

# THE ENVIRONMENTAL EMERGENCY RESPONSE ACT

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## HEARINGS BEFORE THE COMMITTEE ON FINANCE UNITED STATES SENATE NINETY-SIXTH CONGRESS

SECOND SESSION

ON

**S. 1480**

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SEPTEMBER 11 AND 12, 1980

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Printed for the use of the Committee on Finance



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# **THE ENVIRONMENTAL EMERGENCY RESPONSE ACT**

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**THURSDAY, SEPTEMBER 11, 1980**

**U.S. SENATE,  
COMMITTEE ON FINANCE,  
*Washington, D.C.***

The committee met, pursuant to call, at 10:10 a.m., in room 2221, Dirksen Senate Office Building, the Hon. Daniel P. Moynihan, presiding.

Present. Senators Moynihan, Bradley, Bentsen, Dole, Roth, Chafee, Heinz, and Durenburger.

[The press releases announcing this hearing, bill S. 1480, amendment No. 1958 of S. 1480, and joint committee print follow:]

Press Release #H-49

P R E S S   R E L E A S EFOR IMMEDIATE RELEASE  
August 25, 1980COMMITTEE ON FINANCE  
UNITED STATES SENATE  
2227 Dirksen Senate Office Bldg.SENATE FINANCE COMMITTEE SETS HEARINGS ON S. 1480,  
THE ENVIRONMENTAL EMERGENCY RESPONSE ACT

Senator Russell B. Long, Chairman of the Senate Committee on Finance, announced today that the Committee will hold hearings beginning Thursday, September 11, 1980 at 10:00 a.m. on sec. 5 of S. 1480, the Environmental Emergency Response Act. The hearings will be held in Room 2221 of the Dirksen Senate Office Building.

Senator Long noted that section 5 of S. 1480 as reported by the Environment and Public Works Committee on July 11, 1980 establishes a Hazardous Substance Response Fund to be funded by levying taxes on specified substances.

The Chairman announced that the Committee will also take testimony on an amendment to S. 1480 offered by Senator Gravel (amendment number 1965). The amendment would create a Federal trust fund for the payment of claims due to oil spills. The trust fund would be supported by a tax on oil produced or consumed in the United States.

Witnesses who desire to testify at the hearing must submit a written request, including a mailing address and phone number, to Michael Stern, Staff Director, Committee on Finance, Room 2227 Dirksen Senate Office Building, Washington, D.C. 20510, by no later than the close of business on September 4, 1980.

Consolidated Testimony. -- Senator Long also stated that the Committee urges all witnesses who have a common position or the same general interest to consolidate their testimony and designate a single spokesman to present their common viewpoint orally to the Committee. This procedure will enable the Committee to receive a wider expression of views than it might otherwise obtain.

Legislative Reorganization Act. -- Senator Long stated that the Legislative Reorganization Act of 1946, as amended, requires all witnesses appearing before the Committees of Congress "to file in advance written statements of their proposed testimony, and to limit their oral presentations to brief summaries of their argument."

Witnesses scheduled to testify should comply with the following rules:

- (1) All witnesses must include with their written statements a one-page summary of the principal points included in the statement.
- (2) The written statements must be typed on letter-size (not legal size) paper and at least 100 copies must be delivered to Room 2227, Dirksen Senate Office Building, not later than noon of the last business day before the witness is scheduled to appear.
- (3) Witnesses are not to read their written statements to the Committee, but are to confine their oral presentations to a summary of the points included in the statement.

Written Statements. -- Witnesses who are not scheduled to make an oral presentation, and others who desire to present their views to the Committee, are urged to prepare a written statement for submission and inclusion in the printed record of the hearing. These written statements should be typewritten, not more than 25 double-spaced pages in length, and mailed with five (5) copies to Michael Stern, Staff Director, Committee on Finance, Room 2227, Dirksen Senate Office Building, Washington, D.C. 20510, not later than September 15, 1980.

Press Release #H-51

P R E S S R E L E A S EFOR IMMEDIATE RELEASE  
August 28, 1980UNITED STATES SENATE  
COMMITTEE ON FINANCE  
2227 Dirksen Senate Office Bld.SENATE FINANCE COMMITTEE EXPANDS HEARING ON S. 1480

Senator Russell B. Long, Chairman of the Senate Committee on Finance, today announced that the hearing on S. 1480 to be held on September 11, 1980 (see Press Release #H-49 - August 25, 1980) will cover amendment number 1958 introduced by Senator Magnuson on August 1, 1980.

The amendment would establish liability for oil spill cleanups, and make provisions for compensation and financial responsibility. It would create a \$250 million fund financed by a tax of up to 3 cents-per-barrel of oil.

**Calendar No. 933**96TH CONGRESS  
2D SESSION**S. 1480****[Report No. 96-848]**

To provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites.

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**IN THE SENATE OF THE UNITED STATES**

JULY 11 (legislative day, JUNE 21), 1979

Mr. CULVER (for himself, Mr. MUSKIE, Mr. STAFFORD, Mr. CHAFEE, Mr. RANDOLPH, Mr. MOYNIHAN, Mr. SCHWEIKER, Mr. HEINZ, Mr. LEVIN, Mr. HUDDLESTON, Mr. JAVITS, Mr. PELL, Mr. LEAHY, Mr. TSONGAS, Mr. WILLIAMS, Mr. HATFIELD, Mr. COHEN, Mr. MITCHELL, Mr. BRADLEY, Mr. KENNEDY, Mr. BURDICK, Mr. RIEGLE, Mr. INOUE, and Mr. MATHIAS) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

JULY 11, 1980

Reported, under authority of the order of the Senate of July 2 (legislative day, June 12), 1980, by Mr. CULVER, with amendments

[Omit the part struck through and insert the part printed in italic]

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**A BILL**

To provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites.

★(Star Print)



1           (F) all interest received from the investment of  
2           moneys held by the Fund pursuant to subsection  
3           (h)(2).

4           (2) The total amount which may be collected in fees  
5           under subsection (c) shall not exceed—

6                   (A) \$250,000,000 for fiscal year 1981,

7                   (B) \$525,000,000 for fiscal year 1982, and

8                   (C) \$700,000,000 for each of fiscal years 1983  
9           through 1986.

10          (3) There are authorized to be appropriated to the Fund  
11          for the fiscal year—

12                   (A) 1981, \$35,000,000,

13                   (B) 1982, \$75,000,000,

14                   (C) 1983 and each fiscal year thereafter through  
15          1986, \$100,000,000.

16          (e)(1) Beginning ninety days after the enactment of this  
17          Act, the Secretary of the Treasury shall collect from each  
18          manufacturer, importer, or generator of a hazardous sub-  
19          stance, as appropriate, a fee on each unit of hazardous sub-  
20          stance produced, manufactured, or imported into the United  
21          States and each unit of hazardous waste generated. The unit  
22          for application of such fees shall be the quantity determined  
23          under section 311(b)(4) of the Clean Water Act, or the mini-  
24          mum quantity required to be reported under section 3002,  
25          3003, 3004, or 3005 of the Solid Waste Disposal Act, or

1 such other unit as the President determines to be appropriate  
2 for the measurement of such fee. Any such fees shall be es-  
3 tablished; or modified pursuant to paragraph (2) of this sub-  
4 section, at levels adequate to assure, to the extent reasonably  
5 possible, that (A) the percentage of the total fees collected  
6 from each of the various categories of hazardous substance  
7 and modes of discharge or release is equitable, based upon  
8 the claims and payments experience of the Fund and projec-  
9 tions thereof; (B) complexity in application and collection of  
10 such fees is minimized; (C) the costs imposed by such fees are  
11 spread as broadly as possible through the economy; and (D)  
12 incentives to proper handling and disincentives to improper  
13 or illegal handling or disposal of hazardous substances are  
14 maximized.

15 (2) The Secretary of the Treasury, after consulting with  
16 appropriate Federal agencies, may promulgate rules and reg-  
17 ulations relating to the collection of the fees authorized by  
18 paragraph (1) and, from time to time, the modification there-  
19 of. Modifications shall become effective on the date specified  
20 therein, but no earlier than the ninetieth day following the  
21 date the modifying regulation is published in the Federal  
22 Register. Any modification of the fee shall be designed to  
23 assure that the Fund is maintained at a level adequate to  
24 meet potential obligations, and not more than \$500,000,000.  
25 No regulation that modifies fees, nor any modification of such

1 a regulation, whether or not in effect, may be stayed by any  
2 court pending completion of judicial review of that regulation  
3 or modification.

4 (3)(A) Any person who fails to collect or pay fees as  
5 required by the regulations promulgated under paragraph (2)  
6 shall be liable for a civil penalty not to exceed \$10,000; to be  
7 assessed by the Secretary of the Treasury, in addition to the  
8 fees required to be collected or paid and the interest on those  
9 fees at the rate the fees would have earned if collected or  
10 paid when due and invested in special obligations of the  
11 United States in accordance with subsection (d)(2). Upon the  
12 failure of any person so liable to pay any penalty, fee, or  
13 interest upon demand, the Attorney General shall, at the re-  
14 quest of the Secretary of the Treasury bring an action in the  
15 name of the Fund against that person for such amount.

16 (B) Any person who falsifies records or documents re-  
17 quired to be maintained under any regulation promulgated  
18 under this subsection shall be subject to prosecution for a  
19 violation of section 1001 of title 18, United States Code.

20 (4) The Secretary of the Treasury may, by regulation,  
21 designate the reasonably necessary records and documents to  
22 be kept by persons from whom fees are to be collected pursu-  
23 ant to paragraph (1) of this subsection, and the Secretary of  
24 the Treasury and the Comptroller General of the United

1 States shall have access to such required material for the  
2 purpose of audit and examination.

3       (c)(1) In order to allocate the costs as broadly as possi-  
4 ble among those who may generate, distribute, transport, dis-  
5 pose, or benefit from the use of hazardous substances while  
6 minimizing the burden of collection, fees shall be imposed  
7 early in the manufacturing cycle on the basic elements and  
8 compounds from which hazardous substances are generated.  
9 Beginning one hundred and eighty days after the enactment  
10 of this Act—

11           (A) each supplier of primary petrochemicals shall  
12 collect a fee established in accordance with this section  
13 on behalf of the Fund for each pound of primary petro-  
14 chemicals supplied to any other person or used by such  
15 supplier,

16           (B) each supplier of inorganic raw materials shall  
17 collect a fee established in accordance with this section  
18 on behalf of the Fund for each short ton of inorganic  
19 raw materials supplied to any other person or used by  
20 such supplier, and

21           (C) each owner of a refinery receiving crude oil  
22 or unfinished petroleum oil shall pay a fee established  
23 in accordance with this section per barrel of oil re-  
24 ceived, each owner of petroleum oil for export shall pay  
25 a fee established in accordance with this section per

1       *barrel of oil exported at the point of export or loading*  
2       *for export, and each owner of petroleum oil for entry*  
3       *into the United States shall pay a fee established in*  
4       *accordance with this section per barrel of oil entered at*  
5       *the point of entry or unloading for entry, whether for*  
6       *import or transfer to a foreign country.*

