

HB

106

SENATE COMMITTEE REPORT

FURTHER

4/27/89

DATE TURNED INTO OFFICE 5/17/89

Mr. President:

CSHB 106 (2d Fin)  
(Title am)

Finance

Committee considered

establishing a hazardous waste reduction and recycling program; providing for hazardous waste reduction matching grants; establishing priorities for the promotion of hazardous waste management practices; efd

and recommended

- replace with \_\_\_\_\_ CS \_\_\_\_\_ )  same title
- or adopt \_\_\_\_\_ CS \_\_\_\_\_ )  new title
- attached amendment(s) and  technical title change (HB only)
- \_\_\_\_\_ letter of intent adopted

do pass

do not pass

no recommendation

individual recommendations

further referral to \_\_\_\_\_

FISCAL NOTE(S)  zero  fiscal impact  appropriation no FN  
 new  updated  previous 75.0 DEC  
 same as previous fiscal note(s) published \_\_\_\_\_

MEMBERS SIGNING DO PASS

[Signature]  
[Signature]  
[Signature]  
 \_\_\_\_\_  
 \_\_\_\_\_

OTHER RECOMMENDATIONS

[Signature] No Rec  
[Signature] No Rec  
[Signature] No Rec  
 \_\_\_\_\_  
 \_\_\_\_\_

Chair: signature and recommendation

[Signature] CO-CHAIR  
 NO REC

Committee Backup attached

**FISCAL NOTE**

**REQUEST:**

Revision Date: 03/08/89  
 Title: "An Act relating to hazardous waste; and providing for an effective date."  
 Sponsor: Brown, Davis, et. al.  
 Requestor: House Finance Committee  
 Agency Affected: Environmental Conservation  
 BRU: Environmental Quality  
 Components: Environmental Quality

**EXPENDITURES/REVENUES: (Thousands of Dollars)**

OPERATING	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94
PERSONAL SERVICES	0	0	0	0	0	0
TRAVEL	0	0	0	0	0	0
CONTRACTUAL	0	75.0	75.0	75.0	75.0	75.0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
<b>TOTAL OPERATING</b>	<b>0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>

CAPITAL	0	0	0	0	0	0
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REVENUE	0	0	0	0	0	0
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**FUNDING: (Thousands of Dollars)**

GENERAL FUND	0	75.0	75.0	75.0	75.0	75.0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>

**POSITIONS:**

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

**ANALYSIS : (Attach a separate page if necessary)**

See attached page.

Prepared by: Rep. Ron Larson, Co-Chair/H. Finance Phone: 465-3727  
Rep. Lyman Hoffman, Co-Chair/H. Finance Phone: 465-4453  
 Division: \_\_\_\_\_ Date: 03/08/89  
 Approved by Commissioner: *Ronald J. Larson* Date: \_\_\_\_\_  
 Agency: \_\_\_\_\_

Distribution (by preparer):  
 Legislative Finance  
 Legislative Sponsor  
 Requestor  
 Office of Management and Budget  
 Impacted Agency(ies)

Adopted

03/08/89

FISCAL NOTE ANALYSIS

The proposed legislation directs the DEC to establish a hazardous waste reduction and recycling program to coordinate, promote, and assist efforts to reduce the generation of hazardous waste in Alaska. In Alaska there are more than 300 facilities that have notified EPA as hazardous waste generators and there are several hundred more small businesses that could benefit from these services.

The bill directs the department, subject to available funds, to undertake several activities. These include: providing for technical assistance to businesses upon request; information and referral assistance; organizing workshops and seminars; development of a technical reference center and data base; development of curricula; and administration of a hazardous waste reduction and recycling matching grants program.

The fiscal note includes 75.0 in contractual funds. These funds would be used for non-regulatory, on-site technical assistance to businesses upon request (assumes approximately 8 to 10 on-site waste reduction audits at \$5,000 each plus administrative overhead); contractual services to provide waste reduction technical workshops and seminars; and acquisition of a technical reference materials.

No new positions are authorized by the fiscal note.

Amended: 3/22/89

6-0169D

Offered: 3/15/89

Referred: Rules

Original sponsors: Brown, M. Davis,  
Menard, et al.

1 IN THE HOUSE BY THE FINANCE COMMITTEE

2 CS FOR HOUSE BILL NO. 106 (2d Finance)(title amended)

3 IN THE LEGISLATURE OF THE STATE OF ALASKA

4 SIXTEENTH LEGISLATURE - FIRST SESSION

5 A BILL

6 For an Act entitled: "An Act establishing a hazardous waste reduction and  
7 recycling program; providing for hazardous waste  
8 reduction matching grants; establishing priorities  
9 for the promotion of hazardous waste management  
10 practices; and providing for an effective date."

11 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

12 \* Section 1. FINDINGS. The legislature finds that

13 (1) several thousand pounds of hazardous waste are added to the  
14 nation's environment for every person in the United States each year;

15 (2) hazardous substances have been improperly disposed of at  
16 more than 200 known or suspected sites in the state, including 40 regulated  
17 public water supply systems that have been contaminated, and more sites are  
18 discovered each year;

19 (3) the Congress of the United States, in adopting the Hazardous  
20 and Solid Waste Amendments in 1984, established a national policy that  
21 wherever feasible, the generation of hazardous waste should be reduced or  
22 eliminated as expeditiously as possible;

23 (4) by reducing or eliminating hazardous waste before it is  
24 generated, hazardous waste source reduction efforts can be more effective  
25 than traditional "end-of-the-pipe" pollution abatement strategies;

26 (5) hazardous waste reduction can improve workplace safety as  
27 well as lower waste management and regulatory compliance costs;

28 (6) while some large businesses have successfully undertaken  
29 hazardous waste reduction initiatives, small businesses have a particular

1 need for information and technical assistance regarding opportunities to  
2 reduce the generation of hazardous waste; and

3 (7) hazardous waste reduction and recycling efforts are increas-  
4 ingly recognized by both business interests and the general public as an  
5 economically and environmentally effective response to the increasing costs  
6 and liabilities resulting from hazardous waste generation.

7 \* Sec. 2. AS 46.03.299 is amended by adding a new subsection to read:

8 (f) In order to minimize the present and future threat to human  
9 health and the environment, the department shall promote the following  
10 hazardous waste management practices in the following order of pri-  
11 ority:

12 (1) waste source reduction;

13 (2) recycling of waste;

14 (3) waste treatment; and

15 (4) waste disposal.

16 \* Sec. 3. AS 46.03 is amended by adding new sections to read:

17 Sec. 46.03.316. HAZARDOUS WASTE REDUCTION AND RECYCLING PROGRAM.

18 (a) There is established within the department a hazardous waste  
19 reduction and recycling program. Within the limit of funds available,  
20 the department shall

21 (1) coordinate agency efforts to reduce the production of  
22 hazardous waste, including air and water emissions;

23 (2) in order to implement the priorities set out in AS 46.-  
24 03.299(f)(1) - (2), promote hazardous waste source reduction and  
25 on-site recovery of resources from hazardous waste streams and through  
26 materials recycling;

27 (3) provide for source reduction and recycling technical  
28 assistance and consultation to hazardous waste generators at their  
29 request;

1           (4) sponsor or co-sponsor with public or private organiza-  
2 tions technical workshops and seminars on hazardous waste reduction;

3           (5) develop a hazardous waste reduction technical reference  
4 center and data base;

5           (6) establish and maintain a hazardous waste reduction  
6 information referral service;

7           (7) identify and evaluate hazardous waste reduction re-  
8 search needs for state businesses and industry, local governments, and  
9 state agencies;

10           (8) develop, in consultation with institutions of higher  
11 education in the state, courses and curricula related to hazardous  
12 waste reduction; and

13           (9) issue hazardous waste reduction grants under AS 46.-  
14 03.317.

15           (b) In response to a request of a hazardous waste generator, a  
16 representative of the department may visit the hazardous waste genera-  
17 tor's site for the purpose of observing a waste generating process,  
18 obtaining information relevant to waste reduction, rendering advice,  
19 and making recommendations. A visit under this subsection may not be  
20 regarded as an inspection or investigation. A representative of the  
21 department designated to render advisory or consultative services may  
22 not have enforcement authority.

23           (c) This section does not diminish the responsibility of a  
24 person to comply with this chapter, AS 46.04, or AS 46.09.

25           Sec. 46.03.317. HAZARDOUS WASTE REDUCTION MATCHING GRANTS. (a)  
26 A hazardous waste reduction grant account is established in the gen-  
27 eral fund. It consists of appropriations made to it.

28           (b) The department may issue matching grants from money in the  
29 account to businesses, local governments, industry trade associations,

1 labor organizations, or nonprofit organizations for the purpose of  
2 feasibility analysis and evaluation of ways to implement hazardous  
3 waste reduction.

4 (c) Grants under this section

5 (1) must be matched on a dollar-for-dollar basis by the  
6 grantee in cash or in kind;

7 (2) may not exceed \$10,000 for any single proposal or  
8 project.

9 (d) The department shall establish an advisory committee, con-  
10 sisting of five members, to assist the department in reviewing and  
11 evaluating grant applications under this section. The advisory com-  
12 mittee must include

13 (1) an officer or employee of the department;

14 (2) a representative of the University of Alaska;

15 (3) a professional civil or chemical engineer with experi-  
16 ence in environmental engineering;

17 (4) an owner or representative of a small business; and

18 (5) a public member.

19 \* Sec. 4. AS 46.03.900 is amended by adding a new paragraph to read:

20 (34) "hazardous waste reduction" means decreasing, avoiding,  
21 or eliminating wastes that are hazardous to human health or the envi-  
22 ronment through source reduction or recycling; the term does not  
23 include hazardous waste treatment or hazardous waste disposal.

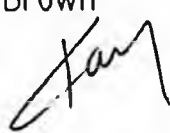
24 \* Sec. 5. This Act takes effect July 1, 1989.

# Kay Brown

## Alaska State Legislature House of Representatives

TO: Senator Rick Uehling, Co-Chair  
Senator John Binkley, Co-Chair  
Senate Finance Committee

FROM: Representative Kay Brown

DATE: April 30, 1989 

SUBJ: Senate Finance Scheduling Request

The purpose of this memorandum is to request that CS HB 106 (2nd Fin)(title amended) and CS HB 141 (Finance) be scheduled for hearing in the Senate Finance Committee.

### HB 106/Hazardous Waste Reduction

CS HB 106 (2nd Finance)(title amended) would establish a non-regulatory, technical assistance and matching grants program to help hazardous waste generators reduce their generation of hazardous wastes. More than 30 states have established, or are in the process of establishing, a waste reduction program.

In contrast to conventional strategies that rely on regulation of hazardous waste after it has been generated, waste reduction efforts focus on the reduction and elimination of hazardous waste streams before they are created. Reducing or eliminating hazardous waste at the source offers the most effective response to the costs and liabilities associated with hazardous waste. In Alaska, small businesses that lack extensive resources have a particular need for information and technical assistance regarding opportunities to reduce the generation of hazardous waste. Enactment of CS HB 106 (2nd Fin)(title amended) would enable the Department of Environmental Conservation to help these businesses using independent contractors to provide the needed technical assistance.

