						
@Bentazon (Basagran)	25057-89-0	NA	1.75			17.5	h(1)	Z						
BHC, total (Lindane)	58-89-9	0.025	0.4			0.2	h	MCL	0.08	aq cr	F	2 aq ac F		
@Bromacil (Hyvar)	314-40-9	NE	8.4			84	h(1)	Z						
@Butylate (Sutan +)	2008-41-5	NE	4.67			46.7	h(1)	Z						
@Carbaryl (Sevin)	63-25-2	NE	67.2			672	h(1)	Z						
@Carbofuran (Furadan)	1553-66-2	NE	3.6			36	h(1)	Y						
@Carboxin	5234-68-4	NA	70			700	h(1)	Z						
@Chloramben (Amiben)	133-90-4	NA	10.5			105	h(1)	Z						
@Chlordane	57-74-9	0.25	0.027	h(r,2)	Y	0.27			0.0043	aq cr	F	2.4 aq ac F		
@Chlorothalonil	1897-45-6	NA	1.5	h(r,2)	Z	15								
@Chlorpyrifos (Lorsban/Dursban)	2921-88-2	NE	2.1			21	d(cr)	RD	0.041	aq cr	HE	0.083 aq ac HE		
@Cyanazine (Bladex)	21725-46-2	NE	0.87			8.7	h(1)	Z						
@D, 2,4-	94-75-7	0.40	10			70	h	MCL						
@Dalapon	75-99-0	NA	56			560	h(1)	Z						
@DBCP (1,2-dibromo,3-chloropropane)	96-12-8	NA	0.025	h(r,2)	L	0.25								
@DCPA, (Dacthal)	1861-32-1	0.050	350			3500	h(1)	Z						
DDD, 4,4'-(p,p'-DDD)	53-19-0	0.040	2.4E-06			2.4E-05	h	QF						
DDE, 4,4'-(p,p'-DDE)	342-48-26	0.020	2.4E-06			2.4E-05	h	QF						
DDT, o,p'-	50-29-3	0.10	0.042	h(r)	N	0.42			0.001	aq cr	F	1.1 aq ac F		
DDT, p,p'-	50-29-3	0.10	0.042	h(r)	N	0.42			0.001	aq cr	F	1.1 aq ac F		
Diazinon	333-41-5	NE	0.063			0.63	h(cr)	Z						
dibromoethane, 1,2- (EDB)	106-93-4	0.5	0.0005	h(r)	LY	0.005								
@Dicamba (Banvel)	1918-00-9	NE	0.87			8.7	h(1)	Z						
@Dieldrin	60-57-1	0.050	0.00219	h(r,2)	Z	0.0219								
@Dimethoate (Cygon)	60-51-5	NE	14			140	d(cr)	WHO						
@Dimethrin	67239-16-1	NA	210			2100	h(1)	Z						
@Dinoseb (DNBP)	88-85-7	NA	0.35			3.5	h(1)	Z						
@dioxane, p-	123-91-1	100	7			70	h(1)	Z						
@Diphenamid	957-51-7	NA	21			210	h(1)	Z						
@Disulfoton (Di-Syston)	298-04-4	NE	0.03			0.3	h(1)	Z						
@Diuron (Karmex)	330-54-1	NA	1.46			14.6	h(1)	Z						
@Endosulfan, alpha	115-29-7	0.020	5.25			52.5	d(cr)	RG	0.056	aq cr	F	0.22 aq ac F		
@Endosulfan, beta	115-29-7	0.020	5.25			52.5	d(cr)	RG	0.056	aq cr	F	0.22 aq ac F		
Endosulfan sulfate	1031-07-8	0.10	7.4			74	h	F	0.056	aq cr	F	0.22 aq ac F		
@Endothall		NA	14			140	h(1)	Z						
Endrin	145-73-3	0.10	0.02			0.2	h	MCL	0.0023	aq cr	F	0.18 aq ac F		
Endrin aldehyde	72-20-8	NE	14			140	d(cr)	NPe						
@EPTC (Eptom/Eradicane)	759-94-4	NE	14			140	d(cr)	NPe						
@Ethylene thiourea	96-45-7	NA	0.24	h(r,2)	Z	2.4								