7       *(2)(A) Under regulations promulgated by the Secretary*  
8       *of the Treasury, the fees in paragraph (1) of this subsection*  
9       *shall be imposed on the basis of a schedule of rates estab-*  
10       *lished by the Secretary, in consultation with the Administra-*  
11       *tor of the Environmental Protection Agency, consistent with*  
12       *subsections (d) and (e) of this section. The schedule of rates*  
13       *may be modified annually in accordance with this section,*  
14       *but in no event shall the fee exceed 2 per centum of the list*  
15       *price of the primary petrochemical, inorganic raw material,*  
16       *or petroleum oil when sold at arms length.*

17       *(B) No regulation that establishes fees promulgated by*  
18       *the Secretary of the Treasury, nor any modification of such*  
19       *a regulation, whether or not in effect, may be stayed by any*  
20       *court pending completion of judicial proceedings for the*  
21       *review of that regulation or modification.*

22       *(C) Any fees shall be imposed only once under this sub-*  
23       *section on any quantity of petroleum oil, primary petrochem-*  
24       *ical, or inorganic raw material, except that any fee imposed*  
25       *on any quantity of refined petroleum used as a feedstock or a*

1 *primary petrochemical shall be added, once and only once, to*  
2 *the fee imposed on that quantity pursuant to paragraph*  
3 *(1)(C) of this subsection.*

4 *(d)(1) The fee imposed on any primary petrochemical*  
5 *shall not exceed \$20 per short ton of primary petrochemical:*  
6 *Provided, however, That the aggregate amount of such fees*  
7 *shall not exceed such amount as is necessary to produce rev-*  
8 *enues equal to, for the fiscal year—*

9 *(A) 1981, \$162,000,000,*

10 *(B) 1982, \$338,000,000, and*

11 *(C) 1983, and each fiscal year thereafter through*  
12 *1986, \$450,000,000 or such amount as determined by*  
13 *regulation pursuant to subsection (e)(1)(A) of this*  
14 *section.*

15 *(2) The fee imposed on any inorganic raw material*  
16 *shall not exceed \$10 per short ton of inorganic raw material:*  
17 *Provided, however, That the aggregate amount of such fees*  
18 *shall not exceed such amount as is necessary to produce rev-*  
19 *enues equal to, for the fiscal year—*

20 *(A) 1981, \$50,000,000,*

21 *(B) 1982, \$112,000,000, and*

22 *(C) 1983, and each fiscal year thereafter through*  
23 *1986, \$150,000,000, or such amount as determined by*  
24 *regulation pursuant to subsection (e)(1)(A) of this*  
25 *section.*

1       (3) *The fee imposed on any crude or unfinished petro-*  
 2 *leum oil shall not exceed 3 cents per barrel of petroleum oil*  
 3 *received, exported or entered: Provided, however, That the ag-*  
 4 *gregate amount of such fees shall not exceed such amount as*  
 5 *is necessary to produce revenues equal to, for the fiscal*  
 6 *year—*

7               (A) 1981, \$38,000,000,

8               (B) 1982, \$75,000,000, and

9               (C) 1983, and each fiscal year thereafter through  
 10       1986, \$100,000,000, or such amount as determined by  
 11       regulation pursuant to subsection (e)(1)(A) of this sec-  
 12       tion.

13       (4) *Beginning in fiscal year 1981 and until modified*  
 14 *pursuant to subsection (c)(2)(A) of this section, the fee im-*  
 15 *posed on primary petrochemicals, inorganic raw materials,*  
 16 *and petroleum oil shall be—*

	<i>Dollars per short ton</i>
<i>Acetylene.....</i>	<i>3.88</i>
<i>Benzene .....</i>	<i>3.88</i>
<i>Butane.....</i>	<i>3.88</i>
<i>Butylene, excluding that portion used to make butadiene.....</i>	<i>3.88</i>
<i>Butadiene .....</i>	<i>3.88</i>
<i>Ethylene.....</i>	<i>3.88</i>
<i>Methane, excluding that portion used to make ammonia.....</i>	<i>3.44</i>
<i>Naphthalene.....</i>	<i>3.88</i>
<i>Propylene.....</i>	<i>3.88</i>
<i>Toluene, excluding that portion used to make benzene.....</i>	<i>3.88</i>
<i>Xylene.....</i>	<i>3.88</i>
<i>Antimony.....</i>	<i>2.66</i>
<i>Antimony trioxide.....</i>	<i>2.24</i>
<i>Antimony sulfide.....</i>	<i>1.94</i>
<i>Arsenic.....</i>	<i>2.66</i>
<i>Arsenic trioxide .....</i>	<i>2.04</i>
<i>Barium sulfide .....</i>	<i>2.18</i>
<i>Bromine.....</i>	<i>2.66</i>
<i>Cadmium.....</i>	<i>2.66</i>

	<i>Dollars per short ton</i>
<i>Chlorine</i> .....	2.66
<i>Chromium</i> .....	2.66
<i>Chromite</i> .....	1.12
<i>Potassium dichromate</i> .....	1.02
<i>Sodium dichromate</i> .....	1.12
<i>Cobalt</i> .....	2.66
<i>Copper sulfate</i> .....	1.13
<i>Cupric oxide</i> .....	2.14
<i>Cuprous oxide</i> .....	2.37
<i>Hydrochloric acid</i> .....	0.18
<i>Hydrogen fluoride</i> .....	2.53
<i>Lead</i> .....	2.66
<i>Lead oxide</i> .....	2.48
<i>Mercury</i> .....	2.66
<i>Nickel</i> .....	2.66
<i>Nitric acid, excluding that portion used to make fertilizers</i> .....	0.15
<i>Phosphorous</i> .....	2.66
<i>Phosphoric acid, excluding that portion used to make fertilizers</i> .....	0.19
<i>Potassium hydrozide</i> .....	0.11
<i>Sodium hydrozide</i> .....	0.11
<i>Sulfuric acid, excluding that portion used to make fertilizers</i> .....	0.16
<i>Stannous chloride</i> .....	1.71
<i>Stannic chloride</i> .....	1.27
<i>Zinc</i> .....	2.66
<i>Zinc oxide</i> .....	1.15
<i>Ammonia, excluding that portion used to make fertilizers or used to make nitric acid</i> .....	0.11
	<i>Cents per barrel</i>
<i>Petroleum oil</i> .....	0.756

- 1           (e)(1) *Beginning three years after the fee is first initi-*  
2 *ated and biannually thereafter, the Secretary of the Treasury*  
3 *may, in consultation with the Administrator of the Environ-*  
4 *mental Protection Agency, adjust by regulation the amount*  
5 *of the fee to better reflect the claims experience of the Fund*  
6 *for any primary petrochemical, inorganic raw material, or*  
7 *petroleum oil subject to a fee under this section. In making*  
8 *such adjustments, the Secretary shall, to the extent reason-*  
9 *ably practicable, modify the fee so that:*
- 10           (A) *the percentage of the total annual moneys col-*  
11 *lected is approximately proportional to the incidence,*

1       *as estimated from available information, of all primary*  
2       *petrochemicals, of all inorganic raw materials, and of*  
3       *crude oil (and their intermediates, final products and*  
4       *wastes) in releases requiring fund expenditures for*  
5       *each of these three classes;*

6               *(B) the fee rate for each primary petrochemical,*  
7       *inorganic raw material, and crude oil subject to the fee*  
8       *is approximately proportional to its (including interme-*  
9       *diates, final products and waste) incidence, as esti-*  
10       *mated from available information, in releases requiring*  
11       *fund expenditures.*

12       *(2) In modifying the fee rate pursuant to paragraph*  
13       *(1)(B) of this subsection:*

14               *(A) If in the first three years a substance (its in-*  
15       *termediates, final products, or wastes) has not been*  
16       *found in any releases requiring fund expenditures, the*  
17       *fee for that substance shall be set at the lowest rate ap-*  
18       *plicable to any substance subject to the fee and that*  
19       *rate shall apply until the next biannual adjustment.*

20               *(B) If by the second biannual fee adjustment or*  
21       *any subsequent biannual fee adjustment, a substance*  
22       *(its intermediates, final products, and wastes) has not*  
23       *been found in any releases requiring fund expendi-*  
24       *tures, the fee for that substance may be set at zero,*  
25       *except that, if expenditures from the fund are subse-*

1        *quently required for a substance with a fee rate of zero,*  
2        *the Secretary may, by rule, reimpose a fee in the next*  
3        *annual fee collection period.*

4            *(C) The Secretary of the Treasury, in consulta-*  
5        *tion with the Administrator of the Environmental Pro-*  
6        *tection Agency, may, where appropriate, distinguish*  
7        *among industrial categories to better approximate the*  
8        *expenditure experience of the Fund. If it is concluded*  
9        *that (i) a particular industrial category and its suppli-*  
10       *ers have not caused or contributed significantly to re-*  
11       *leases of such substances requiring Fund expenditures;*  
12       *(ii) substances typical of those used by the industrial*  
13       *category or its suppliers have not been present signifi-*  
14       *cantly in releases of unknown origin from any facility*  
15       *or site where hazardous substances are stored or dis-*  
16       *posed and which have resulted in fund expenditures;*  
17       *and (iii) distinguishing among industrial categories*  
18       *would not preclude passing the fee on to ultimate con-*  
19       *sumers of hazardous substances present in releases,*  
20       *then such industrial category shall not be subject to a*  
21       *fee on the particular primary petrochemical, inorganic*  
22       *raw material or crude oil.*

23        *(3) Prior to the first adjustment of fee rates provided for*  
24        *in paragraph (1)(B) of this subsection, the fertilizer produc-*  
25        *tion industry is conclusively presumed to not impose signifi-*

1 cant costs upon the Fund and to be subject to a fee rate of  
2 zero. In implementing such paragraph, the Secretary of the  
3 Treasury, in consultation with the Administrator of the En-  
4 vironmental Protection Agency, shall determine whether such  
5 fee rate requires adjustment to reflect the Fund's actual ex-  
6 penditure experience.

7 (4) Prior to the first adjustment of fee rates provided for  
8 in paragraph (1)(B) of this subsection, the fee on copper shall  
9 be imposed only on copper sulfate, cupric oxide, and cuprous  
10 oxide. In implementing this section, the Secretary of the  
11 Treasury, in consultation with the Administrator of the En-  
12 vironmental Protection Agency, shall determine, pursuant to  
13 paragraph (1)(B) of this subsection, whether a fee should be  
14 imposed by rule on copper or additional copper compounds to  
15 reflect the Fund's actual expenditure experience. Copper  
16 which is exported shall be exempt from any fee.

17 (f)(1) In order to provide suppliers an economic incen-  
18 tive for the recycling and reuse of primary petrochemicals  
19 and inorganic raw materials, the Secretary of the Treasury,  
20 after consultation with the Administrator of the Environ-  
21 mental Protection Agency, may by rule reduce the fee which  
22 would otherwise be imposed under this section in proportion  
23 to the extent that the Secretary determines any portion of  
24 that primary petrochemical or inorganic raw material to be—

1           (A) removed from the waste stream of a produc-  
2           tion process and recycled in such production process;  
3           reintroduced into the production of substances subject  
4           to the fee; or used as a source of fuel or other energy  
5           when used onsite or sold to other persons;

6           (B) derived from recycled material; or

7           (C) produced solely as a byproduct of pollution  
8           controls and used onsite or sold to other persons.