This non-regulatory, incentive-based legislation is supported by a broad spectrum of public and private interests including representatives of industry, small business, labor, local governments and conservationists.

HB 141/Tobacco Sales Licensing

There is clearly a need to provide for an enforcement tool to reduce the sale of tobacco products to minors. CS HB 141 (Finance) would establish a licensing requirement for retail sales of cigarettes, cigars, tobacco, and other tobacco products.

Under this legislation, retail tobacco license endorsements could be administratively suspended for a violation involving the sale of tobacco to a minor. No retail tobacco products could be sold during a period of suspension. Retailers would be required to make application and pay a \$25 fee to the Department of Commerce and Economic Development.

\* \* \* \* \*

If you have any questions regarding these bills, please let me know. I appreciate your consideration of this request.

4/12/89  
Rep. Kay Brown

INFORMATION REGARDING WASTE REDUCTION

CS HB 106 (2nd Finance)(title amended)

ATTACHMENTS:

1. Summary of the Legislation
2. 2nd CS HB 106 (2nd Finance)(title amended)
3. Sectional Analysis
4. Fiscal Note
5. Position Paper - Department of Environmental Conservation
6. Letters and statements in support of the legislation:

Tom Painter, CONOCO  
Mayor Don Gilman - Kenai Peninsula Borough  
Fairbanks North Star Borough Assembly  
David Wigglesworth - Alaska Health Project  
Glenn Akins - America North Inc.  
Alaska Center for the Environment  
Anchorage Health and Human Services Commission  
Pat Smutz - Alaska State AFL/CIO  
Dennis Steffy - UAA/Mining and Petroleum Training Service  
Alaska Environmental Lobby  
Dalee Sambo - Inuit Circumpolar Conference  
Alaska Water Resources Board  
Small Business Development Center of Alaska

7. Summary Report - Office of Technology Assessment (OTA)
8. Resolution - Pacific Northwest Hazardous Waste Advisory Council

4/12/89  
Rep. Kay Brown

**HAZARDOUS WASTE REDUCTION**  
CS HB 106 (2nd Finance)(title amended)

**The Issue:**

- several thousand pounds of hazardous waste is added to the environment for every person in the United States each year
- in Alaska there are several hundred sites where hazardous substances have been improperly disposed, including 40 contaminated public water supply systems and more sites are discovered each year
- reducing or eliminating hazardous waste at the source, prior to generation, offers the most economically and environmentally effective response to the costs and liabilities resulting from hazardous waste generation
- small businesses (eg, printing, auto repair, aviation maintenance, electroplating, fur tanning, commercial labs, dry cleaners, photo finishers, etc) are in need of information and technical assistance regarding opportunities to reduce the generation of hazardous wastes
- over 30 states have established, or are in the process of establishing, a waste reduction program

**CS HB 106 (2nd Finance)(title amended) would:**

- establish a Hazardous Waste Reduction and Recycling program within the Department of Environmental Conservation
- enable the department to provide non-regulatory hazardous waste source reduction and recycling technical assistance upon the request of hazardous waste generators
- direct the Department of Environmental Conservation to promote hazardous waste management practices according to a hierarchy that recognizes waste reduction as a priority

- establish a hazardous waste reduction 50-50 matching grants program (\$10,000 maximum) for businesses, local governments, industry trade associations, labor organizations and non-profits to help finance the feasibility analysis and evaluation of hazardous waste reduction opportunities

**Fiscal note:**

- the fiscal note for the bill would authorize \$75,000 in contractual funding to provide hazardous waste reduction and recycling technical assistance and information services
- no new positions would be authorized by the fiscal note

**Support for the legislation:**

- the legislation is supported by a broad spectrum of public and private interests including representatives of industry, small business, labor, local governments and conservationists.
- testimony and statements in support for the legislation have been provided by the following individuals and organizations:

Tom Painter, CONOCO  
Mayor Don Gilman, Kenai Peninsula Borough  
Fairbanks North Star Borough Assembly  
David Wigglesworth, Alaska Health Project  
Glenn Akins, America North Inc.  
Alaska Center for the Environment  
Anchorage Health and Human Services Commission  
Pat Smutz, Alaska State AFL-CIO  
Dennis Steffy, UAA/Mining and Petroleum Training Service  
Alaska Environmental Lobby  
Dalee Sambo, Inuit Circumpolar Conference  
Alaska Water Resources Board  
Small Business Development Center of Alaska

Amended: 3/22/89

6-0169D

Offered: 3/15/89

Referred: Rules

Original sponsors: Brown, M. Davis,  
Menard, et al.

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2 CS FOR HOUSE BILL NO. 106 (2d Finance)(title amended)

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4 SIXTEENTH LEGISLATURE - FIRST SESSION

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14 nation's environment for every person in the United States each year;

15 (2) hazardous substances have been improperly disposed of at  
16 more than 200 known or suspected sites in the state, including 40 regulated  
17 public water supply systems that have been contaminated, and more sites are  
18 discovered each year;

19 (3) the Congress of the United States, in adopting the Hazardous  
20 and Solid Waste Amendments in 1984, established a national policy that  
21 wherever feasible, the generation of hazardous waste should be reduced or  
22 eliminated as expeditiously as possible;

23 (4) by reducing or eliminating hazardous waste before it is  
24 generated, hazardous waste source reduction efforts can be more effective  
25 than traditional "end-of-the-pipe" pollution abatement strategies;

26 (5) hazardous waste reduction can improve workplace safety as  
27 well as lower waste management and regulatory compliance costs;

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29 hazardous waste reduction initiatives, small businesses have a particular

1 need for information and technical assistance regarding opportunities to  
2 reduce the generation of hazardous waste; and

3 (7) hazardous waste reduction and recycling efforts are increas-  
4 ingly recognized by both business interests and the general public as an  
5 economically and environmentally effective response to the increasing costs  
6 and liabilities resulting from hazardous waste generation.

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22 hazardous waste, including air and water emissions;

23 (2) in order to implement the priorities set out in AS 46.-  
24 03.299(f)(1) - (2), promote hazardous waste source reduction and  
25 on-site recovery of resources from hazardous waste streams and through  
26 materials recycling;

27 (3) provide for source reduction and recycling technical  
28 assistance and consultation to hazardous waste generators at their  
29 request;

1 (4) sponsor or co-sponsor with public or private organiza-  
2 tions technical workshops and seminars on hazardous waste reduction;

3 (5) develop a hazardous waste reduction technical reference  
4 center and data base;

5 (6) establish and maintain a hazardous waste reduction  
6 information referral service;

7 (7) identify and evaluate hazardous waste reduction re-  
8 search needs for state businesses and industry, local governments, and  
9 state agencies;

10 (8) develop, in consultation with institutions of higher  
11 education in the state, courses and curricula related to hazardous  
12 waste reduction; and

13 (9) issue hazardous waste reduction grants under AS 46.-  
14 03.317.

15 (b) In response to a request of a hazardous waste generator, a  
16 representative of the department may visit the hazardous waste genera-  
17 tor's site for the purpose of observing a waste generating process,  
18 obtaining information relevant to waste reduction, rendering advice,  
19 and making recommendations. A visit under this subsection may not be  
20 regarded as an inspection or investigation. A representative of the  
21 department designated to render advisory or consultative services may  
22 not have enforcement authority.

23 (c) This section does not diminish the responsibility of a  
24 person to comply with this chapter, AS 46.04, or AS 46.09.

25 Sec. 46.03.317. HAZARDOUS WASTE REDUCTION MATCHING GRANTS. (a)  
26 A hazardous waste reduction grant account is established in the gen-  
27 eral fund. It consists of appropriations made to it.

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29 account to businesses, local governments, industry trade associations,

1 labor organizations, or nonprofit organizations for the purpose of  
2 feasibility analysis and evaluation of ways to implement hazardous  
3 waste reduction.

4 (c) Grants under this section

5 (1) must be matched on a dollar-for-dollar basis by the  
6 grantee in cash or in kind;

7 (2) may not exceed \$10,000 for any single proposal or  
8 project.

9 (d) The department shall establish an advisory committee, con-  
10 sisting of five members, to assist the department in reviewing and  
11 evaluating grant applications under this section. The advisory com-  
12 mittee must include

13 (1) an officer or employee of the department;

14 (2) a representative of the University of Alaska;

15 (3) a professional civil or chemical engineer with experi-  
16 ence in environmental engineering;

17 (4) an owner or representative of a small business; and

18 (5) a public member.

19 \* Sec. 4. AS 46.03.900 is amended by adding a new paragraph to read:

20 (34) "hazardous waste reduction" means decreasing, avoiding,  
21 or eliminating wastes that are hazardous to human health or the envi-  
22 ronment through source reduction or recycling; the term does not  
23 include hazardous waste treatment or hazardous waste disposal.

24 \* Sec. 5. This Act takes effect July 1, 1989.

4/3/89 Rep. Kay Brown

**HAZARDOUS WASTE REDUCTION**  
CS HB 106 (2nd Finance)(title amended)  
Sectional Analysis

Section 1

A statement of findings by the legislature.

Section 2

Directs the Department of Environmental Conservation to promote hazardous waste management practices according to a hierarchy that recognizes waste reduction as a priority.

Section 3

Creates a Hazardous Waste Reduction and Recycling program within the Department of Environmental Conservation and prescribes responsibilities of the department. Within the limits of funds available, the department shall:

- providing for non-regulatory hazardous waste source reduction and recycling technical assistance upon request;
- developing and providing information concerning hazardous waste reduction opportunities; and
- administration of hazardous waste reduction matching grants.

Section 3 also establishes a hazardous waste reduction matching grants program (\$10,000 maximum) for the purpose of feasibility analysis and evaluation of ways to implement hazardous waste reduction. An advisory committee is also established.

Section 4

Provides a definition of "hazardous waste reduction."

Section 5

Effective date.

**FISCAL NOTE**

**REQUEST:**

Revision Date: 03/08/89  
 Title: "An Act relating to hazardous waste; and providing for an effective date." Agency Affected: Environmental Conservation  
 BRU: Environmental Quality  
 Sponsor: Brown, Davis, et al. Components: Environmental Quality  
 Requestor: House Finance Committee

**EXPENDITURES/REVENUES: (Thousands of Dollars)**

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PERSONAL SERVICES	0	0	0	0	0	0
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CONTRACTUAL	0	75.0	75.0	75.0	75.0	75.0
SUPPLIES	0	0	0	0	0	0
EQUIPMENT	0	0	0	0	0	0
LAND & STRUCTURES	0	0	0	0	0	0
GRANTS, CLAIMS	0	0	0	0	0	0
MISCELLANEOUS	0	0	0	0	0	0
<b>TOTAL OPERATING</b>	<b>0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>

CAPITAL	0	0	0	0	0	0
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REVENUE	0	0	0	0	0	0
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**FUNDING: (Thousands of Dollars)**

GENERAL FUND	0	75.0	75.0	75.0	75.0	75.0
FEDERAL FUNDS	0	0	0	0	0	0
OTHER	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>	<b>75.0</b>

**POSITIONS:**

FULL-TIME	0	0	0	0	0	0
PART-TIME	0	0	0	0	0	0
TEMPORARY	0	0	0	0	0	0

**ANALYSIS : (Attach a separate page if necessary)**

See attached page.

