Approved 3-24-87
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 March 18, 1987 in room 123-S of the Capitol.

All members were present except:

Committee staff present:
Ramon Powers - Research
Don Hayward - Revisor
Nancy Jones - Secretary

Conferees appearing before the committee:
Representative Keith Roe
Laura Menhusen, North Central Kansas Citizens
Greg Hattan, City of Concordia
Robert Stephen, Attorney General
Dr. Robin Hood, Hood Development Co. Concordia, Ks.
Robert Burns, Concordia, Ks.
James Power, KDHE, Acting Director, Division of Environment
Steve Kraushaar, Marysville, Ks.,Counsellor, Marshall County Commission
G.W. Stanton, Marysville, Ks.

Hearing for proponents on:

HB 2108 - Cocncerning radioactive and hazardous waste

Representative Roe, sponsor of the bill, stated the bill expands existing statute to ban underground burial of LLRW for protection of groundwater and the land. The importance of this bill lies with the likelihood of Kansas remaining in the Compact and becoming the host state. Representative Roe feels the status of Kansas in the Compact will not be altered with the passate of this legislation. (Attachment A)

Jim Power testified there are two issues to be addressed. First, will passage of HB 2108 jeopardize the state's membership in the Compact and secondly, will current language restrict available technology to the developer to locate a site. Mr. Power stated that if Kansas were to impose or restrict in any way the technologies the developer could use, this might jeopardize the position of the state in the Compact. Proposals submitted by developers within the next 90 days could include nine alternative disposal technologies. Mr. Powers suggested the legislature and KDHE work together developing policy decisions regarding technology by the appointment of an oversight committee (Attachment B)

Robert Stephen testified that the two basic purposes of HB 2108 are to establish a sound policy for above ground burial of LLRW and promote the development of new technology for disposal. Mr. Stephen stated it is never too late to act legislatively to protect Kansas citizens and Kansas will not accept mediocrity as a criterion for LLRW disposal. Mr. Stephen feels HB 2108 is designed to give meaningful implementation to safety standards envisioned by the Compact as well as Kansas. Mr. Stephen further stated HB 2108 is not in conflict with the Compact. Opposition to any underground burial of LLRW was expressed. Sites should be developed and managed by the state. It is the opinion of Mr. Stephen that the courts would uphold a ban on burial of LLRW by Kansas if the Compact attempted such a ban. (Attachment C)

Laura Menhusen stated it is time for Kansas to take responsibility for our waste and all Kansans need to become informed and get involved. Ms. Menhusen discussed the technology used at the Barnwell, South Carolina site and supports above ground disposal. (Attachment D)

Greg Hattan stated this legislation is needed to protect Kansas from being forced to accept inferior technology for disposal. Without this legislation Kansas will have no recourse but to accept technology proposed for LLRW disposal by the Compact. Attention should be given to nuclear waste technology developed in France during the past 17 years. (Attachment E)

Dr. Robin Hood expressed concern about property devaluation. It is felt the Dames-Moore Study is bogus as ground water levels have been ignored. It is the consensus of water drillers in the Concordia area that a geological team should conduct a survey where sites are to be designated. Dr. Hood encourages strong action by the state rather than being subjected to outside regulation. (Attachment F)

Steve Kraushaar testified the citizens of Marshall County feel a great concern that the county and Kansas are being considered as potential siting areas for a LLRW disposal facility and strongly oppose the action. Mr. Kraushaar further stated that Wolf Creek should be the only site considered for a disposal facility. (Attachment G)

G. W. Stanton gave testimony regarding the terrain and water supply of the Marysville area to demonstrate the error of locating a site there. Mr. Stanton stated Kansas should assume the responsibility of site selection for any disposal facility. (Attachment H)

Robert Burn opposes being intimidated by the threat of a law suit or the imposition of penalties if we refuse to bury LLRW. Shallow land burial is not successful and Kansas needs to look to the technology that has proven successful for disposal of LLRW.

Meeting adjourned. Next meeting March 19, 1987.

Senate Energy - Guest List
3-18-87

James Power	Topeka	KDHE
John Blythe	Manhattan	Ks Farm Bureau
R.P. Hood	Concordia	Hood Develop.
Robert Burns	Concordia	Myself
Ken Peterson	TopeKA	KPC
Chip Wheeler	Topeka	McGill & Associates
Marshall Clark	Topeka	KEPCo
Shelley Sutton	Topeka	Ks. Engineering Soc.
Sharon Markusen	Jewell	Pres RCK Citizens
Greg Watson	Concordia	City Commission
John D? McClure	Glen Elder	NCK Citizens
Donna Markusen	Jewell	NCK
Louise Park	Mankato	N.C.K.C.
Harold L. Spiker	Topeka	KDH&E
Ed Reinert	Topeka	Ks League Women Voters
Mary Ann Bradford	Topeka	League of Women Voters of KS
S. Philip Stover	Quinter	Gove County
Steve Kraushaar	Marysville	Marshall County
[illegible]	[illegible]	[illegible]
Bob Stephan	Wichita	Attorney General
John Campbell	Topeka	KS Atty Gen Off.
Peggy Conrad	"	KG&E
Howard M. [illegible]	Hutchinson	Ks. Assn of Wheat Growers

STATE OF KANSAS

KEITH ROE
REPRESENTATIVE, 109TH DISTRICT
JEWELL, SMITH, OSBORNE COUNTIES

TOPEKA

HOUSE OF
REPRESENTATIVES

COMMITTEE ASSIGNMENTS
CHAIRMAN: RULES AND JOURNAL
CHAIRMAN: LEGISLATIVE, JUDICIAL, AND
CONGRESSIONAL APPORTIONMENT
MEMBER: ASSESSMENT AND TAXATION
ENERGY AND NATURAL RESOURCES
FEDERAL AND STATE AFFAIRS

Senate Energy and Natural Resources Committee

Testimony on H.B. 2108

March 18, 1987

H.B. 2108 protects our environment and groundwater supplies by extending the present ban on underground burial of hazardous waste to low-level radioactive waste.

Kansas has an excellent record of legislation protecting the state's groundwater. As a state we rank as the most dependent in the country on groundwater supplies instead of surface water.

With Kansas the likely location for a low-level radioactive waste site, we need to do all we can to protect our environment. The state has the ability to determine methods of disposal if a site is within its borders, as long as these methods are not inconsistent with the laws establishing the Central Interstate Compact.

H.B. 2108 makes environmental commonsense and asserts the state's priority to decide how low-level radioactive waste is disposed of in our state.

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Testimony Presented to
Senate Energy and Natural Resources Committee
March 18, 1987

by
James A. Power, Acting Director
Division of Environment
Kansas Department of Health and Environment

House Bill 2108

House Bill 2108 would amend K.S.A. 1986 Supp. 65-3458, a statute prohibiting the underground burial of hazardous waste in Kansas. The amendment would include in the ban the underground burial of high-level and low-level radioactive waste as defined in K.S.A. 48-1603.

The federal government, pursuant to the Atomic Energy Act of 1954 as amended, and the Nuclear Waste Policy Act of 1982 (P.L. 97-425), is responsible for locating, developing, and operating a national repository for high-level radioactive wastes. Such wastes are not buried but rather are placed in specially designed repositories. In selecting a site for such a facility, the federal government has narrowed its choices down to three sites located in the states of Texas, Washington, and Nevada. No sites in Kansas were considered.

Pursuant to the Low-Level Radioactive Waste Policy Act of 1980 (P.L. 96-573) and the Low-Level Radioactive Waste Policy Amendments Act of 1985 (P.L. 99-240), the states, either individually or through interstate compacts, are responsible for the disposal of their own low-level radioactive waste.

Kansas is a member of the Central Interstate Low-Level Radioactive Waste Compact, which has initiated the process of selecting a developer and a site for a low-level radioactive waste management facility to serve the compact region.

State statutes and regulations affected by this bill are K.S.A. 1986 Supp. 65-3458, K.S.A. 65-34a01 (Central Interstate Low-Level Radioactive Waste Compact), K.S.A. 48-1603 (Nuclear Energy Development and Radiation Control Act), and K.A.R. 28-35-133 through 28-35-338 (Kansas Radiation Protection Regulations). It appears that there are two issues which need to be brought to the attention of the Committee. These are:

1. Passage of H.B. 2108 may jeopardize the state's membership in the Compact.

2. The proposed language may restrict the technology currently available for disposal of low-level radioactive waste.

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My comments pertain to the disposal of low-level radioactive wastes, since high-level radioactive waste is not an issue at this time.

State Eligibility

Should the state enact House Bill 2108, what are the implications?

Article VI of the Compact, paragraphs b. and c. address the issue of state eligibility in the compact.

Article VI. Other Laws and Regulations

b. No party state shall pass or enforce any law or regulation which is inconsistent with this compact.

c. All laws and regulations or parts thereof of any party state which are inconsistent with this compact are hereby declared null and void for purposes of this compact. Any legal right, obligation, violation or penalty arising under such laws or regulations prior to enactment of this compact shall not be affected.

Attorney General Robert Stephan in Opinion #87-43 requested by Senator Paul Feleciano addressed the issue. The Attorney General noted "However this would not appear to preclude the state from enacting strict regulations concerning the methods by which the low-level radioactive waste should be stored, treated, and disposed of should Kansas be chosen as the site for a regional facility." The Attorney General does not deal with prohibition, but, rather stressed methods of implementing technologies available for the disposal of low-level radioactive waste.

The issue has been discussed with the Chairman of the Compact Commission, the Executive Director of the Compact Commission, and Mr. James Aiken, who represented the State of Kansas in drafting the Compact language in 1982. Each of these individuals indicated, in their opinion, Article IV, paragraph b, could be interpreted to imply that the prohibition on land burial could be construed by the Compact Commission members as a basis for revocation of the state's membership in the compact.

For instance, Mr. Ray Peery, Commission Executive Director, is quoted in the Topeka Capital Journal (March 15, 1987 issue) as stating "If every state had a prohibition against land burial, then we'd be on an equal footing, but, if Kansas enacts a ban, then it may be creating a circumstance where it is not competing equally with other states, and that's where other state may be concerned about the action.... From our standpont, we would rather that nothing be excluded, that all proposals be considered on their merits." He was quoted as stating member states could under federal law have the ban declared void.

Both Dr. Hall Bohlinger and Mr. James Aiken said it was the intent of the drafters of the compact language to preclude a state from taking action which might be inconsistent with the compact and federal law.

I would caution these are the personal opinions of these three men, rather than the concensus of the members of the compact.

Technology

The compact commission had identified two treatment alternatives (compaction and incineration) and nine disposal technologies (licensable shallow land burial, enhanced shallow land burial, modular concrete canisters, above-ground vaults, below-ground vaults, earth-mounded concrete bunkers (monoliths and tumuli), augered holes, and mined cavities).

The primary reason for applying compaction or incinceration is to reduce the volume of waste to be stored and disposed. This is desirable to extending existing disposal capacity or minimizing the amount of of interim facilities required pending operation of a new facility.

Choosing among technology alternatives involves a balance among objectives, and that balance may be different from region to region and from state to state within the region. The Commission has described the advantages and disadvantages of the technology alternatives. Table 1 reflects those advantages and disadvantages. The issue of which alternative technology to select is not only complex, but one that should not be reached before all the facts are available. The experience of the state with a leaking hazardous waste disposal site has made us extremely cautious about the siting and technology which should be used in the handling of any type of waste for ultimate disposal. Three factors will guide our judgment throughout the evaluation of any technology suggested by any developer if Kansas becomes the host state. These are the techniques used in specific site investigation; the ability to effectively monitor all potential sources of contamination; and should leakage occur, that wastes can be retrieved and controlled.

The term underground burial is a very general term which technically would apply to any placement of wastes below the surface of the earth. Although the existing three low-level radioactive waste shallow-land burial facilities in the U.S. are working as designed, newer disposal technologies have, and continue, to be developed. However, with the exception of mined cavity disposal or above-ground storage facilities, virtually all of the low-level radioactive waste disposal technologies currently available, both in the U.S. and internationally, utilize disposal or placement of the waste below the surface of the earth. This includes "mound landfills" as well as the newest and most advanced engineered near surface facilities currently being used in France and other European countries. One of the major advantages of underground burial is the shielding which the earth provides against gamma radiation. It is possible that a near surface disposal technology of some kind will be selected for our compact's facility. Do we want to eliminate the option for a technology which could very well provide us with the best and safest low-level radioactive waste disposal facility possible?

Summary

Reluctantly, I have come to the conclusion that House Bill 2108 may jeopardize our position in the Compact. We recommend either the legislature (1) appoint a legislative oversight committee to work with KDHE on policy issues, or (2) direct the advisory board, created under K.S.A. 65-34a03, to take a stronger role in oversight. Either approach would involve periodic reports to the legislature and to the citizens of Kansas.

TABLE 1

Perceived Advantages and Disadvantages of Waste Disposal Alternatives

Advantages	Disadvantages
Enhanced Shallow Land Burial	
a. Prior successful experience as measured by minimal public radiation exposure at similar operating sites.	a. Short-term subsidence has resulted in water infiltration and waste migration at some sites.
b. Site characteristics are secondary barrier to waste migration (after waste form and packaging).	b. Active control measures required during institutional control period. Previously used sites not adequately funded to accomplish these activities.
c. Regulatory structure and requirements more fully developed than other alternatives. Full rulemaking on 10 CFR 61 documented modelling techniques and impacts analysis. Extensive opportunity for public input.	c. Recoverability of waste and site remediation not as easy as for other technologies.
d. Lower occupational exposure than other alternatives.	d. Long-term impacts greater than for other alternatives.
e. Expected to be shortest lead time to operating a new facility.	
f. Lowest cost alternative.	
Modular Concrete Disposal	
a. Modules prevent short-term subsidence.	a. Significant additional treatment and handling activity onsite with potential for worker exposure.
b. Inadvertent intrusion less likely.	b. Significant increased onsite facility requirements for compaction and encapsulation.
c. Water contact with waste less likely.	c. Increased disposal costs. ($11/ft^3 increase from enhanced shallow land burial).

TABLE 1 (Cont'd)

d. Potential stabilization and closure cost savings.	d. Long-term performance and durability of concrete as yet undemonstrated for LLRW.

Above Ground Vaults

a. Less dependent on geologic materials for isolation to meet Part 61 objectives.	a. Applicable regulations do not exist and are not being planned at Federal level.
b. Independent of packages for structural stability.	b. No secondary barrier to radionuclide release either gaseous or liquid. Potential for surface water contamination.
c. Designed to resist foreseeable damage and degradation for hundreds of years.	c. Requires longer institutional control period.
d. High visibility prevents inadvertent intrusion.	d. Greater exposure to atmosphere necessitates greater active maintenance.
e. Not susceptible to ground water infiltration.	e. Not amenable to use of remote handling equipment.
f. Not susceptible to plant and animal intrusion.	f. Higher work exposures.
g. Easy visual inspection and monitoring.	g. Greater visibility may hinder public acceptance.
h. Designed to resist tornadoes, earthquakes, landslides, erosion, etc.	h. More susceptible to deliberate intrusion.
	i. Seismic and other natural hazards protection required for very long time periods. No accepted standards yet exist.
	j. Increased disposal costs ($19/ft^3 increase from enhanced shallow land burial).

