MINUTES

MONTANA SENATE
53rd LEGISLATURE - REGULAR SESSION

COMMITTEE ON NATURAL RESOURCES

Call to Order: By Chair Bianchi, on January 18, 1993, at 1:03 p.m.

ROLL CALL

Members Present:

Sen. Don Bianchi, Chair (D)
Sen. Cecil Weeding, Vice Chair (D)
Sen. Sue Bartlett (D)
Sen. Steve Doherty (D)
Sen. Lorents Grosfield (R)
Sen. Bob Hockett (D)
Sen. Tom Keating (R)
Sen. Ed Kennedy (D)
Sen. Bernie Swift (R)
Sen. Chuck Swysgood (R)
Sen. Henry McClernan (D)
Sen. Larry Tveit (R)
Sen. Jeff Weldon (D)

Members Excused: None.

Members Absent: None.

Staff Present: Paul Sihler, Environmental Quality Council
Leanne Kurtz, Committee Secretary

Please Note: These are summary minutes. Testimony and discussion are paraphrased and condensed.

Committee Business Summary:

Hearing: None.
Executive Action: None.

Announcements/Discussion:

Chair Bianchi announced on 1/22 the Committee would hear the Montana Environmental Information Center (MEIC) and Montanans Against Toxic Burning's (MATB) perspective on hazardous waste burning. He added the Committee would also hear realtors' and surveyors' position on the subdivision issue.

Chair Bianchi announced on 1/25 the Committee would hold executive session on SB 60, SB 72, SB 102, SB 104, and SB 128.

Informational Presentation:

Chair Bianchi introduced Jerome Anderson, a Helena attorney and registered lobbyist for Holnam Inc., a company which operates a cement kiln at Trident, Montana. Mr. Anderson said Holnam has applied for a permit to burn hazardous waste as an alternate fuel in its cement kilns, and described the agenda for the presentation (Exhibit #1). Mr. Anderson introduced Tom Daubert, who represents Ash Grove, a cement company located near Montana City which is also proposing to burn hazardous waste in its kilns.

Mr. Daubert showed the Committee slides of data he said were from Health Department files, noting his company has reviewed ten years' worth of files with regard to hazardous waste generation in Montana. Mr. Daubert distributed to the Committee hard copies of his slide presentation (Exhibit #2).

Mr. Daubert clarified that his graphs are affected by changing federal definitions of hazardous waste. He said there are nearly 11,000 businesses in Montana and they all generate hazardous waste. He noted it would be legal for those businesses to generate over 13,000 tons of waste every year, all of it legally going into landfills. Mr. Daubert said over 69 tons of hazardous waste generated in Montana ended up in Ash Grove Cement plants in other states where hazardous waste burning is permitted.

Mr. Daubert stressed dust would be tested daily to prove that it is not hazardous.

Mr. Daubert introduced Dr. George Carlo, an epidemiologist with the Health and Environmental Sciences Group in Washington D.C. Dr. Carlo is also chairman of the Independent Scientific Advisory Board on cement kiln recycling. A summary of his background was distributed to the Committee (Exhibit #3). Dr. Carlo discussed the formation of the Scientific Advisory Board, stressing that it is approaching the hazardous waste burning issue "in a very practical context." He said "the technology proposed by the cement industry to recycle waste through cement kilns is a potential solution to some of the hazardous waste problems."

Dr. Carlo said the board believes policy decisions should be based on knowledge of what is known, not based on a fear of what is not known. He said the board's role was to bring as much scientific integrity to the process as possible. Dr. Carlo added the Board has not seen anything in its studies "that would suggest that [hazardous waste burning] is not a viable waste management alternative." He said the technology is fundamentally sound and manageable, and the technology provides the opportunity to control potential problems.

Eric Hansen, chemist and Vice President and Technical Director, Ash Grove Cement Company, discussed the following: why the

cement industry is interested in utilizing waste; safety criticisms; and "how the regulatory process is working to the benefit of the society." He stressed that new regulations require cement kilns to operate with monitors to measure combustibility. Dr. Carlo noted cement is a product with high liability, and there is a national sanitation foundation mandated by the EPA to develop standards for cement use in products such as concrete water pipe. Mr. Hansen distributed copies of his biographical sketch to the Committee (Exhibit #4).

Bill Springman, Plant Manager, Holnam-Trident cement plant, submitted copies of his presentation (Exhibit #8).

Stuart Weiss, Senior Process Engineer, Holnam Inc., and Arlene Sherman, Holnam Plant Personnel and Safety Manager also submitted written copies of their presentations (Exhibits #5 & #6).

Mr. Anderson distributed copies of a prepared statement by Don Ryan, Laboratory Superintendent at the Columbia Falls Aluminum Company (Exhibit #7). Mr. Ryan was not present to testify.

Questions from the Committee and Responses:

Mr. Weiss clarified for Sen. Swift that Holnam would limit itself to burning only certain kinds of wastes, specifically wastes generated from identifiable industries in Montana. Mr. Weiss added the plant would plan to use only solid wastes. He said the plant does not normally monitor and identify what comes out of the stack, but added "it's likely that certain emissions...safely would not be present."

Sen. Keating asked about the chemistry of making cement, and Mr. Hansen explained the process. Sen. Keating asked what gasses are exhausted and to what extent they are damaging. Mr. Hansen stated cement kilns have effective dust collectors to capture the limestone dust suspended in the gas stream. He added the air that is exhausted will meet Montana air quality standards.

Mr. Hansen said the cement dust that escapes the collectors "may be perceptibly changed [and have a] slight increase of lead or the volatile metals." He added these changes can be measured. Mr. Hansen said he has data from four Holnam cement kilns that are burning hazardous waste, and in every case, the amount of volatile metals have been below the detection limits. He noted those limits are 10 to 100 times less than the health-based standards.

In response to a question by Sen. Weldon, Mr. Springman discussed the amount of material Holnam plans to use on an annual basis. He added the company's permit application calls for a maximum of 44,000 tons, based on a substitution rate of 50%. Mr. Springman said the plant would begin by burning smaller amounts of waste, increasing the rates as tests were substantiated. Mr. Springman

also discussed costs involved (to the company and the waste generator) in burning hazardous waste.

Sen. Weldon asked Mr. Weiss about warning labels on cement produced by burning hazardous waste. Mr. Weiss said he thinks "targeting one particular industry because of [its] practices" is inappropriate.

Sen. Weeding asked what the parameters of the hazardous waste burning operation would be. Mr. Anderson responded the company is targeting three types of waste products - potliners, dry cleaning material, and material from refineries. He added that Ash Grove's proposals are broader than Holnam's. Mr. Hansen said Ash Grove is targeting combustible waste ideally suited for energy recovery.

Mr. Springman discussed Holnam's dust management plan and testing program at Trident. He noted the company has reduced its waste codes (how many types of waste the company will consider using as fuel) from 500 to 12.

Chair Bianchi discussed the review process and new technology development with Mr. Springman.

Dr. Carlo explained how the hazardous fuel is processed and how it is transported. He stated that labeling products is currently popular, but "from a public health point of view, we have not seen tremendous evidence that any type of labeling will have an impact on public health."

ADJOURNMENT

Adjournment: 2:50 p.m.

Don Bianchi
SEN. DON BIANCHI, Chair

Leanne Kurtz
LEANNE KURTZ, Secretary

DB/lk

ROLL CALL

SENATE COMMITTEE Natural Resources DATE 1/18

NAME	PRESENT	ABSENT	EXCUSED
Sen. Bianchi	X		
Sen. Hockett	X		
Sen. Bartlett	X		
Sen. Doherty	X		
Sen. Grosfield	X		
Sen. Keating	X		
Sen. Kennedy	X		
Sen. McClernan	X		
Sen. Swift	X		
Sen. Swysgood	X		
Sen. Treit	X		
Sen. Weeding	X		
Sen. Weldon	X		

FC8

Attach to each day's minutes

OUTLINE FOR SENATE NATURAL RESOURCES COMMITTEE EDUCATIONAL HEARING ON CEMENT KILN RECYCLING, 1/18/93

(1) Introduction

Jerome Anderson, lobbyist for Holnam, Inc.

(2) Trends in Montana's Hazardous Waste Generation & Management

Summary of MDHES file data, trends, and how cement kiln recycling contributes
Tom Daubert, lobbyist for Ash Grove Cement Company

(3) Rising Above Rhetoric, Focusing on Science

Summary of scientific knowledge of cement kiln recycling and related health and environmental concerns
Dr. George Carlo, Ph.D., M.S., J.D., faculty member of Georgetown Washington University, State University of New York at Buffalo School of Medicine, Roswell Park Memorial Institute; Chairman of Scientific Advisory Board on Cement Kiln Recycling

(4) The Development of Cement Kiln Recycling Technology as an Environmental Solution

How and why cement kilns are contributing to national goals of recycling and waste minimization; the nature of regulation
Eric Hansen, Vice President and Technical Director, Ash Grove Cement Company

(5) Summary of Holnam Proposal & Safety Issues

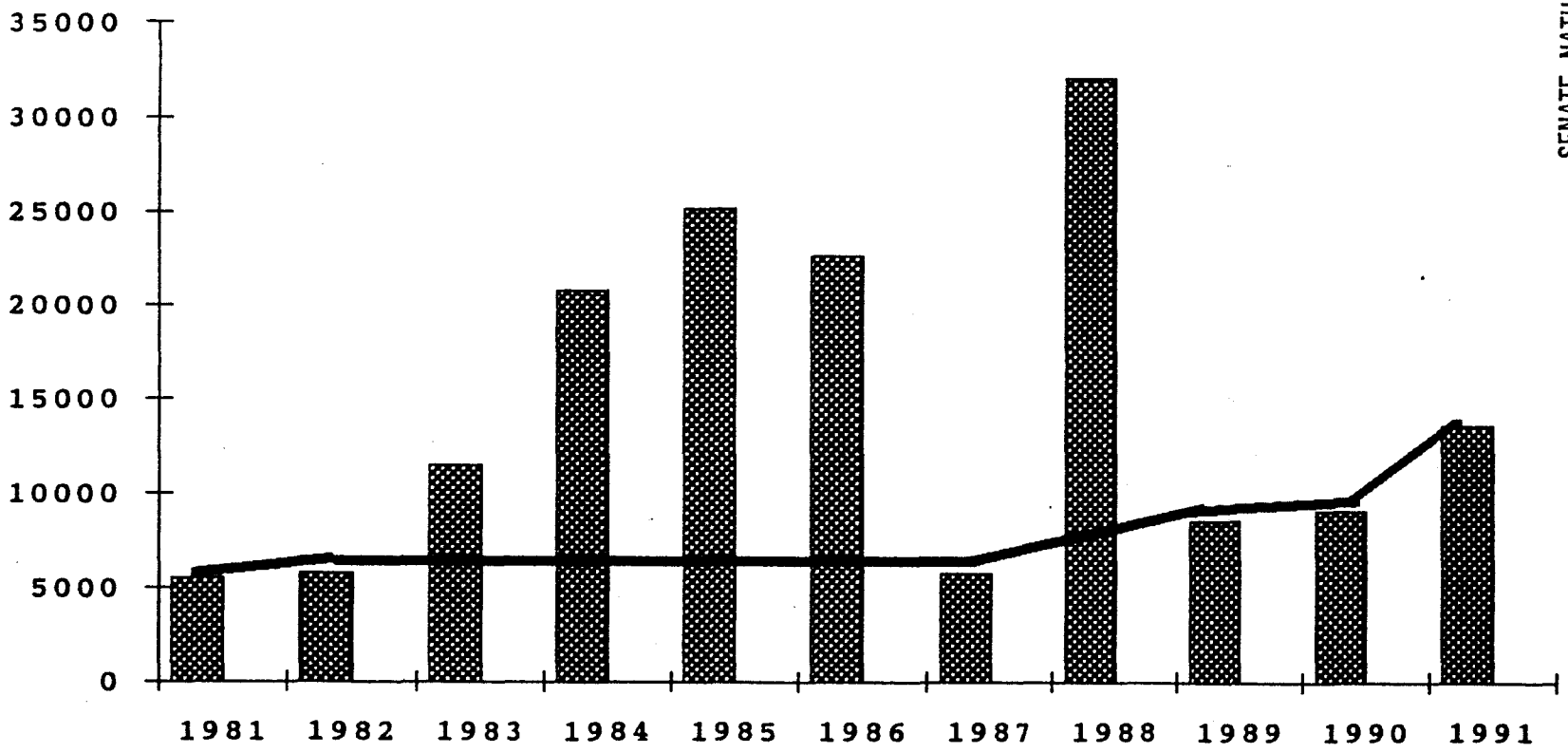
Bill Springman, Plant Manager, Holnam (Trident) Cement Plant
Stuart Weiss, Senior Process Engineer, Holnam, Inc.
Arlene Sherman, Personnel/Safety Manager, Holnam (Trident) Cement Plant