9           (2) No reduction in fees under paragraph (1) of this  
10          subsection may exceed the amount of the fee which would  
11          otherwise be imposed under this section on the sale or use of  
12          such primary petrochemical or inorganic raw material.

13          (g) Any fees imposed by subsection (c) shall be assessed  
14          and collected by the Secretary of the Treasury or his dele-  
15          gate, and the provisions of subtitle F of the Internal Revenue  
16          Code of 1954 shall apply to the assessment and collection of  
17          such fee as if such fee were a tax described in chapter 32 of  
18          such Code.

19          (d)(h)(1) The President shall determine the level of fund-  
20          ing required for immediate access in order to meet potential  
21          obligations of the Fund. In any fiscal year, two-thirds of the  
22          money credited to the Fund as provided in subsection (b) (2)  
23          and (3) shall be available only for—

24                 (A) costs of removal as provided under section

25                 6(a)(1) (A), (B), (C), and (G);

1           (B) all other costs as provided for under section  
2       6(a)(1) (C), (D), (E), (F), (H), (I), (J), (L), and (P);  
3       and

4           (C) that portion of administrative and personnel  
5       costs under section 6(a)(1)(K) which are incident to  
6       the costs in subparagraphs (A) and (B) of this para-  
7       graph.

8       (2) The Secretary of the Treasury may invest any  
9       excess in the Fund, ~~above the level determined under para-~~  
10      ~~graph (1)~~, in interest-bearing special obligations of the United  
11      States. Such special obligations may be redeemed at any time  
12      in accordance with the terms of the special issue and pursu-  
13      ant to regulations promulgated by the Secretary of the  
14      Treasury. The interest on, and the proceeds from the sale of,  
15      any obligations held in the Fund shall be credited to and form  
16      a part of the Fund.

17       (3) *The Secretary of the Treasury, in consultation with*  
18      *the Administrator of the Environmental Protection Agency,*  
19      *may use any excess in the Fund to purchase private reinsur-*  
20      *ance. Any such reinsurance shall be for the sole purpose of*  
21      *increasing the ability of the Fund to meet potential obliga-*  
22      *tions as provided in section 6. Any contract to purchase such*  
23      *reinsurance made under the provisions of this paragraph*  
24      *may be made without regard to the provisions of section 3709*  
25      *of the Revised Statutes, as amended (41 U.S.C. 5), upon a*

1 *determination by the Secretary that advertising is not rea-*  
2 *sonably practicable.*

3       *(i)(1) Moneys recovered, collected, transferred, or loaned*  
4 *which are referred to in subsection (b)(1) and in paragraph*  
5 *(2) of this subsection, shall, as necessary, increase the*  
6 *moneys in the Fund provided by subsection (b) (2) and (3) to*  
7 *the extent necessary to meet the potential obligations of the*  
8 *Fund as determined by the President. All moneys cred-*  
9 *ited to the Fund in any fiscal year shall remain availa-*  
10 *ble until expended.*

11       **(e)(2) If at any time the moneys available in the Fund**  
12 **are insufficient to meet the obligations of the Fund, the Presi-**  
13 **dent shall issue to the Secretary of the Treasury notes or**  
14 **other obligations in the forms and denominations, bearing the**  
15 **interest rates and maturities and subject to such terms and**  
16 **conditions as may be prescribed by the Secretary of the**  
17 **Treasury. Redemption of these notes or obligations shall be**  
18 **made by the President from moneys in the Fund. These notes**  
19 **or other obligations shall bear interest at a rate determined**  
20 **by the Secretary of the Treasury, taking into consideration**  
21 **the average market yield on outstanding marketable obliga-**  
22 **tions of comparable maturity. The Secretary of the Treasury**  
23 **shall purchase any note or other obligations issued hereunder**  
24 **and, for that purpose, is authorized to use as a public debt**  
25 **transaction the proceeds from the sale of any securities issued**

1 under the Second Liberty Bond Act. The purpose for which  
2 securities may be issued under that Act are extended to in-  
3 clude any purchase of these notes or obligations. The Secre-  
4 tary of the Treasury may at any time sell any of the notes or  
5 other obligations acquired by him under this subsection. All  
6 redemptions, purchases, and sales by the Secretary of the  
7 Treasury of these notes or other obligations shall be treated  
8 as public debt transactions of the United States. The au-  
9 thority of the President to issue notes or other obligations  
10 under this subsection shall be subject to such amounts as are  
11 provided in appropriation Acts.

12 *(3) In any one fiscal year, any notes or other obliga-*  
13 *tions authorized to be issued under paragraph (2) of this sub-*  
14 *section shall not exceed in amount the total of fees and appro-*  
15 *priations authorized by subsection (b) (2) and (3) of this sec-*  
16 *tion for the subsequent fiscal year. Except as necessary to*  
17 *provide the costs of removal in the first two years after impo-*  
18 *sition of a fee under this section or to provide the costs of*  
19 *removal for one or more unanticipated catastrophic releases,*  
20 *the proceeds of any notes or obligations issued pursuant to*  
21 *paragraph (2) of this subsection shall not be used for the*  
22 *purposes identified in subsection (h)(1) (A), (B), and (C).*

23 **(f) The Administrator of the Environmental Protection**  
24 **Agency, the Commandant of the Coast Guard, and the**  
25 **Comptroller General shall undertake a study of possible in-**

1 centives to safer operation of vessels and facilities to reduce  
2 the potential of discharges or releases of hazardous sub-  
3 stances; and generally of measures to prevent or avoid the  
4 occurrence of such discharges or releases. Such study shall  
5 address (1) the feasibility of a variable fee for replenishment  
6 of the Fund under subsection (e) of this section which takes  
7 into account the likelihood of a discharge or release and the  
8 operational experience of individuals or classes; and (2)  
9 whether current practices in the insurance and banking in-  
10 dustries provide any incentives or disincentives to reducing  
11 the potential for discharges or releases of hazardous sub-  
12 stances. Such study shall be conducted in consultation with  
13 other appropriate Federal and State agencies, the affected  
14 industries, and other interested parties. A first report of such  
15 study, together with legislative recommendations, if any,  
16 shall be submitted to the Congress not later than one year  
17 after enactment of this Act and as appropriate thereafter.

18       (j) *Within four years after the fee is first initiated, the*  
19 *Administrator of the Environmental Protection Agency, after*  
20 *consultation with the Secretary of the Treasury and the Sec-*  
21 *retary of Transportation, shall submit a report on the fee*  
22 *system to the Congress. Opportunity shall be provided for*  
23 *public review and comment. The report shall make recom-*  
24 *mendations on any statutory changes which would further*  
25 *assure that, to the extent practicable, the burden of the fee*

1 system is on those substances and parties who create the  
2 problem addressed by this Act and that the costs of the fees  
3 are distributed as broadly as possible through the economy.  
4 Such recommendations should also address changes which  
5 would reduce administrative and reporting burdens. The  
6 report shall consider the feasibility of a variable fee which  
7 takes into account the likelihood of a discharge or release and  
8 the operational experience of classes so that incentives to  
9 proper handling and disincentives to improper or illegal  
10 handling or disposal of hazardous substances are maximized.  
11 In addition, the report shall provide the following informa-  
12 tion: (1) a summary of past disbursements from the Fund;  
13 (2) a projection of any future funding needs remaining after  
14 expiration of authority to impose fees and of the threat to  
15 public health, welfare and the environment posed by the re-  
16 leases creating such needs; (3) the record and experience of  
17 the Fund in recovering Fund disbursements from liable  
18 parties; and (4) the record of State participation in response  
19 and compensation.

20 (k)(1) There is hereby established in the Treasury of the  
21 United States a Post-closure Liability Fund, not to exceed  
22 \$200,000,000. Such fund shall be administered by the  
23 President and the Secretary of the Treasury, as specified in  
24 this section.

1       (2) *Beginning six months after the enactment of this*  
2 *Act, the Secretary of the Treasury shall collect from the*  
3 *owner or operator of each hazardous waste disposal facility*  
4 *which has received a permit or is accorded interim status*  
5 *under subtitle C of the Solid Waste Disposal Act, a fee on*  
6 *each unit of hazardous waste received at such facility, which*  
7 *will remain at such facility after such facility is closed in*  
8 *accordance with the requirements of such subtitle C. Such fee*  
9 *may reflect the relative hazard, including persistence of*  
10 *hazard, of such hazardous wastes, as determined in the dis-*  
11 *cretion of the Administrator of the Environmental Protection*  
12 *Agency. For wastes of large volume and relatively low*  
13 *hazard, such fee shall reflect the relative hazard. Such fee*  
14 *shall initially be established at levels adequate to provide a*  
15 *fund of \$200,000,000 five years after collection of such fee*  
16 *begins.*

17       (3) *Subsections (c)(2)(B), (g), (h)(2), and (i)(2) of this*  
18 *section shall apply to the Post-closure Liability Fund.*

19       (4) *Any modification of the fee under this subsection*  
20 *shall be designed to assure that the Post-closure Liability*  
21 *Fund is maintained at a level adequate to meet potential obli-*  
22 *gations, and not less than \$100,000,000 nor, taking into ac-*  
23 *count imminent obligational requirements, more than*  
24 *\$200,000,000.*

1       (5) *Not later than three years after enactment of this*  
2 *Act, the President shall, after opportunity for public comment*  
3 *and consultation with States and affected private interests,*  
4 *submit recommendations to the Congress on any further leg-*  
5 *islation or amendments which may be necessary to assure*  
6 *that risk to public health and welfare and the environment*  
7 *from closed waste disposal facilities is minimized. Recom-*  
8 *mendations shall include, but not be limited to, the adequacy*  
9 *of the size of the Fund established by this subsection; and the*  
10 *appropriate division of responsibility among the Fund, State*  
11 *and local governments, and owners and operators of facilities*  
12 *for care of such facilities in perpetuity.*

13       (6) *The President shall appoint an advisory committee*  
14 *of State and local officials and owners or operators of facili-*  
15 *ties from which the fee provided in paragraph (2) of this*  
16 *subsection is collected, to observe and report to the President*  
17 *and the Congress on the administration of the Post-closure*  
18 *Liability Fund and the appropriateness of disbursements*  
19 *from such fund.*

20       (1) *For the purposes of this section, the term—*

21           (1) *“barrel” means forty-two United States gal-*  
22 *lons at 60 degrees Fahrenheit;*

23           (2) *“primary petrochemical” means only the fol-*  
24 *lowing: acetylene; benzene; butane; butylene excluding*  
25 *that portion used to make butadiene; butadiene; ethyl-*

1        *ene; methane excluding that portion used to make am-*  
2        *monia and acetylene; naphthalene; propylene; toluene*  
3        *excluding that portion used to make benzene; and*  
4        *xylene.*