TABLE 1 (Cont'd)

Below Ground Vaults

a. Visually unobtrusive.	a. Require flooding protection during construction and operation.
b. Not susceptible to effects of weathering.	b. Not amenable to visual inspection monitoring.
c. Extra barrier to plant and animal intrusion.	c. Less amenable to use of remote-handling equipment.
d. Extra barrier to inadvertent human intrusion. Less susceptible to deliberate intrusion than above-grade facilities.	d. Higher worker exposures.
e. Short-term barrier to groundwater infiltration.	e. Require protection from degradation caused by corrosive soils.
f. Vault structure and earth cover delay migration of liquid or gaseous matter.	f. Increase disposal costs ($\$21/ft^3$ increase from enhanced shallow land burial).
g. Self-supporting and can support backfilled earth with little subsidence.	
h. Reduced long-term maintenance needs.	
i. May facilitate relocation.	
j. Designed and constructed to facilitate operation and post-closure maintenance.	
k. Engineered roof and earth cover limit radiation flux to the surface.	

Earth-Mounded Concrete Bunker Tumuli

a. Prior successful experience for short-term isolation.	a. Applicable regulations do not exist and are not being planned at Federal level.

TABLE 1 (Cont'd)

b. Resistant to surface and ground water infiltration.	b. Require flooding protection during construction and operation.
c. Visibility and physical barriers resist inadvertent intrusion.	c. Require strict packaging and disposal sequencing.
d. May facilitate relocation.	d. Seismic and other natural hazardous protection required for very long time periods. No accepted standards yet exist.
e. Reduced long-term active maintenance compared to aboveground vaults.	e. More susceptible to deliberate intrusion.
f. Remote handling possible.	

Earth-Mounded Concrete Bunker Monoliths

a. Structure provides stability independent of waste package.	a. Significant additional handling activity onsite with potential for worker exposure.
b. Grouting delays contact between waste and water.	b. Significantly increased onsite facility requirements.
c. Inadvertent intrusion less likely.	c. Increased disposal costs.
d. Potential stabilization and closure cost savings.	d. Long-term performance and durability of concrete not yet demonstrated.
	e. Increased disposal costs ($\$23/ft^3$ increase from enhanced shallow land burial.

Augered Holes

a. Offer good long-term isolation when minimization of void-space back-filling and compaction necessary to minimize settlement and long-term maintenance are performed.	a. Relatively low volume capacity of holes and higher volume of unused space surrounding each hole.

TABLE 1 (Cont'd)

b. Inadvertent intrusion very unlikely.	b. Not compatible with physical dimensions of majority of waste requiring disposal.
c. Plant and animal intrusion very unlikely.	c. Requires relatively deep water table conditions which are not common in the region.
d. Remote handling possible.	
e. Amenable to intermittent or low volume operations, such as for specific waste streams.	
f. Short operating period for each hole.	
g. Closure of each hole independent of operation and closure of other holes.	

Mined Cavities

a. Sited to provide dry, structurally stable environment.	a. Applicable regultaions do not exist and are not being planned at the Federal level.
b. Offer good long-term isolation.	b. Performance capability not enhanceable.
c. Inadvertent intrusion very unlikely.	c. Construction of new mined space very extensive.
d. Plant and animal intrusion very unlikely.	d. Lack of access restricts remedial action.
e. Documented long-term structural stability.	e. Lack of access and remoteness complicates monitoring.
f. Isolated from surface environment; unaffected by surface drainage or flooding.	f. Not amenable to use of remote handling equipment.
g. Less affected by surface developments.	g. Higher worker exposures and increased waste handling.
h. Operation of disposal chambers independent of each other for closure.	h. Geological characterization may be complicated by fracturing.

TABLE 1 (Cont'd)

i. When properly sited, surroundings chemically compatible with and non-corrosive to the waste form or containers.	i. Require larger workforce and greater land area to prevent intrusion.
	j. Site opportunities more limited.
	k. Significantly increased disposal cost for newly constructed mine. ($41/ft^3 increase from shallow land burial). Formerly used mines would be significantly less costly.

TESTIMONY OF
ATTORNEY GENERAL ROBERT T. STEPHAN
BEFORE
THE SENATE ENERGY & NATURAL RESOURCES COMMITTEE

March 18, 1987

MR. CHAIRMAN, MEMBERS OF THE COMMITTEE:

Thank you for this opportunity to appear before the Committee today. I am here to testify in support of House Bill 2108.

House Bill 2108 has two basic purposes. The first is the establishment of a sound state policy. I believe above-ground disposal of hazardous and radioactive waste is a keystone to any modern hazardous waste disposal policy. The Dark Ages mentality which called for burying and forgetting must be abandoned. Unless we abandon our burial mentality, the waste we bury today will return to pollute our groundwater and endanger the lives of our children. The Furley dump site is a perfect example of the urgent need to abandon below-ground burial of hazardous and radioactive waste.

The second purpose of House Bill 2108 is equally compelling. The Bill recognizes the limitations of current technology and promotes the development of new technology. Under House Bill 2108, the Secretary of Health and Environment may grant special exceptions to the requirement of above-ground disposal of hazardous and radioacive waste. These exceptions come only after it is proven there is no economically reasonable or technologically feasible method existing to dispose of a particular waste other than below-ground burial. The burden of proof is placed where it belongs--on those who wish to remain behind the state of the art. This serves to promote the search for new, safer technologies.

I am not an engineer and even if I were, I could not testify with certainty regarding the methodologies of waste disposal that may be developed within the next ten years. However, I do know that as we speak, scientists and engineers are attempting, through waste reduction methodologies and recycling technologies, to reduce or perhaps even some day eliminate the need for waste disposal sites. This bill promotes such technology. It denies the easy quick fix of underground burial.

It was suggested last weekend in a newspaper story quoting Mr. Raymond Peery, executive director of the Central Interstate Low-Level Radioactive

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Waste Compact, that Kansas faced certain barriers in the passage of House Bill 2108. I wish to address those issues raised by Mr. Peery.

The first issue raised by Mr. Peery is that Kansas is acting "awfully late" in enacting this bill. Let me state that it is never too late for this legislature or any branch of government to protect the citizens of the State of Kansas. Somehow, Mr. Peery must imagine that the Kansas comment to technological advancement, and development of new laws designed to protect our citizens ended with our signing the Compact. Nothing could be further from the truth. Even the bill before the Senate Committee today is not the end of the process of protection. At most, it is part of a beginning. As technology advances, the law must advance. To even suggest that it is ever too late for a state to protect its citizens is unconscionable.

Secondly, Mr. Peery suggests that with the passing of this bill, Kansas would no longer be on an equal footing with the other states of the Compact. Mr. Peery contends that if our laws are harsher than say those of Oklahoma or Louisiana, then an independent contractor would be more likely to locate his waste disposal facility in those states. I find this statement absolutely incredible. If taken to its logical conclusion, it would demand that the state with the lowest standards of low level radioactive waste disposal be the guide for other states. Mediocrity, or even substandard waste disposal, would be demanded by the Compact. This philosophy is not one Kansas has ever subscribed to. The Compact does not demand such an insane policy nor would any federal court I am aware of enforce such a policy.

Third, Mr. Peery indicates that if the legislature were to pass House Bill 2108, the State might be sued. My response to that is "Fine." If it takes court action to protect the people of the State of Kansas, then so be it. If need be, my office will invest whatever amount of manpower is needed in order to protect the environment of the State of Kansas.

In truth, Mr. Peery should acknowledge that the only penalty the State could be subjected to would be ejection from the Compact. I ask you to consider whether that is a realistic threat. If Kansas is ejected from the compact due to its high standards of waste disposal, then who will take its place. Will Nebraska endorse substandard waste disposal policies in order to stay in the Compact; will Arkansas pollute its soil and air? Of course not, and neither will any other state.

House Bill 2108 is not designed to impede the compact. It is designed to give meaningful implementation to the safety standards envisioned by the Compact, Kansas law, and federal law.

Fourth. Mr. Peery makes a last point which I find most disturbing of all. He contends that unless we lower our standards and unless we accept mediocre hazardous waste policy controls, private contractors will shy away from the State of Kansas. I say that any contractor unwilling to spend the funds necessary to protect the citizens of Kansas is not welcomed in this State. More than that, he should be banned from this State.

I have long been of the opinion that hazardous waste disposal facilities and radioactive waste disposal facilities are matters of such importance and of such long-term impact that they should be managed by the state. Mr. Peery's statements only strengthen my convictions on this matter.

Let me state for the record that it is not my concern whether or not a contractor makes a single dime on hazardous waste disposal in Kansas. My only concern is for the safety of the citizens of the State of Kansas. Any other concern is a rejection of the public trust which the people have entrusted to us.

In conclusion, I believe House Bill 2108 is a valid expression of Kansas environmental policy; that it is not in conflict with either the Compact or federal law; that it establishes a state policy demanding Kansas not become a dumping ground or an open sewer for radioactive waste. If waste is to be disposed of in Kansas, then it will be disposed of in a manner which ensures the safety of all of its citizens. Federal regulations and regulations adopted by the Compact are all fine and good, but the final say over safety in Kansas must remain in Kansas. The standards adopted by the federal government and the Compact should be seen as a base line--a line below which we will never allow our standards to fall. Federal standards are not a ceiling on standards. The ceilings should be Kansas law--laws designed for the protection of the people of this State. I urge the Committee to approve House Bill 2108.

Again, thank you, Mr. Chairman and members of the committee, for allowing me to present this testimony.

TESTIMONY ON HB #2108

BANNING THE UNDERGROUND BURIAL OF HIGH AND LOW LEVEL RADIOACTIVE WASTES IN KANSAS

PRESENTED BEFORE THE SENATE SUB COMMITTEE ON ENERGY & NATURAL RESOURCES

BY LAURA MENHUSEN
PRESIDENT N.C.K.CITIZENS
JEWELL,KANSAS
MARCH 18,1987

I AM LAURA MENHUSEN, I AM HERE TO REPRESENT THE CITIZENS OF NORTH CENTRAL KANSAS AND THE MANY OTHER PEOPLE ACROSS THE STATE THAT WE HAVE TALKED WITH IN THE LAST FEW WEEKS. THEY ARE CONCERNED, WORRIED AND FRUSTRATED BY THIS WHOLE ISSUE. THEY WANT TO KNOW WHAT THEY CAN DO? WE ARE TELLING THEM TO GET INFORMED AND GET INVOLVED! THEY CAN MAKE A DIFFERENCE.

I WOULD LIKE TO TAKE THIS OPPORTUNITY TO STATE THAT I AM A PROPONENT OF HB # 2108 BECAUSE I FEEL IT IS THE SAFEST METHOD OF STORAGE OF RADIOACTIVE WASTE AT THIS POINT IN TIME. THERE IS NO TRULY SAFE METHOD OF DISPOSAL OF RADIOACTIVE WASTES. OUR SCIENTISTS HAVE HAD 30 YEARS TO COME UP WITH SOME SORT OF SOLUTION TO THIS DISTURBING PROBLEM. WE CAN ONLY STORE OR ISOLATE RADIOACTIVE WASTES FROM OUR POPULATION AND OUR ENVIRONMENT, WE CAN NOT DISPOSE OF RADIOACTIVE WASTE.

I AM SUPPORTING THIS BILL TO PROVIDE THE SAFEST METHOD OF STORAGE- NOT AS A MEANS OF WITHDRAWING OUR STATE FROM THE CENTRAL INTERSTATE LOW LEVEL RADIOACTIVE WASTE COMPACT. AS YOU KNOW THERE IS ALREADY A SENATE BILL # 114 CONCERNING THE WITHDRAWAL OF KANSAS FROM THE COMPACT, WHICH I ALSO SUPPORT.

I THINK IT IS VERY IMPORTANT TO POINT OUT THAT BOTH NEBRASKA AND ARKANSAS FEEL THAT ABOVE GROUND STORAGE IS THE BEST STORAGE METHOD AT THIS TIME AND HAVE SIMILAR LEGISLATION IN THE WORKS TO BAN THE BURIAL OF RADIOACTIVE WASTES IN THEIR STATES.

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THEY ARE ALSO WORKING ON BILLS TO WITHDRAW FROM THE COMPACT IF THEY ARE CHOSEN HOST STATE.

ONE OF OUR GREATEST CONCERNS IS THE POSSIBLE CONTAMINATION OF OUR GROUND WATER BY RADIOACTIVE WASTES ESCAPING FROM BELOW-GROUND STORAGE SITES. DOCUMENTED REPORTS OF LEAKAGE FROM 4 of 6 ORIGINAL COMMERCIAL LOW LEVEL RADIOACTIVE WASTE DUMP SITES, OF WHICH 3 HAVE BEEN FORCED TO SHUT DOWN, MAKE IT CLEAR THAT OUR CONCERNS ARE VALID AND URGENT.

MANY OF THE RADIOACTIVE WASTES WHICH WILL BE PLACED IN THE PROPOSED DUMPS WILL REMAIN POTENT AND DEADLY FOR MANY HUNDREDS AND EVEN THOUSANDS OF YEARS: WE PROPOSE THAT PLANS FOR STORING THESE DANGEROUS SUBSTANCES BE MADE IN A DELIBERATE, EDUCATED MANNER, ALWAYS CONSIDERING THE WELFARE OF THE COUNTLESS GENERATIONS TO COME.

NOW, I'VE GOT A QUESTION FOR YOU--
IS UNDERGROUND BURIAL OF LOW LEVEL RADIOACTIVE WASTE A PROVEN SAFE METHOD OF "DISPOSAL???

LET'S LOOK AT SOME EXAMPLES---I'M SURE YOU ARE ALL FAMILIAR WITH THE 3 COMMERCIAL DUMPSITES THAT HAVE BEEN FORCED TO CLOSE. SITES AT SHEFFIELD, ILL., MAXEY FLATS,KY., AND WEST VALLEY,N.Y. THESE SITES ARE DOCUMENTED TO BE MISERABLE FAILURES, WITH BILLION DOLLAR PRICE TAGS FOR THE CLEAN UP AND CONTAINMENT COSTS. ALL OF THESE SITES USED UNDERGROUND BURIAL AS THE METHOD OF "DISPOSAL". I WOULD ALSO LIKE TO ADD THAT THE SAME CONTRACTORS OF THESE SITES ARE LOOKING AT OUR COMPACT AS THEIR NEXT PROJECT.

EVEN BARNWELL,SOUTH CAROLINA WITH IT'S NEWER AND BETTER METHODS, AND IT'S ENHANCED TECHNOLOGY, WHICH INCLUDES A PLASTIC LINER IN THE SHALLOW LAND BURIAL TRENCHES---IS DOCUMENTED TO BE LEAKING TRITIUM AND COBALT-60. SEE ATTACHMENT---U.S.GEOLOGICAL SURVEY, OPEN-FILE REPORT 82-863

WE APPLAUD REPRESENTATIVE KEITH ROE FOR TAKING THE FIRST STEP IN THE RIGHT DIRECTION BY INTRODUCING HB# 2108, AND WE ARE PROUD OF THE HOUSE FOR THEIR OVERWHELMING SUPPORT OF THE BILL WITH A VOTE OF 111-11, TO BAN THE BURIAL OF RADIOACTIVE WASTE IN KANSAS.

IS UNDERGROUND BURIAL OF LOW LEVEL RADIOACTIVE WASTE A PROVEN SAFE METHOD OF "DISPOSAL"???

I THINK THE ANSWER IS NO! IT HAS BEEN PROVEN OVER AND OVER AGAIN TO BE A MISERABLE FAILURE.

WE HOPE THAT THE DAYS OF THE OUT-OF-SIGHT---OUT-OF-MIND METHOD OF DISPOSAL ARE OVER FOREVER!