(6) Question-Answering and Discussion

Including above-listed speakers and other officials from industry:
Mike Benoit, Vice President of Environmental Affairs and Technical Development, Cadence Chemical Resources, Inc.
Scott Ellis, Senior Environmental Compliance Coordinator, Cadence Chemical Resources
Hans Steuch, Director of Engineering, Ash Grove Cement Company
Doug Hale, Environmental & Safety Director, Ash Grove Cement Company
Dan Peterson, Plant Manager, Ash Grove Cement Company Montana City Plant
Joe Scheeler, Environmental and Safety Manager, Ash Grove Cement Company Montana City Plant
Gordon Kenna, Director for Public Affairs, Cemtech

SENATE NATURAL RESOURCES
EXHIBIT NO. 1
DATE 1/18
BILL NO. —

RCRA HAZARDOUS WASTE
1981-1991



SENATE NATURAL RESOURCES
EXHIBIT NO. 2
DATE 1/18
BILL NO.

OF REPORTS

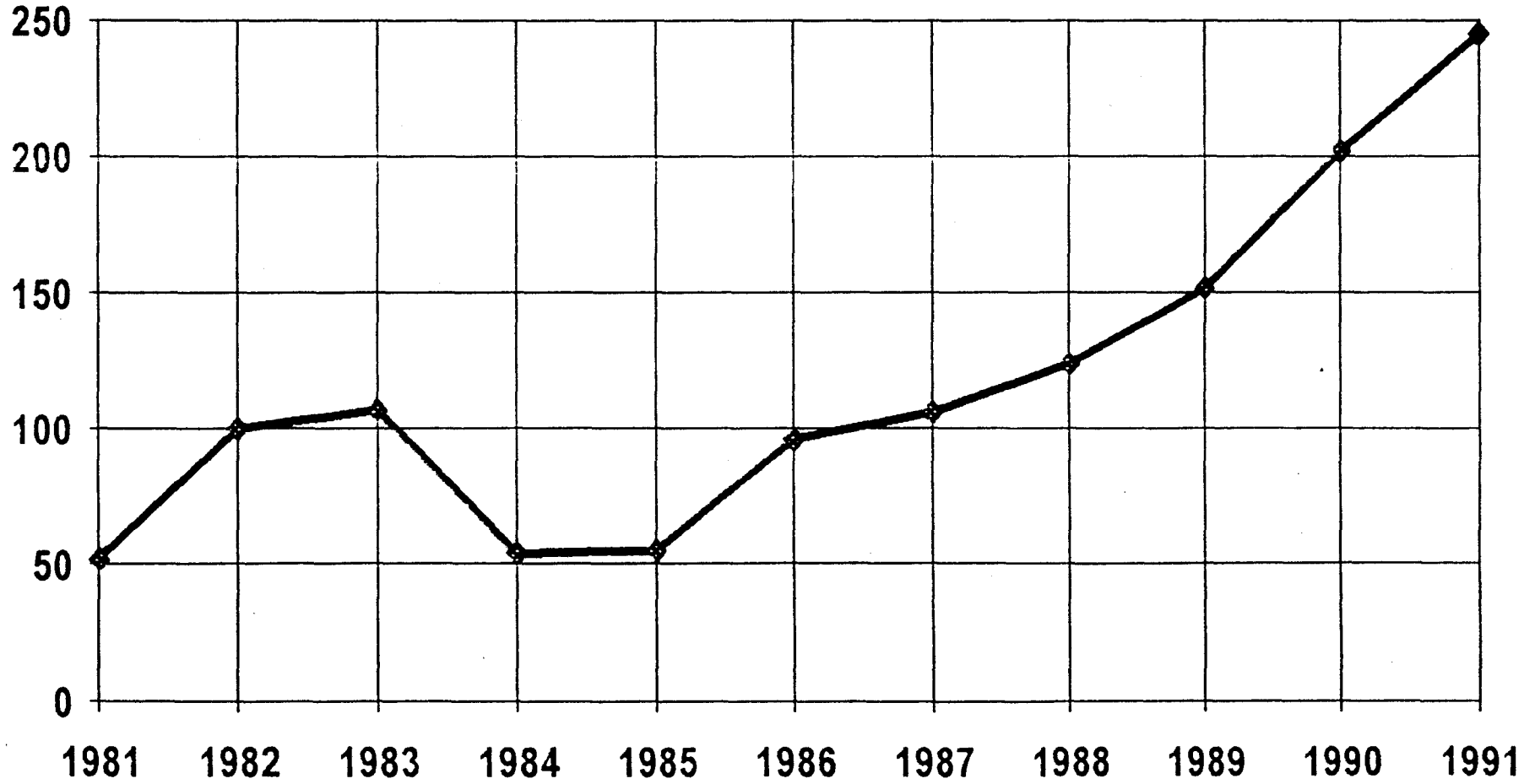

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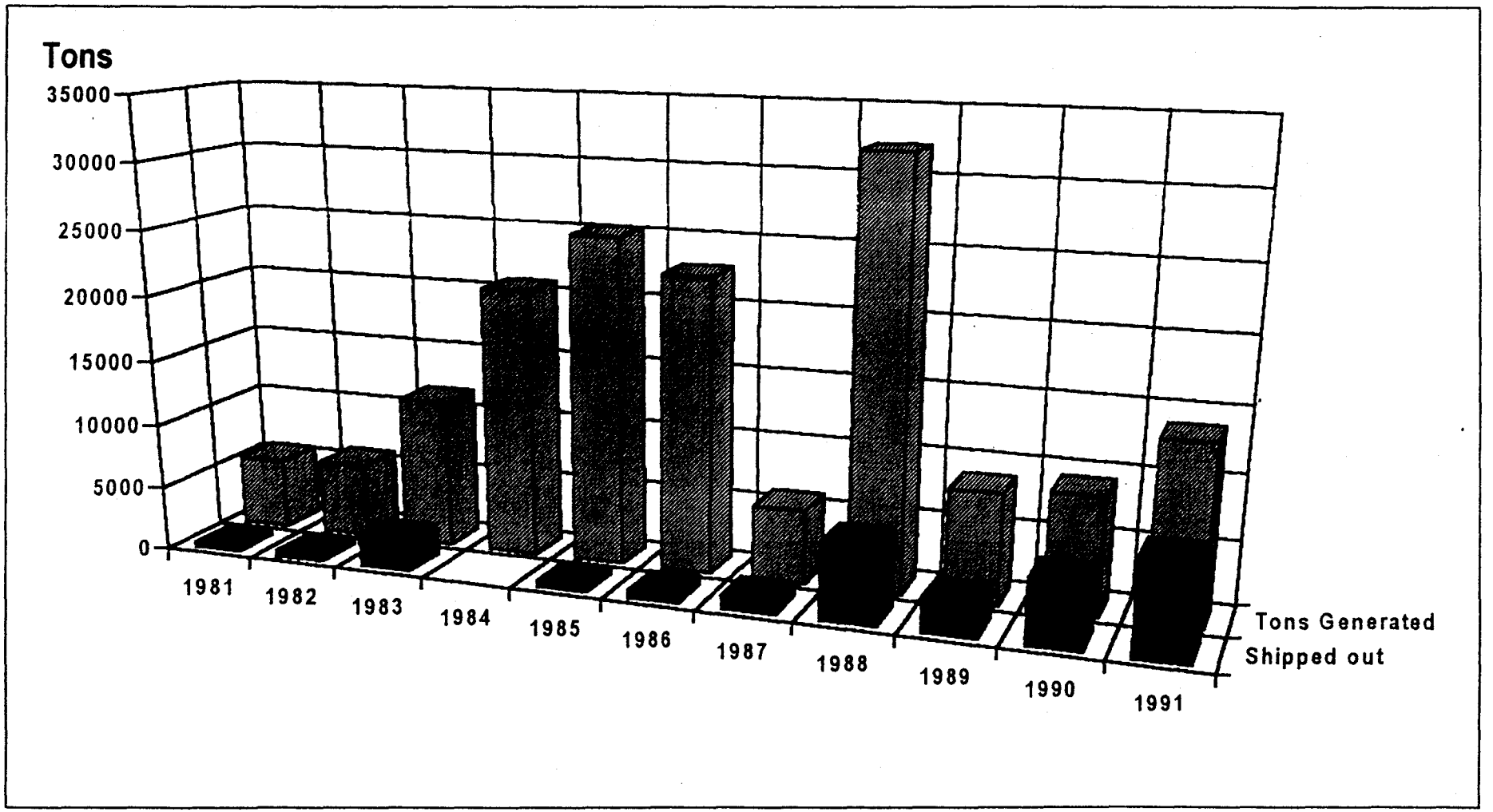
EXHIBIT #2
DATE 1-18-93