Prepared by: Rep. Ron Larson, Co-Chair/H. Finance Phone: 465-3727  
Rep. Lyman Hoffman, Co-Chair/H. Finance Phone: 465-4453  
 Division: \_\_\_\_\_ Date: 03/08/89  
 Approved by Commissioner: *Lyman Hoffman* Date: \_\_\_\_\_  
 Agency: \_\_\_\_\_

Distribution (by preparer):  
 Legislative Finance  
 Legislative Sponsor  
 Requestor  
 Office of Management and Budget  
 Impacted Agency(ies)

03/08/89

Revised Fiscal Note - CS HB 106 (Finance)

### FISCAL NOTE ANALYSIS

The proposed legislation directs the DEC to establish a hazardous waste reduction and recycling program to coordinate, promote, and assist efforts to reduce the generation of hazardous waste in Alaska. In Alaska there are more than 300 facilities that have notified EPA as hazardous waste generators and there are several hundred more small businesses that could benefit from these services.

The bill directs the department, subject to available funds, to undertake several activities. These include: providing for technical assistance to businesses upon request; information and referral assistance; organizing workshops and seminars; development of a technical reference center and data base; development of curricula; and administration of a hazardous waste reduction and recycling matching grants program.

The fiscal note includes 75.0 in contractual funds. These funds would be used for non-regulatory, on-site technical assistance to businesses upon request (assumes approximately 8 to 10 on-site waste reduction audits at \$5,000 each plus administrative overhead); contractual services to provide waste reduction technical workshops and seminars; and acquisition of technical reference materials.

No new positions are authorized by the fiscal note.

# STATE OF ALASKA

**DEPT. OF ENVIRONMENTAL CONSERVATION**

STEVE COWPER, GOVERNOR

## POSITION PAPER FOR CSHB 106 (2d Fin)

### Title

An Act relating to hazardous waste; and providing for an effective date.

### Effect of the Bill

The bill would establish a hazardous waste reduction and recycling program within the Department of Environmental Conservation. Within the limits of funds provided by the Legislature, the Department would conduct the following activities under the proposed legislation:

- Coordinate the Department's efforts to reduce the production of hazardous wastes, including air and water emissions, and promote hazardous waste source reduction and recovery of resources from wastes through recycling;
- Provide for source reduction and recycling technical assistance information and consultation to hazardous waste generators at their request;
- Sponsor or co-sponsor technical workshops and seminars on hazardous waste reduction;
- Develop and maintain a hazardous waste reduction reference center, data base, and information referral service;
- Identify and evaluate hazardous waste reduction research needs for Alaskan businesses and industry, local governments, and state agencies;
- Work with institutions of higher learning to develop hazardous waste reduction courses and curricula; and
- Administer a hazardous waste reduction grants program, including the establishment of an advisory committee to assist the Department with the evaluation of grant applications.

### Department Position

Traditionally, federal and state environmental laws have regulated the management and disposal of wastes after they have been produced. While these regulatory programs serve a valuable function to protect public health and the environment, there are limits to the protection that these programs can achieve. Many people now recognize that

further gains in protection can be achieved by reducing the production of hazardous wastes.

Waste reduction is increasingly recognized as an important component in a hazardous waste management plan. Reducing the amount of wastes produced often is a cost-effective waste management technique that a businesses, industries, and government agencies can institute. Once hazardous wastes are produced, the potential for their reuse or recycling should be explored prior to waste treatment and disposal. This is especially true for hazardous wastes, because of the higher risks and liabilities associated with waste handling and disposal. It also is especially true in Alaska, where both new product and hazardous waste management costs are high. Hazardous waste reduction efforts can result in reduced product costs, employee training and protective equipment costs, and regulatory compliance costs.

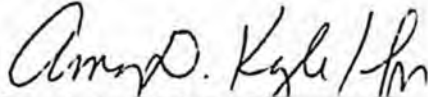
The Department strongly supports waste reduction and recycling as part of Alaska's hazardous waste management efforts. DEC has undertaken several individual hazardous waste reduction and recycling projects in the past when funding from federal grants and legislative appropriations have been provided. This bill establishes a continuing waste reduction and recycling emphasis within the Department.

In order for businesses and institutions to begin waste reduction and recycling efforts, information on hazardous waste reduction and recycling methods must be provided. This is appropriately done through provision of technical assistance and consultation with waste generators and through workshops, seminars, or courses on waste reduction and recycling. This availability of information is particularly important to small businesses that do not have an independent capacity to research appropriate waste reduction and recycling techniques. This bill provides mechanisms to meet those needs. The Department intends to use independent contractors to provide technical assistance and consultation to waste generators and thereby avoid potential conflicts that may occur with the Department's responsibilities to enforce Alaska's pollution laws.

The Department believes the bill should provide the authority to adopt regulations necessary to administer and disburse funds from the hazardous waste reduction grants account.

#### Fiscal Effect

The fiscal note for HB 106 includes \$ 75,000 in contractual funds to provide approximately 8 on-site technical assistance and consultation visits to hazardous waste generators, the sponsorship or co-sponsorship of one or more waste reduction technical workshops or seminars, and the establishment of a hazardous waste reduction reference library.

  
\_\_\_\_\_  
Dennis D. Kelso, Commissioner



Tom Painter  
Division Manager

Conoco Inc.  
3201 C Street  
Suite 200  
Anchorage, AK 99503

February 22, 1989

The Honorable Kay Brown  
P. O. Box V  
Juneau AK 99811

Dear Representative Brown:

I am pleased that you are attempting to implement some of the items that we have discussed in the Pacific Northwest Hazardous Waste Advisory Council with the introduction of HB 106 and HB 107. I would like to have the following statement in support of HB 106 and HB 107 submitted as part of the hearing records for these bills:

I am Tom Painter, Division Manager for Conoco's Anchorage Exploration & Production Division, and a member of the Pacific Northwest Hazardous Waste Advisory Council, appointed by Governor Cowper to represent Alaska along with Representative Kay Brown, Mayor Don Gillman, and Tony Knowles. The Council has members from the four Pacific Northwest states of Alaska, Idaho, Oregon, and Washington, the Province of British Columbia, and the Departments of Defense and Energy. The Council is comprised of a diverse cross-section of public interests including energy, manufacturing, environmental, and municipal, State and Indian tribal government concerns.

The Council is committed to facilitating and supporting greater reliance on waste reduction and waste minimization in the Pacific Northwest. These goals are consistent with the goals of both Conoco and our parent company, Du Pont worldwide. Within Du Pont, a Corporate Waste Minimization Committee has been established to provide leadership and recommend policy and program direction for the company. An annual budget of \$500,000 has been established to provide plant training, support research and development, and carry out a company-wide communication program. Waste minimization offers Du Pont potential savings of \$50 to \$100MM in direct disposal costs, plus several times this amount in conserved resources. We have established a goal within the company of a 35% reduction in wastes generated by yearend 1990.

A company with large resources, such as Du Pont, is able to implement a waste minimization program internally without significant external technical assistance. However, smaller companies do not have these resources internally available, and their ability to devise and implement effective waste minimization programs are limited by the simple lack of technical expertise. It should be noted that the aggregate

volume of wastes generated by small quantity generators, currently exempt from regulation, exceeds the volume generated by larger generators. Thus assistance in aiding small quantity generators to reduce their wastes will be a significant factor in reducing the total waste stream.

HB 106 would both establish legislative intent and provide a method for Alaska's smaller waste generators to obtain technical assistance in devising and implementing waste reduction practices. There are also several key features in this proposed legislation which are consistent with the goals and work of the Advisory Council.

Specifically, these items are:

- Public education. The proposed legislation provides for technical workshops, a referral service, public seminars, and college courses on waste reduction. For the program to be successful, public awareness of the problems and resources available for potential solutions are necessary. Our society must come to recognize that the proper handling and disposition of all our wastes is a growing problem to which we all contribute and must work together to solve.
- Public involvement. The Advisory Council will provide the opportunity for increased public involvement in this area.
- Voluntary cooperation. The concept of individuals or small businesses working hand in hand with a regulatory agency, such as the Department of Environmental Conservation, without threat of enforcement sanctions may be a radical concept for some. However, we believe for widespread utilization and acceptance by the general public to occur, the program must be voluntary. Sheer magnitude of the numbers alone renders DEC incapable of regulating each and every small waste generator in the state. The provisions protecting a volunteering business or individual from the threat of citations is essential to the voluntary provisions of the legislation.
- Financial assistance. By providing limited matching funds, the state and the small generator have both made a commitment to reducing the waste volume. This dual commitment will strengthen the cooperative bond between the state and the applicant.

The Honorable Kay Brown  
February 22, 1989  
Page 3

- Technical assistance. Most small volume generators do not have the technical expertise to implement effective waste reduction programs. Providing this assistance will facilitate a more effective program.

This concludes my statement on HB 106 and HB 107. If any of the hearings are teleconferenced, and I am in Anchorage, I would be willing to present this statement as testimony. Again, Conoco and I personally endorse the innovative concepts embodied in this proposed legislation, and strongly recommend your support in its enactment. If you need any additional information, please give me a call at 564-7601.

Very truly yours,



Tom Painter  
Division Manager

AEH(jah)



## **KENAI PENINSULA BOROUGH**

144 N. BINKLEY • SOLDOTNA, ALASKA 99669  
PHONE (907) 262-4441

**DON GILMAN**  
MAYOR

### **POSITION PAPER HB 106 & 107 HAZARDOUS WASTE REDUCTION**

The Administration of the Kenai Peninsula Borough supports the passage of HB 106 & 107, establishing and funding a hazardous waste reduction grant program.

The implementation of a state policy to address hazardous waste source reduction is critical to the future health and safety of the public and environment of Alaska. The Kenai Peninsula Borough, as well as the entire state, is facing ever increasing occurrences of hazardous waste contamination. A recent inventory done on the Kenai Peninsula revealed over 200 potential sites.

Our hazardous waste management policies can no longer simply deal with disposal and treatment practices, but must begin to focus on reduction at the source to the greatest extent possible, as well as recycling of those wastes.

This legislation begins that process by establishing priorities and creating an Office of Hazardous Waste Reduction and Recycling within the Department of Environmental Conservation to implement those priorities. The technical and financial assistance for private industry and local governments provided by this legislation is essential to the success of the program. Through this assistance, they will see that source reduction of hazardous waste is not only environmentally sound, but economically beneficial as well.

By: Juanita Helms  
Introduced: 02/23/89  
Adopted: 02/23/89

**RESOLUTION NO. 89-023**

**A RESOLUTION RELATING TO HOUSE BILL NO. 106 (RESOURCES)  
IN THE LEGISLATURE OF THE STATE OF ALASKA**

WHEREAS, the Legislature of the State of Alaska, Sixteenth Legislature, First Session, has offered a bill for an Act entitled: "An Act relating to hazardous waste; and providing for an effective date;" and

WHEREAS, there are known or suspected sites within the Fairbanks North Star Borough where hazardous substances have been improperly disposed and more sites are discovered each year; and

WHEREAS, hazardous waste reduction and recycling efforts are increasingly recognized by both business interests and the general public as an economically effective response to the increasing costs and liabilities resulting from hazardous waste generation; and

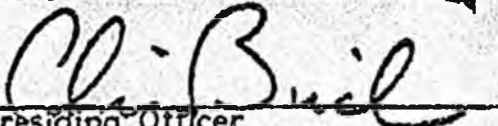
WHEREAS, the people of the Fairbanks North Star Borough are committed to a healthy and non-hazardous environment in which the residents of the Borough may live and work; and

WHEREAS, House Bill No. 106 has been introduced to reduce or eliminate hazardous waste before it is generated.