WE WOULD LIKE TO SEE ABOVE-GROUND, MONITORED, RETRIEVABLE STORAGE, ON OR NEAR SIGHT AT THE NUCLEAR POWER PLANTS. STORAGE AT THE POINT OF THE GENERATION OF THE LARGEST AMOUNT OF WASTE WOULD PREVENT THE MANY PROBLEMS CONNECTED WITH TRANSPORTATION. TRANSPORTING THE WASTES OF 5 STATES TO JUST ONE LOCATION WOULD DO MUCH DAMAGE TO OUR STATE'S ALREADY DETERIORATING HIGHWAYS. LARGE TRUCKS HAULING HEAVY LOADS OF THE WORLD'S MOST DEADLY GARBAGE WOULD NOT ONLY HASTEN THE NEED FOR NEW ROADS, BUT CREATE COUNTLESS POSSIBILITIES OF RADIOACTIVE CONTAMINATIONS OF PROPERTY AND PERSONS OCCURRING BECAUSE OF LEAKAGE AND TRAFFIC ACCIDENTS.

THE ON OR NEAR SIGHT STORAGE OF THE WASTES FOR 30 YEARS WOULD ALSO COINCIDE WITH THE 30 YEAR PROJECTED LIFE OF THE POWER PLANT. IF OUR SCIENTISTS HAVE STILL NOT COME UP WITH AN ACCEPTABLE METHOD OF DISPOSAL,THE WASTE AND THE DECOMMISSIONED POWER PLANT WOULD BOTH BE IN THE SAME AREA.

OUR GREATEST CONCERN, OF COURSE, ARE THE HEALTH RISKS TO ALL HUMAN BEINGS PRESENT & FUTURE. AUTHORITIES AGREE THAT THE RATE OF CANCER, BIRTH DEFECTS AND GENETIC DAMAGE INCREASE WHEN THE HUMAN BODY IS EXPOSED TO THE IONIZING RADIATION FROM RADIOACTIVE WASTES.

AS OUR FOREFATHERS PROVIDED FOR OUR FUTURE WHEN THEY WROTE OUR CONSTITUTION SO SHOULD YOU PROVIDE FOR OUR FUTURE GENERATIONS AN ENVIRONMENT WITH PURE WATER, SOIL,AIR AND THE QUALITY OF LIFE THAT WE NOW ENJOY IN OUR STATE OF KANSAS.

IN CLOSING I WOULD LIKE TO SAY THAT IF YOU PASS HB# 2108, YOU WILL BE SHOWING THE NATION THAT KANSAS HAS LEARNED A VALUABLE LESSON FROM OUR COUNTRIES MANY PAST MISTAKES CONCERNING THE MANAGEMENT OF RADIOACTIVE WASTES, AND THAT COMMON SENSE IS NOT DEAD!!!

YOU CAN MAKE A DIFFERENCE!

HYDROLOGY OF THE LOW-LEVEL RADIOACTIVE -SOLID-WASTE BURIAL SITE AND VICINITY NEAR BARNEWELL, SOUTH CAROLINA--BY JAMES M. CAHILL

U.S. GEOLOGICAL SURVEY
OPEN-FILE REPORT 82-863

FROM THE SUMMARY PAGE 99

SEDIMENT SAMPLES WERE OBTAINED FROM BENEATH THE TRENCH FLOOR AT FOUR TRENCHES. THE ONLY GAMMA-EMITTING RADIOISOTOPE DETECTED BENEATH THE TRENCH FLOOR THAT DOES NOT OCCUR UNDER NATURAL CONDITIONS WAS COBALT-60. THIS ISOTOPE WAS DETECTED IN THE UNSATURATED ZONE TO A DEPTH OF 5.8 FEET BENEATH WASTE THAT HAS BEEN COVERED SINCE 1972. TRITIUM ACTIVITY GREATER THAN BACKGROUND WAS DETECTED IN NEARLY ALL OF THE SEDIMENT CORES FROM BENEATH THE TRENCHES. TRITIUM APPEARS TO MIGRATE UPWARD AS WELL AS DOWNWARD FROM THE BURIED WASTE, AND MAY ENTER THE ATMOSPHERE BY EVAPORATION.

DATA OBTAINED FROM A HYDROLOGIC DIGITAL MODEL OF THE STUDY AREA WERE USED TO CALCULATE DISCHARGES TO STREAMS FROM VARIOUS ZONES AND THE AVERAGE WATER VELOCITY IN THE SATURATED ZONES. THE MINIMUM TRAVEL TIME FOR WATER TO MOVE FROM THE BURIAL SITE TO THE CLOSEST STREAM, MARYS BRANCH CREEK, IS ABOUT 50 YEARS, BASED ON VERTICAL MOVEMENT THROUGH ZONE 1 AND HORIZONTAL FLOW THROUGH ZONE 2 TO THE NEARBY CREEK.

City of

concordia

135 E. 6TH ST. - P.O. BOX 603 - CONCORDIA, KANSAS 66901

March 17, 1987

Underground burial of radioactive waste is a technology that has failed at site after site. It relies on an "out of sight-out of mind" mentality that insults the intelligence and common sense of the people of Kansas.

UNDERGROUND BURIAL

Dames and Moore, consulting firm for the Central Compact, concluded that licensable shallow land burial is the least effective method of disposal and "results in the greatest computed (radiation) exposure" to the population.[1]

Both Illinois (Sheffield) and Kentucky (Maxey Flats) have had shallow land burial sites which were closed because of contamination of surrounding land and groundwater. As a result, their Compact agreement calls for "above ground facilities and other disposal technologies providing greater and safer confinement."[2]

NEED FOR LEGISLATION

The people of Kansas need the passage of HB 2108 to protect us from being forced to accept this inferior technology. Article III, section b, of the Central Compact reads as follows:

> "To the extent authorized by Federal law and host state law, a host state shall regulate and license any regional facility within its borders and ensure the extended care of such facility."

In order to protect our best interests, we need a law banning the underground burial of radioactive waste approved prior to our possible selection as a host state.

1. Dames and Moore. "Assessment of Alternate Treatment and Disposal Technologies."

2. Low-Level Radioactive Waste Policy Act Amendments.

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ALTERNATIVES

If Kansas is selected as the host state, and we have a ban against underground burials, what would be our alternatives?

In their study of alternate technologies, Dames and Moore stated that the most effective method of reducing the radiation exposure to the public is the use of earth mounded concrete bunkers (EMCB).

This technology is currently in use at the Centre de la Manche facility in France. It was developed after they experienced failure and groundwater contamination with the technology of enhanced shallow land burial.

The attached report illustrates the superiority of this technology in every aspect when compared to underground burial. Dames and Moore estimate the cost of this technology to be $\$143/ft^3$ as compared to $\$119/ft^3$ for shallow land burial.

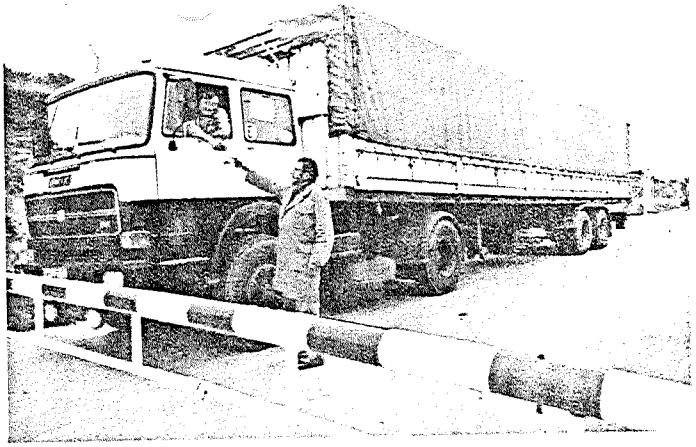
In closing, I want to thank the members of this committee and the Kansas Legislature for your wisdom and foresight in turning away from the "out of sight-out of mind" mentality responsible for the past failures of burying radioactive waste in the ground.

Sincerely,

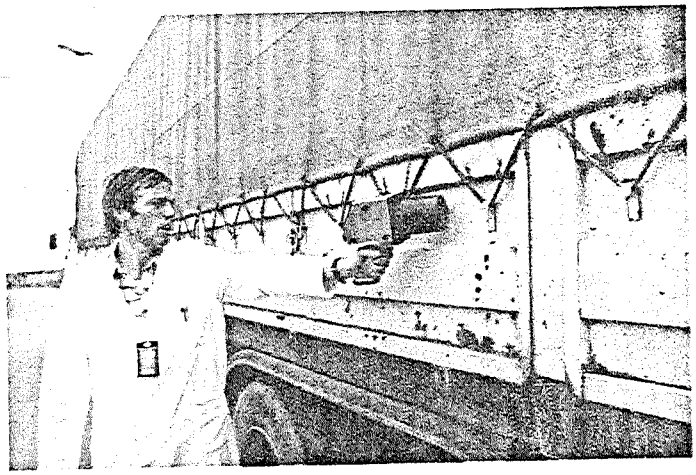
Gregory L. Hattan

Gregory L. Hattan
Concordia City Commission

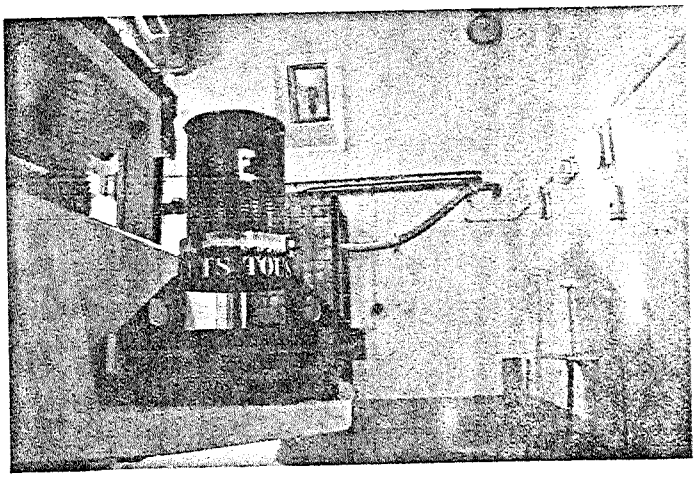
RECEIPT



The wastes arrive in lorries at the Centre de la Manche. The dispatch certificates are checked by the receiving department.



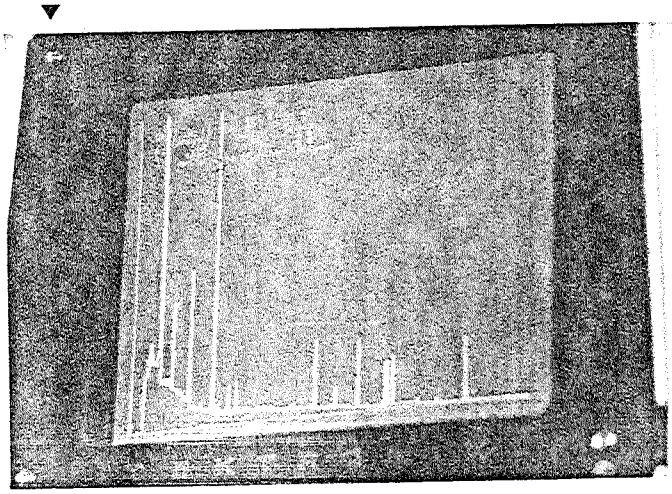
Before entering the disposal enclosure, the lorry is thoroughly checked.

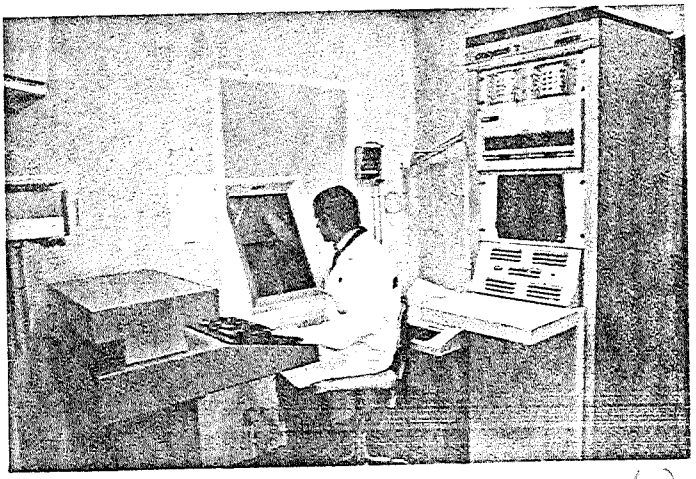


Sample drums are regularly selected from arrival shipment for non-destructive testing in this test cell.

From his control console, the operator moves the drums towards the detector and switches on the analysing unit. The data supplied by the detector are processed by computer.

This helps to determine very accurately the type and activity of the radioisotopes in the drum, and to check the data supplied by the producer.





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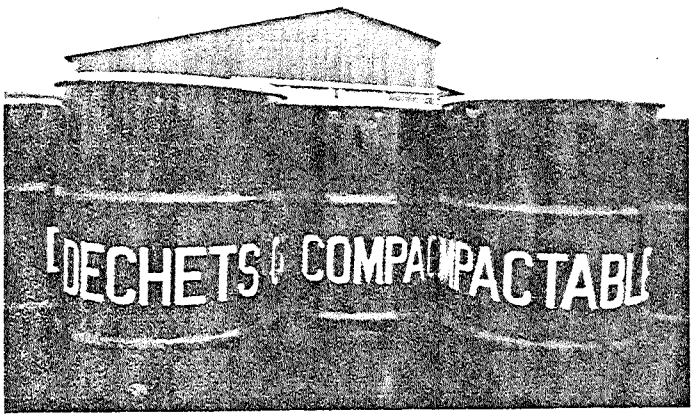
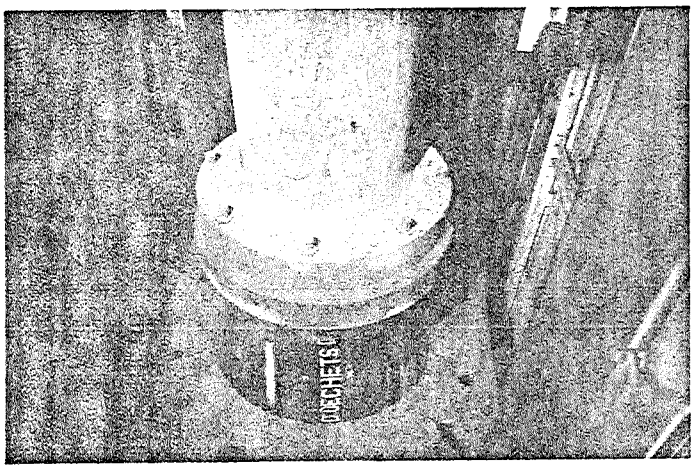
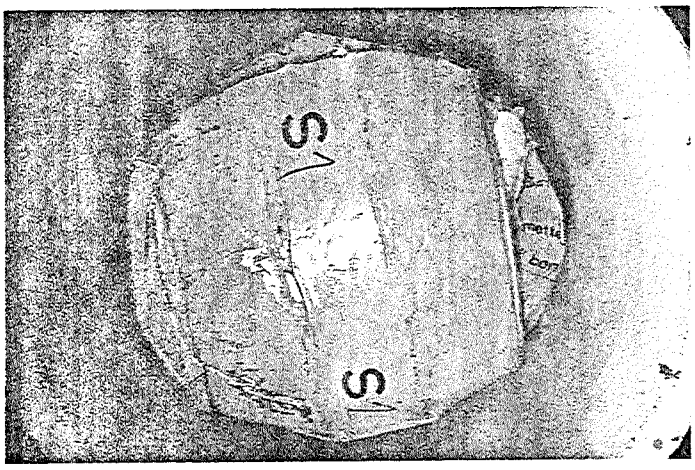
TREATMENT



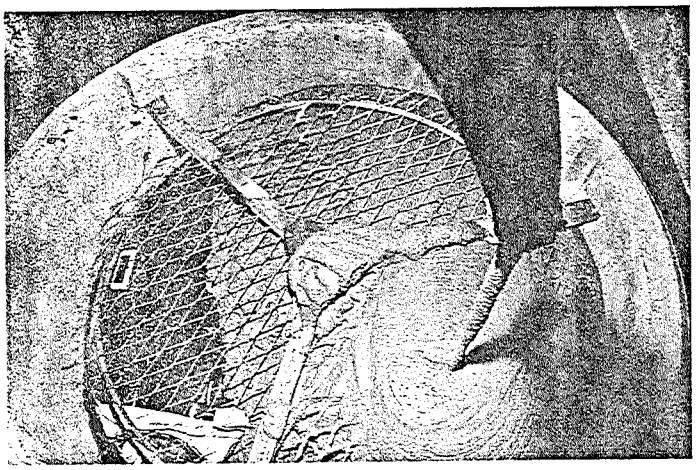
Some producers send wastes to the Centre de la Manche which have not been compacted or immobilized inside the drums.