MONTANA RCRA WASTE



INCREASING OUT-OF-STATE SHIPMENTS

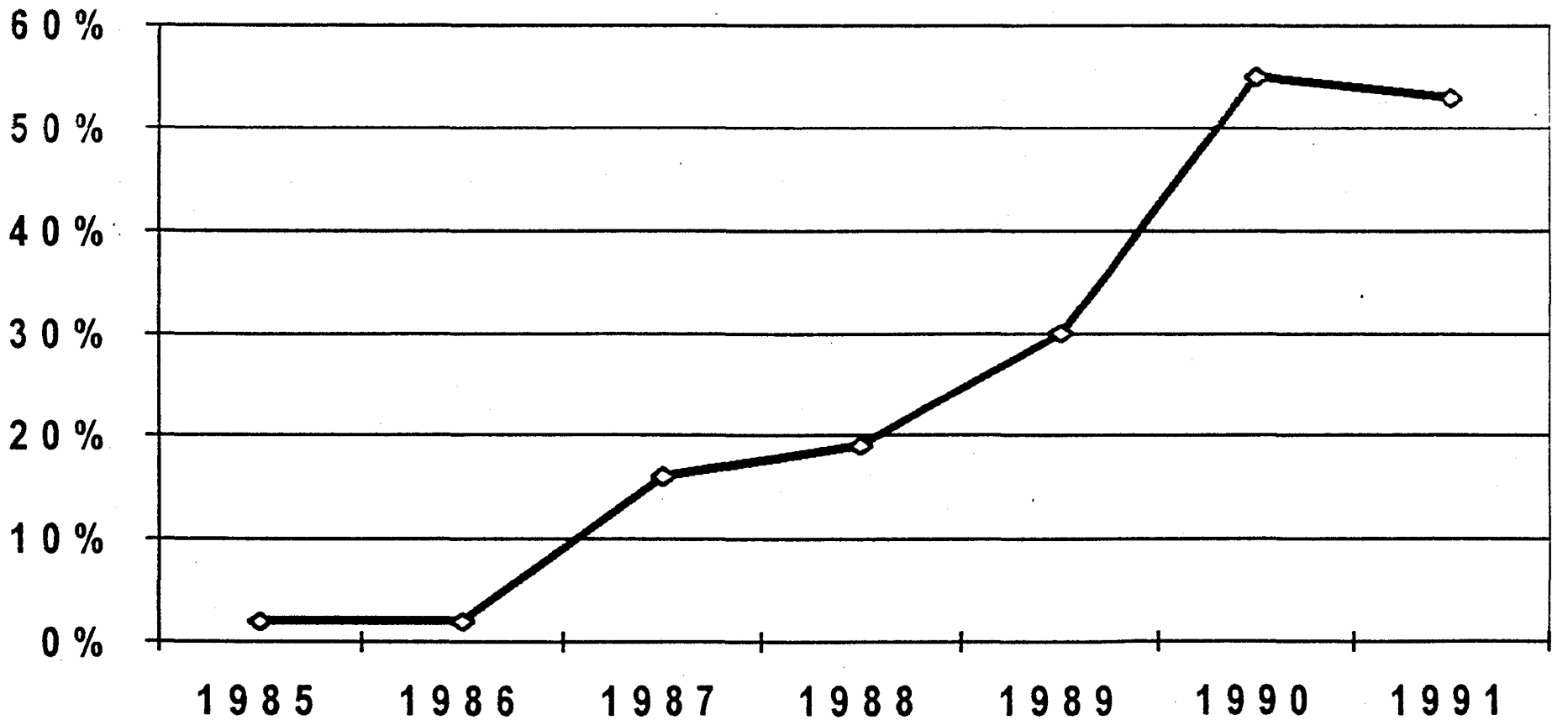
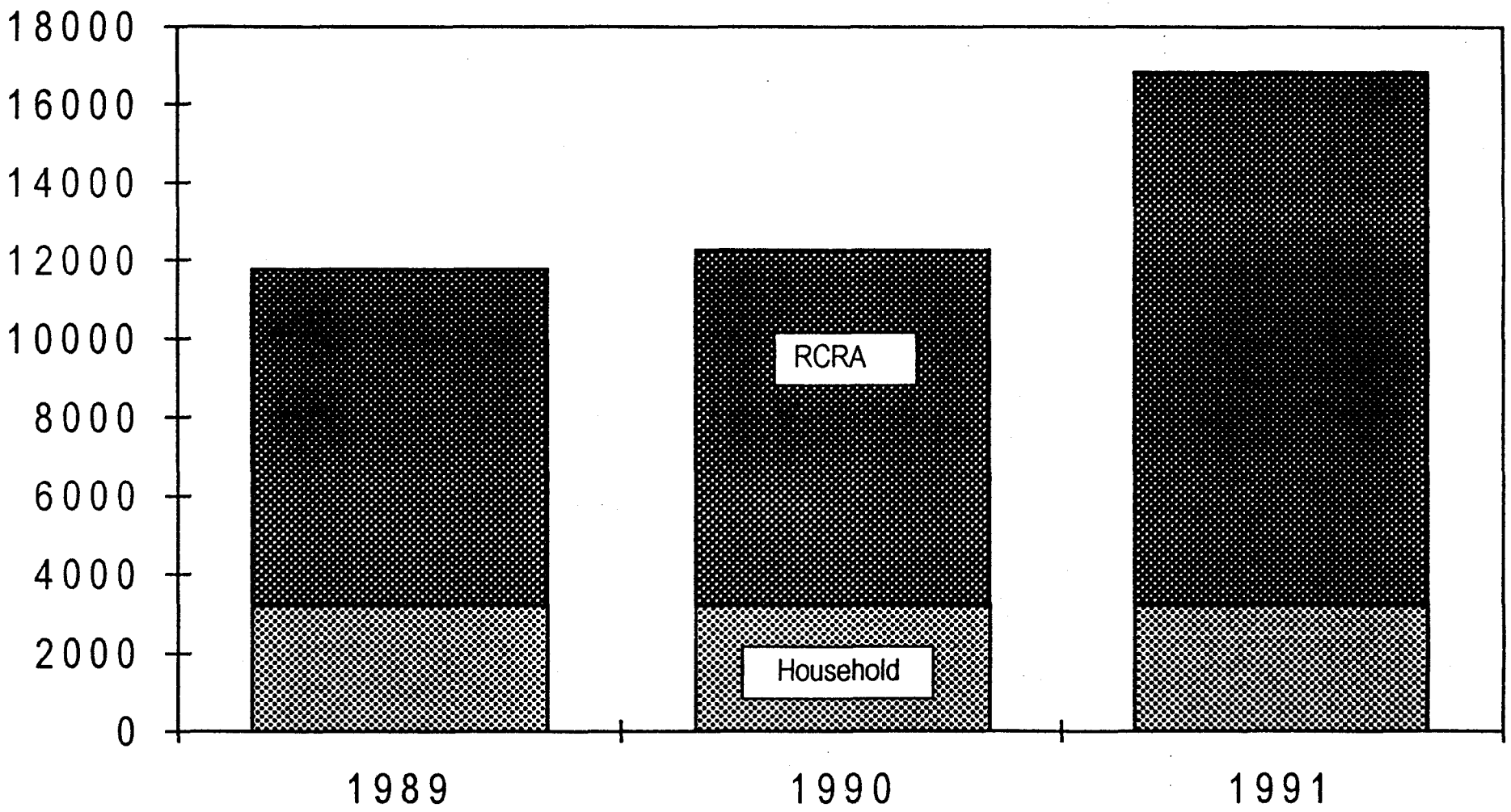


EXHIBIT #2
DATE 1-18-93

HAZARDOUS WASTE GENERATION



MONTANA
Household Hazardous Waste

More than 3,200 tons per year

"Montana & Mississippi have the worst household waste programs in the nation."

- - - Waste Watch Center, 1992

Andover, Mass.

EXHIBIT #2
DATE 1-18-93

MONTANA HAZARDOUS WASTE IN LANDFILLS

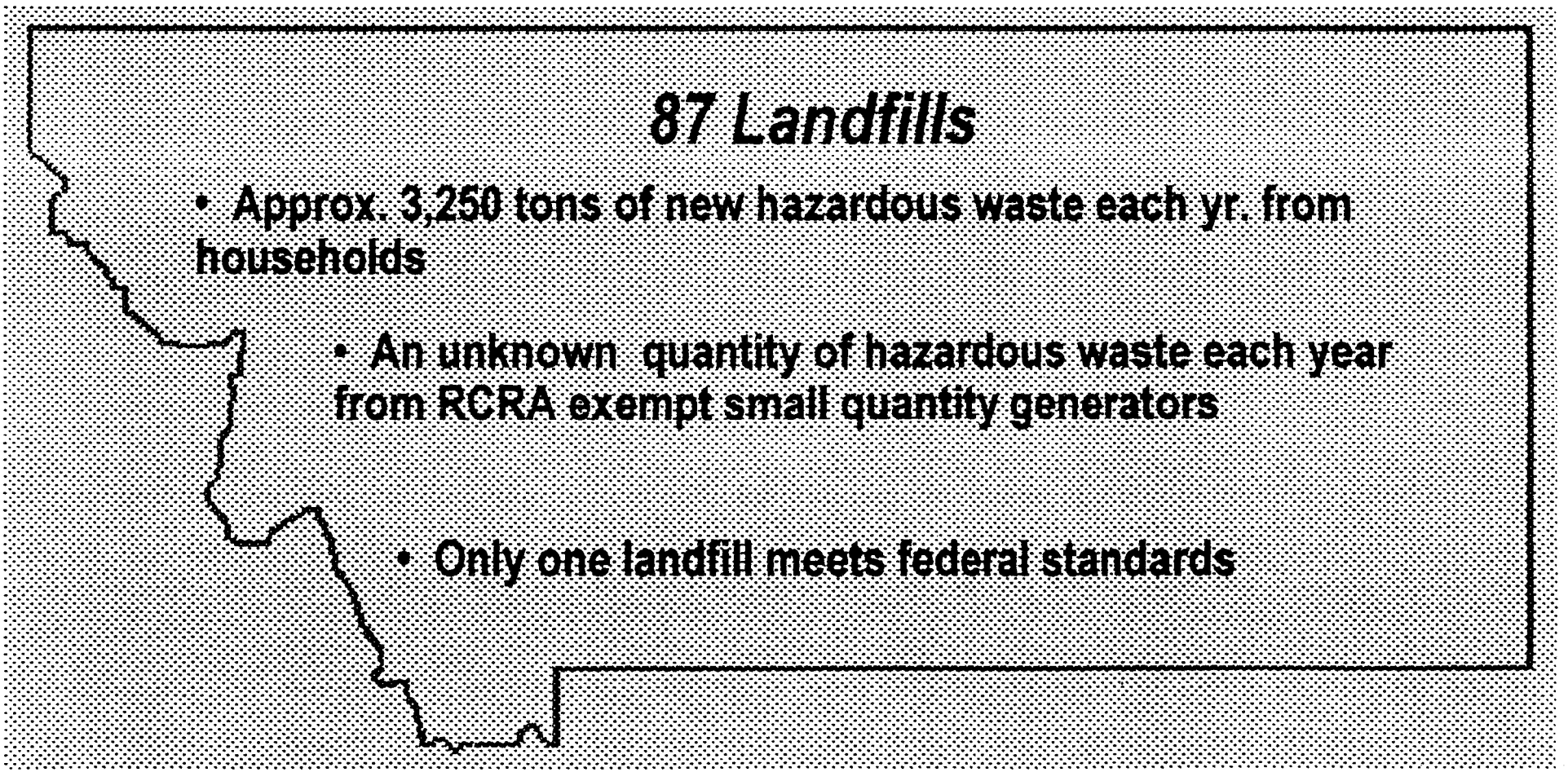


EXHIBIT #2
DATE 1-18-93

CHEM-FUEL®:

Not accepted for use in Chem Fuel®

- No PCBs
- No furans or dioxins
- No pesticides
- No herbicides
- No nuclear or radioactive waste
- No medical or infectious waste

CHEM-FUEL®: What It Is

- Used paints, brushes, paint solids, thinners
- Refinery wastes
- Used oils, filters, printing inks
- Use solvents
- Protective clothing