5            (3) "inorganic raw material" means only the fol-  
6        *lowing:*

7            (A) *antimony and the equivalent weight of*  
8        *antimony in antimony trioxide and antimony sul-*  
9        *fide; arsenic and the equivalent weight of arsenic*  
10       *in arsenic trioxide; the equivalent weight of*  
11       *barium in barium sulfide; cadmium; chromium*  
12       *and the equivalent weight of chromium in chro-*  
13       *mite and potassium dichromate and sodium di-*  
14       *chromate; cobalt; copper (except as provided in*  
15       *subsection (e)(4) of this section); lead and the*  
16       *equivalent weight of lead in lead oxide; mercury;*  
17       *nickel; the equivalent weight of tin in stannic*  
18       *chloride and stannous chloride; zinc and the*  
19       *equivalent weight of zinc in zinc oxide;*

20            (B) *chlorine; bromine; and the equivalent*  
21       *weight of fluorine in hydrogen fluoride;*

22            (C) *phosphoric acid; sulfuric acid; hydro-*  
23       *chloric acid; nitric acid; potassium hydroxide; and*  
24       *sodium hydroxide in hydrogen fluoride;*

25            (D) *elemental phosphorous; and*

1                   (E) ammoniu excluding that portion used to  
2                   make nitric acid;

3                   (4) "refinery" means a permanently situated fa-  
4                   cility, located in the United States, which receives  
5                   crude petroleum oil for the purpose of refinement;

6                   (5) "supplier" means any person who produces,  
7                   manufactures, or imports primary petrochemicals or  
8                   inorganic raw materials and either provides, through  
9                   sale or any other means, such primary petrochemicals  
10                  or inorganic raw materials to other persons, or uses  
11                  such primary petrochemicals and inorganic raw mate-  
12                  rials himself; and

13                  (6) "petroleum oil" means petroleum, including  
14                  crude petroleum or any fraction or residue therefrom,  
15                  other than carbon black.

\*           \*           \*           \*           \*           \*           \*

**AMENDMENT NO. 1958**

**Calendar No. 933**

**Purpose:** To establish an equitable and comprehensive liability regime for oil spills, and for other purposes.

**IN THE SENATE OF THE UNITED STATES—86th Cong., 2d Sess.**

**S. 1480**

To provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites.

August 1 (legislative day, June 12), 1980

Ordered to lie on the table and to be printed

**AMENDMENT** intended to be proposed by **Mr. MAGNUSON**

**Viz:** Add the following as a new and additional title:

1       **SECTION 1.** This title may be cited as the “Oil Spill  
2       **Liability Act”.**

3       **SEC. 2. DEFINITIONS.**

4       As used in this title, unless the context otherwise re-  
5       quires, the term—

6               (1) “barrel” means 42 United States gallons at 60  
7       degrees Fahrenheit;

8               (2) “claim” means a claim, made in writing for a  
9       sum certain, for compensation under this title for dam-  
10      ages or cleanup costs resulting from a discharge of oil;

1           (3) "cleanup costs" means all actual and reason-  
2           able costs incurred by any person in—

3                   (A) removing or attempting to remove oil re-  
4                   sulting from an incident; or

5                   (B) taking other measures after an incident  
6                   has occurred to prevent, reduce, or mitigate oil  
7                   damages to private property, or public health,  
8                   property, or welfare resulting from such incident,  
9                   including shorelines, beaches, or natural  
10                  resources;

11           (4) "damages" means damages for which compen-  
12           sation may be claimed as set forth in section 5;

13           (5) "discharge" includes any spilling, leaking,  
14           pumping, pouring, emptying, or dumping of oil, how-  
15           ever caused—

16                   (A) in an unlawful quantity or at an unlawful  
17                   rate—

18                           (i) in or on the navigable waters or their  
19                           connecting or tributary waters within the  
20                           United States or immediately adjacent there-  
21                           to; or

22                           (ii) in or on the waters of the contiguous  
23                           zone established by the United States under  
24                           Article 24 of the Convention on the Territo-

1           rial Sea and the Contiguous Zone (15 UST  
2           1606); or

3           (B) in or on the waters of the high seas out-  
4           side the territorial limits of the United States—

5                 (i) when discharged in connection with  
6                 activities conducted under the Outer Conti-  
7                 nental Shelf Lands Act, as amended (43  
8                 U.S.C. 1331 et seq.), or the Deepwater Port  
9                 Act of 1974, as amended by this Act (33  
10                U.S.C. 1501 et seq.);

11               (ii) which may cause injury to or loss of  
12               natural resources belonging to, appertaining  
13               to, or under the exclusive management au-  
14               thority of, the United States; or

15               (iii) when such oil was discharged from  
16               a ship which received such oil at the termi-  
17               nal of the pipeline authorized by the Trans-  
18               Alaska Pipeline Authorization Act, as  
19               amended by this Act (43 U.S.C. 1651 et  
20               seq.), for transportation to a port in the  
21               United States, and was discharged from such  
22               ship prior to being brought ashore in such a  
23               port; or

24           (C) in or on the territorial sea, internal  
25           waters, or adjacent shoreline, of a foreign coun-

1           try, if damages and cleanup costs are recoverable  
2           by a foreign claimant under section 5;

3           (6) "facility" means a structure or group of struc-  
4           tures (other than a vessel or vessels which are not an  
5           integral part of any such structure or structures) used  
6           for the purpose of transporting, producing, processing,  
7           storing, transferring, or handling oil which is within, or  
8           subject to the jurisdiction of, the United States;

9           (7) "fund" means the Oil Spill Compensation  
10          Fund established pursuant to section 6;

11          (8) "incident" means any occurrence, or series of  
12          occurrences, involving one or more vessels, a facility,  
13          or any combination thereof, which causes, or poses an  
14          immiment threat of, a discharge of oil;

15          (9) "insurer" means any person who provides, in  
16          accordance with section 10, evidence of financial re-  
17          sponsibility for the owner or operator of a vessel or a  
18          facility;

19          (10) "natural resources" means land, fish, wild-  
20          life, biota, air, water, and other such resources owned,  
21          managed, held in trust, or otherwise controlled by the  
22          Federal Government (including the fishery resources of  
23          the fishery conservation zone established by section  
24          101 of the Fishery Conservation and Management Act

1 of 1976 (16 U.S.C. 1811)), any State or local govern-  
2 ment, or any foreign government;

3 (11) "oil" means oil of any kind (except animal or  
4 vegetable oils), in any form, including petroleum, fuel  
5 oil, sludge, oil refuse, and oil mixed with wastes other  
6 than dredge spoil;

7 (12) "operator" means any person who is respon-  
8 sible for the operation, manning, victualizing, and sup-  
9 plying of a vessel or who charters by demise such  
10 vessel;

11 (13) "owner" means any person holding title to,  
12 or in the absence of title, any other indicia of owner-  
13 ship of, a vessel or facility, except that the term does  
14 not include a person who, without participating in the  
15 management or operation of a vessel or facility, holds  
16 indicia of ownership primarily to protect a security in-  
17 terest in such vessel or facility;

18 (14) "person" means an individual, a public or  
19 private corporation, partnership or other association, or  
20 a governmental entity;

21 (15) "person in charge" means the individual im-  
22 mediately responsible for the operation of a vessel;

23 (16) "public vessel" means a vessel which is  
24 owned, or chartered by demise, and operated by the  
25 United States, any State or subdivision thereof, or any

1 foreign government; and is not engaged in commercial  
2 service;

3 (17) "refinery" means a terminal which receives  
4 crude oil for the purpose of refinement;

5 (18) "Secretary" means the Secretary of Trans-  
6 portation;

7 (19) "State" means each of the several States of  
8 the United States, the District of Columbia, the Com-  
9 monwealth of Puerto Rico, American Samoa, the  
10 United States Virgin Islands, Guam, and any other  
11 commonwealth, territory, or possession of the United  
12 States;

13 (20) "terminal" means any permanently situated  
14 facility which is located within the territorial limits of  
15 the United States; is not owned by any agency of the  
16 Federal Government; and receives oil in bulk directly  
17 from any vessel or facility; and

18 (21) "vessel" means every description of water-  
19 craft or other artificial contrivance used, or capable of  
20 being used, as a means of transportation through or on  
21 water.

22 **SEC. 4. LIABILITY.**

23 (a) **IN GENERAL.**—Notwithstanding any other provi-  
24 sions of law, or rule of law, according to the following provi-  
25 sions of this section, the owner and operator of a vessel

1 (other than a public vessel), or a facility, which is the source  
2 of, or poses an imminent threat of, a discharge of oil, shall be  
3 jointly, severally, and strictly liable for all damages and  
4 cleanup costs for which a claim is asserted under this title.

5 (b) LIMITS OF LIABILITY.—Except as provided in sub-  
6 section (d), the liability of the owner or operator of a vessel  
7 or a facility under subsection (a), including cleanup costs in-  
8 curred on behalf of such owner or operator, shall not  
9 exceed—

10 (1) \$150 for each gross ton of any vessel which  
11 does not carry oil in bulk as cargo;

12 (2) \$500,000, or \$300 for each gross ton, which-  
13 ever is greater, of any vessel which carries oil in bulk  
14 as cargo; or

15 (3) for any facility, \$50,000,000 or such lesser  
16 amount as is established under subsection (c).

17 (c) ESTABLISHING LIMITS FOR CLASSES.—The Secre-  
18 tary shall establish, by regulation, limits of liability, up to  
19 \$50,000,000, for classes of facilities, except that the limits of  
20 liability for any deepwater port or offshore oil production fa-  
21 cility shall not be less than \$50,000,000. In establishing such  
22 limits, the Secretary shall take into account the size, type,  
23 location, oil storage and handling capacity of such classes of  
24 facilities, and other matters relating to the likelihood of inci-  
25 dents resulting from the facilities in each such class. Such

1 limits shall, to the extent practicable, be comparable to limits  
2 set forth in subsection (b), taking into account the relative  
3 possibilities of a discharge of oil.

4 (d) COMPLETE LIABILITY.—Notwithstanding the pro-  
5 visions of subsection (b), the liability of the owner or operator  
6 of a vessel or facility under subsection (a), including cleanup  
7 costs incurred on behalf of such owner or operator, shall be  
8 the full extent of the damages and cleanup costs resulting  
9 from a discharge of oil if the—

10 (1) incident is caused by gross negligence or will-  
11 ful misconduct within the privity or knowledge of the  
12 owner or operator;

13 (2) incident is caused by a gross or willful viola-  
14 tion, by the owner or operator, of applicable safety,  
15 construction, or operating standards or regulations of  
16 the Federal Government; or

17 (3) owner or operator fails or refuses to provide  
18 all reasonable cooperation and assistance requested by  
19 the responsible Federal official in furtherance of  
20 cleanup activities.