The Centre de la Manche is equipped with a press for handling non-immobilized wastes. The drums are placed remotely in a mould can crushed by the ram of the press.



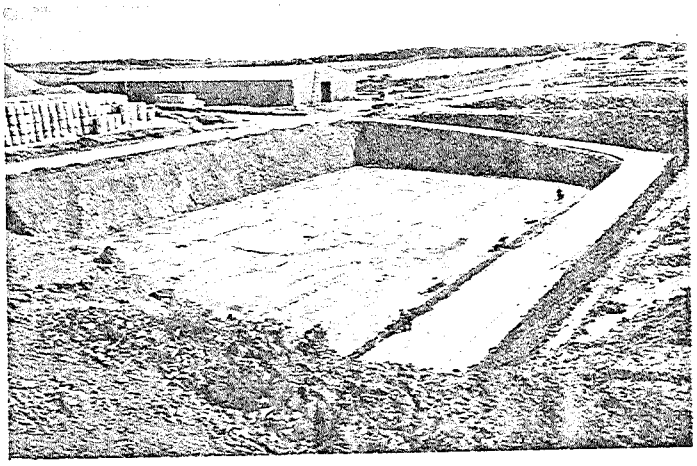
This means that ten 200-litre drums, compacted into slabs, can be placed in one concrete container, which is then filled with concrete.



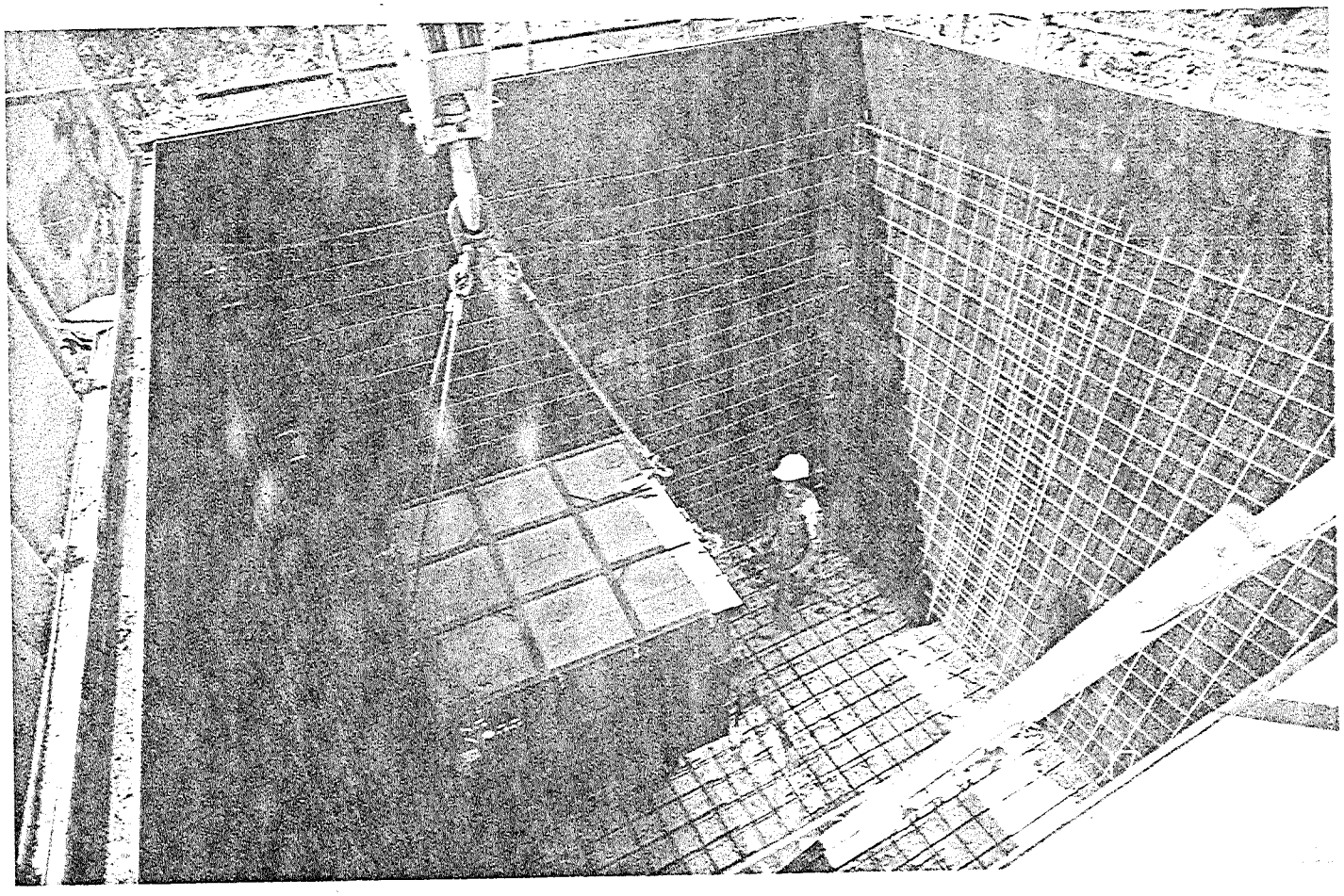
The concrete block thus produced displays good mechanical strength and prevents any escape of radioactivity.

DISPOSAL IN MONOLITHS

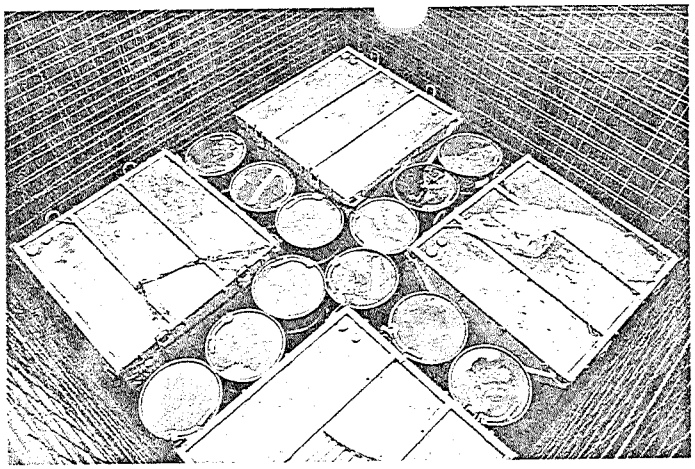
Wastes whose packaging does not provide adequate shielding against radiation are disposed of in monoliths.



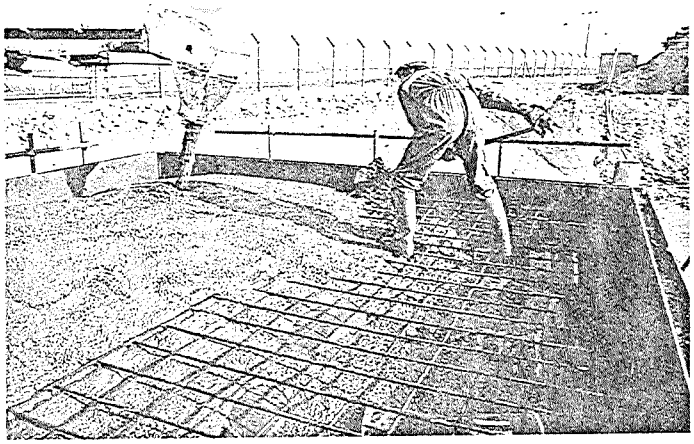
To build a structure to accomodate the concrete monoliths, a wide pit is first excavated and the bottom covered with a layer of concrete. A catchment system is provided to collect any run-off or infiltrating water entering during the construction period. ▶



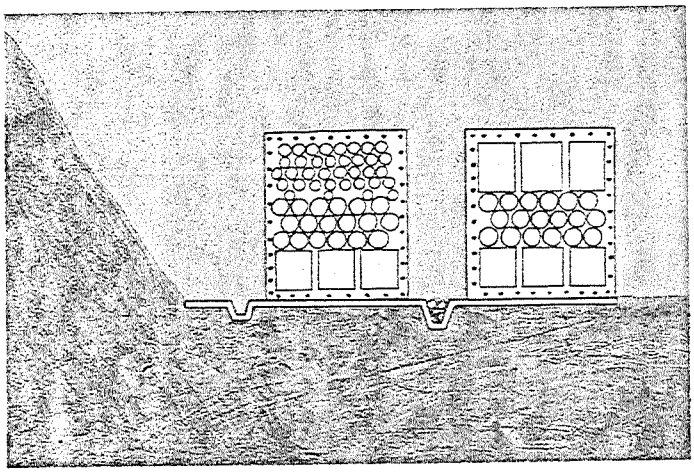
The pit is subdivided into compartments by panels. Steel reinforcement is placed on the bottom and sides to guarantee the strength of the monolith. The packages are then lowered by crane into the compartment.



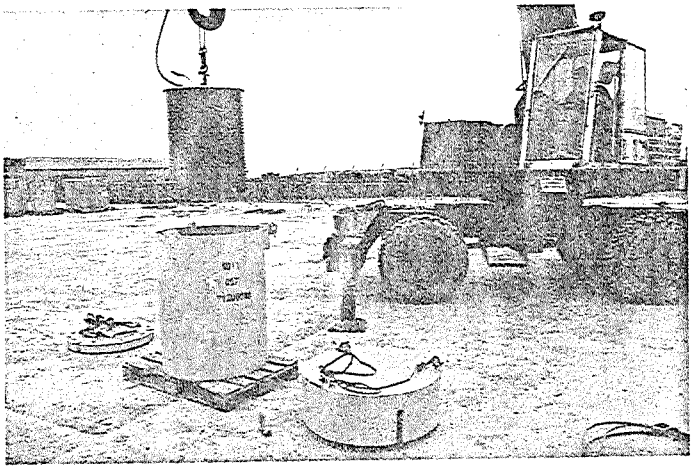
The packages are placed in successive layers. Concrete is then poured in and the packages are thus completely embedded in concrete.



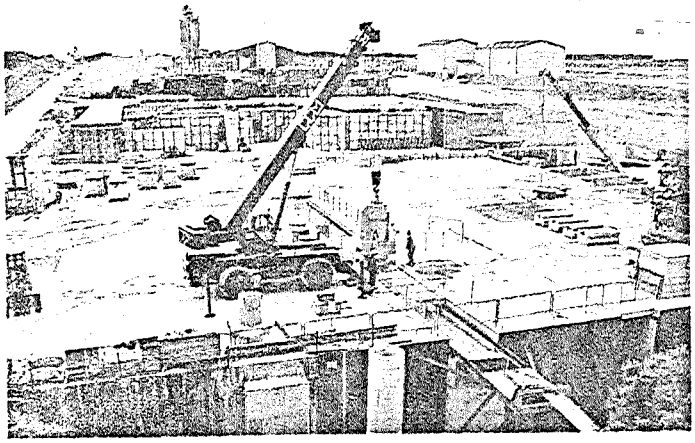
Reinforcing steel is placed on the last layer of packages. The compartment is then completely filled with concrete, thus producing a concrete monolith.



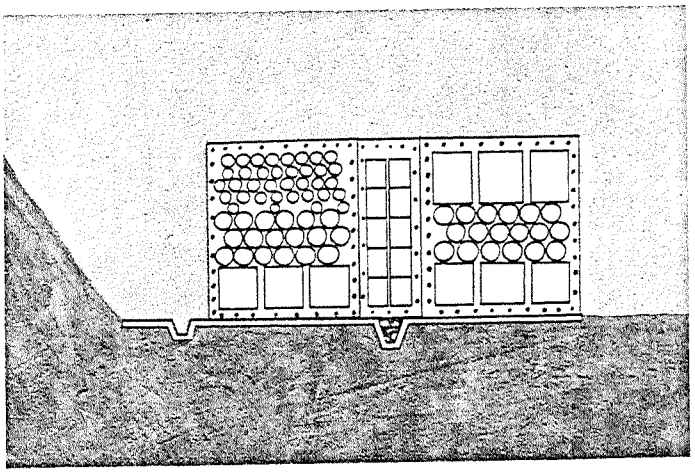
Monoliths are stacked in pairs, with a two-meter void. This is used for the disposal of packages which require additionnal shielding during their handling because of their high levels of radiation.



These high radiation level packages reach the Centre de la Manche in lead or steel containers, which allow them to be transported in perfect safety. A transfer cask guarantees biological protection from the moment of unloading the package from its container up to its arrival at the disposal structure.

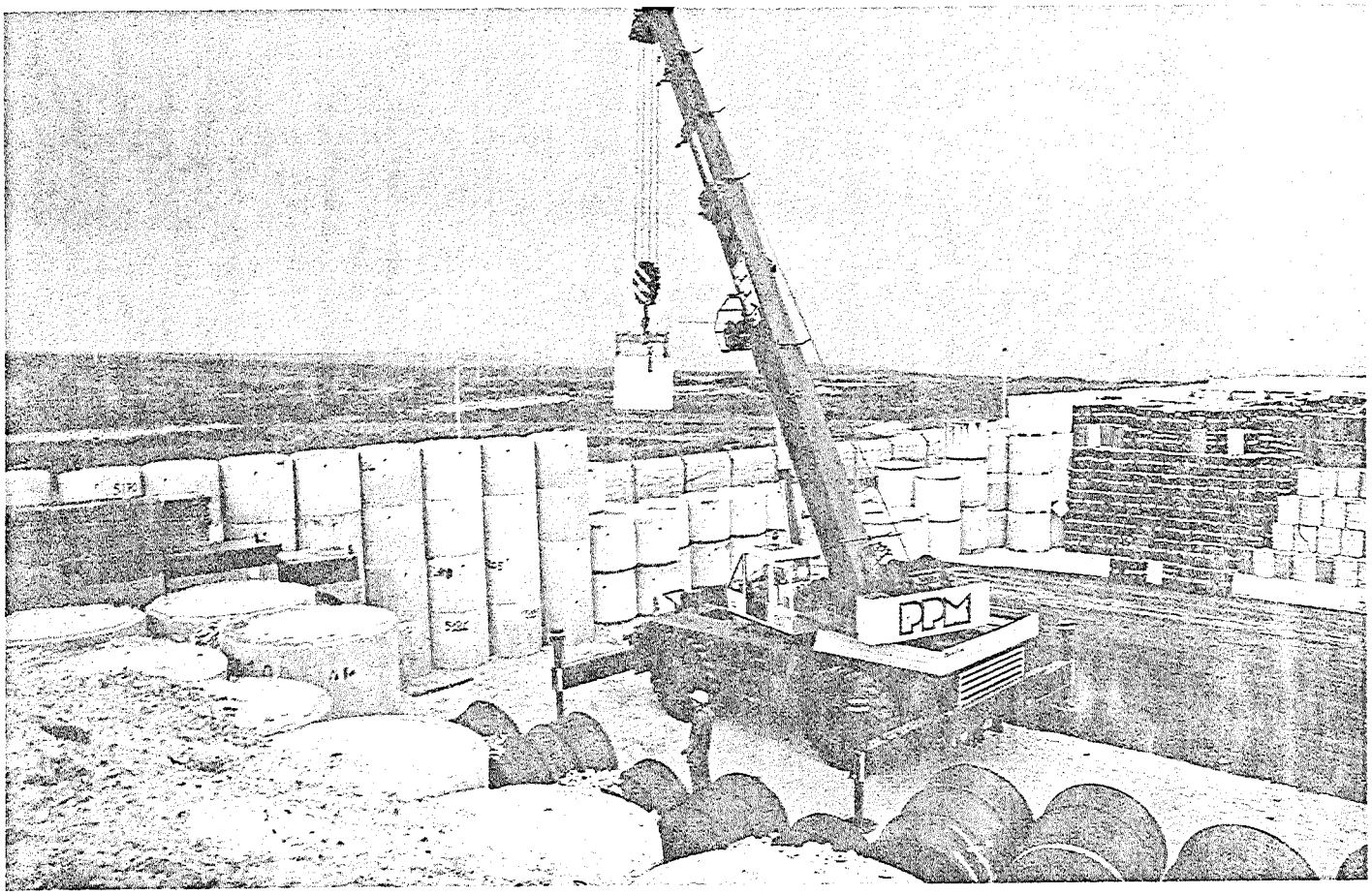


The crane raises the packages in the transfer cask, until it is positioned above the void which is temporarily closed by a slab. The hatches of the cask and slab are opened, and the package lowered into the void.