EXHIBIT #2
DATE 1-18-93

WHY PAINT & THINNER ARE HAZARDOUS

- ★ methylene chloride
- ★ toluene
- ★ petroleum distillates
- ★ ethylene
- ★ aliphatic hydrocarbons
- ★ n-butyl alcohol
- ★ acetone
- ★ methyl isobutyl ketone

KILN DUST

- Natural by-product of kiln operations
- Dust recycled to kiln as feedstock to minimize waste dust
- Daily testing to prove waste dust does not require disposal as "hazardous" waste
- Monofil treatment on Ash Grove property for waste dust

EXHIBIT #2
DATE 1-18-93

ASH GROVE CEMENT COMMITMENT

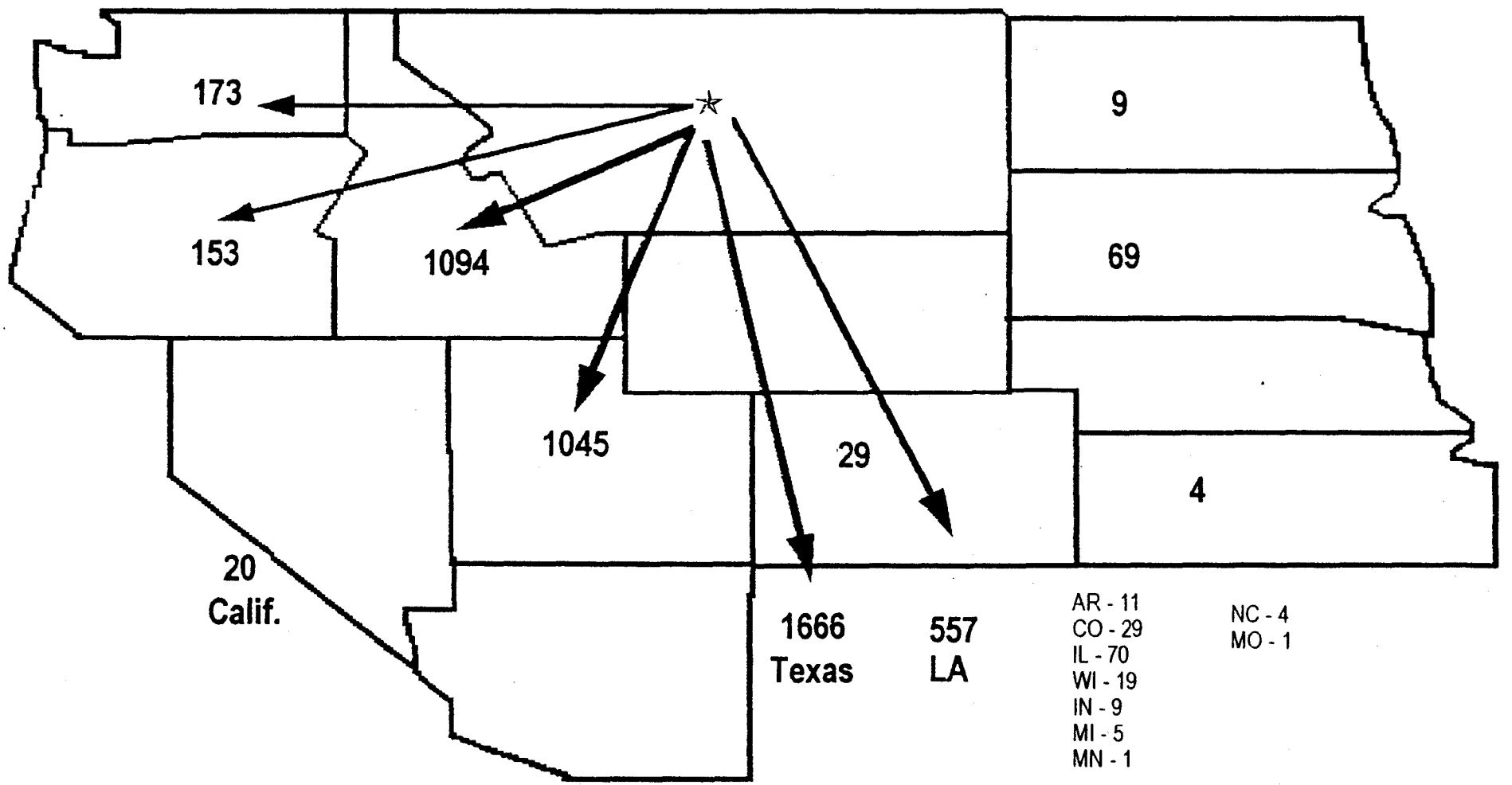
- ★ Comprehensive research
- ★ Public involvement
- ★ Called for own EIS
- ★ On-Site Health Risk Assessment Study
- ★ Solid, Preprocessed fuel
- ★ Off-hours delivery
- ★ Fuel testing
- ★ Continuous emissions monitoring
- ★ Auto fuel-feed cutoffs
- ★ Daily testing of kiln dust
- ★ No-burn during inversions
- ★ Community Advisory Council

MONTANA TIRE WASTE

- 800,000 tires generated annually as waste in Montana
- Equals 96 billion in Btu value
- Enough energy to operate Montana City cement plant for 21 days

EXHIBIT #2
DATE 1-18-93

DESTINATIONS - 1990



FEDERAL MANDATE

Comprehensive Environmental Compensation & Liability Act

(CERCLA) OR "SUPERFUND"

The President shall not provide any remedial actions unless the State first enters into a contract providing that the State will assure the availability of hazardous waste treatment or disposal facilities which–

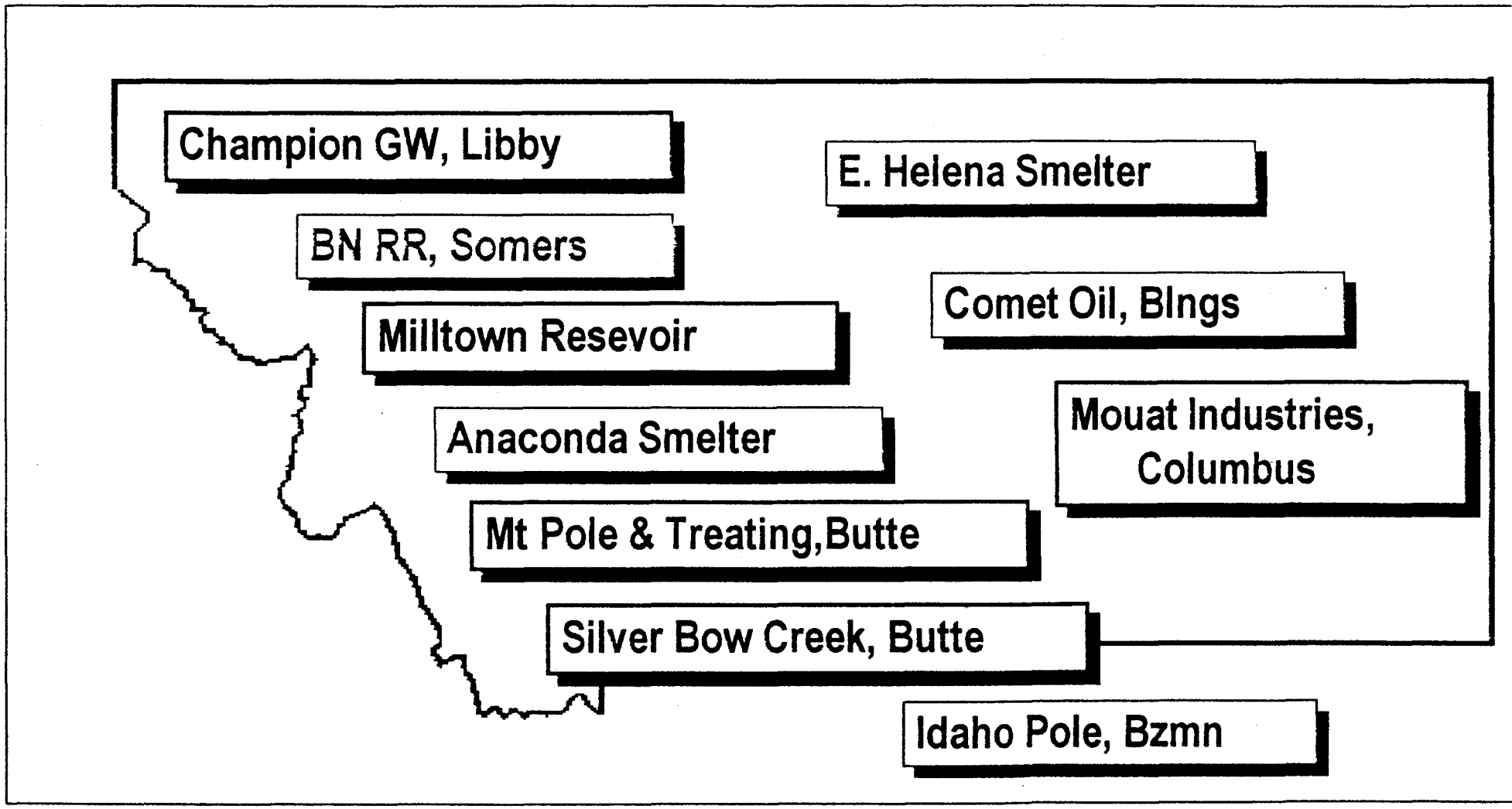
(a) have adequate capacity of all hazardous wastes expected to be generated for 20 years,