KNL / KAL

AKNL / AKAL
ALTERNATE AQUATIC LIFE LEVELS

ANALYTICAL PARAMETER	CAS NUMBER	quan limit	KNL / KAL				AKNL / AKAL							
			KNL	NOTE	REF SPCL	KAL	NOTE	REF SPCL	AKNL	NOTE	REF	AKAL	NOTE	REF
PESTICIDES														
@Fenamiphos (Nemacur)	22224-92-6	NA	0.17			1.7	h(1)	Z						
@Fenvalerate (Pydrin)		NA	87.5			87.5	d(cr)	ISD						
@Fluometuron	2164-17-2	NA	8.75			87.5	h(1)	Z						
@Fonofos (Dyfonate)	944-22-9	NA	1.4			14	h(1)	Z						
@Glyphosate (Roundup)	1071-83-6	NA	70			700	h(1)	Z						
@Heptachlor	76-44-8	0.020	0.076	h(r,2)	Y	0.76			0.0038	aq cr	I	0.52	aq ac	F
@Heptachlor epoxide	1024-57-3	0.020	0.038	h(r,2)	Y	0.38								
@Hexazinone (Velpar)	51235-04-2	NA	23.3			233	h(1)	Z						
Igran (Terbutryn)		NE												
@IPC (Propham)	122-42-9	NA	11.7			117	h(1)	Z						
Malathion	121-75-5	NE	14			140	h(cr)	N						
@Maleic hydrazine	123-33-1	NA	350			3500	h(1)	Z						
@MCPA (Weedone)	94-74-6	NE	0.35			3.5	h(1)	Z						
@Methomyl	21087-64-9	NA	17.5			175	h(1)	Z						
Methoxychlor (Marlate)	72-43-5	0.20	10			100	h	MCL	0.03	aq cr	I	0.3		
@Methyl parathion	298-00-0	NE	0.17			1.7	h(1)	Z						
@Metolochlor (Dual)	51218-45-2	0.25	1.05			10.5	h(1)	Z						
Metribuzin (Sencor)	21087-64-9	0.10	17.5			175	h(1)	Z						
@Oryzalin (Surflan)		NA	6.58			65.8	d(cr)	NH						
@Oxamyl	23135-22-0	NA	17.5			175	h(1)	Z						
@Paraquat	1910-42-5	NA	0.31			3.1	h(1)	Z						
Parathion	56-38-2	NE	3			30	h(cr)	N	0.013	aq cr	III	0.065	aq ac	III
@PCBs (total)	11097-69-1	0.50	7.9E-05	h(r,2)	Y	0.05			0.014	aq cr	I	2	aq ac	F
@Pendimethalin (Prowl)	40318-45-4	NE												
@Permethrin (Ambush)		NA	35			350	d(cr)	ISD						
@Picloram (Tordon)	1918-2-1	NE	49			490	h(1)	Z						
@Prometon (Pramitol)	1610-18-0	NA	10.5			105	h(1)	Z						
@Pronamide (Kerb)	23950-58-5	NE	5.25			52.5	h(1)	Z						
@Propachlor (Ramrod)	1918-16-7	0.25	9.3			93	h(1)	Z						
@Propargite (Omite/Comite)		NA	157.5			1575	d(cr)	ISD						
@Propazine (Milogard)	139-40-2	NE	1.17			11.7	h(1)	Z						
@Propoxur (Baygon)	114-26-1	NE	2.5			25	h(1)	Z						
@Simazine (Princep)	122-34-9	NE	3.5			35	h(1)	Z						
@T, 2,4,5-	93-76-5	0.20	2.1			21	h(1)	Z						
TCDD, 2,3,7,8- (Dioxin)	1746-1-6	NA	2.2E-07	h(r,2)	LY	2.2E-06			1E-05	aq cr	I	1E-04		
@Tebuthiuron (Spike)	34014-18-1	NA	35			350	h(1)	Z						
@Terbacil (Sinbar)	5902-51-2	NA	8.75			87.5	h(1)	Z						
@Terbufos (Counter)	13071-74-9	NE	0.017			0.17	h(1)	Z						
@Toxaphene	8001-35-2	2.0	0.5			5	h	MCL	0.0002	aq cr	III	0.73	aq cr	HK
TP, 2,4,5- (Silvex)	93-72-1	0.20	1			10	h	MCL						
@Trifluralin (Treflan)	1582-09-8	NE	0.17			1.7	h(1)	Z						