NOW, THEREFORE, BE IT RESOLVED that the Fairbanks North Star Borough Assembly supports and endorses House Bill No. 106 in the Legislature of the State of Alaska, Sixteenth Legislature, First Session.

BE IT FURTHER RESOLVED that the Fairbanks North Star Borough Assembly urges the Interior Legislative Delegation to actively support the passage of House Bill No. 106 in the Legislature of the State of Alaska, Sixteenth Legislature, First Session.

PASSED AND APPROVED THIS 23RD DAY OF FEBRUARY, 1989.

  
\_\_\_\_\_  
Presiding Officer

ATTEST:

  
\_\_\_\_\_  
Clerk of the Assembly



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# Alaska Health Project

Providing information about hazardous materials on the job and in the community.  
431 West 7th Ave., Suite 101, Anchorage, AK 99501 (907) 276-2864

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Testimony Supporting House Bill 106 And House Bill 107  
Acts Relating To Hazardous Waste  
And A Waste Reduction Matching Grant Program

by  
David Wigglesworth  
Deputy Director  
Alaska Health Project

January 24, 1989

Alaska Health Project is a private non-profit organization providing information and education about hazardous materials on the job and in the community. In 1986, AHP established the Waste Reduction Assistance Program (WRAP). WRAP is a non-regulatory multi-media program providing information, technical assistance, and on-site audits for Alaskan businesses. The Small Business Development Center of Alaska and the University of Alaska, School of Engineering are keyed into selected components of WRAP. Funding for AHP's waste reduction services come from a variety of public and private sources.

AHP strongly supports both House Bill 106, "an act relating to hazardous waste and providing for an effective date," and House Bill 107, "an act making a special appropriation for hazardous waste reduction grant program; and providing for an effective date." We urge the Legislature to act quickly on these bills because of their enormous benefit to Alaskan businesses and the general public.

Waste reduction offers environmental quality with economic benefits. It is the most economically sensible approach to solid and hazardous waste management. By reducing the generation of waste at the source before it becomes a pollutant or a "lost" resource, businesses can use resources more efficiently, decrease regulatory compliance costs, reduce liabilities, and create additional revenues from the recovery of waste materials.

To date, several businesses in Alaska have implemented active waste reduction programs. Two local businesses, One Hour Fireweed and PhotoWright Laboratories, have received Pollution Prevention Awards for their efforts in reducing waste. Many other businesses in Alaska are also beginning to see the value in eliminating waste at the source and recycling waste that is created.

Moreover, waste reduction makes sense for all Alaskans by helping to:

- \* Protect public health through the reduction of environmental pollution.
- \* Reduce state cleanup costs associated with illegal waste disposal and abandoned sites.
- \* Increase the capacity (life span) of state solid waste management facilities.
- \* Promote economic development and the well being of all Alaskans by improving the operating efficiency of business activities.

A significant barrier to active business involvement in waste reduction has been the lack of technical assistance and other positive incentives to help business owners identify waste reduction opportunities. Alaska needs the institutional support provided by both House Bill 106 and 107 to help overcome these technical and behavioral barriers to waste reduction. For instance,

- \* The policy statement in HB 106 prioritizing waste management practices provides the framework and the leadership needed to further enhance waste reduction opportunities in Alaska.
- \* The proposed creation of the Office of Hazardous Waste and Recycling institutionalizes waste reduction within the State's environmental management programs and commits the state to an active program.
- \* The provisions for education and technical assistance offer the positive, non-regulatory incentives that businesses have requested and need to properly manage their industrial wastes.
- \* The Matching Grant Program offers additional incentive for business to identify waste reduction opportunities. At the same time the structure of the matching grant program is fiscally responsible--ensuring that funding goes to only those businesses, or other entities truly interested in developing a waste reduction program and willing to utilize some of their own capital to do so.
- \* The funding support for the Matching Grant Program identified in HB 107 allows components of Alaska's waste reduction program to become reality today--not in the future.

Alaska Health Project congratulates the Legislature, in particular, bill sponsor Representative Kay Brown and bill cosponsors Representatives M. Davis, Ellis, Goll, Koponen, Menard, Navarre, and Ulmer for their forward thinking. Both bills should receive broad support from all Alaskans.

Given our current economy, the Legislature may find it difficult to support appropriation of dollars from the General Fund to create a new program. AHP urges the Legislature to consider this legislation not as an expenditure, but as a cost savings investment for the future. The state is already spending millions of public dollars to cleanup abandoned waste sites across the state. An active waste reduction program will help reduce future state expenses in this area and help reduce the size, scope and costs for new waste management facilities. Moreover, the competitiveness of Alaskan industries will be enhanced as businesses improve their operating efficiency through the implementation of waste reduction programs.

As stated in a recent article in Waste Minimization & Recycling Report, a national waste reduction newsletter produced by Government Institutes, Inc.: "it has been demonstrated numerous times that waste minimization can reduce economic expenditures, that there can be significant economic leverage factors in waste minimization. The Ventura County (California) experience shows a whopping leverage factor of over 50--i.e., more than fifty dollars can be saved for each dollar invested in waste minimization." (September 1988, page 11).

The bottom line is that waste reduction works and makes sense for Alaskan business and for the state as a whole. Further, there is demonstrated need for sustained programs to assist industry in developing waste reduction programs, and to build into our state government the capability to maintain a waste reduction program over time.

AHP looks forward to providing further comment on this legislation during committee hearings. We also are available to provide any additional technical assistance that the Legislature might need in the area of waste reduction. Enclosed is some additional information about AHP's Waste Reduction Assistance Program (WRAP). Please keep us informed of the progress of this legislation. Thank you.

cc. Governor Steve Cowper  
Representatives:  
Brown  
M. Davis  
Ellis  
Goll  
Koponen  
Menard  
Navarre  
Ulmer

# Hazardous & Solid WASTE MINIMIZATION & RECYCLING REPORT

Code 7025

December 1988

Issue 25

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## Federal Report

### Federal Waste Reduction Policy, 1989 and Beyond: A Look Ahead

by David R. Jones

On January 20, 1989, George Bush will become the 41st president of the United States. In the years to come, will observers look back upon this date as the beginning of a new era in hazardous waste reduction policy? Or will the man who campaigned to become the "environmental president" be remembered for continuing the weak, fragmented federal policies of recent years?

President-elect Bush takes office with a campaign commitment to reduce pollution. Indeed, his statements on the environment make specific mention of the need for waste minimization and recycling (see box on next page). The question is: Will the Bush administration make waste reduction a cornerstone, or even a major component, of its environmental policy plans?

#### Legislation in Congress

Congress begins the 1989 session with its own

agenda for hazardous waste reduction and recycling. In the House, the Waste Reduction Act (H.R. 2800 in the previous congressional session) will be reintroduced by Rep. Howard Wolpe (D-Mich.). H.R. 2800 breezed through the House last year, boasting 230 co-sponsors, despite opposition from the Chemical Manufacturers Association (CMA). Though the Wolpe bill must now wind its way through the legislative process all over again, swift approval appears likely.

A different story may be taking shape in the Senate. Sen. Frank Lautenberg (D-N.J.) returns after a tough reelection campaign to sponsor the Senate version of the Hazardous Waste Reduction Act. Last year, Lautenberg's bill had 23 co-sponsors, including seven Republicans, yet died in committee.

In 1989, the Senate probably will have a more liberal tilt; though Senate Democrats increased their numbers by just one, two moderate-to-liberal

(continued on next page)



## Case Study

### The Alaska Health Project: Selling Small Businesses on Hazardous Waste Reduction

by David R. Jones

At times, both professionals involved in waste minimization and those reporting on the subject take on the trappings of religious zealots in their advocacy. Reducing hazardous wastes in business and government operations is often so practical, and the economic and environmental benefits so obvious, that those of us in the field occasionally sound like television preachers proclaiming the dawn of a new age.

In short, we sometimes speak of hazardous waste reduction more as a moral imperative and less as a business, engineering and management strategy. And while reducing wastes is undoubtedly the key, long-term solution to toxic pollution, few business managers are willing to commit substantial time and resources to waste reduction simply because it is the "right" thing to do.

#### Preaching the Bottom Line

The Alaska Health Project (AHP) was established in 1980 with the purpose of providing information and education about hazardous materials in the work place and in the community. AHP conducts seminars on occupational safety and health for business operators and employees; develops training manuals; and provides information to individuals, businesses, health professionals, and state and local governments. Information is offered through publications, a Small Business Hazardous Materials Resource Library, research assistance and referral services to additional resources in the state and the nation.

For AHP, promoting waste reduction in the private sector means speaking the language of the business professional, not that of the environmentalist or the scientist. Consider the introduction to its promotional brochure:

"Effective material management is key to any successful business. And when it comes to hazardous materials and waste reduction, sound management is crucial to protecting your business investment."

AHP goes on to list the benefits of proper hazardous materials and waste reduction management, focusing on economic opportunities:

- "Reduce injuries and costly spills"
- "Reduce liabilities, such as future clean-ups, regulatory and noncompliance problems"
- "Help maintain a safe and healthy work place and community"
- "Improve your public image with your customers and your community," and

- "Reduce hazardous waste production and thereby reduce or eliminate regulatory costs, disposal costs and insurance costs."

Unlike many technical assistance programs (TAPs) for reducing hazardous wastes, AHP is not state-operated; rather, it is a nonprofit organization that taps into the resources of state and local government, academia, foundations and the business community. What further sets AHP from TAPs in other states is its exclusive focus on the needs of small business.

#### Program Components

AHP launched its waste reduction efforts in 1986 with the development of the Waste Reduction Assistance Program (WRAP) and the Small Business Hazardous Materials Management Project (HMMP). Both programs target small business.

The Waste Reduction Assistance Program focuses on providing on-site consultation for small business. Like Minnesota's Technical Assistance Program, WRAP arranges internships for engineering graduate students. These students, recruited from the University of Alaska School of Engineering, assist AHP staff in conducting waste reduction audits at work sites. Audit reports concentrate on the elimination of waste through source reduction and recycling wherever possible.

After on-site audits are conducted, individual reports are written describing the processes used and waste produced by the particular business. Each report recommends methods for reducing these wastes. The identity of the business remains confidential. While geared to specific sites, the audits are intended to be applicable to similar businesses in the state. Audit reports are available to interested parties upon request.

In addition, WRAP has produced a set of on-site consultation audits for dry cleaners, photofinishing shops, auto body and repair shops, automotive repair shops, printing shops, aviation facilities and electroplaters. Audit reports also are being prepared for dairies, fur tanning shops and bottle making/chemical manufacturing sites. Each audit includes practical, low-cost techniques that businesses can use in current operations, or in planning future expansion.