(b) are within the State or in accordance with a regional agreement,

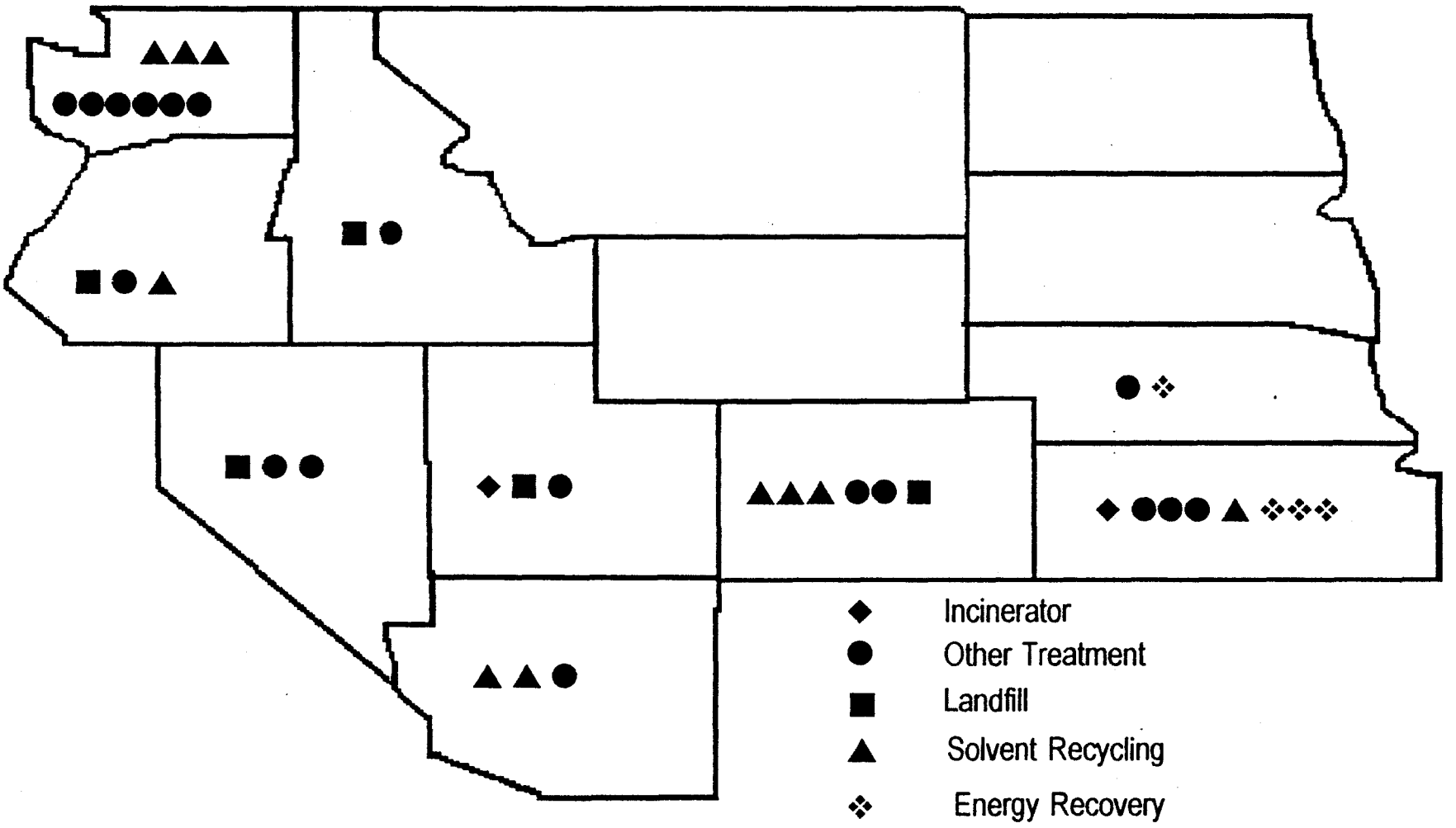
42 U.S.C.A. 9604 (c) (9)

EXHIBIT #2
DATE 1-18-93

SUPERFUND SITES



WESTERN STATES CAPACITY



DATE 1-18-93

MT HAZARDOUS WASTE SITUATION

- Growing quantities of hazardous waste
- Montana depends increasingly on other states for disposal, recycling or treatment
- Montana lags behind other states in addressing potential problems from household hazardous waste
- Montana's good standing with regional capacity assurance compact state could be jeopardized

THE CEMENT KILN SOLUTION

- Meets regional capacity assurance obligations
- Assures continued Superfund funding
- Lowers the cost of shipping MT wastes
- No cost to taxpayers
- Long-term viability for cement plant
- Reduces use of virgin fossil fuels
- Recycles energy of waste otherwise incinerated

EXHIBIT #2
DATE 1-18-93

CEMENT KILN PERFORMANCE

THE CEMENT KILN TECHNOLOGY IS SUPERIOR TO COMMERCIAL INCINERATORS.

CEMENT KILNS:

- Recycles only energy-bearing waste
- No incentive to cut temperature
- Consistent, highest combustion
- Hotter, longer gas residence time
- Turbulence & alkalinity = scrubbing
- Continuous Emissions Monitoring
- Automatic fuel-feed cutoffs
- BIF rules more strict

INCINERATORS:

- Burn any waste
- Incentive to save fuel
- Inconsistent combustion

Kiln Performance & EPA Standards

EPA Requirements:

- **Material:**
  - 1800°
- **Gas residence:**
  - 2 seconds @ 1800°

Kiln Performance:

- **Material:**
  - 1800°- 2450° for .5 - 1 hour
- **Gas residence:**
  - 2-5 secs @ 3000°
- **Flame: 3200°**

EXHIBIT #2
DATE 1-18-93

FUEL SUBSTITUTION

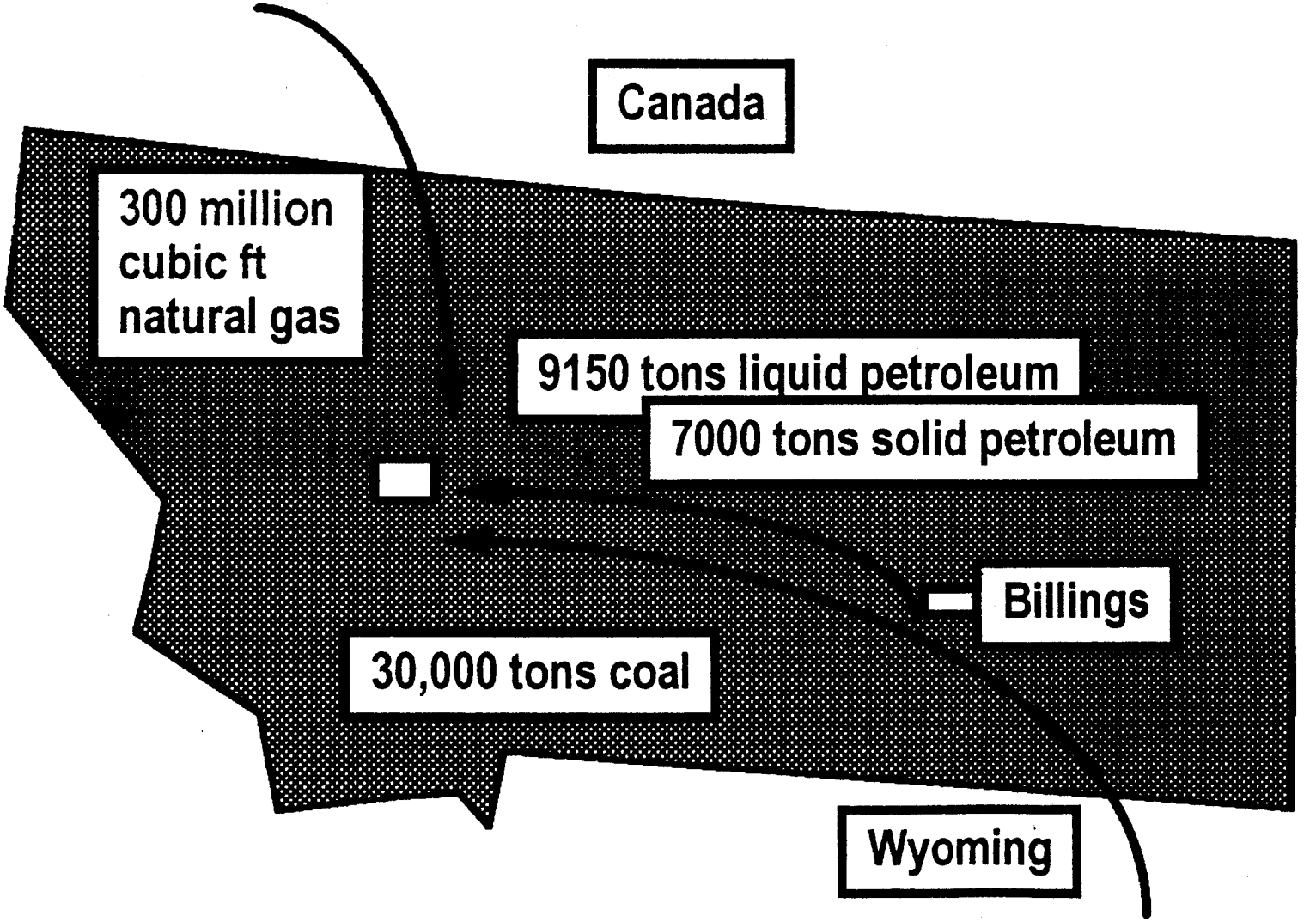
- **Fuel = 25%-40% of production costs**
- Currently use = about 12 tons of fossil fuel per hour
- **Ash Grove proposes substituting up to 20% of current fossil fuels with Chem Fuel®**
- **1 ton Chem Fuel® = 20.8 m. btu / 1 ton coal = 20 m. btu**
- **Recycles materials otherwise incinerated or landfilled**
- **WDF a by-product of treatment-disposal-recycling activities**

CEMENT

- 2nd most consumed commodity in the world after water
- Ash Grove Montana City produces 300,000 tons/yr. of cement
- Ash Grove serves a regional market
  - Approx. 50% Montana's consumption
  - Approx. 50% marketed thoughout the region, including Alaska

EXHIBIT #2
DATE 1-18-93

CURRENT ASH GROVE FUEL USE



CHEM-FUEL®

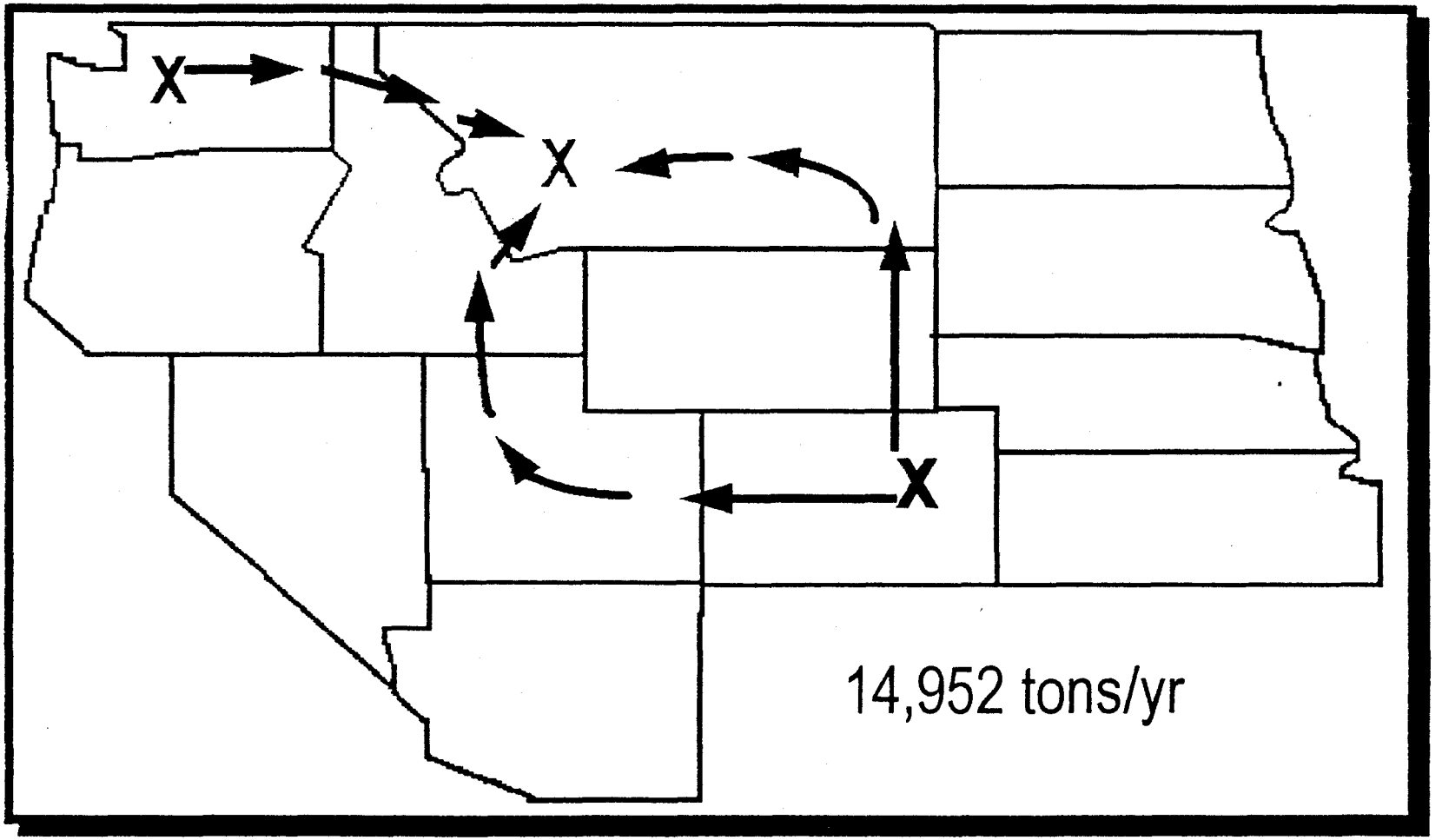


EXHIBIT #2
DATE 1-18-93

TRANSPORTATION

- DOT-regulated: among strictest categories of regulation
- Solid, non-pumpable, pre-containerized fuel reduces risk
- Off-hour deliveries possible to reduce traffic hazards
- Ash Grove to provide training and equipment needed by the Montana City fire department