21 (e) DEFENSES.—There shall be no liability under sub-  
22 section (a)—

23 (1) if the incident is caused solely by—

24 (A) an act of war, hostilities, civil war, or in-  
25 surrection, or by a natural phenomenon of an ex-

1            ceptional, inevitable, and irresistible character,  
2            and such incident could not have been prevented  
3            or avoided by the exercise of due care or fore-  
4            sight; or

5            (B) an act or omission of a person other than  
6            (i) the claimant, (ii) the owner or operator, (iii) an  
7            employee or agent of the claimant, the owner, or  
8            the operator, or (iv) one whose act or omission  
9            occurs in connection with a contractual relation-  
10           ship with the claimant, the owner, or the opera-  
11           tor;

12           (2) as to a particular claimant, if the incident or  
13           loss is caused, in whole or in part, by the gross negli-  
14           gence or willful misconduct of that claimant; or

15           (3) as to a particular claimant, to the extent that  
16           the incident or loss is caused by the negligence of that  
17           claimant.

18           (f) INTEREST.—(1) In addition to the damages and  
19           cleanup costs for which claims may be asserted under this  
20           title, and without regard to the limitation of liability provided  
21           for in subsection (b), the owner, operator, or insurer of the  
22           vessel or facility which is the source of a discharge of oil shall  
23           be liable to any claimant for interest on the amount paid in  
24           satisfaction of the claim, pursuant to section 6, for the period  
25           from the date upon which the claim was presented to such

1 owner, operator, or insurer to the date upon which the claim-  
2 ant is paid, inclusive, less the period, if any, from the date  
3 upon which the owner, operator, or insurer offers to the  
4 claimant an amount equal to or greater than that finally paid  
5 in satisfaction of the claim to the date upon which the claim-  
6 ant accepts that amount, inclusive. However, if such owner,  
7 operator, or insurer offers to the claimant, within 60 days  
8 after the date upon which the claim was presented, or after  
9 the date upon which advertising was commenced pursuant to  
10 section 9, whichever is later, an amount equal to or greater  
11 than that finally paid in satisfaction of the claim, then such  
12 owner, operator, or insurer shall be liable for the interest  
13 provided in this paragraph only from the date the offer was  
14 accepted by the claimant to the date upon which payment is  
15 made to the claimant, inclusive.

16 (2) The interest provided for in paragraph (1) shall be  
17 calculated by the Secretary at the average of the highest rate  
18 for commercial and finance company paper of maturities of  
19 180 days or less, obtaining on each of the days included  
20 within the period for which interest must be paid to the  
21 claimant, as published in the Federal Reserve Bulletin.

22 (g) ADJUSTMENT OF LIMITS.—The Secretary shall,  
23 from time to time, report to the Congress on the desirability  
24 of and, where appropriate, recommendations on adjusting the  
25 limits of liability contained in this section. In considering any

1 such recommendation, the Secretary shall publish any pro-  
2 posed recommendation in the Federal Register and provide  
3 30 days for any interested party to submit comments.

4 (h) PROHIBITION.—No indemnification, hold harmless,  
5 or similar agreement shall be effective to transfer from the  
6 owner or operator of a vessel or facility to any other person  
7 the liability provided for under this title, other than as speci-  
8 fied under the provisions of this title.

9 **SEC. 5. RECOVERABLE DAMAGES AND CLAIMANTS.**

10 (a) DAMAGES.—Claims for damages for loss resulting  
11 from a discharge of oil may be asserted under this title for:

12 (1) cleanup costs;

13 (2) personal injury;

14 (3) injury to, or destruction of, real or personal  
15 property;

16 (4) loss of use of any real or personal property;

17 (5) injury to, or destruction of, natural resources;

18 (6) loss of use of any natural resources, without  
19 regard to ownership of such resources;

20 (7) loss of profits or impairment of earning capac-  
21 ity resulting from any damage to, or destruction of real  
22 or personal property, or natural resources; and

23 (8) loss of tax, royalty, rental, or net profits share  
24 revenue by the Federal Government or any State or  
25 local government, for a period of not to exceed 1 year.

1           (b) **TRUSTEE OF NATURAL RESOURCES.**—The Presi-  
2 dent, or the authorized representative of any State, shall act  
3 on behalf of the public as trustee of the natural resources to  
4 recover for damages to such resources. Sums recovered<sup>d</sup> shall,  
5 whenever practicable, be used to restore, rehabilitate, or ac-  
6 quire the equivalent of such natural resources by the appro-  
7 priate agencies of the Federal Government, or such State.

8           (c) **FOREIGN CLAIMANTS.**—Claims for compensation  
9 for damages and cleanup costs may be made under this title  
10 by any citizen of a foreign nation or by any foreign nation if  
11 such damages or cleanup costs resulted from a discharge of  
12 oil, or threat of a discharge of oil, from—

13           (1) an incident occurring in the navigable waters  
14 of the United States;

15           (2) a vessel carrying oil as cargo between two  
16 ports subject to the jurisdiction of the United States; or

17           (3) a facility located in the United States or sub-  
18 ject to the jurisdiction of the United States.

19 **SEC. 6. OIL SPILL COMPENSATION FUND.**

20           (a) **ESTABLISHMENT.**—There is established in the  
21 Treasury of the United States a fund to be known as the Oil  
22 Spill Compensation Fund (hereinafter referred to as “the  
23 Fund”). The Fund shall be administered by the Secretary  
24 and the Secretary of the Treasury in accordance with the

1 provisions of this title. The Fund may sue and be sued in its  
2 own name.

3 (b) **CONTENT.**—The Fund shall be constituted from—

4 (1) all fees collected pursuant to section 7;

5 (2) all moneys recovered through subrogation  
6 under section 8;

7 (3) interest on, and the proceeds from the sale of,  
8 special obligation bonds of the United States, as pro-  
9 vided in subsection (e); and

10 (4) amounts received by the Secretary from the  
11 sale or issuance of notes or other obligations under  
12 subsection (f).

13 (c) **LIABILITY OF THE FUND.**—(1) Subject to the provi-  
14 sions of paragraph (2), the Fund shall be liable for all dam-  
15 ages and cleanup costs for which a claim may be asserted  
16 under this title, to the extent that the loss is not otherwise  
17 compensated on behalf of the owner or operator involved.

18 (2) Except for cleanup costs incurred under the provi-  
19 sions of law specified in subsection (d)(2), there shall be no  
20 liability under paragraph (1)—

21 (A) where the incident is caused primarily by an  
22 act of war, hostilities, civil war, or insurrection;

23 (B) as to a particular claimant, where the incident  
24 or economic loss is caused, in whole or in part, by the

1 gross negligence or willful misconduct of that claimant;  
2 or

3 (C) as to a particular claimant, to the extent that  
4 the incident or economic loss is caused by the negli-  
5 gence of that claimant.

6 (d) DISBURSEMENTS.—The Secretary may use the  
7 money in the Fund solely for the following purposes:

8 (1) The payment of any valid claim for damages  
9 presented according to the provisions of this title.

10 (2) The payment of any valid claim for cleanup  
11 costs incurred by any claimant.

12 (3) Administrative and personnel costs of the Fed-  
13 eral Government incident to administration of the  
14 Fund, including costs relating to claims settlement, and  
15 adjudicatory and judicial proceedings, whether or not  
16 such costs are recoverable under section 8, after appro-  
17 priation in an appropriations Act.

18 (4) After appropriation in an appropriations Act,  
19 the cost of assessing injury to or the destruction of nat-  
20 ural resources resulting from a discharge of oil, such  
21 assessment to be undertaken by the National Oceanic  
22 and Atmospheric Administration, in coordination with  
23 the Fish and Wildlife Service and the Environmental  
24 Protection Agency.

1 Moneys in the Fund shall be immediately available for pay-  
2 ment of cleanup costs incurred under subsections (c), (d), or  
3 (l) of section 311 of the Federal Water Pollution Control Act  
4 (33 U.S.C. 1321), section 5 of the Intervention on the High  
5 Seas Act (33 U.S.C. 1474), or section 18(b) of the Deepwa-  
6 ter Port Act of 1974, as amended (33 U.S.C. 1517(b)), and  
7 may be obligated for such purpose by any person so designat-  
8 ed by the Secretary.

9 (e) INVESTMENT.—The Secretary of the Treasury may  
10 invest any portion of the moneys in the Fund which the Sec-  
11 retary determines is not immediately required to meet the  
12 potential obligations of the Fund. Such investments shall be  
13 made only in interest-bearing special obligations of the  
14 United States. Any such obligations that are issued to the  
15 Fund may be redeemed at any time, in accordance with the  
16 terms of the special issue and regulations promulgated by the  
17 Secretary of the Treasury in cooperation with the Secretary.  
18 The interest on, and the proceeds from the sale of, any such  
19 obligations shall be credited to and form a part of the Fund.

20 (f) INSUFFICIENCY.—If the money available in the  
21 Fund is not sufficient to pay any amount which the Fund is  
22 obligated to pay under this title, the Secretary shall issue to  
23 the Secretary of the Treasury notes or other obligations (only  
24 to such extent and in such amounts as may be provided for in  
25 appropriations Acts) in such forms and denominations, bear-

1 ing such maturities, and subject to such terms and conditions  
2 as the Secretary of the Treasury prescribes. Such notes or  
3 other obligations shall bear interest at a rate determined by  
4 the Secretary of the Treasury on the basis of the current  
5 average market yield on outstanding marketable obligations  
6 of the United States on comparable maturities during the  
7 month preceding the issuance of such notes or other obliga-  
8 tions. Any sums received by the Secretary through such issu-  
9 ance shall be credited to the Fund. The Secretary of the  
10 Treasury shall purchase any notes or other obligations issued  
11 under this subsection, and for this purpose such Secretary  
12 may use, as a public debt transaction, the proceeds from the  
13 sale of any securities issued under the Second Liberty Bond  
14 Act, as now or hereafter in force. The purposes for which  
15 securities may be issued under that Act are extended to in-  
16 clude any purchase of notes or other obligations issued under  
17 this subsection. The Secretary of the Treasury may at any  
18 time sell any of the notes or other obligations so acquired  
19 under this subsection. All redemptions, purchases, and sales  
20 of such notes or other obligations by the Secretary of the  
21 Treasury shall be treated as public debt transactions of the  
22 United States.

23 (g) ANNUAL REPORT.—Within 6 months after the end  
24 of each fiscal year, the Secretary shall submit to the Con-  
25 gress (1) a report on the administration of the Fund during

1 such fiscal year, and (2) recommendations for such additional  
2 legislative authority as may be necessary to improve the  
3 management of the Fund and the administration of the liabil-  
4 ity provisions under this title.

5 **SEC. 7. OIL CARGO LIABILITY FUND FEE.**

6 (a) **ESTABLISHMENT OF THE FEE.**—There is hereby  
7 established a fee, of not more than 3 cents per barrel, to be  
8 levied on each barrel of crude oil received at any refinery and  
9 on each barrel of oil received at any terminal for export from  
10 or entry into the United States. Oil on which a fee has been  
11 levied under this subsection shall not be subject to any subse-  
12 quent such levy.