The success of WRAP was recognized last year when Anchorage Mayor Tony Knowles bestowed the 1987 Mayor's Pollution Prevention Award to AHP for the program. In a letter to AHP, Mayor Knowles noted that WRAP "is a truly outstanding example of



## Case Study(continued)

providing needed on-site advice and help to businesses on pollution prevention" that "provides an example for others to follow." WRAP "not only has raised an awareness of the environmental and economic benefits" of waste reduction, write the mayor, but also "has provided practical technical assistance to many businesses that would otherwise not have the money or expertise for such programs."

WRAP is funded by a RCRA 8001 grant from the U.S. Environmental Protection Agency, Region 10.

The Hazardous Materials Management Project focuses on providing technical assistance and education to small firms. This includes developing waste reduction fact sheets; producing other educational materials; conducting seminars; and responding to information requests.

An example of HMMP's program materials is the manual *Profiting from Waste Reduction in Your Small Business*. In the introduction, author David Wigglesworth observes that it is designed to help small business managers and their employees work together to identify and implement methods" of waste reduction, as well as "help managers and employees see their industrial wastes as financial resources rather than as unavoidable byproducts of their business process."

*Profiting from Waste Reduction*—which could be used by small firms in Alaska and the lower 48 alike—is a highly readable, easy-to-use guide that takes the business owner step-by-step through the process of creating an in-house waste reduction program. After reviewing the financial benefits of such a program, the manual outlines how to:

1. Organize a business to promote waste reduction by forming an audit team.
2. Review business plans and procedures for waste reduction potential. This includes assessing a firm's market plan, financial plan and record-keeping plan and operations plan (which includes process, receiving, delivery and inventory procedures and personnel policies).
3. Carry out a waste reduction audit in four steps: conduct a preliminary walkthrough; conduct a facility walkthrough; identify waste reduction opportunities; and document findings.
4. Evaluate a waste reduction program and implement options.

Also included is a chart that highlights nine common business processes (such as dry cleaning, equipment maintenance and purchasing); the types of businesses that use particular processes; the types of wastes generated; and selected low-cost and higher-cost options for waste reduction. The manual concludes with an extensive listing of waste

reduction resources for small businesses.

A major feature of *Profiting from Waste Reduction* is its ready-to-use business forms, complete with instructions. For example, the chapter on conducting a waste reduction audit includes forms for process identification, materials identification, waste identification and cost identification. It even has a walk-through schematic drawing for diagramming a facility and highlighting waste-generating processes.

HMMP works closely with the Small Business Development Center of Alaska, which helps AHP reach small business operators and serves as a distribution center for program materials. The Charles Stewart Mott Foundation in Flint, Mich. funds HMMP.

### Signposts to Success

Though: AHP's waste reduction efforts were initiated just two years ago, its two small business programs have provided program materials to numerous businesses and government agencies, both in Alaska and in other states (AHP also conducts regional waste-reduction activities as part of EPA Region 10's waste management initiatives in the Pacific Northwest). It also has offered free, confidential, on-site assistance to firms involved in printing, dry-cleaning, auto body and automobile repair and aircraft maintenance.

Will AHP succeed in helping Alaskan small businesses substantially reduce their waste generation? This question will be answered in the next few years, as the organization expands its outreach and technical assistance efforts. Nevertheless, several factors indicate that AHP may evolve into a model program for hazardous waste reduction.

- AHP combines "generic" technical assistance with information geared to specific types of businesses. AHP's manual *Profiting from Waste Reduction* is a general guide to establishing an industrial waste reduction program that all types of firms can use. This generic manual is complemented by on-site consultation to individual businesses and detailed audits and fact sheets applicable to particular kinds of work sites—dry cleaners, aviation facilities and others.

- AHP taps a wide array of public and private sector resources to bolster its efforts. The Waste Reduction Assistance Program follows the lead of Minnesota's Technical Assistance Program in placing engineering graduate students in individual firms for on-site consultation. To ensure its outreach efforts succeed, AHP works closely with the Small Business Development Center of Alaska, which helps AHP reach small businesses and distributes program materials. In addition, AHP draws upon the

(continued on next page)



## Case Study (continued)

advice and expertise of a statewide, 40-member Professional Resource Committee and a Small Business Hazardous Materials Advisory Committee.

- AHP targets Alaskan firms—that is, small businesses—with the greatest need for waste reduction technical assistance. Alaska's economy is dominated by large oil companies. But, as the congressional Office of Technology Assessment has pointed out, "The size of a firm—in terms of annual sales or number of employees—is not necessarily indicative of the amount and/or toxicity of wastes being produced....In certain states small firms may be more prone than large ones to poor waste practices, i.e., they may create problems out of proportion to their hazardous waste generation rates."

- AHP taps nongovernmental sources of funding. While most technical assistance programs for industrial waste reduction rely on state or federal funds, HMMP is funded by the Flint, Michigan-based Charles Stewart Mott Foundation. This

foundation has long supported innovative programs around the country that take new approaches to solving social problems. In addition, publication of AHP's manual was partially funded by the municipality of Anchorage, the Anchorage Water and Wastewater Utility, the state Department of Environmental Conservation and the U.S. Environmental Protection Agency.

### Selling to the Sellers

It remains to be seen whether AHP can have a long-term impact on waste reduction in Alaska. Yet, in just two years, the organization has made its mark. With the motto "Waste Reduction is Good Business Sen\$e [sic], AHP has sold many Alaskan small businesses on the *economics* of waste reduction, whose environmental benefits become readily apparent upon implementation.

Contact David Wigglesworth, Alaskan Health Project, 431 West 7th Ave., Suite 101, Anchorage, AK 99501; (907) 276-2864. #DRJ

## Recycling News

### Steel Can Recycling Seen in Future by Scrap Metal Processors—But Not Now

Scrap metal processors don't believe a ready market exists for steel can scrap, according to a survey of members by the Institute of Scrap Recycling Industries (ISRI). The survey showed, however, that many processors expect such recycling to be a viable option for their business in the future—not just yet.

Robert Garino, director of commodities for ISRI, said only about 100 processors responded to the survey. "We assume the lack of response reflects a low present interest in the subject," Garino said, "but we believe the survey is a valid insight." Most respondents—more than 95 percent—now process aluminum can scrap, Garino said, and 30 percent also process bi-metallic cans.

Asked whether processors have recently tried to sell steel can scrap to steel mills, 83 percent of those responding said "no." Of the 17 percent answering yes, only a couple noted positive mill interest. Almost 70 percent of the companies surveyed said no ready market exists for the steel in can scrap.

When asked about any processing problems, most respondents answered "no" and also saw no transportation or environmental problems. Some, however, expressed concern about the lack of specialized processing equipment, anticipated high freight rates, and health problems associated with residual food in cans.

Asked whether steel can recycling was a "viable option for your business in the future," about 60 percent of the respondents said "yes." Thirty-five percent said "no," however, and five percent answered "maybe." For more information, contact Dean Reed, ISRI, 1627 K St., NW, Washington, D.C. 20006; (202) 466-4050. #

### Amoco, Big Mac Attack Polystyrene Waste

A joint project of Amoco Foam Products, McDonald's Corporation, and the city and state of New York is investigating the feasibility of recycling polystyrene foam containers into home construction materials. The impetus of the project was New York Governor Cuomo's request to McDonald's to use substitute biodegradable materials for plastic foam packaging in restaurants in the state, as well as New York City Mayor Koch's stated opposition to forms of plastic packaging.

A pilot project will be conducted at 20 McDonald's outlets in New York City, with a companion recycling project for corrugated paperboard boxes also being tested in the city. For more information, contact the Council on Plastics and Packaging in the Environment, 1275 K St., N.W., Washington, D.C. 20005; (202) 789-1310. # AHP



PROGRAM SUMMARY OF ALASKA HEALTH PROJECT'S  
WASTE REDUCTION ASSISTANCE PROGRAM (WRAP)

January 20, 1989

Alaska Health Project's Waste Reduction Assistance Program (WRAP) was established in 1986. WRAP is a non-regulatory multi-media program providing information, technical assistance, and on-site audits to Alaskan businesses, small business in particular. WRAP information and technical assistance has also been provided to businesses and other waste reduction programs through out the United States. WRAP activities focus on source reduction and recycling. Specific program activities include:

- \* Information clearinghouse/research
- \* Technical assistance ( including an 800 number)
- \* Seminars
- \* Education outreach ( news articles, public speaking)
- \* On-site waste reduction audits
- \* Waste reduction publications ( fact sheets, manuals, audits)
- \* Waste reduction resource library
- \* Graduate engineering students intern program
- \* Referrals

To date, WRAP staff have responded to several hundred technical assistance inquiries and have completed 14 detailed waste reduction audit reports for selected Alaskan businesses. A total of 8 graduate interns have assisted WRAP staff conduct the on-site audits and prepare audit reports. In addition, WRAP staff have completed over two dozen informational articles for Alaskan newspapers, presented 10 waste reduction seminars, produced 6 technical waste reduction information fact sheets for selected businesses, and published a 46-page manual entitled "Profiting From waste Reduction In Your Small Business."

The Small Business Development Center of Alaska, the University of Alaska, and the State Department of Environmental Conservation are keyed into selected components of WRAP. Funding for WRAP comes from a variety of public and private sources including the Charles Stewart Mott Foundation ,the Alaska Department of Environmental Conservation, and US EPA Region 10.

AHP is a private non-profit organization established in 1980. The WRAP program contact is David Wigglesworth, 907-276-2364.

LIST OF CURRENT WASTE REDUCTION PUBLICATIONS  
PRODUCED BY ALASKA HEALTH PROJECT

January 1989

Detailed Audit Reports

- \* Auto Body Repair and Paint Shop
- \* Automotive Repair Shop
- \* Aviation
- \* Chemical Manufacturing (and plastic bottle production)
- \* Dairy Foods
- \* Dry Cleaners
- \* Electroplating
- \* Fur Tanning
- \* High School
- \* Laboratory
- \* Newspaper Manufacturing
- \* Photofinishing
- \* Print Shop
- \* Publishing House

Waste Reduction Fact Sheets

- \* General Industry
- \* Dry Cleaners
- \* Local Government
- \* Newspaper Manufacturing
- \* Photofinishers
- \* Print Shop
- \* Vehicle Repair

Other Publications

- \* News articles
- \* "Profiting From Waste Reduction In Your Small Business", 46 pages. Designed to help small business identify and implement and industrial waste reduction program.

OTHER SELECTED WASTE REDUCTION ACTIVITIES  
PERFORMED BY ALASKA HEALTH PROJECT

January 1989

- \* Member, National Roundtable for State Waste Reduction Programs.
- \* Member, Technical Advisory Committee providing review of the "EPA Manual for Waste Minimization Opportunity Assessments."
- \* Manuscript contributions to "Hazardous Waste Minimization" to be published by McGraw-Hill Inc.
- \* Past member, Pacific Northwest Regional Waste Management Steering Committee.
- \* Participant, survey evaluating waste reduction audit protocols conducted by CHEMCYCLE for the State of New Jersey.
- \* Recipient, Mayors Pollution Prevention Award, 1987, Anchorage, Alaska.