EMISSIONS

- BIF standards more stringent than for incinerators
- Extensive test-burn research during permitting proves kiln efficiency, establishes benchmark operating parameters to assure emission limits are met
- Continuous monitoring of benchmark operating parameters and emissions
- Automatic fuel-feed cutoff if any emission limits are approached

GEORGE L. CARLO, Ph.D., M.S., J.D.

Chairman

George Carlo is certified by the American College of Epidemiology. He is the chairman of Health & Environmental Sciences Group, Limited, which specializes in environmental health risk assessment, communication, and management. Dr. Carlo serves on the faculties of George Washington University, the State University of New York at Buffalo School of Medicine, and the Roswell Park Memorial Institute. He sits on the Office of Technology Assessment Agent Orange Advisory Panel, is Chairman of the Scientific Advisory Board on cement kiln recycling, and is a scientific advisor to the Industry Task Force II on 2,4-D Research Data, the Institute for Regulatory Policy, the Chlorine Institute and the Fernz Corporation group of Australian and New Zealand manufacturers. Dr. Carlo has published numerous research articles, commentaries, chapters in books, and health policy papers addressing issues in the health sciences. He has testified before Congress, other government and regulatory committees, and as an expert in litigation. Dr. Carlo often speaks at seminars and is frequently consulted for television, radio, and newspaper interviews. He earned his B.A., M.S., and Ph.D. degrees from the State University of New York at Buffalo and his J.D. degree from George Washington University. Dr. Carlo belongs to the Society for Risk Analysis, the American Association for the Advancement of Science, the New York Academy of Sciences, the Society for Occupational and Environmental Health, Sigma Xi, the American Public Health Association, and the Society for Epidemiological Research. He has been listed in *Who's Who Among American Law Students* and *Who's Who in Science and Engineering*.

SENATE NATURAL RESOURCES
EXHIBIT NO. 3
DATE 1/18
BILL NO.

ERIC R. HANSEN

Mr. Hansen is Vice President and Technical Director for Ash Grove Cement Company and has seventeen (17) years experience in the cement industry in both plant operating and corporate management positions. He joined Marquette Cement Company in 1974 as Corporate Quality Manager and progressed to Production and quality Control Manager at a new 1,000,000 TPY cement plant at Cape Girardeau, Missouri. He joined Ash Grove Cement Company in 1982 to start up a new preheater/precalciner cement kiln in Louisville, Nebraska. Mr. Hansen became Vice President and Technical Director for Ash Grove in its Overland Park corporate office in 1985. He has also directed the Research Laboratory for both Marquette Cement Company and Ash Grove Cement Company.

Mr. Hansen holds a B.S. Degree in Chemistry from Baldwin-Wallace College and a M.S. in Organic Chemistry from the University of Utah.

Mr. Hansen has performed specific research on the structure of the minerals in portland cement and how thermal processing effects the structure of these minerals and the resulting cement performance. He has also done extensive study in cement kiln combustion technology. Mr. Hansen received a U.S. patent for a low NO_x burner in 1985. His extensive study of the combustion process in cement kilns led to the study of the substitution of alternate fuels into cement kilns and the effects these have had on cement quality and emissions. These combustion studies have led to numerous patents.

Mr. Hansen has received recognition for his leadership role in developing cement technology. He is Chairman of the Portland Cement Association Manufacturing and Process Subcommittee and is President of the Cement Kiln Recycling Coalition.

Mr. Hansen has extensively studied the emissions from cement kilns and has worked closely with the Federal EPA in testing kilns burning hazardous wastes in place of fossil fuel. He has also had numerous publications and given numerous papers in front of various trade organizations.

SENATE NATURAL RESOURCES
EXHIBIT NO. #4
DATE 1/16
BILL NO.

Testimony Before the
State Legislature of Montana
Senate Natural Resources Committee
by
Stuart Weiss
Senior Process Engineer
Holnam Inc.
P.O. Box 122
Dundee, Michigan 48131

January 18, 1993

My name is Stuart Weiss. I work for Holnam at their corporate offices in Michigan. My title is Senior Process Engineer and my principal responsibility is to assist Holnam's plants that are seeking permits to use alternative fuels and raw materials as substitutes for fossil fuels and mined virgin materials. These alternatives include both non hazardous and hazardous wastes and various industrial byproducts as well.

The reason that Holnam hopes to use wastes and byproducts instead of virgin materials is a simple one -- survival. Those of you that are in business recognize survival as the first priority in your efforts. It is similar to the basic instinct that people have. In people, only after the primary need for food, shelter and clothing is satisfied can we pursue such things as spiritual and material growth. And, ultimately, it is growth in all of its facets that will help us -- both individuals and businesses -- to survive.

When I first entered the cement industry about ten years ago as a researcher, the warning signs for our industry were already there. Cement companies were cutting costs to the bone -- including the money they spent on research. Back then, cement, on average, was selling for about $50 per ton. Even then, cement companies were aggressively looking for ways to cut their costs, because, evidently, the price had been lingering near that same $50 for quite some time, and the costs of doing business were increasing. Today, ten years later, that price has not changed very much. This is due to competitive pressures from imports as well as the increasing sophistication of competition. But whatever the causes, we must continuously improve. We must reduce our operating costs.

Some of Holnam's critics accuse us of holding our employees and communities hostage with threats of closure if we are not allowed to do what we want. This accusation is untrue. It is unfair to Holnam and an insult to every businessperson's intelligence. Profitable businesses survive and grow. Businesses that are not profitable strive to increase their sales and lower their costs. Otherwise their days

EXHIBIT #5
DATE 1-18-93

are numbered. Anyone that wants to predict the future of any given Holnam plant or anyone else's plant needs only to spend some time in the library and read about our industry. The economic facts speak for themselves.

At all of our plants, Holnam is implementing extensive training and capital projects to improve efficiency. Alternative fuels utilization is one of many ways to do this. It is also the most effective way, since energy is cement manufacturing's greatest cost. We're proud of the efforts that our plants have made to cut cots, and proud of Bill Springman, Trident's plant manager for his willingness to take the heat of a permit process that nobody could call fun.

Some of the very rules that govern pollution and waste management and force our operating costs upward have, at the same time, given my industry an opportunity to save costs as well. Here in Montana, as in most everywhere else, owning a home, driving a car, and being a consumer creates waste. Industry, business and government create waste too, including hazardous wastes. The only difference is that many individuals think nothing about throwing these materials in the trash or pouring them down the drain. Businesses and manufacturers get fines or go to jail for doing the same thing. As a result, small businesses are starting to appreciate the dilemma of industry -- they can't just throw waste away any more. How many of you have had to pay a disposal fee to trade in an old car battery or used tire?

So what we are starting to do, both as individuals and businesses is to generate less waste. We recycle, too. Every Tuesday morning a truck comes by my house to pick up my plastics, paper, glass, and aluminum, which I have dutifully separated at my daughter's insistence.

Industry and business are doing the same. Filling stations and machine shops send their waste oil and cleaning solvents to recycling facilities. Dry cleaners do the same with their used solvents along with the filters and lint -- the solvents are recovered, leaving solids to be either disposed of or recycled as fuels.

Here in Montana and in surrounding states a number of aluminum plants are trying to reduce generation of wastes too. The aluminum plants use carbon to line the electrolytic cells that produce the aluminum metal. When the carbon liner fails, it must be replaced with a new one. The carbon liner, known as a potliner, becomes hazardous over the years of operation at high temperatures. By developing new materials that last longer and by improving the equipment designs and operating procedures, the generation of waste potliners will decline, but it won't go away as some idealists wish.

EXHIBIT #2
DATE 1-18-93

Right now, companies like Columbia Falls Aluminum have few alternatives and a potentially dramatic escalation in disposal costs. Much of the potliner generated throughout the northwest goes to a hazardous waste landfill in Oregon. But EPA has said that, in 1994, land filling of potliner must stop. Instead, potliner must go to an approved treatment facility. The only facility that is currently accepting appreciable amounts of potliner is owned and operated in Arkansas by one of Columbia Falls' competitors in the aluminum business. The problem is that there are no foreseeable options here in the northwest. Come 1994, the aluminum producers in this region will be between a rock and a hard place. That is when cement kilns can be a benefit both to the region and the state. Holnam and the aluminum industry both expect that the "Best Technology" for destroying potliner will include cement kilns because fuel substitution is considered to be better than incineration whenever fuel substitution works just as well.

As you already are probably aware, Montana has not done its fair share in providing capacity for treatment and disposal of hazardous wastes generated in the region. Oregon, on the other hand, will lose some of this capacity in 1994 due to the restrictions on land disposal. The cement kiln at Trident can and should be a vehicle to keep that capacity in the region.

Now that the 1993 legislature is in session, opponents of cement kiln recycling seek to prevent both Holnam and Ash Grove from using this important means to reduce costs and provide safe waste management capacity to Montana and the region. Issues such as siting and product liability have been used in an attempt to kill these programs arbitrarily. Imposing conditions that, as a practical matter, cannot be met, is the same as a moratorium. Montana will lose any potential for treatment capacity.

Product labeling is even more insidious. There is no scientific basis to assume that cement is hazardous because of fuel substitution in cement kilns. The fact is that the materials of concern in the wastes are already in the raw materials. We can demonstrate that the product is safe. We would not risk losing our sales if there were any evidence that our products were affected by using waste fuels. Why impose such senseless restrictions both on Montana producers and at the same time increased product costs on our customers? To kill an unpopular proposal?

I urge this body to use science and reason as well as the needs of the community in deciding how to regulate. There is no question that when emotions and fears are used by opposition groups, the only science that is called upon as a means to an end is the science of psychology. We hope that the decision as to whether our proposal is safe or not is made by environmental professionals.