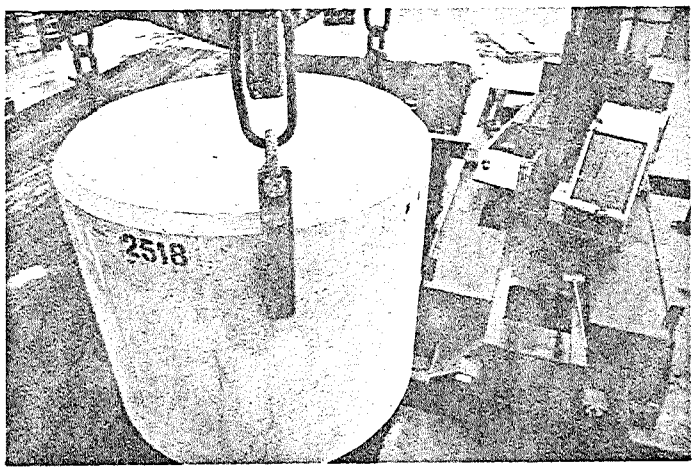


When the void is full, concrete is poured in. This also produces a concrete monolith, surrounded by the first two monoliths.

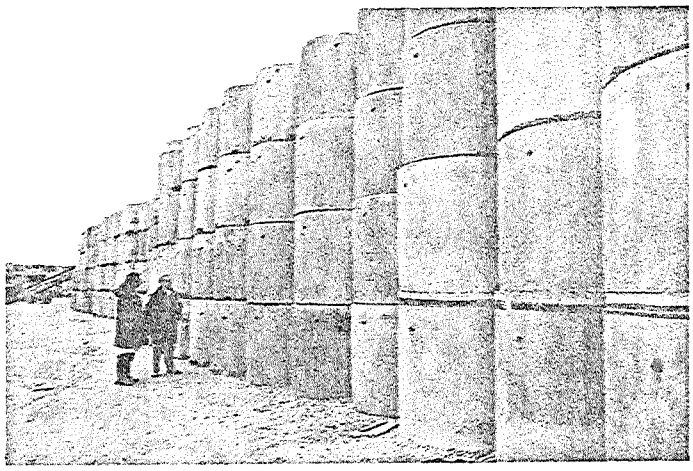
DISPOSAL IN TUMULI



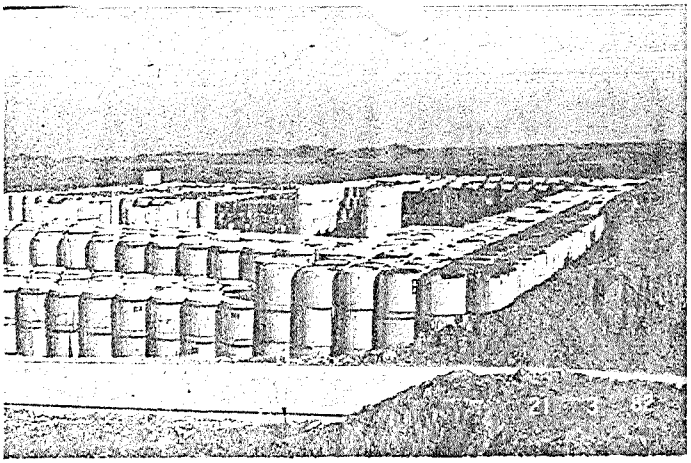
Disposal in tumuli is carried out on top of the buried monoliths. The latter form a vast concrete platform that is covered with asphalt. The area thus delimited is surrounded by a catchment system designed to collect run-off during the construction period, and to check the absence of water infiltrating into the structure after completion.



The concrete blocks weighing 3 to 5 tons are placed in position by crane. Each block bears an identification number that helps to locate it on a storage plan.

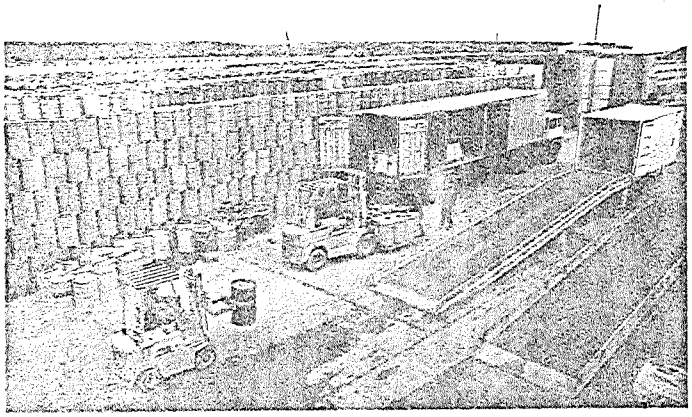


Blocks are stacked to a maximum of four levels, or about 6 meters.



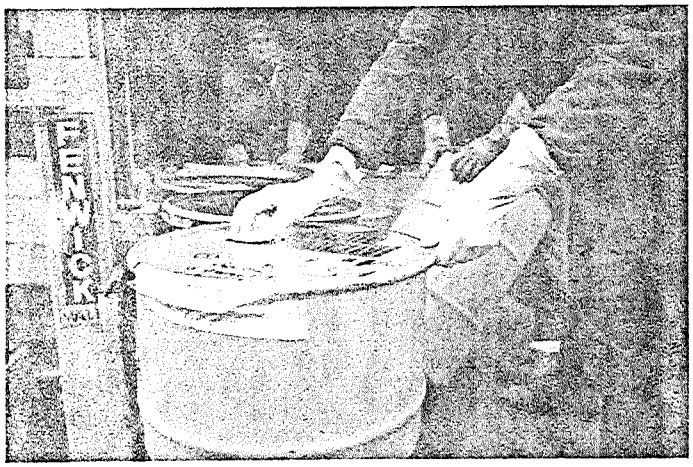
The blocks are placed along the perimeter of the area, and also in rows inside the area, thus making up the structural framework of the tumulus.

Along the area periphery, the blocks are stacked in a stepped arrangement to give the final tumulus the shape of a gently sloping knoll.

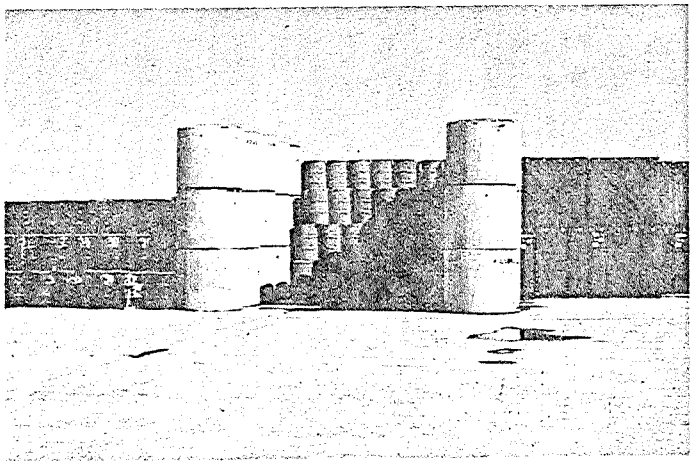


Metal drums are disposed of by category inside the compartments formed by the rows of blocks. Like the blocks, the drums bear an identification number that serves to locate them inside the tumulus.

Before disposal, the drums are inspected individually. Special care is taken to ensure that the outer appearance of the drums and their external radiation levels meet the required safety standards.



To check the absence of radioactive contamination, the rim of the cover is rubbed with a rag which is then checked to make sure that it has not collected any radioactive dust.



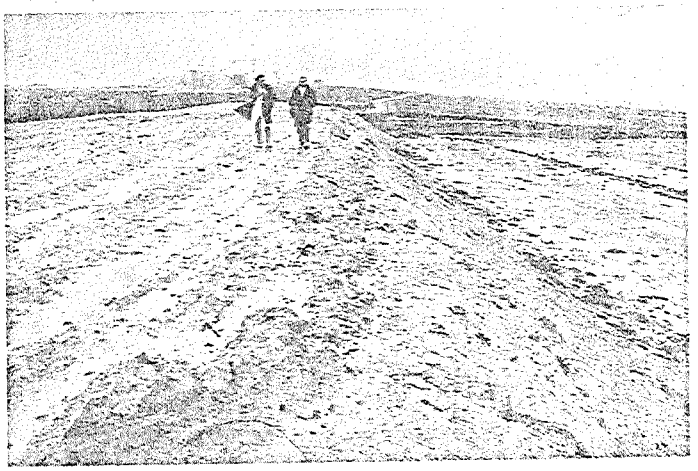
Nearly 10,000 m^3 of packages can thus be disposed of in an area of 3,000 m^2.

When disposal of the co. te blocks and metal drums is complete, backfilling material is poured over the entire stack to fill all the gaps between the packages and guarantee the stability of the tumulus.

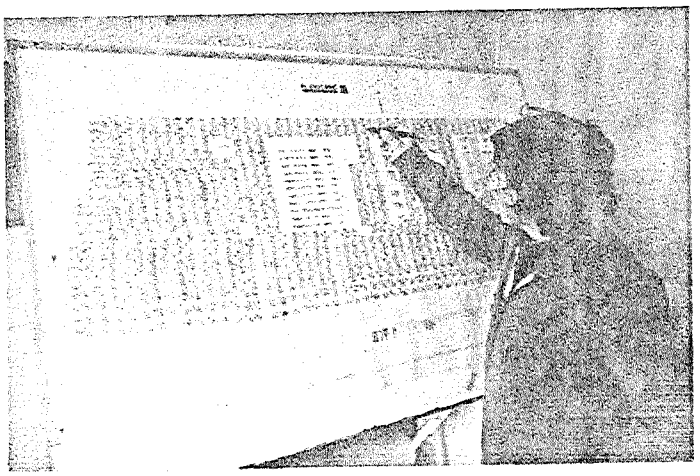
The disposal area is then covered with a thick layer of impermeable clay.

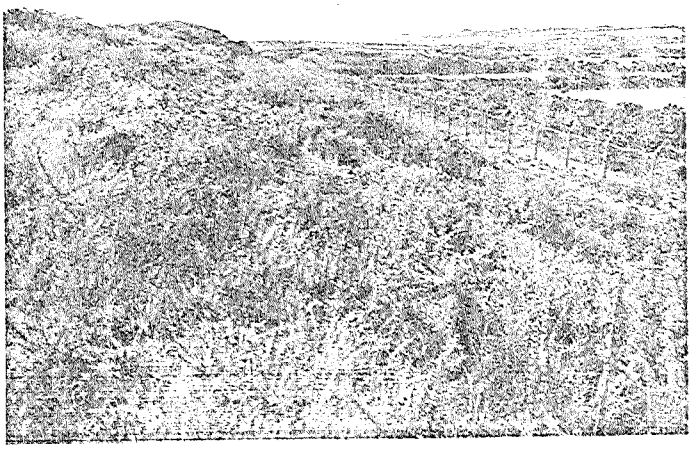
The disposal facility assumes the form of a tumulus, surrounded by a catchment system designed to collect rainwater flowing over the clay layer. The clay is then covered with topsoil.

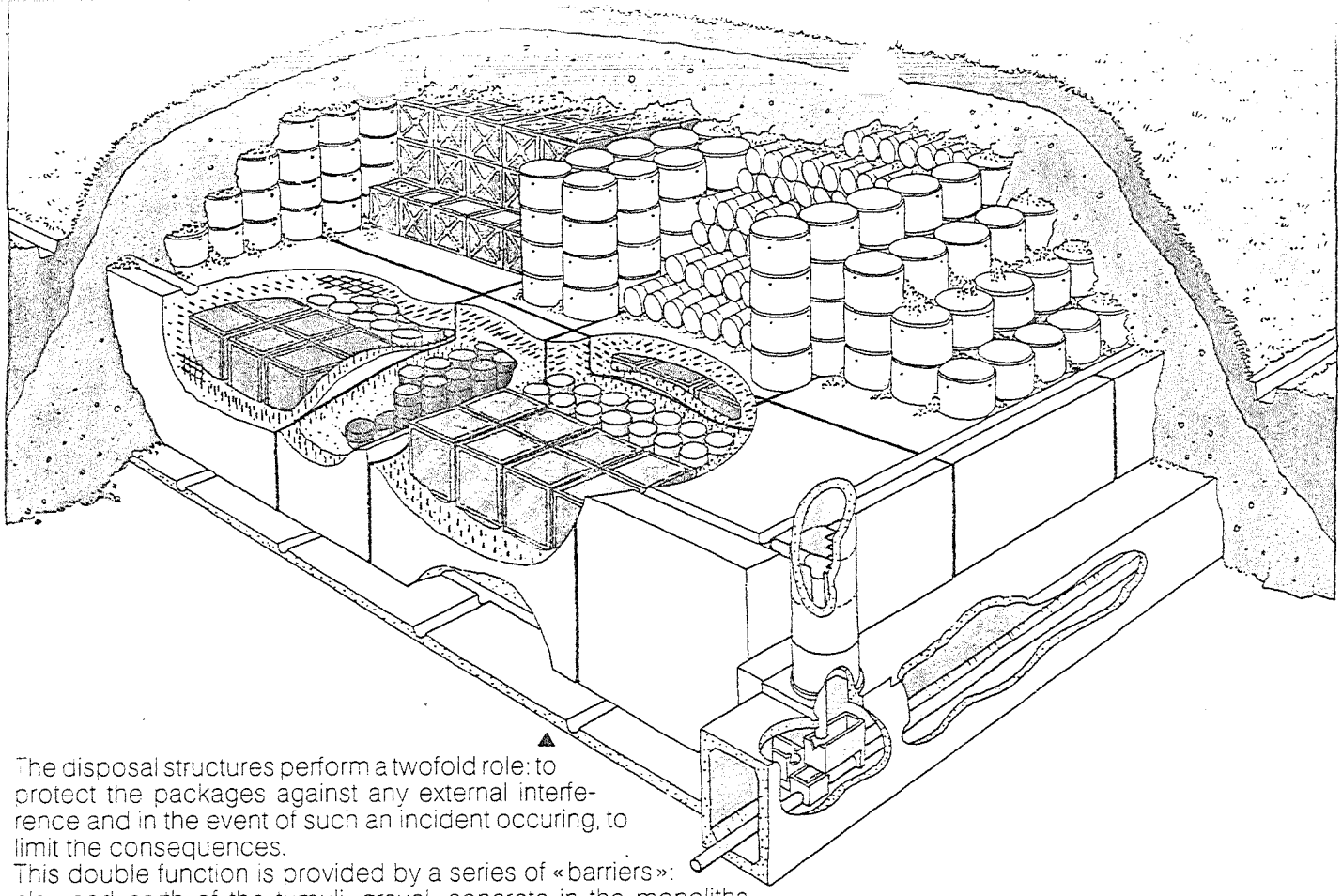
The tumuli are next covered with vegetations to immobilize the soil and to encourage drying.
But since local plants are also successful in re-establishing themselves, these mounds blend naturally with the surrounding landscape.