Tom Fink,  
Mayor

# Municipality of Anchorage

Municipal Health & Human Services Commission

825 "L" Street

P.O. Box 196650 • Anchorage, Alaska 99519-6650



Telephone:  
(907) 343-4674

February 17, 1989

Representative Kay Brown  
P.O. Box V  
Juneau, Alaska 99811

Subject: HB 106 & 107

Dear Representative Brown,

The Municipal Health and Human Services Commission strongly supports both House Bill 106, "an act relating to hazardous waste," and House Bill 107, "an act making a special appropriation for hazardous waste reduction grant program."

Tons of hazardous materials are known to be stored, used, or transported in Anchorage everyday. The continued need for chemicals will mean that some time a major hazardous materials emergency will happen, potentially involving human casualties, mass evacuations, and environmental and property damage.

The Commission believes that the best way to reduce the dangers associated with hazardous waste is to reduce the amount of hazardous waste used. This philosophy is reflected in the Anchorage Health and Human Services Plan which specifically recommends this strategy.

It is estimated that over 1,500 businesses in Anchorage could potentially take advantage of the proposed hazardous waste reduction program. Although the initial program is modest it could reap large financial and environmental quality benefits in the future.

Please let us know how we can be of further assistance in promoting the passage of this important piece of legislation.

Sincerely,

*Linda Langston*

Linda Langston, Chair,  
Municipal Health & Human Services Commission

cc: Mayor Tom Fink

Bert Hall, Director, Department of Health & Human Services  
Bill Faulkner, Chairman, Municipal Assembly

Governor Steve Cowper

Representatives: Larson, Hoffman, Goll, Gruenberg, Davis,  
Menard, Navarre, Kopenen, Ellis, Ulmer

# ALASKA STATE AFL-CIO

2501 Commercial Dr.  
Anchorage, Alaska 99501  
(907) 258-6284



819 1st Ave.  
Fairbanks, Alaska 99701  
(907) 456-2030

MANO FREY  
Executive President

February 24, 1989

Representative Kay Brown  
Box V  
Juneau, Alaska 99811

Dear Representative Brown,

On behalf of the Alaska State AFL-CIO, I would like to offer this letter in support of CS HB 106 (Resources) and HB 107, legislation to establish a hazardous waste reduction program in Alaska.

There is one significant benefit of the proposed legislation that we are very interested in, and we feel should be emphasized. Non-regulatory technical assistance to small businesses that results in more efficient use of toxic or hazardous materials can also help reduce occupational health risks. Many waste reduction techniques involve relatively simple housekeeping improvements within a production system (e.g. taking care not to combine waste streams in a way that precludes recycling or reuse of hazardous materials). The technical assistance and matching grants program that would be established by CS HB 106 (Resources)/HB 107 would help businesses identify these opportunities and generally increase awareness about the appropriate management of hazardous materials. Waste reduction efforts will not only result in lower costs, but also increased awareness about hazardous materials management and a general improvement in the cleanliness and safety of operations for employees.

In conclusion, CS HB 106 (Resources)/HB 107 would not only assist businesses generating hazardous wastes to lower costs and avoid expensive and unnecessary contamination clean-ups in the future, the legislation would also help reduce occupational health risks. The Alaska State AFL-CIO supports this preventative approach to hazardous waste management and urges passage of this legislation.

Sincerely,

A handwritten signature in cursive script, appearing to read "Pat Smutz", with a long horizontal flourish extending to the right.

Pat Smutz  
Business Representative/  
COPE Director

cc: Mano Frey

# America North Inc.

Environmental Consulting/Natural Resources Management

February 3, 1989

Representative Kay Brown  
P.O. Box V  
State Capitol  
Juneau, Alaska 99811

Dear Representative Brown:

I would like to express my strong support for HB 106/107. This legislation would provide both an important message and a valuable service to waste generators in Alaska.

As co-owner of an environmental consulting firm, I can assure you that several large industrial corporations in Alaska have taken serious steps to reduce generation of hazardous waste. Their interest in this is great, because through minimization they reduce their liability from potential mis-management, and reduce their costs for out-of-state waste disposal. After Hawaii, Alaska has the greatest distance to cover of any state to reach an EPA-permitted disposal site.

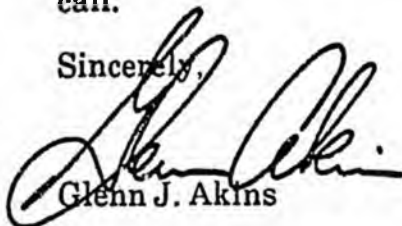
Industry's waste minimization efforts are aided by environmental engineers and industrial hygienists on-staff, and also by consultants such as ourselves. For example, we are in the second year of waste management training for one company, and have trained over 300 of their staff.

Most small businesses do not have these resources. Your legislation, if enacted, will greatly improve the transfer of information and technology to small businesses. The growth of product substitution, waste minimization, and recycling hardware and services over the past two years has been truly amazing. There is a great opportunity to get this information into the hands of those who can use it, along with follow-up technical assistance.

I would like to repeat my recommendation that waste minimization successes be recognized in an annual award. The Anchorage award program has secured valuable publicity for the feasibility and cost effectiveness of waste minimization efforts by small businesses.

Please let me know if I can help in any other way to secure this legislation. If any questions come up on programs underway within large businesses, do not hesitate to call.

Sincerely,



Glenn J. Akins

GJA:wr



# Alaska Center for the Environment

700 H Street, Suite 4 • Anchorage, Alaska 99501 • (907) 274-3621

February 27, 1989

Representative Kay Brown  
Alaska Legislature  
P. O. Box V  
Juneau, Alaska 99811

Dear Representative Brown:

Alaska Center for the Environment has been involved in hazardous waste matters in Alaska for the past eight years. Our goals include working for a strong state regulatory program. We support CS HB 106 and HB 107, which would add an office of hazardous waste reduction and recycling to the Department of Environmental Conservation.

We believe that waste reduction needs to be a priority throughout all the DEC programs, including permits and cleanups, in addition to ongoing waste management. It is good that your bill spells out waste management practice priorities and further enables DEC to implement waste reduction policies. Currently, DEC is unable to do little beyond talk about waste reduction.

We also believe that the best regulatory program combines technical assistance and enforcement. However, we feel it is important that personnel who conduct enforcement inspections are not the same as those who technically assist. The Committee Substitute addresses this issue.

We also are concerned that hazardous waste enforcement continues to be lax in Alaska. DEC and EPA estimated compliance with the federal hazardous waste law (RCRA) to be only 8% (1988 draft State EPA Agreement). While we support the establishment of waste reduction programs to address the long-term solutions, they must be in conjunction with adequate enforcement. Enforcement and penalties serve as incentive to reduce hazardous waste generation, without which continuing illegal disposal will leave little motivation for obtaining technical assistance. For this reason, we also urge you to carefully assess the proposed DEC budget to ensure that enforcement has been given enough funding, especially relative to existing levels of technical assistance.

Sincerely,

Kristine Benson  
Hazardous Waste Specialist



# MINING AND PETROLEUM TRAINING SERVICE

2 March 1989

Mr. Eric F. Meyers  
Legislative Assistant  
Office of Representative Kay Brown

Dear Mr. Meyers:

Thank you for the information you provided on HB106 regarding reduction of hazardous waste in Alaska. The OTA brief was a concise summary of our own position on the matter.

MAPTS is a division of the University of Alaska, Anchorage charged with, among other duties, delivery of industrial health & safety training in the mandated areas. We will train about 3500 individuals in FY89 of which about 28% are directly in the field of hazardous waste abatement. MAPTS is in fact one of the largest delivery systems for this training in the country.

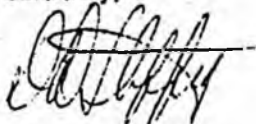
The key element of the bill is the "non-regulatory" function. Current enforcement attitudes have created a real paranoia in the state with respect to hazardous materials and waste. This mind set is not mitigated in the least by some of the rhetoric coming from the Center for The Environment and the Trustees for Alaska. In general, press and public statements have been overblown and decidedly oriented toward punishment rather than a sincere desire to alleviate the problem.

We support a non-threatening, cost-effective program for waste reduction if it is properly organized and conducted on the basis of fact and scientific principles rather than personal opinion. This will be a very long term undertaking, and should include a package of educationally sound material for distribution through the secondary school system.

The problems with hazardous materials and waste are the result of long standing American attitudes. We want to flush everything out of sight and out of mind, preferably into someone else's back yard. Education is the only way to change these attitudes. Our present regulatory environment encourages clandestine dumping and disposal. There is no desire to cooperate with a system which is increasingly viewed as punitive and unreasonable. I believe HB 106 is a step in the right direction. It is the only way that Alaska can move from treating the symptoms instead of the cause of the disease.

I wish you success with HB 106. If we may be of further assistance, please contact us at your convenience.

Yours truly,



Dennis D. Steffy, Director  
Mining and Petroleum Training Service  
University of Alaska Anchorage

Reply to:  
155 Smith Way, Suite 104  
Soldotna, Alaska 99669  
907 262-2788



a division of  
CCREE  
of the  
University of Alaska



# Alaska Environmental Lobby, Inc.

P.O. Box 22151 Juneau, Alaska 99802

907-586-2345

## AEL ISSUE PAPER - HB 106 and 107 - REDUCTION OF HAZARDOUS WASTE AT ITS SOURCE

The Alaska Environmental Lobby wholeheartedly supports House Bills 106 and 107. Reducing hazardous waste at its source - a **proactive**, prevention-oriented approach - is a pioneering shift from the traditional, **reactive** waste treatment methods. Less hazardous substances in our society mean less potential for environmental damage, and a decreased risk of spills and human health hazards. Economically speaking, reducing our waste output means industry, the public, and government save money by avoiding costs of clean-ups, treatment, and disposal of wastes. We all benefit from hazardous waste reduction.

We are the creators of our children's world. It is our duty to those who will follow us to develop industries and economies that are sustainable, safe, and far-sighted. Hazardous wastes, too, act in the long-term. They can continue to create problems years after they are generated, and are non-specific in who they effect.

Therefore, we must be united in our attack on hazardous waste. HBs 106 and 107 promote cooperation between regulatory agencies, the public, big industry and small business. The huge amount of money, worry and time saved by a small investment now promises to outweigh the costs of handling problems later. We applaud the plan in HB 106 to provide financial and technological assistance to businesses. Scientific and technological information is complicated and is continually evolving; citizens need help in understanding it.

Alaska's current fiscal situation dictates that we must put our limited funds where they will do the most good. Developing a hazardous waste reduction and recycling office represents a wise investment of state money for long-term cost savings, and at the same time promotes public health, industry efficiency, a healthy economy, and a clean environment. We encourage the committee to support HBs 106 and 107.