13 (b) **COLLECTION OF THE FEE.**—The Secretary of the  
14 Treasury shall collect the fee established by subsection (a)  
15 from (1) the owner of any refinery receiving crude oil and (2)  
16 the owner of any terminal receiving oil for export from or  
17 entry into the United States, whether for import or transfer  
18 to a foreign country. The person who owns such oil shall be  
19 obligated to reimburse the owner of such refinery or terminal,  
20 as the case may be, the full amount of the fee levied on the  
21 oil of that person and paid by the owner of the refinery or  
22 terminal.

23 (c) **FEE SCHEDULE.**—The Secretary of the Treasury,  
24 after consultation with appropriate Federal agencies, may  
25 promulgate and, from time to time, amend regulations relat-

1 ing to the collection of fees under this section, including the  
2 establishment of a fee schedule. Any such fee schedule shall  
3 be designed to insure that the Fund is maintained at a level  
4 which, along with all other moneys covered into the Fund, is  
5 sufficient to meet the obligations of the Fund, but in no case  
6 more than \$250,000,000. No regulation establishing a fee  
7 schedule, or any amendment of such regulation, whether or  
8 not in effect, may be stayed by any court pending completion  
9 of judicial review of such regulation or amendment.

10 (d) PENALTIES.—Any person who fails to collect or pay  
11 any fee required under this section shall be liable for (1) a  
12 civil penalty of not to exceed \$10,000, to be assessed by the  
13 Secretary of the Treasury; (2) the amount of the fee required  
14 to be collected or paid; and (3) the amount of interest that  
15 would have been earned by such fee if it had been collected  
16 or paid when due and invested in special obligations of the  
17 United States. The Attorney General may, at the request of  
18 the Secretary of the Treasury, bring an action in the name of  
19 the Fund against any person who fails to pay any fee re-  
20 quired under this section, or any amount for which such  
21 person is liable under this subsection.

22 (e)(1) RECORDS.—The Secretary of the Treasury may,  
23 by regulation, require persons from whom fees are to be col-  
24 lected pursuant to this section to keep such records and docu-  
25 ments as the Secretary deems necessary. The Secretary of

1 the Treasury and the Comptroller General of the United  
2 States shall have access to such records and documents for  
3 the purpose of audit and examination.

4 (2) Any person who falsifies records or documents re-  
5 quired to be kept under any regulation promulgated under  
6 this subsection shall be subject to prosecution for a violation  
7 of section 1001 of title 18, United States Code.

8 **SEC. 8. SUBROGATION.**

9 (a) **GENERAL.**—Any person, including the Fund, who  
10 pays compensation pursuant to this title to any claimant for  
11 damages or cleanup costs resulting from an incident, shall be  
12 subrogated to all rights, claims, and causes of action for such  
13 damages and cleanup costs as such claimant has under this  
14 title or any other law.

15 (b) **ACTION TO RECOVER.**—Upon request of the Secre-  
16 tary, the Attorney General shall commence an action on  
17 behalf of the Fund to recover any compensation paid by the  
18 Fund to any claimant pursuant to this title, and, without  
19 regard to the limitation of liability provided for in section  
20 4(b), all costs incurred by the Fund by reason of the claim,  
21 including interest, administrative and adjudicative costs, and  
22 attorney's fees. Such an action may be commenced against  
23 any owner, operator, or insurer, or against any other person  
24 who is liable, pursuant to any law, to the compensated claim-

1 ant or to the Fund, for the damages for which the compensa-  
2 tion was paid.

3 **SEC. 9. CLAIMS PROCEDURES.**

4 (a) **IN GENERAL.**—The Secretary shall prescribe, and  
5 may from time to time amend, regulations for the filing, proc-  
6 essing, settlement, and adjudication of claims under this title,  
7 including uniform procedures and standards for the appraisal  
8 and settlement of claims against the Fund.

9 (b) **NOTIFICATION.**—The person in charge of a vessel  
10 or facility, which is involved in an incident, shall immediately  
11 notify the Secretary of the incident as soon as he has knowl-  
12 edge thereof. Notification received pursuant to this subsec-  
13 tion, or information obtained by the exploitation of such noti-  
14 fication, shall not be used against any such person or his  
15 employer in any criminal action, other than an action involv-  
16 ing prosecution for perjury or for giving a false statement.

17 (c) **IDENTIFYING THE SOURCE OF AN INCIDENT.**—  
18 When the Secretary receives information, pursuant to sub-  
19 section (b) or otherwise, of an incident which involves a dis-  
20 charge of oil, the Secretary shall, where possible—

21 (1) identify the source of such discharge; and

22 (2) immediately notify the owner, operator, and  
23 insurer of the vessel which is the source of such dis-  
24 charge of such identification.

1           (d) ADVERTISEMENTS.—(1) If the source of a discharge  
2 of oil, identified by the Secretary under subsection (c), is a  
3 private vessel or facility, then the owner, operator, or insurer  
4 of such vessel or facility shall, within 15 days after being  
5 notified by the Secretary of such identification, begin to ad-  
6 vertise such identification along with a description of the pro-  
7 cedures to be followed for presenting claims to the owner,  
8 operator, or insurer, except that such owner, operator, or  
9 insurer shall not have the duty of making such advertise-  
10 ment if—

11           (A) such owner, operator, or insurer denies liabil-  
12 ity for such discharge of oil; and

13           (B) notifies the Secretary of such denial within 10  
14 days after receiving notice from the Secretary of such  
15 identification.

16 Any owner, operator, or insurer who denies liability for a  
17 discharge of oil, as provided in this subsection, and who is  
18 subsequently found to be liable for the damages or cleanup  
19 costs resulting from such discharge, shall be liable, in addi-  
20 tion to whatever other such costs or damages for which they  
21 might be liable, for the costs of making the advertisements he  
22 otherwise should have made under this subsection.

23           (2) The Secretary shall make advertisements of a dis-  
24 charge of oil, along with a description of the procedures to be  
25 followed in presenting claims to the Fund, where—

1 (A) the source of the discharge is from a public  
2 vessel;

3 (B) the Secretary is unable to identify the source  
4 of the discharge; or

5 (C) the owner, operator, and insurer each deny li-  
6 ability for the discharge of oil.

7 (3) Advertisements made under the provisions of this  
8 subsection shall—

9 (A) begin within 15 days after the date the Secre-  
10 tary notifies the owner, operator, or insurer of the  
11 identification under subsection (b), or within 15 days  
12 after the Secretary determines that the source of the  
13 discharge cannot be identified or the source is a public  
14 vessel;

15 (B) continue for at least 30 days thereafter; and

16 (C) be carried in a newspaper of general circula-  
17 tion in the vicinity of the discharge for which such ad-  
18 vertisement is being made.

19 (e) **PRESENTATION OF CLAIMS.**—(1) Except as pro-  
20 vided in paragraph (2), all claims shall be first presented to  
21 the owner, operator, or insurer of the vessel or facility which  
22 is the source of the discharge of oil resulting in the cleanup  
23 costs or damages for which such claim is presented.

24 (2) Claims shall be first presented to the Fund—

1 (A) if the Secretary has advertised or otherwise  
2 notified claimants in accordance with subsection (d)(2);  
3 or

4 (B) by any owner or operator for cleanup costs in-  
5 curred on behalf of such owner or operator if such  
6 owner or operator—

7 (i) is entitled to a defense to liability under  
8 section 4(d), or

9 (ii) is entitled to a limitation of liability under  
10 section 4(b) and the claim is only for the amount  
11 of cleanup costs incurred in excess of such limit of  
12 liability.

13 (3) If a claim is presented in accordance with paragraph  
14 (1) and—

15 (A) the person to whom the claim is presented  
16 denies all liability for the claim, for any reason; or

17 (B) the claim is not settled by any person by pay-  
18 ment to the claimant within 60 days after the date  
19 upon which (i) the claim was presented, or (ii) advertis-  
20 ing was commenced pursuant to subsection (d)(1),  
21 whichever is later;

22 then the claimant may elect to commence an action in court  
23 against the owner, operator, or insurer involved, or to pre-  
24 sent the claim to the Fund, such election to be irrevocable  
25 and exclusive.

1       (4) If a claim is presented in accordance with paragraph  
2 (1), and full and adequate compensation is unavailable, either  
3 because the claim exceeds a limit of liability invoked under  
4 section 4(b) or because the owner, operator, and insurer in-  
5 volved are financially incapable of meeting their obligations  
6 in full, a claim for the uncompensated damages may be pre-  
7 sented to the Fund.

8       (5) If a claim which has been presented to any person,  
9 pursuant to paragraph (1), is being presented to the Fund,  
10 pursuant to paragraph (3) or (4), that person to whom the  
11 claim was first presented, at the request of the claimant, shall  
12 transmit the claim and supporting documents to the Fund.  
13 The Secretary may, by regulation, prescribe the documents  
14 to be transmitted and the terms under which they are to be  
15 transmitted.

16       (6) If the Fund—

17           (A) denies all liability for a claim, for any reason,  
18           presented to it under paragraph (2), (3), or (4); or

19           (B) does not settle such a claim by payment to  
20           the claimant within 60 days after the date upon which  
21           (i) the claim was presented to the Fund, or (ii) adver-  
22           tising was commenced pursuant to subsection (d)(2),  
23           whichever is later;

24 then the claimant may submit the claim to the Secretary for  
25 settlement, except that a claimant who has presented a claim

1 to the Fund pursuant to paragraph (2) may elect to com-  
2 mence an action in court against the Fund in lieu of submis-  
3 sion of the claim to the Secretary for settlement, that election  
4 to be irrevocable and exclusive.

5 (f) SETTLEMENT OF CLAIMS.—(1) Except as provided  
6 in paragraph (2), the Secretary shall use the facilities and  
7 services of private insurance and claims adjusting organiza-  
8 tions or State agencies in processing claims against the Fund  
9 and may contract to pay compensation for those facilities and  
10 services. Any contract made under the provisions of this  
11 paragraph may be made without regard to the provisions of  
12 section 3709 of the Revised Statutes, as amended (41 U.S.C.  
13 5), upon a showing by the Secretary that advertising is not  
14 reasonably practicable. Notwithstanding any other provision  
15 of law, the Secretary may make advance payments to a con-  
16 tractor for services and facilities, and the Secretary may ad-  
17 vance to the contractor funds to be used for the payment of  
18 claims. The Secretary may review and audit claim payments  
19 made pursuant to this subsection. A payment to one claimant  
20 for a single claim in excess of \$100,000, or payment of two  
21 or more claims of one claimant aggregating in excess of  
22 \$200,000, shall be first approved by the Secretary. When the  
23 services of a State agency are used in processing and settling  
24 claims, no payment may be made on a claim asserted on or

1 on behalf of that State or any of its agencies or subdivisions  
2 unless the payment has been approved by the Secretary.

3 (2) To the extent necessitated by extraordinary circum-  
4 stances, where the services of such private organizations or  
5 State agencies are inadequate, the Secretary may use Feder-  
6 al personnel to process claims against the Fund.