The locations of the packages in the tumuli and monoliths are recorded on the site plan. This provides a detailed summary of the disposition of the wastes which is then duplicated on microfilm and filed in different places.

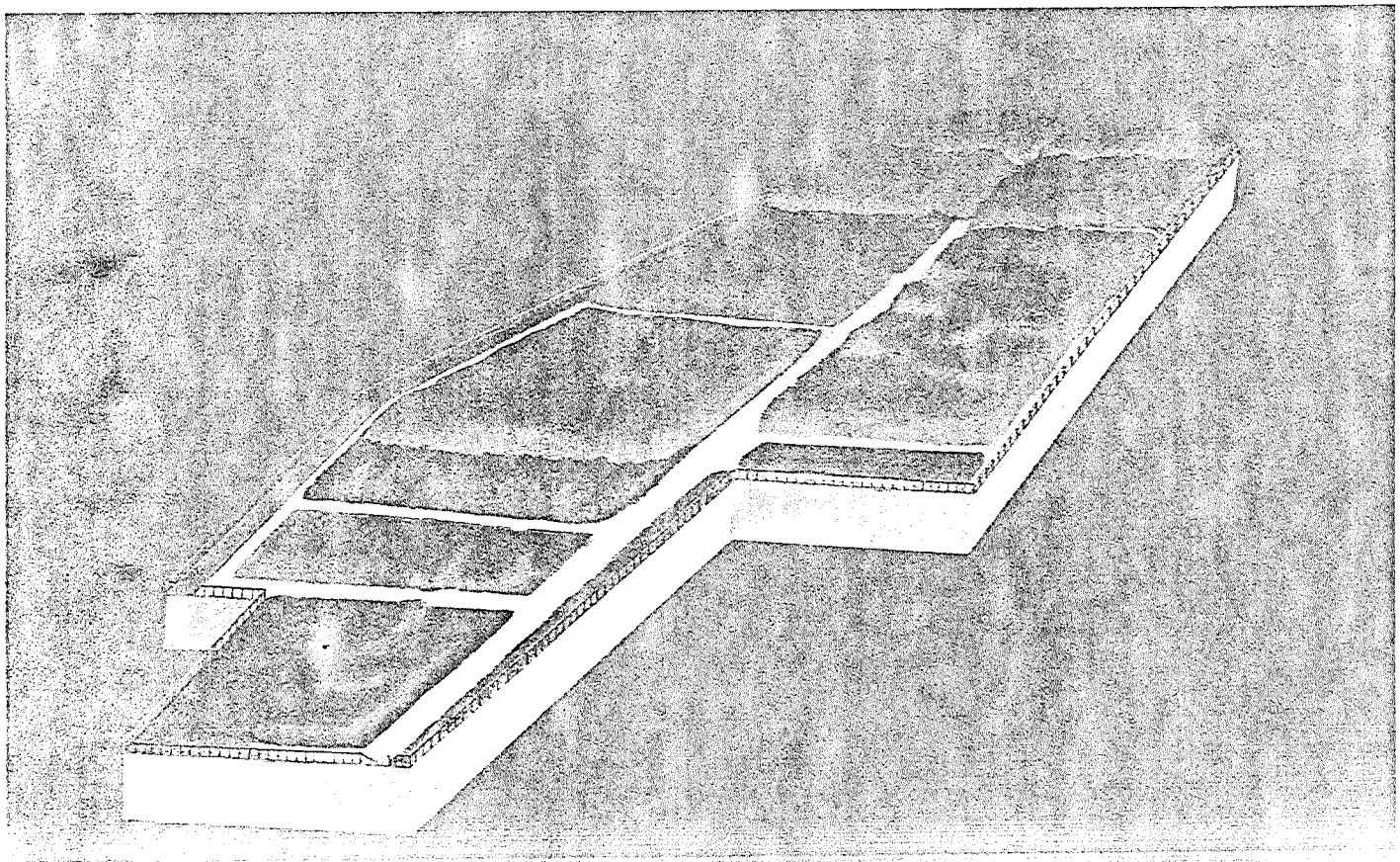


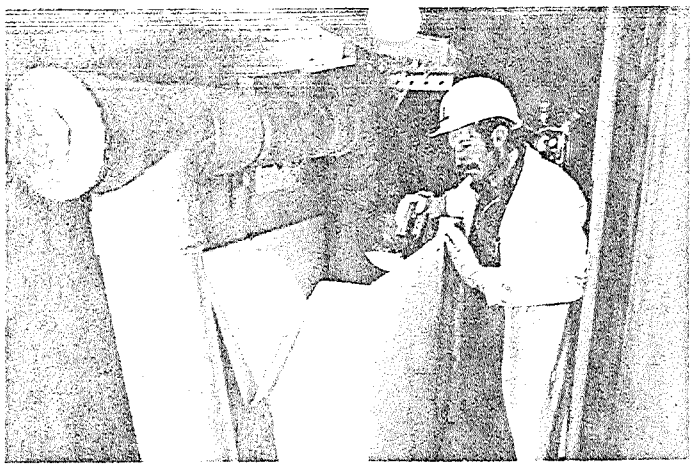




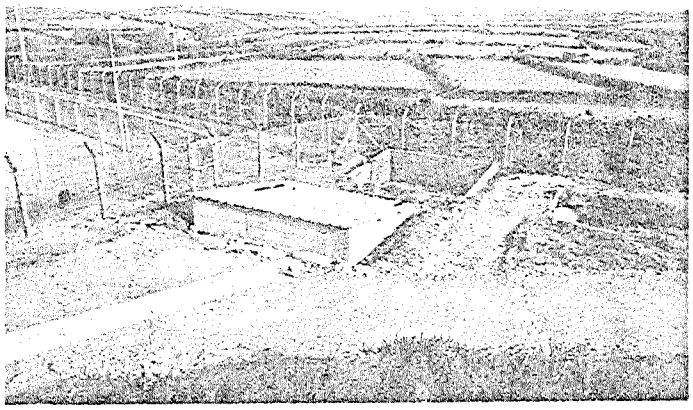
The disposal structures perform a twofold role: to protect the packages against any external interference and in the event of such an incident occuring, to limit the consequences.
This double function is provided by a series of «barriers»: clay and earth of the tumuli, gravel, concrete in the monoliths, package walls and immobilization matrix in the packages. The structures are particularly earthquake resistant. They are impervious to rainfall and underground water. A monitoring network situated at the base of the monoliths and tumuli and accessible by inspection pits, enables the watertightness of the structures to be checked. This network is separate from the one that collects the runoff at the base of the tumuli.

At the end of the operational period, the Centre de la Manche will be cleared of its equipment and other facilities (press, test cell, temporary storage facilities, administrative building) and only grassy mounds will be visible. The land will remain under State control for 200 to 300 years, after which the potential risk to the environment will be negligible.



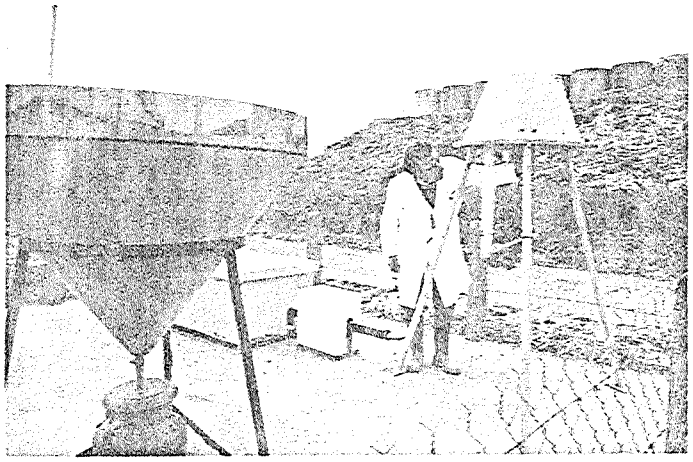


During construction, the monitoring network surrounding the tumulus and monolith collects any water that has infiltrated or fallen on the structure. These waters are collected, analyzed, treated if necessary, and discharged after testing.
When the structure is complete, this network is normally dry.

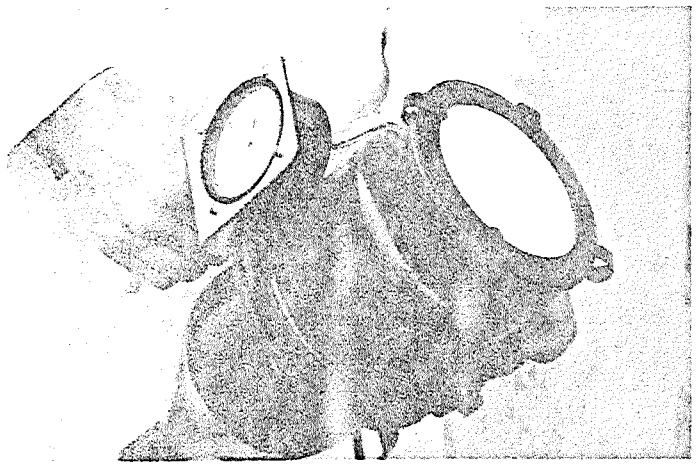


Two separate tanks collect rainwater and the water from the monitoring network. Periodic sampling and analysis is carried out.

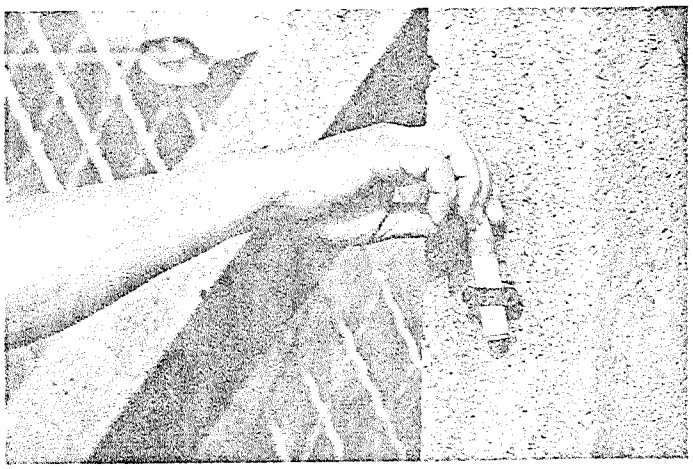
Changes in the water-table are also checked. Its level is measured and checks are made to confirm the absence of radioactivity.



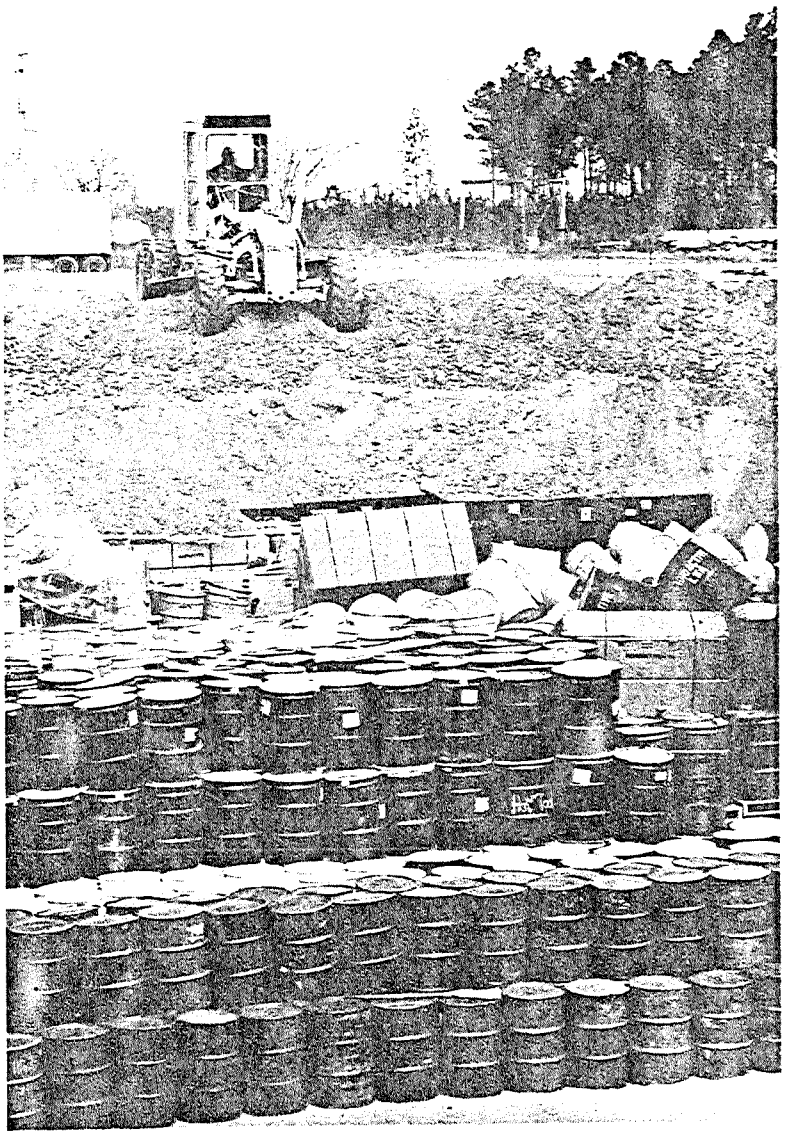
A small meteorological station measures rainfall and checks it for radioactivity.



Measurements of radioactivity in air are also performed regularly both outside and inside the buildings.



Dosimeters placed in the centre and along the fence serve to check the radiation levels.
Monthly reports of all measurements taken at the Centre are transmitted to the inspection authorities and filed.



Low-level waste at Barnwell, South Carolina, in 1983. *Philadelphia Inquirer / Nick Kelsh*

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Concordia, Kansas, February 23, 19 87

Dr. Robin P. Hood, 1122 Broadway, Concordia, KS 66901

—In Account With—

CARL THOMAN & SON

Well Drilling
PUMPS and WINDMILLS
IRRIGATION SUPPLIES

333 East Sixteenth Street P.O. Box 10 Phone 243 - 2465

Robin:

In answer to your questions: My family has been in the water-well drilling business for about 54 years. We have drilled thousands of wells all over north-central Kansas.

As we have drilled the majority of these wells in Cloud, Republic, Jewell, and Mitchell counties, I can definitely assure you that in almost all places potable water can be reached short of 50 feet. In certain localities, water wells must be drilled considerably deeper to provide adequate water reserves in dry years. This greater depth may not be necessary in very wet years. But, in answer to your question, almost always we hit water before we drill 50 feet.