Karen Wood  
March 1, 1989

ALASKA CENTER FOR THE ENVIRONMENT • ALASKA CHAPTER, SIERRA CLUB • JUNEAU GROUP, SIERRA CLUB • SITKA GROUP, SIERRA CLUB  
KNIK GROUP, SIERRA CLUB • DENALI GROUP, SIERRA CLUB • ANCHORAGE AUDUBON SOCIETY • ARCTIC AUDUBON SOCIETY  
DENALI CITIZENS' COUNCIL • ALASKA FRIENDS OF THE EARTH • JUNEAU AUDUBON SOCIETY • KACHEMAK BAY CONSERVATION SOCIETY  
KENAI PENINSULA AUDUBON SOCIETY • KODIAK AUDUBON SOCIETY • LYNN CANAL CONSERVATION • ALASKA WILDLIFE ALLIANCE  
SITKA CONSERVATION SOCIETY • NORTHERN ALASKA ENVIRONMENTAL CENTER • SOUTHEAST ALASKA CONSERVATION COUNCIL  
KNIK KANOERS AND KAYAKERS

5/3



## INUIT CIRCUMPOLAR CONFERENCE

March 20, 1989

Representative Kay Brown  
Alaska State Legislature  
P.O. Box V  
Juneau, Alaska 99811

Representative Brown:

The Inuit Circumpolar Conference (ICC) is an international Native organization representing approximately 105,000 Inuit from Alaska, Canada and Greenland. Our objectives include promotion and protection of Inuit rights and interests at the national and international level. We are also extremely concerned about protection of our arctic homeland.

We want to express our strong support for HB 106 and 107 - Hazardous Waste Reduction Legislation. The ICC has long been concerned about the environmental effects of hazardous waste in the arctic and in particular, the hazardous waste abandoned and dumped by the military.

In 1986 the ICC General Assembly delegates adopted Resolution 86-07 (enclosed) addressing the "Environmental Causes of Health Problems in the Arctic Regions". This resolution, among others, reflects the widespread concern about hazardous wastes in the arctic. Unfortunately, we have not ever had sufficient funds to completely follow-up on Resolution 86-07. However, the introduction of HB 106 is an important step to responding to the problem.

HB 106, if approved and implemented quickly, will not only provide continued environmental protection but will also protect the public health of both Inuit and non-Inuit throughout the State.

Thank you for taking the initiative to respond to this important matter. If you have any questions, comments or concerns about this letter of support, please contact us.

Sincerely,

*Dalee Sambo*

Dalee Sambo  
Special Assistant

HEAD OFFICE:

P.O. BOX 280, KUUJJUAQ, QUEBEC, CANADA JOM 1C0  
TELEPHONE: 819-964-2431

REGIONAL OFFICES:

ALASKA: 429 'D' Street, Suite 202, Anchorage, Alaska 99501, tel: 907-258-6917  
GREENLAND: P.O. Box 204, DK 3900, Nuuk, Greenland, tel: 23632  
CANADA: 176 Gloucester St., Ottawa, Ontario, K2P 0A6, tel: 613-563-2642

INUIT CIRCUMPOLAR CONFERENCE

Resolution 86-07

Environmental Causes of Health Problems in the Arctic Regions

WHEREAS, old military installations, White Alice sites and DEW Line sites cause environmental and health problems in the Arctic Regions; and

WHEREAS, contamination is causing cancer and environmental problems for the Inuit of the circumpolar regions;

NOW THEREFORE BE IT RESOLVED THAT the Inuit Circumpolar Conference demands that the governments of the United States, Canada and Denmark initiate clean-up of all the old military installations, army sites, White Alice sites, and DEW Line sites as soon as possible; and

BE IT FURTHER RESOLVED THAT the Inuit Circumpolar Conference do an extensive survey on the effects of military installations on the health and well-being of the Inuit in the circumpolar regions.

INTRODUCED THIS 3rd DAY OF AUGUST 1986  
ADOPTED THIS 3rd DAY OF AUGUST 1986.

James F. Stott  
ICC Executive Council Member

August 27, 1986  
Date

INUIT CIRCUMPOLAR CONFERENCE

RESOLUTION ICC 77-11

AS AMENDED

PEACEFUL AND SAFE USES OF THE ARCTIC CIRCUMPOLAR ZONE.

Recognizing that it is in the interest of all circumpolar people that the Arctic shall forever to be used exclusively for peaceful and environmentally safe purposes; and

Acknowledging the emphatic contributions to scientific knowledge resulting from a cooperative spirit in scientific investigations of the Arctic;

NOW, THEREFORE, BE IT RESOLVED:

- (a) that the Arctic shall be used for peaceful and environmentally safe purposes only;
- (b) that there shall be prohibited any measure of a military nature such as the establishment of military bases and fortifications, the carrying out of military maneuvers, and the testing of any type of weapon, and/or the disposition of any type of chemical, biological or nuclear waste, or other waste. Further, present waste be removed from the Arctic;
- (c) that a moratorium be called on implacement of nuclear weapons;
- (d) that all steps be taken to promote the objectives in the above mentioned.

INTRODUCED THIS 17th DAY OF JUNE, 1977.

ADOPTED THIS 17th DAY OF JUNE, 1977.

Alaska Water Resources Board  
Resolution No. 89-15

Hazardous Waste Reduction

WHEREAS: Many types of hazardous wastes are currently being used in Alaska, with more being introduced each year through the regular market process, and

WHEREAS: Approved commercial off-site facilities to treat, store, and dispose of hazardous waste are presently non-existent; and

WHEREAS: The cost of establishing and maintaining approved hazardous waste treatment, storage, and disposal facilities is great; and

WHEREAS: Improper disposal of hazardous wastes is not only illegal but also has become a major source of ground water pollution, and

WHEREAS: A program of reduction and recycling the amount of hazardous wastes can reduce the amount of wastes requiring disposal;

NOW THEREFORE BE IT RESOLVED: The Alaska Water Resources Board agrees there is need for an active program of hazardous waste reduction; and

BE IT FURTHER RESOLVED: The Board supports the concept of the technical assistance and matching grant program as expressed in HB 106 and HB 107.

Adopted this 9th day of March, 1989  
Alaska Water Resources Board



Peg Tileston, Chairwoman  
Alaska Water Resources Board



## Small Business Development Center of Alaska

TEXT OF TESTIMONY - Prepared by the University of Alaska Small Business Development Center

SBDC TELE-CONFERENCE PRESENTATION TO SENATE LABOR AND COMMERCE COMMITTEE, 3:30 P.M., April 4, 1989..

I am Ben Milam, speaking for the State Office of the Small Business Development Center, Janet Nye Director. Because we work with several thousand small businesses each year, we are involved in any issue concerning small business.

We strongly support HB 106 and 107 as a means to educate small businesses on the problems associated with hazardous waste generation. Past experience indicates that most small business people think hazardous waste is some form of dangerous chemical requiring white suits and special equipment to handle. Very few of them give any consideration to this subject prior to entering into a business venture. In any work as a consultant with firms doing business with government agencies, it is even more critical that there be some form of organized effort to educate small business people concerning the overall costs of hazardous waste generation. We believe these bills will provide the impetus needed to start this education process.

Although it is not addressed in this bill, we want to make it clear that we do not support any legislation to create new regulations on small business. We only support the creation of the education process which these bills will accomplish.

We have one small reservation and would request an amendment to add the University of Alaska Small Business Development Center to the Advisory Committee as an advocate for small business concerns. The SBDC should be added as a sixth member or in lieu of the public member.



# OTA REPORT BRIEF

September 1986

## Serious Reduction of Hazardous Waste

Waste reduction is an economically sensible response to what many people see as a hazardous waste crisis. Several thousand pounds of hazardous waste are generated annually for every person in the Nation. Many thousands of people have lost their drinking water because of contamination by toxic waste. Across the country there are thousands of sites contaminated by hazardous waste that require billions of dollars for cleanup. An increasing number of lawsuits are being brought by people who claim to have suffered adverse health effects from living near toxic waste sites. Also the number of lawsuits being instituted by the government is mounting rapidly. These suits claim that certain waste generators have not complied with regulations and that generators who have used waste management facilities now on the Superfund list must pay for cleanups.

Waste reduction is critical to the prevention of future hazardous waste problems. By reducing the generation of waste, industry can use materials more efficiently and achieve more certain protection for health and the environment. At the same time, industry can lower waste management and regulatory compliance costs, liabilities, and risks.

Although there are many environmental and economic benefits to waste reduction, over 99 percent of Federal and State environmental spending is devoted to controlling pollution after waste is generated. Less than 1 percent is spent to reduce the generation of waste. The current level of national spending for pollution control is about \$70 billion. Two-thirds of this is spent by industry. Since many hazardous substances are not yet regulated, annual expenditures will, in all likelihood, continue to increase.

OTA finds that reducing waste to prevent pollution from being generated at its source is now a practical way to complement this costly pollution control regulatory system. Because of sporadic and uneven enforcement, the current regulatory system weakens the incentive to reduce waste. Waste reduction, no matter how far it is taken, cannot eliminate all wastes, but it can help to lower costs for environmental protection as regulations continue to expand.

Current pollution control methods often do little more than move waste around. For example: air and water pollution control devices typically generate solid, hazardous waste that goes to landfills and too often leaches from there into groundwater. Many hazardous wastes, such as most toxic air emissions, are

not yet regulated, and regulatory standards for permissible emissions legally sanction the generation of some wastes. Thus, OTA finds that establishing a comprehensive, multimedia approach to reducing wastes going into the air, land, and water is essential.

OTA finds that there is no common definition of waste reduction; there are few or no data on the extent of industrial waste reduction; waste reduction is usually measured incorrectly; and the information that the government collects on waste generation is not useful for waste reduction. If waste reduction is defined to include waste treatment, companies will naturally pay more attention to treatment, which is a familiar activity, than to the reduction of waste. Problems of definition and lack of information should be addressed and ongoing waste reduction efforts should be documented by government, even if decisions to reduce waste remain at the discretion of individual companies.

Despite some claims to the contrary, industry has not taken advantage of all effective waste reduction opportunities that are available. Reducing waste involves more than buying a black box, reading the directions, and plugging it in. Even a simple step toward waste reduction can seem difficult to a company with few technical resources and no obvious place to go for guidance. Reducing waste in an industrial process requires intimate knowledge of all aspects of that specific production process, in contrast to waste treatment, which is essentially an add-on to the end of the process. There are also clear pressures to reduce waste tomorrow, rather than today. The attention and resources given to required pollution control activities limit the amount of thought, time, and money that industry can devote to waste reduction. Some U.S. companies, however, have verified the fact that waste reduction pays for itself relatively quickly, especially when compared to the time needed to comply with regulations, obtain regulatory permits, or site waste management facilities. Some companies are even beginning to sell new products and services that help others to reduce waste.

Waste reduction succeeds when it is part of the everyday consciousness of all workers and managers involved with production—where the waste reduction opportunities are—rather than when it is a job only of those responsible for complying with environmental regulations. A few people with end-of-pipe, pollution control jobs are not in a position to reduce waste by themselves; such efforts must involve upstream workers and facilities.

(over)

There are five distinct approaches that industry can take to reduce hazardous waste: 1) change the raw materials of production, 2) change production technology and equipment, 3) improve production operations and procedures, 4) recycle waste within the plant, and 5) redesign or reformulate end-products. Among the opportunities that exist for common processes and wastes are: a) using mechanical techniques rather than toxic organic solvents to clean metal surfaces, b) using water-based raw materials instead of materials based on organic solvents, and c) changing plant practices to generate less hazardous wastewater.