As you know from our recent announcement, Holnam's Trident plant has listened to our community and opposition and has proposed a program designed to provide for Montana's needs. We have made a safe process even safer by addressing the concerns about our location and transportation to it. Both in form and in content, the alternative fuels that Trident proposes to use combined with the new rules put in place by Montana's Department of Health and Environmental Sciences will show that our proposal is fully protective.

The new Department rules will require Holnam to demonstrate that our facility will have no impact. While numerous stack tests and sampling programs nationwide have proven cement kiln recycling to be safe, the Department has gone a step further. Now Holnam will have to test our soil and water both before and during operation of the recycling facility. And as the Department said, in their own words (in their responses to comments on DHES's BIF rules):

> "If the department determines that statistically increased contamination [of soils, surface waters, and aquifers] from the facility is apparent, then the department will have the option to require additional testing, restrict the feed rates of hazardous wastes, deny reissuance of the permit or revoke the permit."

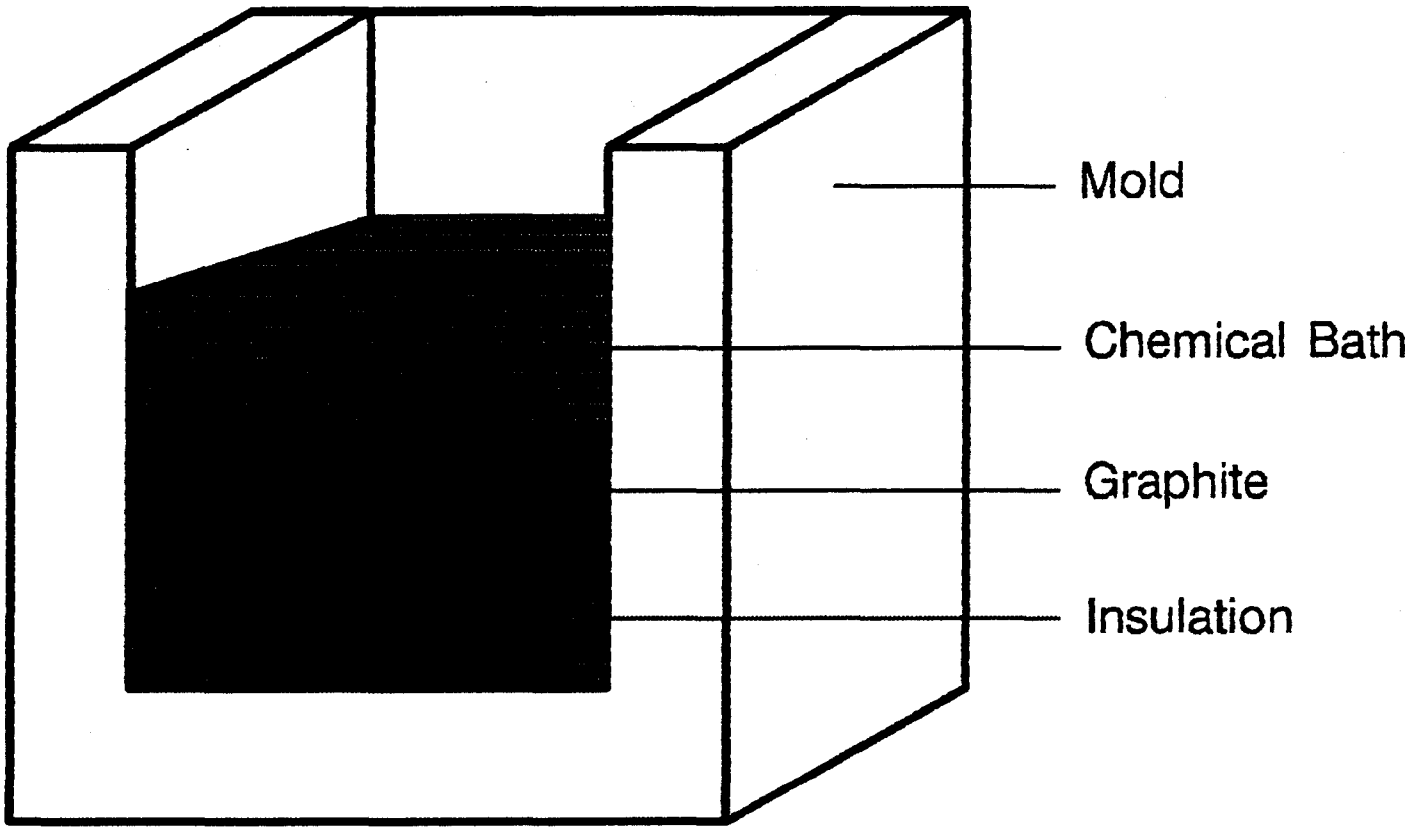
Holnam would not invest in a permit application and environmental assessment and then add a multimillion dollar facility at Trident if experience elsewhere showed that Department rules would shut the facility down. We cannot afford to speculate. It would make no business sense.

Mr. Chairman, members of the committee, please put the burden of proof on us that we demonstrate that our process is safe. We can make claims until we are blue in the face that studies have shown that cement kiln recycling is safe. You, our lawmakers, must decide whether to make us be safe or just say no, regardless of what physical science and economics should dictate.

* * *

EXHIBIT #5
DATE 1-18-93

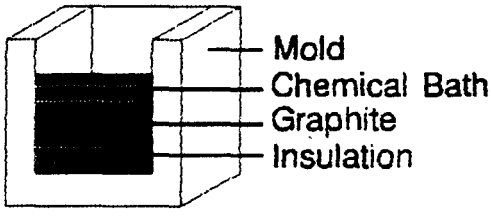
Aluminum Potliner Recycling



Potliners are made up of insulation material such as refractory brick covered with a graphite layer.

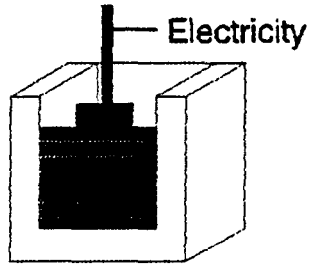
Aluminum Potliner Recycling

1



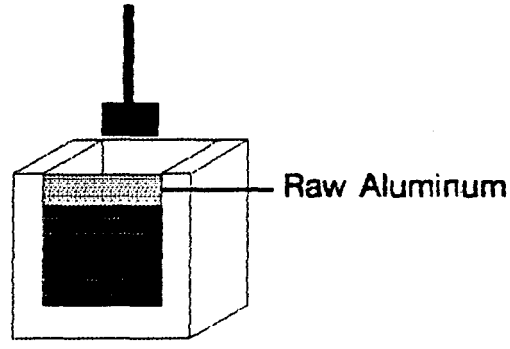
Potliners are placed in molds where aluminum will be produced.

2



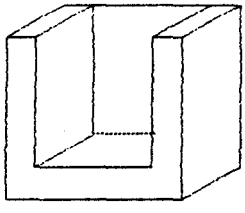
Large amounts of electricity are applied to the mold. Potliners help charge the chemical reaction that produces aluminum.

3



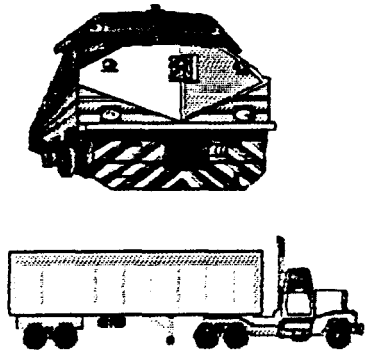
Raw aluminum is skimmed out of the pot and used for everyday products. The process then is repeated.

4



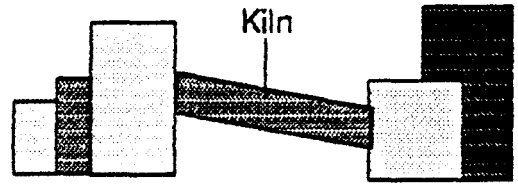
After 3 - 5 years the potliner becomes worn out and is removed and crushed into a gravel-like substance.

5



Crushed potliner can be safely hauled to cement plants and used as a substitute for dwindling supplies of expensive fossil fuels.

6



The intense heat of the cement kiln (more than 3,000° Fahrenheit) completely destroys the spent potliner.

Testimony Before the
State Legislature of Montana
Senate Natural Resources Committee
by Arlene Sherman
Plant Personnel/Safety Manager
Holnam-Trident Cement Plant
Three Forks, Montana

EXHIBIT #6
DATE 1-18-93

January 18, 1993

Mr. Chairman and members of the Committee:

I am Arlene Sherman, a 13 year employee at the Holnam Trident cement plant currently in the position of Personnel/Safety Manager. I am also a graduate of Montana Tech in Occupational Safety and Health and listed nationally as a Certified Safety Professional.

The Trident plant, like other industries in the State, is regulated in the areas of safety, health, and environment by many varied standards and rules that were compiled and based on careful research, experience, and knowledge. It is the responsibility and the intent of Holnam to comply with all of those regulations which apply to our facility. It is in the best interest of all of us at Trident to follow established rules and regulations in order to preserve our jobs and the exceptional lifestyle we enjoy here in Montana.

Transportation has continually been a prime concern to all involved in the process of considering the use of hazardous wastes as a supplemental fuel in the Trident cement kiln. Federal regulations controlling the transportation of hazardous wastes are strict and extensive. Generators of hazardous waste have a "creation to destruction" responsibility for their waste materials, part of which is the transportation process. Once a generator has determined that their waste is indeed considered hazardous as specified under 40 CFR Part 261 and has referred to 40 CFR, Parts 264, 265, and 268 for possible exclusions or restrictions pertaining to management of the specific wastes, a complex manifest process is implemented. All shipments must be carried by a licensed transporter and accompanied by a detailed hazardous waste manifest. Drivers of vehicles transporting hazardous waste are required to be trained under DOT rules in the areas of handling, hazard recognition and emergency response. Stringent drug testing regulations must also be met.

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In our permit application for the Trident plant, we must supply evidence that we are capable of responding to an accident at the plant involving our supplemental fuels. Response efforts will also be coordinated with the local county emergency response plan.

The changes in our permit application have drastically reduced the number of waste materials that would be burned at Trident. This will also have a dramatic reduction on possible transportation impacts to the environment and health concerns in the event of an accidental release. Holnam has carefully considered the concerns expressed by the public during our entire application process and have therefore made the major changes presented in our revised permit application.

The fact that Trident employees already make safety a high priority is underscored by their outstanding safety performance. We are not about to compromise that priority by doing anything which might jeopardize the health or safety of any of our employees. This includes the proposed use of waste derived fuels.

Through my own personal investigation into research that has been conducted on the use of hazardous wastes as supplemental fuels in cement kilns, I have no doubt that this is a safe and effective means to recycle and permanently dispose of certain high heat value flammable wastes. With controlled operation of a cement kiln and associated pollution controls, more than a decade of evidence from several dozen kilns currently burning waste derived fuels here in the U.S. and other countries shows there is no increase in risk to the health and safety of people or the environment. The use of waste derived fuels to supplement currently used fossil fuels will reduce the demand for these non-replaceable natural resources.

Mr. Chairman and members of the Committee, please bear in mind during the remainder of the current legislative session, any decision made that will affect the use of waste derived fuels should be based on scientific fact, not emotion and fear; and, that any ensuing regulations be reasonable, attainable with current technology, and do not sabotage future economic development within Montana.