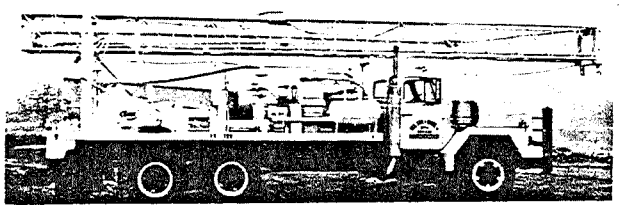
Sincerely,

Elmer Thoman

A FINANCE CHARGE is made at a "Periodic Rate" of 1% per month which is an ANNUAL PERCENTAGE RATE OF 12% applied to the previous balance remaining unpaid on the last day of each month.

F
Energy
3-18-87

DARYL COX 913 455-3301



DARYL COX & SONS, INC.
WELL DRILLERS

T-L CENTER PIVOTS

CLIFTON, KANSAS 66937

February 23, 1987

Robin Hood
1122 Broadway
Concordia, Kansas 66901

Dear Robin:

This letter is in regard to our recent telephone conservation about the water supply in Republic, Mitchell, and Jewell Counties.

I have drilled numerous wells & test wells in these Counties over the 40+ years of drilling experience.

I have yet to drill what you would call a dry hole. There is no place that I know of in this area where you don't get some water. It might not be the best quality, or the quanity might not be what you'd look for in a well, but there is always some water. I have left a dry hole open overnight. In the morning there is always some water in the hole. In these holes the water is sometimes found very shallow, and in some it is quite deep. Usually by the depth of 200 ft. you have some water.

Since July 1, 1975 the State has on record any well drilled in the State of Kansas by a licensed Driller. Although some tests are not recorded, the wells are recorded and the information is available through the State Department. Their address is:

Kansas Department of Health & Environment
Division of Environment
Environmental Geology Section
Topeka, Kansas 66620

There is also a publication available from the Geological Survey of Kansas from Kansas University that might be of interest to you. It is titeled: "Ground Water in the Republican River Area, Cloud, Jewell, and Republic Counties" It is:

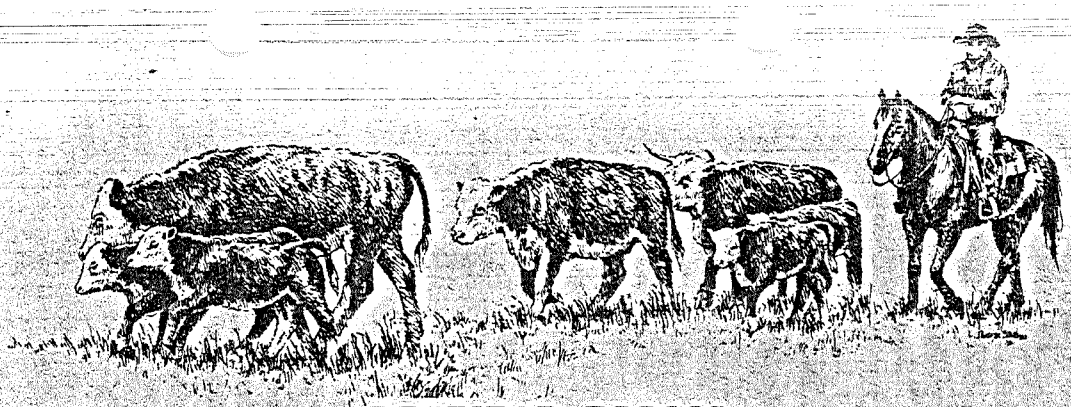
Geological Survey of Kansas
Bulletin 188
by, Stuart Fader

I hope this information will be of help to you.

Yours truly,

Daryl Cox

cc:me



G. KENT LARSON
913 - 527-2195

BESTIFOR FARMS

Rural Route 1
Scandia, Kansas 66966

THAYNE A. LARSON
913 - 335-2895

Feb. 22, 1987

Dr. Robin P. Hood, HOOD DEVELOPMENT CO.
1122 Broadway
Concordia, KS 66901

Robin:

Our farm is located in Republic County (NW¼ of 7-3-3) and has been specifically sited by Dames and Moore as a property ideally suited for the burial of low-level radioactive waste.

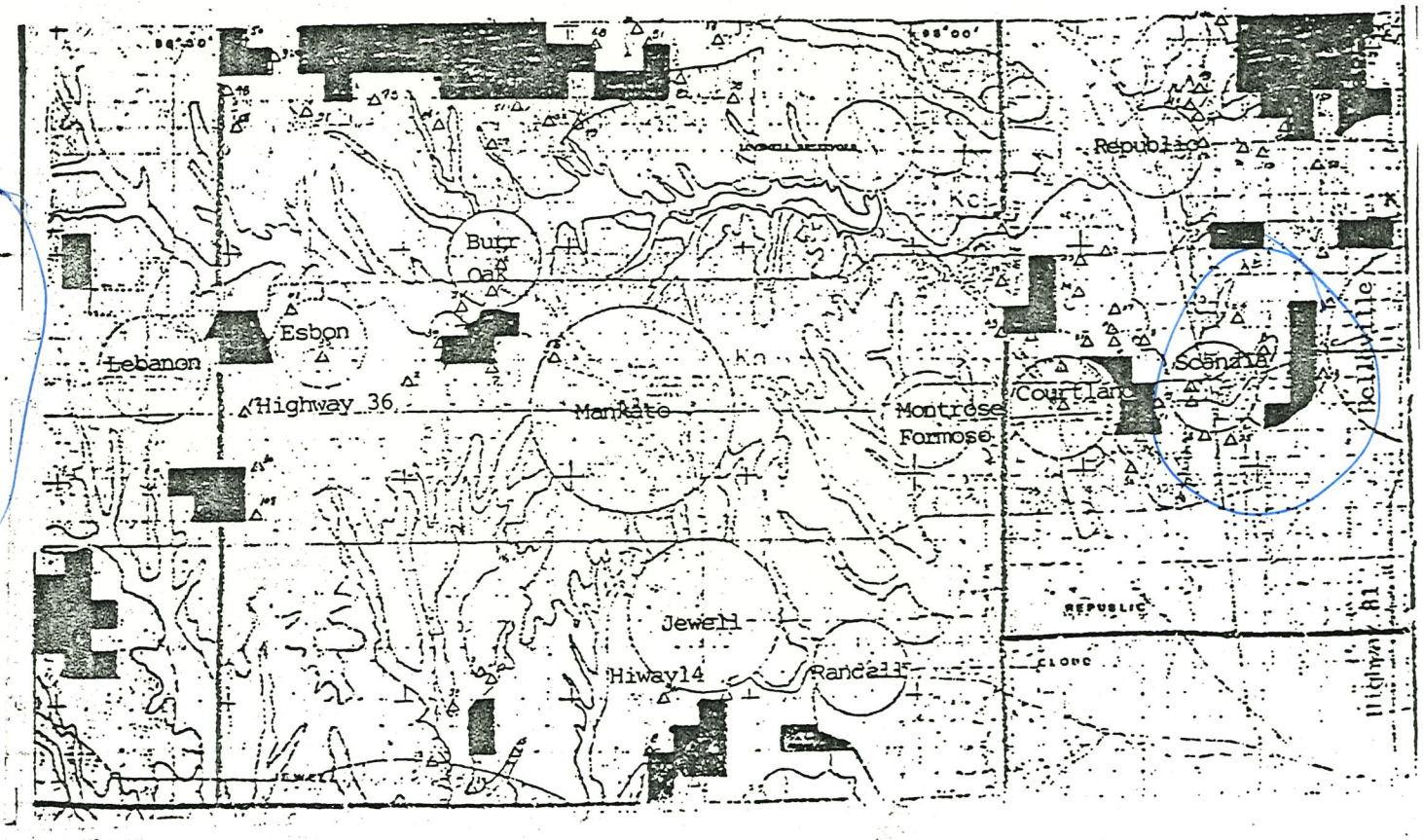
This must be a mistake, but after seeing the other sites published in the Belleville Telescope all within this county, I have came to the conclusion that the only criterion used in determining the placement of this dump is low population. The water table on our farm is approximately four feet (4'). Anyone burring radioactive or any other waste in this region will find the hole they dig filled with water to within four feet of the surface. This can only result in water contamination for the surrounding area.

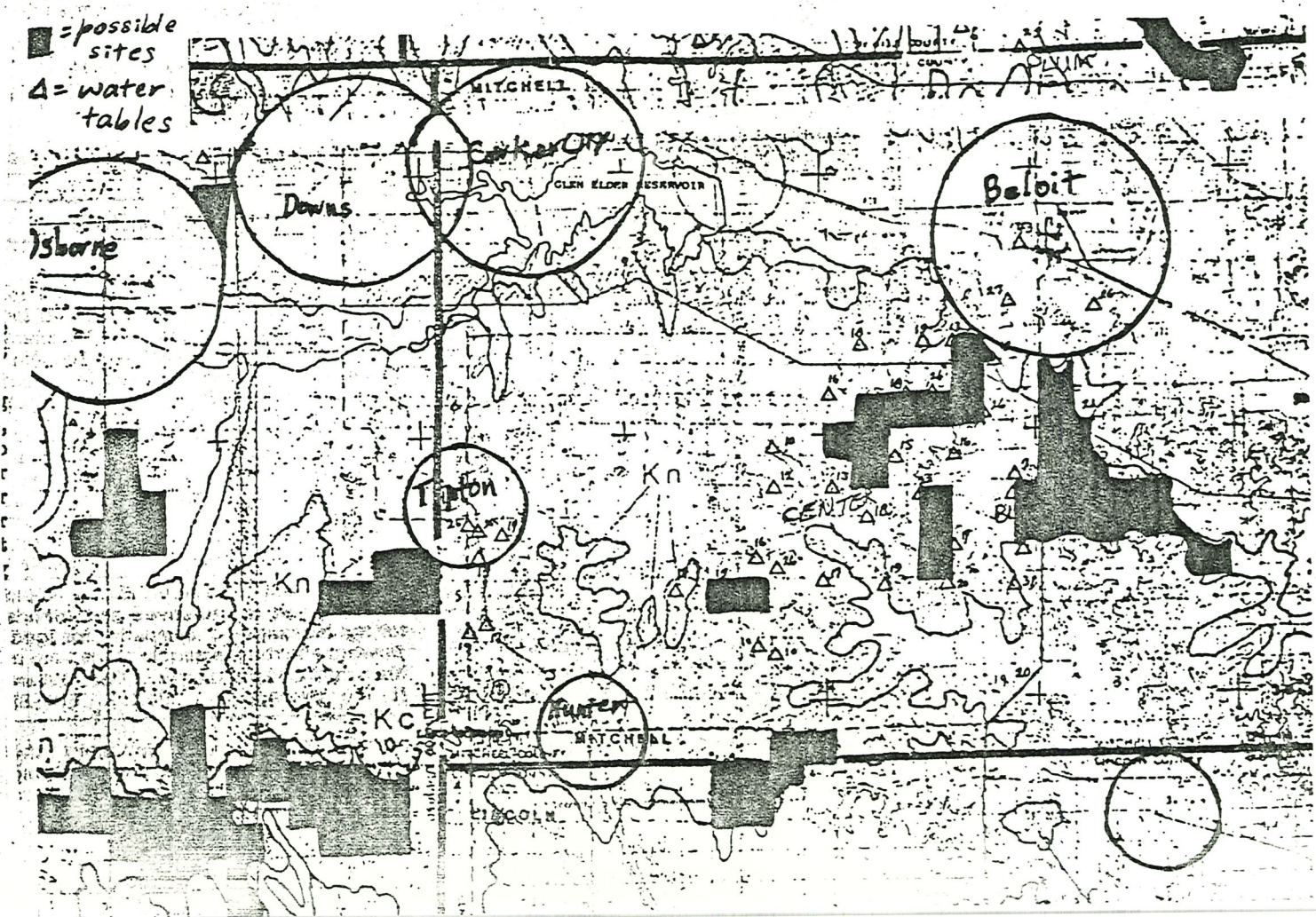
Most people around here think this Dames and Moore study is a phony. No one in their right mind would bury radioactive waste here!

Thayne Larson

Thayne Larson, B.S.

ar Waste Dump In Area





COX - BESWICK

IRRIGATION SERVICE, INC.

Route 1, Box 133A
Clifton, KS 66937

Office: 913-455-3676
Francis Cox: 913-455-3593
Arnie Beswick: 913-455-3528

I am Francis Cox with Cox-Beswick Irrigation Service, Inc. of Clifton, Kansas. We have drilled many wells in the state of Kansas. We are very familiar with the geological formations in Cloud, Jewell, Republic and Mitchell counties. Most groundwater is found in these areas less than 60 feet below ground level. In some places we find it to be deeper, but often find a small amount of water less than 60 feet.

I am also the Executive Director of the Kansas Water Well Association. I am a member of Kansas Environmental Awarness Committee, the Kansas Groundwater Quality Protection Strategy Task Force, and the Kansas Water Well Advisory Committee. The goals of all these committees are to protect our valuable groundwater. If the shallow burial of low-level radioactive waste is allowed in this area, it would mean the many hours and expense many of us have donated to the protection of our groundwater would certainly have been wasted. The most important problem is the hazard of groundwater contamination. I certainly don't agree to the burial of low-level radioactive waste in this area and feel certain it would be the biggest mistake that could be made. It could be a direct channel of contamination into our groundwater forever.

All efforts should be toward protecting our groundwater. This would mean no shallow burial in this area.

Francis Cox

Senate Energy & Natural Resources Committee
State Capitol Building
Topeka, KS 66612-1590

Steve Kraushaar
Attorney At Law
Marshall County Counselor
Courthouse
Marysville, Kansas 66508

(6)
Energy
3-18-87

Merl Werts, Chairman
Senate Energy and Natural Resources Committee
State Capitol Building
Topeka, Kansas
To: Chairman Werts and
the Honorable Members of this Committee

My name is Steve Kraushaar. I am a lawyer in Marysville, Kansas, and am appearing on behalf of and at the direction of the Marshall County Commissioners. Our Commissioners are gravely concerned that Marshall County in particular, and more over the State of Kansas in general, is likely to be designated as the state to receive the low level nuclear waste disposal site. Our Commissioners are acting with nearly unanimous support from the constituents in our county. The Commissioners have read most of the articles concerning the location of the waste site and have discussed this matter on numerous occasions with concerned citizens in our county. The most recent example of a meeting the commissioners had with our residence was last Monday when more than 230 people consulted with the Commissioners about this problem. The meeting was almost spontaneous with only a day and half notice by some of the local residents.

The Marshall County Commissioners have adopted a resolution so that you understand our resolve and committment in objecting to the burial of nuclear waste in our area or in Kansas. The resolution is attached to this statement.

The people of our area are of the firm belief that nuclear energy was promoted by the Federal Government and the utilities industry and that the current compact is the federal government's attempt to pass the problem back to the states.

Our residents believe that Kansas produces very little nuclear waste and that it is the responsibility of this legislative body and the Governor to explore alternative methods of disposal to becoming the dumping ground for other states.

For example, has anyone considered that we might develope our own disposal site for what little waste we have? Has anyone considered the possibility of contracting with another state which would have it's own disposal site open to us?

Our residents believe the federal government has not adequately considered burying this waste in the Nevada Desert near the bomb testing sites on land which is already condemned for thousands of years.