So far government has not required waste reduction. OTA finds that it would be extraordinarily difficult for government to set and enforce waste reduction standards for a myriad of industrial processes. The impact on industry, particularly on troubled manufacturing sectors, could be substantial. Alternatively, the United States could move to an economically sensible environmental protection strategy based on both pollution control (waste management) and pollution prevention (waste reduction) with the Federal Government providing leadership and assistance in the following ways.

First, through policy development, education, and oversight, Congress could help industry and the Nation profit from seeing waste reduction not as some unique technology, but as a field ready for innovative engineering and management. These opportunities are embedded in every part of the industrial produc-

#### Definitions Used in This Report

##### **Waste Reduction:**

In-plant practices that reduce, avoid, or eliminate the generation of hazardous waste so as to reduce risks to health and environment. Actions taken away from the waste generating activity, including waste recycling or treatment of wastes after they are generated, are not considered waste reduction. Also, an action that merely concentrates the hazardous content of a waste to reduce waste volume or dilutes it to reduce degree of hazard is not considered waste reduction. This definition is meant to be consistent with the goal of preventing the generation of waste at its source rather than controlling, treating, or managing waste after its generation.

##### **Hazardous Waste:**

All nonproduct hazardous outputs from an industrial operation into all environmental media, even though they may be within permitted or licensed limits. This is much broader than the legal definition of hazardous solid waste in the Resource Conservation and Recovery Act, its amendments, and subsequent regulations. Hazardous refers to harm to human health or the environment and is broader than the term "toxic." For example, wastes that are hazardous because of their corrosivity, flammability, explosiveness, or intoxication are not normally considered toxic.

#### Waste Reduction and National Policy

"The Congress hereby declares it to be the national policy of the United States that, wherever feasible, the generation of hazardous waste is to be reduced or eliminated as expeditiously as possible. Waste nevertheless generated should be treated, stored, or disposed of so as to minimize the present and future threat to human health and the environment."

From the *Resource Conservation and Recovery Act*, as amended by U.S. Congress in November 1984. This policy statement is supported by waste minimization provisions also added to the Act.

tion system. There is no way to predetermine the amount of waste reduction that is possible; its technical and economic feasibility depend on the characteristics, circumstances, and goals of specific waste generators. Success in reducing waste depends on the ability of organizations to modernize, innovate, and cut costs, thereby increasing profits and reducing long-term liabilities. Thus waste reduction could be used as a measure of performance as energy efficiency and productivity often are.

Second, there are a number of possible legislative actions that could clarify the definition of waste reduction, spur better collection of information on waste reduction, and encourage waste generators to devote more attention to the subject. If the Federal public policy goal is rapid and comprehensive hazardous waste reduction, then a strategy based on government leadership and assistance rather than on prescriptive requirements is likely to be the most effective. For example, Congress could: 1) create an Office of Waste Reduction with an Assistant Administrator within EPA, 2) create a grants program to develop generic or widely transferable technical support for waste reduction, 3) through new comprehensive waste reduction legislation require detailed reporting by industry on past waste reduction actions and plans for future efforts, 4) reward and facilitate waste reduction by offering industry concessions from existing pollution control regulatory requirements, or 5) create and use independent State Waste Reduction Boards to implement programs. Setting a national waste reduction goal of perhaps 10 percent annually could help convert the long stated importance of waste reduction into a true priority and reduce annual environmental spending substantially, ultimately by billions of dollars.

Copies of the OTA report, "Serious Reduction of Hazardous Waste: For Pollution Prevention and Industrial Efficiency," are available from the U.S. Government Printing Office. The GPO stock number is 052-003-01048-8; the price is \$12.00. Copies of the report for congressional use are available by calling 4-8996. Summaries of reports are available at no charge from the Office of Technology Assessment.

## PACIFIC NORTHWEST HAZARDOUS WASTE ADVISORY COUNCIL

### Resolution #2: **Recommending a Hierarchy of Hazardous Waste Management Options for the Pacific Northwest**

.....  
Whereas, hazardous waste management in the Pacific Northwest creates public policy issues which are regional in nature,

Whereas, the Pacific Northwest Hazardous Waste Advisory Council believes that it is important that the governmental entities of the Pacific Northwest share the same priorities with respect to the management of this region's hazardous wastes so that policies can be consistent within the region,

Whereas, the Council recognizes that the traditional "end-of-the pipe" pollution abatement strategy no longer constitutes a sufficient approach, in and of itself, to assure adequate human health and environmental protection and to mitigate the rising costs and liabilities associated with hazardous waste management,

Whereas, the Council recognizes that reduction of hazardous waste serves the long-term interests of the public and the business community to better protect human health and the environment than any other option available, as such efforts may: reduce the need for pollution control expenditures; avoid substitution of one form of pollution for another; improve workplace safety; reduce the liability associated with hazardous pollutants; and, improve the overall efficiency and cost-effectiveness of industrial facilities,

Whereas, the Council believes that decisions regarding the need for treatment, storage and disposal capacity in the region should be made in full recognition of the importance of hazardous waste reduction and the impact of such reduction activities on hazardous waste volumes,

Whereas, the Council recognizes that not all hazardous waste streams will pursue the same path through any hazardous waste management hierarchy; that some options are more appropriate for certain hazardous wastes than for others and that this determination will be made on a case specific basis depending on what works best in the individual circumstance,

Whereas, the Council believes that, in order to create a long-term solution to the problem of hazardous waste, it is important for public agencies, businesses and households to address the challenge of appropriate hazardous waste management, through the general application of the following hazardous waste management hierarchy:

- by reducing, at its source, the amount of hazardous waste generated by any manufacturing process or activity,
- then, by recycling and reusing, either on or off-site, whatever hazardous constituents are required,

- then, once a hazardous waste can be reduced or recycled no further, by reducing the volume or the toxicity of the hazardous waste through biological, chemical and physical treatments,
- then, once a hazardous waste has been reduced, recycled, and/or can receive no further physical, chemical and/or biological treatment, then, if appropriate for the waste stream, by reducing the volume or toxicity of the hazardous waste or hazardous waste residue through incineration,
- then, for any remaining hazardous wastes and/or hazardous residues from earlier treatment/incineration, by solidifying or in some way stabilizing them before land disposal so as to protect air, water and land quality to the greatest extent possible,
- and finally, land disposal of hazardous waste,

Whereas, the Council believes that it is incumbent on the hazardous waste generator and treatment or disposal operators to apply the best demonstrated available technologies at each stage of this hierarchy of hazardous waste management options,

Whereas the Council recognizes that the technological development and implementation of hazardous waste management options is a dynamic process requiring the reevaluation of this hierarchy from time to time,

Whereas, the Council recognizes that establishing hazardous waste reduction and recycling as the highest priorities in hazardous waste management is a fundamentally different approach from "end-of-pipe" pollution control strategies, and as a result, those households, businesses and public agencies which do not have the technical or financial resources to maximize hazardous waste reduction potential may require assistance in implementing such an approach and identifying the appropriate technologies for their specific business situation,

Now, therefore, be it resolved that we, the Pacific Northwest Hazardous Waste Advisory Council, do recommend to the governmental entities of the region that they:

- adopt the foregoing hierarchy of hazardous waste management options to guide their decisions about the need for hazardous waste reduction programs, and the need for various forms of treatment, storage and disposal capacity in the region; and,
- provide research, education and technical assistance to businesses, particularly small and medium-sized firms, governments and households in their hazardous waste reduction efforts, and encourage the sharing of information between businesses and governments.

.....  
 Approved by the Pacific Northwest Hazardous Waste Advisory Council, March 11, 1989.

## Recommended Hierarchy of Hazardous Waste Management Options

The Pacific Northwest Hazardous Waste Advisory Council recommends that the states, other governmental agencies in the region and the private sector adopt the following priorities for the management of their hazardous waste streams. The Council understands that not all of these hazardous waste management options are suitable for use with every waste stream.

### Hazardous Waste Reduction

Hazardous waste reduction is essentially pollution prevention - finding ways to make products without also creating hazardous waste. Generally, this involves substituting non-hazardous inputs for hazardous ones, redesigning processes to be more efficient, including improving housekeeping practices to prevent leaks and spills, and finally, preventing the dilution and mixing of wastes which increase hazardous waste volumes, complicate handling practices, and hinder recycling/reuse efforts. Source reduction is the only management option on the hierarchy which by definition creates no residuals requiring further treatment or disposal, for there can be no residuals from "hazardous waste not generated."

### Hazardous Waste Recycling

Hazardous waste recycling most often occurs when hazardous wastes are treated so that they can be reused directly in the production process or shipped to another firm as a production input. Hazardous waste recycling reduces the total amount of hazardous products required by production processes. Recycling may be done in-line, intra-plant or inter-industry. Recycling generally leaves residuals which may require further treatment prior to disposal.

### Chemical/Physical/Biological Treatment

Hazardous waste treatment, in this context, includes any number of activities done alone and in combination, on and/or off-site, which decrease the volume or toxicity of hazardous waste through physical, chemical, biological processes. These include processes which: lessen the volume of hazardous wastes through filtration, compaction, evaporation, centrifugation, etc.; change either the form or chemistry of a hazardous waste through coagulation, neutralization, oxidation/reduction, electro dialysis, etc.; and biologically degrade hazardous waste streams into more manageable components. These treatment methods may result in wastes which can be directed to local sewage plants or solid waste landfills or in residuals which may require further processing along this hierarchy of hazardous waste management options.

### Incineration

Incineration is the thermal destruction of a waste stream. Some hazardous wastes are incinerated to reduce waste volume to that of the remaining ash. Others, such as carcinogenic wastes, are incinerated to detoxify them. The ash resulting from incineration requires land disposal.

Like physical, chemical and biological treatments, incineration reduces the volume or toxicity of a hazardous waste stream. (Although incineration may concentrate in the ash those toxic elements which were not destroyed - if the waste contained heavy metals for instance.) As it is often used on the residuals of physical, chemical and biological treatments, it is considered a separate step on this management hierarchy. It thus represents a further step in the logical progression of the hierarchy - with each step designed to further reduce the volume or toxicity of hazardous waste streams. However, the Council recognizes that there may be some hazardous wastes which appropriately move directly from waste reduction and recycling to incineration without prior treatment.

### **Solidification/Stabilization**

Solidification and stabilization, in this context, are terms used to describe the various ways a hazardous waste may be treated prior to landfilling so as to protect the air, water and quality from migration of its contaminants. This may involve solidifying the hazardous waste and may also involve encapsulating the waste in some impervious material. These treatments may increase the overall volume of material going into a landfill, as hazardous materials are combined with non-hazardous materials such as cement or glass.

### **Land Disposal**

Land disposal of hazardous wastes - generally in private and commercial landfills and hazardous waste piles - is lowest priority on the management hierarchy. In the past, land disposal has been associated with problems of air, water and ground contamination. Current regulations greatly raise the operating standards of land disposal facilities. As well, EPA's Land Disposal Restrictions will establish the minimum pre-treatment standards and Best Demonstrated Available Technologies for most, if not all, RCRA hazardous waste which had previously been managed at a land disposal facility. In this way, most hazardous wastes will undergo some treatment at a higher rung on the hierarchy prior to land disposal, if land disposed at all. Both these measures are designed to protect the environment to the maximum extent feasible.

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