KLSI Kansas
League of
Savings
Institutions

JAMES R. TURNER, President • Suite 512 • 700 Kansas Ave. • Topeka, KS 66603 • 913/232-8215

February 3, 1988

TO: SENATE COMMITTEE ON ENERGY AND NATURAL RESOURCES
FROM: JIM TURNER, KANSAS LEAGUE OF SAVINGS INSTITUTIONS
RE: S.B. 455 (ENVIRONMENTAL CONTAMINATION RESPONSE ACT)

The Kansas League of Savings Institutions appreciates the opportunity to appear before the Senate Committee on Energy and Natural Resources relating to S.B. 455 which would create the "Environmental Contamination Response Act."

The League supports the effort to identify and take remedial steps to contaminated sites within the State. However, we have serious reservations about allowing the State to have priority lien rights to real property as provided by S.B. 455.

The provisions of S.B. 455 allows the State to seek repayment through the courts (Section 7) as well as imposing civil and criminal penalties (Section 8). To allow lien rights, as a priority to all other liens, as is provided in Section 9 poses serious questions to future lending within the State as well as raising Constitutional issues of impairing existing contracts.

Should the committee feel lien rights are a necessary tool for collection we would urge that they be based on the date of filing. Accordingly, we would request that lines 401 through 403 of Section 9 be deleted from S.B. 455.

Further, we would urge the committee to give consideration to whether or not real property lien rights will have a negative impact upon private funding for waste disposal sites.

J.T.

JRT:bw

Attach III
2-2-88

Kansas Natural Resource Council

Testimony Before the Senate Energy and Natural Resources Committee
February 2, 1988
Concerning SB 455: The Environmental Contamination Response Act

TESTIMONY TOPICS:

- I. Introduction: M. A. Bradford
- II. Contamination and Liability: C. Stinard
- III. Site Access and Registry of Sites: M. Ahrens
- IV. Cleaup Standards: Vic Studer
- V. Responsible Party and Recommendation: M. A. Bradford

TESTIMONY PRESENTED BY:

SPEAKER	ORGANIZATION	MEMBERS
Mary Ann Bradford	League of Women Voters of Kansas	1,000
Charlene A. Stinard	Kansas Natural Resource Council	800
Margaret Ahrens	Kansas Chapter - Sierra Club	2,000
Vic Studer	Kansas Rural Center	2,500

TESTIMONY ENDORSED BY:

Kansas Wildlife Federation	8,000
Kansas Members - National Wildlife Federation	10,000
Kansas Audubon Council	5,000
Kansas Recreation and Park Association	500
Kansas Canoe Association	200
COMBINED MEMBERSHIP	30,000



Mr. Chairman and Members of the Committee:

I am MARY ANN BRADFORD, representing the LEAGUE OF WOMEN VOTERS OF KANSAS. This morning I stand before you with representatives of three other organizations very concerned about the quality of the environment in Kansas. We are presenting a joint statement on behalf of the nine organizations listed, which have a combined membership of approximately 30,000 Kansans. We have purposefully developed this joint statement to economize on the Committee's time and to prevent duplication or redundancy that might occur with separate statements.

In general, the nine organizations support the intent of this legislation that would set procedures to begin the long, arduous, and expensive process of cleaning up contaminated sites in our state. There are six issues we would like to address: definition of contaminant, liability, site access, registry of sites, cleanup standards, and responsible party.