7 (g) CLAIMS SETTLEMENTS BY THE SECRETARY.—(1)  
8 Upon receipt of a request to settle claims under the provi-  
9 sions of subsection (e)(6), the Secretary shall refer such claim  
10 to either an administrative law judge, appointed under sec-  
11 tion 3105 of title 5, United States Code, or to a panel ap-  
12 pointed by the Secretary as provided under subsection (h).  
13 Upon referral of a claim, the administrative law judge or  
14 panel, as the case may be, shall adjudicate such claim and  
15 render a decision on the record after an opportunity for an  
16 agency hearing.

17 (2) In any proceeding conducted by an administrative  
18 law judge or panel under the provisions of this subsection,  
19 the presiding officer may require by subpoena any person to  
20 appear and testify or to appear and produce books, papers,  
21 documents, or tangible things at a hearing or deposition at  
22 any designated place. Subpenas shall be issued and enforced  
23 in accordance with procedures in section 555(d) of title 5,  
24 United States Code, and rules promulgated by the Secretary.  
25 If a person fails or refuses to obey a subpoena, the Secretary

1 may invoke the aid of the district court of the United States  
2 where the person is found, resides, or transacts business in  
3 requiring the attendance and testimony of the person and the  
4 production by him of books, papers, documents, or any tangi-  
5 ble things.

6 (3) A hearing conducted under this subsection shall be  
7 conducted within the United States judicial district within  
8 which the cleanup costs were incurred or the damage com-  
9 plained of occurred, or, if such costs were incurred or such  
10 damage occurred within more than one district, in any of the  
11 affected districts, or, if such costs were incurred or such  
12 damage occurred outside any district, in the nearest district.

13 (4) The decision of the administrative law judge or panel  
14 under this subsection shall be the final order of the Secretary,  
15 except that the Secretary, in his discretion and in accordance  
16 with rules which he may promulgate, may review the deci-  
17 sion upon his own initiative or upon exception of the claimant  
18 or the Fund.

19 (h) JUDICIAL REVIEW.—(1) Any party who suffers  
20 legal wrong or who is adversely affected or aggrieved by any  
21 final order, act or omission of the Secretary under this title  
22 may, not later than 60 days after the date of publication of  
23 such order, or not later than 60 days after such act or omis-  
24 sion occurred or should have occurred, petition for judicial

1 review of such order in the appropriate United States district  
2 court.

3 (2) In the case in which (A) the person responsible for  
4 the discharge of oil, or (B) the Fund, seeks judicial review  
5 under this section, attorneys' fees and court costs shall be  
6 awarded to the claimant if the final order of the Secretary  
7 under subsection (g)(4) is upheld.

8 (i) ESTABLISHMENT AND APPOINTMENT OF  
9 PANELS.—(1) The Secretary is authorized to establish, from  
10 time to time, and to appoint the members of, panels to settle  
11 claims submitted to him under subsection (e)(6). A panel es-  
12 tablished under this subsection shall terminate 180 days after  
13 it was established.

14 (2) Each panel shall consist of three members, at least  
15 one of whom (who shall be the presiding member) shall be  
16 qualified to conduct adjudicatory proceedings. Each member  
17 of the panel shall be appointed from among individuals who,  
18 by their education, training, or experience, are competent to  
19 evaluate and assess property damage and the economic losses  
20 resulting therefrom. Each panel member, in addition, may be  
21 appointed without regard to whether such member is or has  
22 been employed by any governmental entity, except members  
23 of the staff administering the Fund shall not be appointed to  
24 any panel.

1       (3) Each member of a panel who is not otherwise em-  
2 ployed by the Federal Government shall be entitled to re-  
3 ceive compensation of \$100 per day (including traveltime) for  
4 each day during which he is engaged in the actual perform-  
5 ance of the duties of the panel. Each member of a panel who  
6 is an employee or officer of the Federal Government shall  
7 serve on a panel without additional compensation therefor. In  
8 addition, while away from their homes or regular places of  
9 business in the performance of the duties of the panel, each  
10 member of a panel shall be allowed travel expenses, including  
11 per diem in lieu of subsistence, according to the provisions of  
12 chapter 57 of title 5, United States Code.

13       (4) The provisions of chapter 11 of title 18, United  
14 States Code, and of Executive Order 11222, as amended,  
15 regarding special Government employees, shall apply to each  
16 panel member who is not otherwise employed by the Federal  
17 Government.

18       (5) Each member of a panel, and the administrative law  
19 judge, to which a claim is referred under subsection (g), shall  
20 be a resident of the United States judicial district within  
21 which the cleanup costs were incurred or the damage com-  
22 plained of occurred, or, if such cleanup costs were incurred or  
23 such damage occurred within more than one district, of any  
24 of the affected districts, or, if such cleanup costs were

1 incurred or such damage occurred outside any district, of the  
2 nearest district.

3 (j) NOTICE OF ACTIONS.—(1) In any action brought  
4 against an owner, operator, or insurer, both the plaintiff and  
5 defendant shall serve a copy of the complaint and all subse-  
6 quent pleadings therein upon the Fund at the same time as  
7 those pleadings are served upon the opposing parties. The  
8 Fund may intervene in any such action as a matter of right.  
9 If the Fund receives from either the plaintiff or the defendant  
10 notice of such an action, the Fund shall be bound by any  
11 judgment entered therein, whether or not the Fund was a  
12 party to the action.

13 (2) In any action to which the Fund is a party, if the  
14 owner, operator, or insurer admits liability under this title,  
15 the Fund, upon its motion, shall be dismissed therefrom.

16 (3) If neither the plaintiff nor the defendant gives notice  
17 of such an action to the Fund, the limitation of liability other-  
18 wise permitted by this title shall not be available to the de-  
19 fendant, and the plaintiff shall not recover from the Fund any  
20 sums not paid by the defendant.

21 (4) In any action brought against the Fund, the plaintiff  
22 may join any owner, operator, or insurer, and the Fund may  
23 implead any person who is or may be liable to the Fund  
24 under any provision of this title.

1 (k) **DIRECT ACTION.**—In defending any claim asserted  
2 directly against any insurer of an owner's or operator's liabil-  
3 ity under this title, such insurer—

4 (1) shall be entitled to invoke all rights and de-  
5 fenses which would be available to the owner or opera-  
6 tor under this title; and

7 (2) shall not be entitled to invoke any other de-  
8 fense which he might have been entitled to invoke in  
9 proceedings brought by the owner or operator against  
10 him.

11 (l) **EXPIRATION DATES.**—No claim may be presented,  
12 nor may an action be commenced for damages recoverable  
13 under this title, unless such claim is presented to, or that  
14 action is commenced against, the owner, operator, or insurer,  
15 or against the Fund, as to their respective liabilities, within 3  
16 years after the date of discovery of the economic loss for  
17 which a claim may be asserted under this title, or within 6  
18 years after the date of the incident which resulted in that  
19 loss, whichever is earlier.

20 **SEC. 10. FINANCIAL RESPONSIBILITY.**

21 (a) **GENERAL.**—(1) The owner or operator of any vessel  
22 (except a public vessel and any non-self-propelled barge that  
23 does not carry oil as cargo) over 300 gross tons which uses  
24 any facility or the navigable waters shall establish and main-  
25 tain, in accordance with regulations promulgated by the Sec-

1 retary, evidence of financial responsibility sufficient to satisfy  
2 the limits of liability applicable to that vessel under section 4  
3 and section 311 of the Clean Water Act. Certificates shall be  
4 furnished to such owner or operator as evidence that the re-  
5 quirements of this subsection have been complied with.

6 (2) The Secretary of the Treasury shall deny the clear-  
7 ance required by section 4197 of the Revised Statutes of the  
8 United States (46 U.S.C. 91) to any vessel subject to this  
9 subsection which does not have a valid certificate of compli-  
10 ance issued under paragraph (1).

11 (3) The Secretary, in accordance with regulations pro-  
12 mulgated by him, shall—

13 (A) deny entry to any port or place in the United  
14 States or navigable waters; and

15 (B) detain at the port or place in the United  
16 States from which it is about to depart for any other  
17 port or place in the United States;

18 any vessel subject to this subsection which, upon request,  
19 does not produce a valid certificate of compliance issued  
20 under paragraph (1).

21 (b) EVIDENCE.—Financial responsibility may be estab-  
22 lished by any one, or any combination, of the following meth-  
23 ods acceptable to the Secretary:

24 (1) An insurance policy.

25 (2) A guarantee.

1 (3) A surety bond.

2 (4) Qualification as a self-insurer.

3 Any bond filed shall be issued by a bonding company author-  
4 ized to do business in any State.

5 **SEC. 11. CONSOLIDATED ACTIONS.**

6 (a) **ACTIONS BY ATTORNEY GENERAL.**—The Attorney  
7 General may act on behalf of any group of persons which the  
8 Secretary determines would be more adequately represented  
9 as a group in the recovery of claims under this title. Sums  
10 recovered shall be distributed to the members of any such  
11 group.

12 (b) **OTHER ACTIONS.**—If, within 90 days after the date  
13 of a discharge of oil, the Attorney General does not act on  
14 behalf of a group the members of which may be entitled to  
15 compensation under this title, any member of such group may  
16 maintain a consolidated action to recover such compensation  
17 on behalf of such group. That the Attorney General has not  
18 acted within such 90 days shall have no bearing on any  
19 action maintained by any member of such group under this  
20 subsection.

21 (c) **NOTICE.**—If the number of members of any such  
22 group exceeds 1,000, publishing notice of the action in the  
23 Federal Register and in local newspapers of general circula-  
24 tion in the areas in which the members of such group reside  
25 shall be deemed sufficient to fulfill the requirements for public

1 notice established by rule 23(c)(2) of the Federal Rules of  
2 Civil Procedure.

3 **SEC. 12. PUBLIC ACCESS TO INFORMATION.**

4 (a) **GENERAL.**—To the extent required by section 552  
5 of title 5, United States Code, copies of any communication,  
6 document, report, or information transmitted between any of-  
7 ficial of the Federal Government and any person concerning  
8 liability and compensation for damages or cleanup costs re-  
9 sulting from a discharge of oil shall be made available to the  
10 public for inspection, and shall be available to the public upon  
11 identifiable request, for the purpose of reproduction at a rea-  
12 sonable cost.

13 (b) **RELEASE.**—Nothing contained in this section shall  
14 be construed to require the release of any information of the  
15 kind described in section 552(b) of title 5, United States  
16 Code, or which is otherwise protected by law from disclosure  
17 to the public. For the purposes of this section, any contractor  
18 acting on behalf of the Secretary pursuant to section 9(f), and  
19 any employee of such contractor, shall be deemed an employ-  
20 ee of the Secretary for the purposes of this section.

21 **SEC. 13. JURISDICTION, AND VENUE.**

22 (a) **IN GENERAL.**—The district courts of the United  
23 States shall have exclusive original jurisdiction over all con-  
24 troversies arising under this title, without regard to the citi-  
25 zenship of the parties or the amount in controversy.

1           (b) **VENUE.**—Any action (including actions seeking judi-  
2 cial review) brought under this title shall be brought in any  
3 United States judicial district (1) wherein the cleanup costs  
4 were incurred or the damage complained of occurred; (2) if  
5 such costs were incurred or such damage occurred, outside of  
6 any district, in the nearest district; or (3) if such cost were  
7 incurred or such damage occurred in more than one district,  
8 in any affected district, or (4) in the district where the de-  
9 fendant resides, may be found, or has its principal office. For  
10 the purposes of this subsection, the Fund shall be deemed a  
11 resident of the District of Columbia.