Our residents believe that it is absolute insanity to consider dumping nuclear waste in areas where there is precious underground water and significant rainfall as there is in our area and throughout Kansas.

Everytime a site has been constructed in the past, assurances have been given that adequate technology existed to contain the waste and keep it safe. I understand that three of the six sites presently in operation have leaked radiation into the underground water systems and have contaminated the drinking water.

Our residents believe that the members of this committee and the members of the larger legislative body and Governor are the custodians and caretakers of our natural resources. Your responsibility is great. Do not be swayed by assurances with guarantees that are short lived. Our residents do not want to wake up some morning and read in the Topeka Capitol that leaks have been discovered in the disposal site and that the environment has been contaminated.

Despite a severe agricultural economy, our residents take pride that there are many young people in our district who have made our area in the State of Kansas the home in which to raise their children. The decision before you will affect our children and their children.

I want to thank this committee for its attention. The Marshall County Commissioners wish to express their appreciation to you for having heard our voices. The decision you are about to make concerning the storage of nuclear waste in Kansas coincides with the two-hundreth anniversary of our Constitution.

We, in Marshall County, want this committee and our elected Representative, Bruce Larkin, and our Senator, Don Montgomery, to know that the Commissioners with the overwhelming support of our residents, request you favorably pass out of committee HB 2108 and vote for its passage of the floor of the Senate. We also ask your support in requesting the Governor to sign the bill into law.

Thank You.

Steve Kraushaar

RESOLUTION

RESOLUTION PROTESTING KANSAS, AND IN PARTICULAR NORTHEAST KANSAS, FROM BEING SELECTED FOR A RADIOACTIVE WASTE DISPOSAL SITE.

WHEREAS, the Marshall County Commission has knowledge that Kansas, and in particular Northeast Kansas, is being considered for a radioactive waste disposal site; and

WHEREAS, the Marshall County Commission believes that such a radioactive waste disposal site would be detrimental to the health, welfare, and safety of the citizens of the State of Kansas, and in particular the citizens of Northeast Kansas; and

WHEREAS, the Marshall County Commission desire to promulgate a formal protest for the State of Kansas, and in particular Northeast Kansas, from being considered as a site for any radioactive waste disposal site.

NOW THEREFORE, BE IT RESOLVED BY THE BOARD OF MARSHALL COUNTY COMMISSIONERS, that the Board of Marshall County Commissioners desire to promulgate a formal protest for Kansas, and in particular Northeast Kansas, from being considered for a radioactive waste disposal site.

Dated: March 16, 1982

BOARD OF COUNTY COMMISSIONERS OF MARSHALL COUNTY, KANSAS

BY: Francis Long
Francis Long
Chairman

J. Leo Caffrey
J. Leo Caffrey
Member

DeWayne Lindquist
DeWayne Lindquist
Member

CLERK OF MARSHALL COUNTY SEAL KANSAS

ATTEST:

Gayle Landoll
Gayle Landoll
County Clerk

Almost 250 people crowded into the basement meeting room Monday at the Courthouse to ask for the Marshall County commissioners' support in opposing the location of a low-level radioactive waste disposal site in the county and northeast Kansas.

"We have to think about future generations," Bud Anderson, 1000 Elm, said. "We have a nightmare on our hands."

Greg Schmitz, RR2, spokesman for the group, asked the commissioners to do whatever they could as representatives of Marshall County to oppose the location of a low-level radioactive waste site in the area.

Commissioners met for an hour with the group. That portion of the commissioners' meeting was conducted in the Courthouse basement because of the large turnout.

Earlier in the morning, after commissioners had convened in regular session, they passed a resolution that protested the establishment of a site in Kansas, particularly in northeast Kansas.

Marshall County Counselor Steve Kraushaar read the resolution to the group.

Last week the commissioners asked Kraushaar to draw up the resolution in response to a study that names Marshall and Nemaha counties as possible sites for the location of a radioactive waste disposal site.

Kansas is a member of the Central Interstate Low-Level Radioactive Waste Compact, a five-state organization formed in 1982 to find a central location to dump low-level radioactive waste produced within the five-state region. Other members of the compact are Nebraska, Oklahoma, Arkansas and Louisiana.

A February 1987 draft of a consultants' study listed 833 square miles in Kansas with 109 potentially suitable sites for a low-level radioactive waste dump. Among those areas listed in the state were 35.5 square miles with five potential siting areas in Marshall County; 35.5 square miles with eight areas in Nemaha; 35.5 square miles with seven areas in Brown; and 4.5 square miles with two areas in Doniphan.

Commissioners Chairman Francis Long, Marysville, said commissioners would cooperate with the group in any way they could to keep a nuclear dump out of the county.

Later in the day commissioners asked Kraushaar to take a copy of the resolution to Topeka to give to state legislators. Kraushaar was to testify before the Senate Energy and Natural Resources Committee Wednesday morning on behalf of the commissioners. His testimony will be in support of a bill that would prohibit underground burial of radioactive wastes in Kansas.

George Stanton, RR3, chairman of the Rural Water District No. 1, will accompany Kraushaar and will also testify.

Menno Lienemann, RR2, will carry the same resolution to Kansas lawmakers this week in Washington, D.C. Lienemann was to be in Washington to represent the independent telephone companies legislative council.

Commissioners also decided to go to a public meeting in Beloit on Wednesday evening where state and compact officials were scheduled to receive comments about the consultants' study.

Those at the meeting Monday morning were urged by Schmitz, Anderson and Nancy Vogelsberg-Busch, Home City, to attend the meeting in Beloit, scheduled for 7 p.m. in the Beloit Junior-Senior High School Gym.

A bus to take area residents to the meeting was scheduled to leave Wednesday afternoon from the Wal-Mart parking lot.

Community action was imperative, several of those at the meeting said.

"We've got to stop this thing here," Schmitz said. "If the site is established in Marshall County, what guarantee is there that more sites won't be established?"

Steve Boyda, Marysville lawyer, said that although the radioactive waste is called low-level, that is an ambiguous term.

"We have only to look back in history," he said. "The government said the (low-level radioactive) waste material isn't hazardous, but they said nuclear testing wasn't hazardous. They said Agent Orange wasn't hazardous, but 20 years later our boys who fought in Vietnam are dying of cancer. I don't know, when they are looking for a waste site, why they don't look at the testing sites where they set off H-bombs as a site for nuclear waste. They already have claimed the land and there are no more folks to move off the land."

Others who spoke were concerned about the hazard that storage of nuclear waste posed to the underground water supply that serves most of northeast Kansas. Three existing storage sites across the country have been closed due to contamination of underground water.

Boyda urged the group to organize, write letters to legislators, and take out advertisements in area newspapers to list legislators' addresses and call for action.

After the meeting commissioners went back upstairs to their regular meeting room; several people stayed in the basement meeting room and formed the Northeast Kansans Against Nuclear Waste Burial. Members of the committee are Anderson, Schmitz, Vogelsberg-Busch, Boyda, Louise Reust, Frankfort; Rachel Huninghake, Frankfort; Madelyn Turnbull, 1000 Jenkins; G.W. Stanton, RR3; Pete Wassenberg, RR1; Fred Lienemann, Herkimer; and Becky Dunlap, Beattie.

The committee met later Monday afternoon with the commissioners. The committee and commissioners tentatively scheduled a public information meeting in the first week of April to discuss developments in the compact's study.

To: Merrill Werts - Chairman and Committee Members
Senate Energy & Natural Resources Committee
Rm. 120-S
State Capitol Building
Topeka, KS 66612-1590
H. B. 2108 & S. B. 114

From: G. W. Stanton
Rt. #3
Marysville, KS 66508
913-562-3729

H
Energy
3-18-87

To: The Honorable Senate Committee Members:

I am G. W. Stanton, chairman and operator of Rural Water District #2, known as "East-side" Marysville, Marshall Co. Kansas.

The world will little note nor long remember what we say here but if we make the mistake of letting the burial of radioactive waste in our area or state, our great, great, great grandchildren will suffer for our mistake.

The name of Summit may not mean much to you gentlemen, but it is the highest point in Marshall Co. and the map of potential nuclear dump sites shows one near there. The terrian is all down hill from the Nebraska border to the south part of our county, with the Big Blue river on the west and the Nemaha river on the east. Many small creeks all flow to the southern part of our county to Tuttlecreek and on to Topeka and Kansas City. Our area also has the major underground water system that supplies Northeast Kansas. We can't afford to risk polluting it.

The University of Kansas several years ago did a testwell on the coarser gravel bed with good water running from the Nebraska boarder South and East of Marysville, North and East of Frankfort, South and East of Centralia. Our District alone has three rural water wells in this area and all have good water. With six known burial sights in the U.S., three have been shut down because of leaks into the local ground water. This is not a very good record. We

have a good friend who is a geologist and he said not one drop of new water has been generated since long before Jesus' time. The Kansas Geological Survey should be requested to testify about the methods the private developer used in site selection. I think you will hear that the glacial deposits of North Central and Northeat Kansas are not appropriate for burial of nuclear waste. Let's not blindly accept the report of a private developer without having our own geologists check it out.

We are told the plant at Wolf Creek generates over 90% of the radioactive waste in Kansas. What a better place to deposit as they have extra space. The plant is suppose to last 30 to 35 years and will then be taken down and buried? Lets save the transportation cost. Lets handle our own.

Can you imagine Oklahoma or Nebraska with two plants and no burial sites?

Just a small thought, we can go nearly 30 days without food. Try going five days without water. You will be dead.

Thank you very much, Gentlemen, for your time and consideration of HB 2108. Please pass HB 2108 out for a vote and support it on the floor of the Senate.

G. W. Stanton

G. W. Stanton 3-17-87

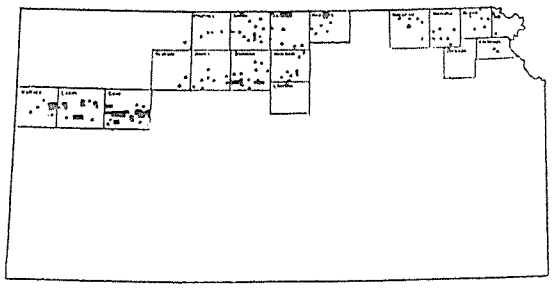
Future of Low-Level Radioactive Waste in Kansas Uncertain

The disposal of low level radioactive waste in Kansas is rapidly becoming one of the hottest issues facing the 1987 state legislature. Currently, Kansas is a member of the Central Interstate Low Level Radioactive Waste Compact, which is a group of five states seeking a regional approach to low level radioactive waste (LLRW) disposal.

According to an unreleased study for the Compact by the engineering firm of Dames and Moore, Kansas is the Compact state with the largest amount of land suitable for a site. This disclosure has prompted swift public reaction and a flurry of activity in the Kansas legislature, as officials scramble to unravel what it means for the state. To date however, there are more questions than answers as the state begins to sort out its options.

Compact Background. The five states of Arkansas, Kansas, Nebraska, Oklahoma, and Louisiana make up the Central Interstate Compact, which was formed in 1982 to develop a regional LLRW disposal facility. The Compact was the result of a federal law, the Low Level Radioactive Waste Policy Act of 1980, which requires states to be responsible for the management of LLRW generated within their borders. (Currently, there are three LLRW sites serving the entire country, and they, understandably, are tired of being "dumped on" by the rest of the country.) Thus, individual states were forced to create compacts with other states, or risk becoming a dump site for LLRW from all over the country.

The Central Interstate Compact commissioned studies to identify the best potential sites within the five states. According to the above mentioned study, Kansas has 860 square miles in 18 counties, while Nebraska, Arkansas, and Louisiana have a total of 288 square miles in 13 counties. No suitable sites were found in Oklahoma.



KANSAS counties in which a low-level radioactive waste disposal site may be located: Wallace, Logan, Gove, Graham, Rooks, Osborne, Mitchell, Lincoln, Phillips, Smith, Jewell, Republic, Marshall, Nemaha, Brown, Doniphan, Jackson, and Atchison.

Each of the five states in the Compact knew of the risk of being selected as the host state when they entered the Compact. But there have been rumors and allegations of a "gentleman's agreement" as to which state would be selected. In addition, the public knew very little about the process for site selection or the management terms acceptable to the Compact until late last fall.

But now that the potential sites have been narrowed down and more information is available, landowners, environmentalists, and the general public are not satisfied that the Compact is acting in the public's best interest. Citizens in the top three states are demanding action by their state legislatures. Both Nebraska and Arkansas have introduced legislation to withdraw from the Compact if their states are selected.

Kansas Actions. As it appears more likely that Kansas will be selected as a regional site, the Kansas legislature has introduced several measures. Responding to the rumors that the Lyons salt mines in the central part of the state were being considered, HB 2050 was introduced to prohibit the burial of LLRW in salt formations in Kansas. To be consistent with a law passed in 1984 which banned the underground burial of hazardous waste in Kansas, HB 2108 was introduced which would ban the burial of high and low level radioactive wastes as well.

-- continued on page 6 --

RADIOACTIVE WASTE contd. from pg. 5

Both the Kansas House and Senate have introduced bills (HB 2175 and SB 114) to withdraw from the Compact. Most recently, the House Energy and Natural Resources Committee has introduced a resolution asking that a special committee be formed to study the raamifications of withdrawing from the Compact, as well as the possibility of developing on-site storage at Wolf Creek, the state's only nuclear power plant.

Unanswered Questions. Action on any of the above bills is unlikely until there are answers to the legal questions related to pulling out of the Compact. Obviously, if Kansas pulls out, it is guaranteed that there will be a LLRW site in the state, as Kansas will be responsible for its own wastes.

The question, then, is whether Kansas can be forced to accept wastes from other states. Some argue that it can because of the interstate commerce clause of the U.S. Constitution. Others argue that the clause applies to a commercial site, not a state owned and operated site. Other states, such as Texas and New York, have opted to go it alone, and the political climate for this is more favorable now than it was in 1980.

But the Compact may also levy heavy financial penalties on the state for withdrawing. Plus, the state will have to develop its own facility at no small cost - approximately $15-25 million.

If the state stays in the Compact, it is hostage to the bad decisions already made by the Compact. For example, this Compact is the only Compact in the country that has left the site selection to the private waste disposal contractor. In other words, the Compact will select a developer, (whose bottom line is normally profits, not necessarily public health and safety) and the developer will select the final site and technology. Thus, the state's authority in banning land burial of LLRW is questionable under the Compact.

Also, the facility being planned will have a design life of about 30 years, and will hold up to five million cubic feet of radioactive wastes. Some of these wastes have very long half-lives, and must be isolated from the environment for several hundred, and even thousands of years. The result is that the host site of a LLRW facility will be responsible for the wastes long after the site itself is closed and the developer is gone. Also, responsibility for clean-up of a leak or other failure ultimately falls on the shoulders of the state. The history of problems at existing sites does not paint a rosy picture for the future.

Over 90 percent of the wastes would come from nuclear power plants in the region, with the remainder coming from hospitals, research facilities, and industry. Kansas has only one nuclear power plant which produces the bulk of the state's low level radioactive waste.

Many opponents of the Compact argue that because the state produces such a small amount of waste itself, it should withdraw from the Compact, and develop a state owned and operated site on or near above ground storage site at Wolf Creek, the state's nuclear power plant.

Such a plan would take care of the wastes that Kansas generates, minimize the amount of LLRW on our highways, and provide the safest "storage" possible until our "disposal" technology catches up with our ability to generate these wastes, this may be the common sense approach.

Thus, the above state legislation is on a fast track. The decisions made by the Kansas legislature as guided by the wishes of the people will determine the fate of low level radioactive wastes in our environment for centuries to come. ■