Charlene Stinard, representing the Kansas Natural Resource Council, will speak about contamination and liability.

CHARLENE A. STINARD (KANSAS NATURAL RESOURCE COUNCIL)

I would like to address two issues of importance in SB 455. First, we strongly urge acceptance of the expansive definition of contaminant in this bill. Including all sectors of the Kansas economy in the remedial responsibilities of KDHE provides a clear focus for cleanup activity and consistency in remedial practices. In addition, accountability is enhanced by making a single agency responsible for all cleanup actions. This bill will improve the operation of the state's cleanup program, making it both more responsive and more responsible to Kansas citizens.

The second aspect of SB 455 I would ask the Committee to consider involves liability issues. While this is a very complicated and thorny area, its relevance to state cleanup activities is clear. For both state and federal "superfund" work, it is essential that responsible parties should be liable for the costs of cleanup. The success of any remedial program is directly related to the ability of the state to recover costs. A statutory definition of responsible party, in the absence of applicable case law, provides the state with some assurance that remediation will be funded by those persons or businesses responsible and not from the purses of Kansas citizens.

Margaret Ahrens of the Kansas Chapter of the Sierra Club will address site access and the registry of sites.

MARGARET AHRENS (KANSAS CHAPTER - SIERRA CLUB)

Section 4 deals with the development and filing of a registry of contaminated sites, and ultimately with notification to prospective buyers that property is on the list of contaminated sites. One might view this registry as a threat to the more than 400 property owners and their mortgagees. Or one could view the lack of a functional registry as a

threat to a group many times larger -- the potential buyers, the potential mortgage holders, and the people of Kansas (citizens, business, and industry) who live with or face the possibility of contaminated water, land, and air resources.

I am not a lawyer, but I understand that the registry merely upholds a principle of common law in Kansas: that it is fraudulent for an owner to sell property with substantial defects without disclosing that fact to the buyer. SB 455 also protects the rights of property owners against inappropriate placement on the registry by providing for appeals to the Department and ultimately for hearings and appeals before a court of law.

Next I want to speak in support of portions of SB 455 which stipulate that the Department have specific authority to gain access to property in order to investigate and oversee cleanup operations. The bill requires the Department to notify property owners and to access the property at reasonable hours. This is no more authority than is granted to fire marshals and weed controllers who are also charged with the responsibility to protect certain aspects of public health, safety, and welfare.

You are aware of what is at issue here: the protection of public health, safety, and welfare of Kansans threatened by contaminated water and land and by hazardous chemical storage. This is the basic charge to the Kansas Department of Health and Environment.

SB 455 indicates your pride in Kansas by giving public notice of offenses against her common good, her natural resources on which we all depend, and by supporting governmental access to property to protect that good.

Vic Studer of the Kansas Rural Center will comment on cleanup standards.

VIC STUDER (KANSAS RURAL CENTER)

Concerning the cleanup standards this bill would provide, the current problem is uncertainty: How clean is clean? Difficulties arise in making reasonable projections of how long cleanup is actually going to take, how much money is needed, and what kind of technology is necessary to achieve it. With rules and regulations that clearly state the standards in Kansas, a company involved in a cleanup will have specific criteria to present to a design engineer or hydrologist. The advantages would benefit the regulatory community as well as the regulated community, by providing everyone with specific guidelines. It is currently a very nebulous situation where companies are simply told to start the cleanup, and KDHE will let them know when to stop, thus leaving cleanup open-ended, with projections in terms of cost and time nearly impossible.

MARY ANN BRADFORD (LEAGUE OF WOMEN VOTERS)

All of our organizations agree that the party responsible for contamination, whether by accident or mismanagement, should bear the costs of remediation. We recognize, however, that a responsible party may not be readily identifiable in every case, and would support the use of state funds as a last resort.

We urge favorable passage of SB 455 as legislation whose time has come. Nevertheless, we realize that this bill encompasses relatively new concepts in environmental law, and that more intensive study could be helpful. We could then support its being held for interim study.

Thank you for your consideration.

cf:SB455