Thank you for your attention and interest.

* * *

Comments To Montana Legislative Committee On Hazardous Waste Disposal

Helena, Montana, January 18, 1993

Donald F. Ryan

Columbia Falls Aluminum Company

My name is Don Ryan. I am the Laboratory Superintendent at Columbia Falls Aluminum Company (CFAC) and have responsibility for the environmental control programs at the Columbia Falls plant. I want to thank the committee for the opportunity to present our views on the use of cement kilns for burning hazardous wastes. My comments will be from the perspective of incineration of a hazardous waste produced by CFAC called spent potliner (SPL). Spent potliner is a listed RCRA hazardous waste which contains low levels of cyanide.

We produce about 6,000 tons of spent potlining per year.

Use of Spent Potlining in Cement Kilns

In the early to mid-1980s, SPL was being recycled as a source of fuel and for its chemical value by the cement, steel and mineral wool industries. The material contains about 6,000 BTUs per pound. The contained fluoride acts as a fluxing agent in the mineral wool and steel processes and it serves to increase the reaction process in cement kilns which reduces temperature requirements and fuel costs. Because of the temperatures at which these processes operate, the cyanide constituent of SPL is destroyed. The remaining noncarbon constituents go into the cement product and no waste results.

The objectives of RCRA are to protect the environment and human health and to conserve and recover resources. The use of SPL as a supplemental fuel source in cement kilns and the subsequent complete recovery of the chemical value of the

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material, while eliminating the cyanide constituent for which it was listed as a hazardous waste, fulfills completely the RCRA objectives.

In March of 1988, approximately 40% of the 130,000 tons of SPL produced in the US was scheduled for incineration by the cement, steel wool and steel industries. As a result of the March 15, 1988, EPA relisting of SPL, none of this material is presently being recovered. Virtually all of it is now being shipped to landfills. In point of fact, EPA will soon place SPL on the list of wastes for which land disposal is banned unless the material is pretreated. Ironically, the only pretreatment technology presently available for cyanide destruction in SPL is incineration. Reynolds Metals Company has developed the technology which has been EPA-approved. Unfortunately, for every pound of SPL treated, 2.5 pounds of waste results which is then landfilled. We are figuratively and literally losing ground in our efforts to dispose of our waste.

<u>To Incinerate Or Not To Incinerate</u>

This brings us back to the cement industry and incineration of hazardous wastes. There is presently a ground swell of opposition to any incineration of hazardous waste. This is clearly an overreaction and must be readdressed in light of the many positive aspects of incineration for recovery of heat and chemical values from wastes. Properly handled, cement-kiln incineration can

result in the total recovery of energy and chemical values of wastes. There are no disadvantages.

This committee must be very careful when evaluating bills relating to the disposition of hazardous waste. Montana must develop and encourage the use of environmentally sound technologies for handling hazardous wastes produced by Montana industries. We can't continue to expect other states to accept our wastes for disposal. The project being developed by Holnam is both an environmental and economic plus for Montana. The legislature should ensure that unreasonable regulatory barriers are not enacted.

Thank you for the opportunity to present our viewpoint on this very important issue.

Reynolds Metals near treating potliner from own primary smelters

EXHIBIT #7
DATE 1-18-93

By EDWARD WORDEN

NEW YORK — Reynolds Metals Co. is poised to treat its own spent potliner from primary aluminum smelters while still weighing the viability of recycling the material.

Moreover, negotiations are being held with "one large generator" of potliner to lease or purchase part of Reynolds' treatment capacity, while other smelters are looking at the situation and want to submit potliner samples for testing, according to a Reynolds official.

E. Jack Gates, general manager of the reduction and reclamation division, said the company's $50-million project at Gum Springs, Ark., is intended to be up and running by April 1, 1993.

Gates noted that time is of the essence for smelters that currently take potliner to landfill sites. The federal Environmental Protection Agency intends to implement a landfill ban for untreated potliner in early 1994 and will require that the potliner be treated with the best available technology at the time, Gates said. Pre-treatment will be required prior to disposal.

The new Reynolds plant will include two gas-fired kilns, each with capacity to treat 60,000 metric tons of potliner a year. Small amounts of cyanide will be destroyed by the heat, and fluorides will be made insoluble, Gates said.

But of the 120,000 tons in capacity, only 30,000 tons will be required to treat Reynolds' own potliner from the company's 848,000-tons-a-year primary capacity in the United States and Canada. Consequently, Reynolds will be able to get into the custom treatment business for other companies' potliner, Gates said.

Bechtel Group Inc. called it a "state-of-the-art facility for handling waste created during aluminum production." Bechtel's mining and metals unit is designing and retrofitting the facility for Reynolds.

The recyclability of material from the new Reynolds plant is yet to be determined. Gates said he has seen dense bricks produced from the ash-type residue, and that one avenue being investigated is the use of the material in refractory-type applications.

The company previously said it would consider going into similar ventures overseas, but that Reynolds for now is getting in at the ground floor, since other facilities would presumably be a long time from obtaining necessary permits (AMM, March 10).

Spent potliner is a carbon-based material that comes from electrolytic reduction of alumina into aluminum. The EPA has cited at least four smelter sites as so-called "Superfund" candidates and included others in its list of potentially hazardous sites.

No. 380 SECONDARY ALUMINUM INGOT PRICES

Monthly and annual average prices of remelt aluminum ingot (No. 380 3% Zn.) in Midwest, cents per pound, compiled from quotations published in American Metal Market.

1982	48.27
1983	66.23
1984	70.68
1985	57.03*
1986	59.83
1987	71.39

1988 1989 1990

Testimony Before the
State Legislature of Montana
Senate Natural Resources Committee
by
William Springman, Plant Manager
Holnam-Trident Cement Plant
Three Forks, Montana

January 18, 1993

Good afternoon Mr. Chairman and members of the Committee:

My name is Bill Springman and I am the manager of the Holnam cement plant at Trident near Three Forks in Gallatin County. The plant has been at this location for 80 years. Over that time we have continued to grow and make improvements to our operation. We currently have some of the most advanced technology in place in order to manufacture cement. We employ 100 people, making us the fourth largest employer in Gallatin County. We are also the fourth largest taxpayer and have a total economic impact of over $20 million. This includes our payroll, benefits, local and state taxes, and purchases of local goods and services. We are actively involved in the communities which surround us through volunteer and charitable efforts such as school partnership programs, and contributions to other worthwhile activities.

I appreciate this opportunity to appear before you today to briefly present our program to use selected solid hazardous wastes -- most of which are generated right here in Montana -- as fuel supplements in our production process. The kiln is the heart of the cement making process. Making our product is extremely energy intensive and requires flame temperatures in the kiln of over 3,000° Fahrenheit. This temperature is necessary for conversion of raw materials into small, walnut-sized stones called clinker -- which are ultimately ground and mixed with gypsum to form cement. The plant currently uses coal and natural gas -- nonrenewable natural resources -- to fuel the kiln. Our plan to recycle hazardous waste-derived fuel will offset our use of those natural fuels. By doing so, we will reduce our operating costs, conserve natural resources and significantly contribute to managing selective wastes at an efficient level in Montana.

As the members of this body are aware, our waste-fuel proposal has changed significantly since we first submitted permit applications in May of 1991. Last week, we requested a modification of our permit application and in just a moment I'd like to review some of the important changes we have made.

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But it is important to note that we have made changes to our proposal after listening carefully to our neighbors in Gallatin County in public meetings, in formal hearings such as this and after meeting individually with hundreds of area residents, landowners, business leaders, local government officials and technical experts. Many of these people have toured our facility at Trident and have taken the time to listen to consider our program.

As I have already mentioned, we have an 80-year record of success in Gallatin County. We could not be successful without making improvements and investments in our plant. Today, the improvements and investments we are planning -- through the use of waste-derived fuels -- are important because they will help us remain competitive. It will also help other Montana industries remain competitive.

We want to continue to provide a source of livelihood for our employees and economic vitality for our local communities. The waste fuel program allows us to do that. The cement business is intensely competitive. Without the advantage of cost savings which we will be able to achieve by supplementing our use of natural gas and coal with waste-derived fuels, the chances of our remaining competitive with other plants who do enjoy that advantage are slim.

However, that doesn't mean we are going to charge ahead without carefully evaluating the safety of the program and without taking into consideration the concerns of our neighbors. We couldn't do that even if we wanted to. The permitting process is too rigorous and thorough to allow it. But we don't want to anyway. When we announced this program almost two years ago, we said that we wanted to hear from local residents about the project. As I've already mentioned, we have heard from many of them. And we have responded.

As we announced last week, we've made significant changes to our application. Following are the most important implications of our modified fuel program:

- We have drastically narrowed down the number of waste materials we intend to use as supplemental fuel. Specifically, we are seeking permits to burn spent potliner from primary aluminum production, spent refinery wastes and used filters and lint from commercial dry cleaners.

- Various kinds of wastes are assigned different classifications by state and federal regulators. We have reduced the number of waste classifications on our permit application by 97 percent -- from over 500 to just 12.

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- Materials will come from Montana generators, as well as neighboring states which participate in the Western States Governors' Compact.

- The waste fuels we are proposing to burn are solid materials. We will eliminate free-flowing liquids to dramatically reduce the impact of any spill, no matter how unlikely.

- We plan to further reduce transportation risks by severely restricting delivery schedules, transportation routes and transportation methods and will provide an exhaustive transportation risk assessment to demonstrate that there is virtually no additional transportation risk associated with our program.

- The reduction in waste codes also eliminates most of the chlorinated wastes that are believed to lead to dioxin/furan formation.

Basically, these modifications to our program make a safe program even safer. And that brings us to the issue of siting. You are going to be asked to consider legislation that will mandate where a facility such as ours should be located based upon our proposed use of waste fuels. This proposed legislation, in our view, approaches the issue from the wrong perspective. The only question should be, Can we safely supplement our current use of fossil fuels with waste fuels? If we can't we should not be allowed to burn anywhere. If we can demonstrate that there is no impact to human health or the environment, our location should make no difference.

We are confident that we <u>can</u> demonstrate the safety of this program. We intend to be accountable. Our compliance record has always reflected our concern for protecting the environment. Every Holnam employee at the Trident plant has a deep commitment to safely, quality, and respect for the regulations that govern our operations. This commitment is part of our culture and it requires that we do nothing to degrade the environment that is home to us and to our families and friends.

We propose to address a Montana problem of hazardous waste generation. In doing so we have listened to the concerns of our neighbors and have modified the program to even further enhance the program's safety.

Once again, I would like to thank the members of the committee for your attention and I will be happy to answer any questions you might have.

* * *

DATE 1/18

SENATE COMMITTEE ON Natural Resources

BILLS BEING HEARD TODAY: ———

Name	Representing	Bill No.	Check One Support	Oppose
Dan Peterson	Ash Grove			
Mike Benoit	Cadence			
Dr. George Carlo	Scientific Advisory Bd on Cement Kiln Recycling			
Tom Daubert	Ash Grove			
Eric Hansen	Ash Grove			
Jerome Anderson	Holnam, Inc.			
Harry Black	MFDA	13		

VISITOR REGISTER

PLEASE LEAVE PREPARED STATEMENT WITH COMMITTEE SECRETARY

F10