12 **SEC. 14. PENALTIES.**

13           (a) **FINANCIAL RESPONSIBILITY.**—(1) Any person who  
14 fails to comply with the requirements of section 10, the regu-  
15 lations promulgated thereunder, or any denial or detention  
16 order, shall be subject to a civil penalty of not more than  
17 \$10,000.

18           (2) Such penalty may be assessed and compromised by  
19 the Secretary. No penalty shall be assessed until notice and  
20 an opportunity for hearing on the alleged violation has been  
21 given. In determining the amount of the penalty or the  
22 amount agreed upon in compromise, the demonstrated good  
23 faith of the party shall be taken into consideration.

1       (3) At the request of the official assessing the penalty,  
2 the Attorney General may bring an action in the name of the  
3 Fund to collect the penalty assessed.

4       (b) NOTIFICATION.—Any person in charge who fails to  
5 give the notification required by section 9(b) shall, upon con-  
6 viction, be fined not more than \$10,000, or imprisoned for  
7 not more than one year, or both.

8 **SEC. 15. RELATIONSHIP TO OTHER LAW.**

9       (a) FUNDS.—No person may be required to contribute  
10 to any fund, by any Federal, State, or other law, the purpose  
11 of which is to pay compensation for any loss which may be  
12 compensated under this title. Nothing in this subsection shall  
13 preclude any State from imposing a tax or fee upon any  
14 person or upon oil in order to finance the purchase or pre-  
15 positioning of oil discharge cleanup equipment or other prep-  
16 arations for the cleanup of an oil discharge which affects such  
17 State.

18       (b) FINANCIAL RESPONSIBILITY.—Except as provided  
19 in this title, no owner or operator of a vessel or facility who  
20 establishes and maintains evidence of financial responsibility  
21 in accordance with this title shall be required under any State  
22 law, rule, or regulation to establish any other evidence of  
23 financial responsibility in connection with liability for the dis-  
24 charge of oil from such vessel or facility. Evidence of compli-  
25 ance with the financial responsibility requirements of this title



1 shall be accepted by a State in lieu of any other requirement  
2 of financial responsibility imposed by such State in connec-  
3 tion with liability for the discharge of oil from such vessel or  
4 facility.

5 (c) STATE LAW.—(1) Except as provided in subsections  
6 (a) and (b), this title shall not be interpreted to preempt the  
7 field of liability or to preclude any State from imposing addi-  
8 tional requirements or liability for damages and cleanup  
9 costs, within the jurisdiction of such State, resulting from a  
10 discharge of oil.

11 (2) Any person who submits a claim or commences an  
12 action for damages or cleanup costs under any State law  
13 shall be precluded from submitting a claim or commencing an  
14 action for the same damages or cleanup costs pursuant to this  
15 title. Any person who submits a claim or commences an  
16 action for damages pursuant to this title shall be precluded  
17 from submitting a claim or commencing an action for the  
18 same damages or cleanup costs under any State law.

19 (d) FEDERAL LAW.—In the case of conflict or inconsis-  
20 tency, the provisions of this title shall supersede all other  
21 provisions of Federal law.

22 **SEC. 16. CONFORMING AMENDMENTS.**

23 (a) OUTER CONTINENTAL SHELF LANDS ACT.—Title  
24 III of the Outer Continental Shelf Lands Act Amendments of  
25 1978 is hereby repealed.

1       (b) INTERVENTION ON THE HIGH SEAS ACT.—Section  
2 17 of the Intervention on the High Seas Act (33 U.S.C.  
3 1486) is amended to read as follows:

4       “SEC. 17. The Fund established under section 6 of the  
5 Oil Spill Liability Act shall be available to the Secretary for  
6 actions and activities, relating to oil pollution, taken under  
7 section 5 of this Act, and the revolving fund established  
8 under section 311(k) of the Federal Water Pollution Control  
9 Act (33 U.S.C. 1321(k)) shall be available for other actions  
10 and activities taken under section 5 of this Act.”

11       (c) DEEPWATER PORT ACT.—The Deepwater Port Act  
12 of 1974 (88 Stat. 2126) is amended as follows:

13           (1) In section 4(c)(1) strike “section 18(1) of this  
14 Act;” and insert in lieu thereof “section 10 of the Oil  
15 Spill Liability Act”.

16           (2) Subsections (b), (d), (e), (f), (g), (h), (i), (j), (l),  
17 (n), and clause (1) of subsection (m) of section 18 are  
18 deleted.

19           (3) Clause (3) of subsection (c) of section 18 is  
20 amended by striking “Deepwater Port Liability Fund  
21 established pursuant to subsection (f) of this section.”,  
22 and inserting in lieu thereof: “fund established under  
23 section 6 of the Oil Spill Liability Act”.

24           (4) Subsections (c), (k), and (m) of section 18 are  
25 redesignated (b), (c), and (d), respectively, and clauses

1 (2), (3), and (4) of subsection (m) are redesignated (1),  
2 (2), and (3), respectively.

3 (d) **TRANS-ALASKA PIPELINE ACT.**—(1) Subsection (b)  
4 of section 204 of the Trans-Alaska Pipeline Authorization  
5 Act (43 U.S.C. 1653(b)) is amended by inserting in the first  
6 sentence after “any area”, the words “in the State of  
7 Alaska”; by inserting after “any activities”, the words “re-  
8 lated to the trans-Alaska oil pipeline”; and by inserting at  
9 the end of the subsection a new sentence to read as follows:  
10 “This subsection shall not apply to cleanup costs covered by  
11 the Oil Transportation by Vessel Liability Act.”.

12 (2) Subsection (c) of section 204 of the Trans-Alaska  
13 Pipeline Authorization Act is hereby repealed. The Trans-  
14 Alaska Pipeline Liability Fund is hereby abolished. All assets  
15 of that fund, as of the effective date of this section, shall be  
16 transferred to the Oil Cargo Liability Fund established by  
17 section 6 of this Act. The Oil Cargo Liability Fund shall  
18 assume any and all liability incurred by the Trans-Alaska  
19 Pipeline Liability Fund under the terms of subsection (c) of  
20 section 204 of the Trans-Alaska Pipeline Authorization Act,  
21 and shall also assume any and all liability incurred by the  
22 officers or trustees in the execution of their duties involving  
23 the Trans-Alaska Pipeline Liability Fund, other than the lia-  
24 bility of such officers or trustees for gross negligence or will-  
25 ful misconduct.

1           (3) The Secretary of the Interior shall certify to the Sec-  
2 retary the total amount of the claims outstanding against the  
3 Trans-Alaska Pipeline Liability Fund at the time the transfer  
4 of assets required under paragraph (2) is made. If the Secre-  
5 tary finds that—

6           (A) the total amount of the assets so transferred is  
7 greater than the total amount of the outstanding claims  
8 so certified, subject to paragraph (4) of this subsection,  
9 the difference between the amount of the assets so  
10 transferred and the amount of the outstanding claims  
11 so certified shall constitute an advance payment toward  
12 payment of the fee due under section 7 of this Act on  
13 barrels of oil, and the Secretary may waive such fee  
14 until such time as the total amount of the fees so  
15 waived equals the difference between the amount of  
16 the assets so transferred and the amount of the out-  
17 standing claims so certified; or

18           (B) the total amount of the assets so transferred is  
19 less than the total amount of the outstanding claims so  
20 certified, the Secretary shall increase by 2 cents per  
21 barrel the fee imposed under such section 7 on barrels  
22 of oil until such time as the total amount of the 2-  
23 cents-per-barrel increase so collected equals the differ-  
24 ence between the amount of the certified outstanding  
25 claims and the amount of the transferred assets.

1           (4) In the event that the local amount of the actual  
2 claims settled is less than the total amount of the outstanding  
3 claims certified, the difference between these amounts shall  
4 be rebated by the Secretary directly to the operator of the  
5 trans-Alaska oil pipeline for payment, on a pro rata basis, to  
6 the owners of the oil at the time it was loaded on the vessel.

7           (5) If an owner of oil (as that term is used in section  
8 204(c)(5) of the Trans-Alaska Pipeline Authorization Act)  
9 who prior to enactment of this Act paid fees to the operator  
10 of the pipeline for transfer to the Trans-Alaska Pipeline Lia-  
11 bility Fund receives the benefit of an advance payment under  
12 paragraph (3) of this subsection for the collection or payment  
13 of fees established under section 7 of this Act, such owner of  
14 oil shall compute, based upon accepted accounting proce-  
15 dures, what the oil production tax and what the royalty paid  
16 to the State of Alaska would have been had payments not  
17 been made to the Trans-Alaska Pipeline Liability Fund in the  
18 amount of fees waived. The difference between the amounts  
19 so computed and amounts actually paid to the State of  
20 Alaska shall be paid by each such owner to the State of  
21 Alaska. Such owner shall make such payment to the State of  
22 Alaska during such time as the collection of payment of fees  
23 under section 7 of this Act is waived.

24           (6) For purposes of paragraphs (3) and (4), the term—

1           (A) "barrels of oil" means only barrels of oil  
2           which would, but for the repeal made by paragraph (1),  
3           be subject to the fee imposed under section 204(c)(5) of  
4           the Trans-Alaska Pipeline Authorization Act; and

5           (B) "Secretary" means the Secretary of the  
6           Treasury.

[JOINT COMMITTEE PRINT]

**DESCRIPTION OF REVENUE ASPECTS  
OF PROPOSALS  
(S. 1480 and Proposed Amendments)  
RELATING TO  
HAZARDOUS SUBSTANCE POLLUTION  
AND LIABILITY  
SCHEDULED FOR A HEARING  
BY THE  
COMMITTEE ON FINANCE  
ON  
SEPTEMBER 11, 1980**

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**PREPARED FOR THE  
COMMITTEE ON FINANCE  
BY THE STAFF OF THE  
JOINT COMMITTEE ON TAXATION**



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## INTRODUCTION

This pamphlet provides descriptions of various legislative proposals relating to releases of oil and hazardous substances into the environment and funding mechanisms to pay for cleanup and damage costs associated with those releases. S. 1480 (the "Environmental Emergency Response Act"), which was reported by the Committee on Environment and Public Works on July 11, 1980 (S. Rept. 96-848), and proposed amendments numbered 1958 (the "Oil Spill Liability Act") and 1965 (the "Oil Pollution Liability and Compensation Act of 1980") are scheduled for a hearing by the Committee on Finance on September 11, 1980.

S. 1480 would establish fees on crude oil, primary petrochemicals (also referred to in the pamphlet as petrochemical feedstocks), and certain inorganic raw materials. These fees would be deposited in a "Hazardous Substance Response Fund." Revenues from the response fund which would be available to compensate for specified costs or damages that result from the release of a hazardous substance into the environment. As reported by the Committee on Environment and Public Works, S. 1480 applies to releases of hazardous substances. Amendments numbered 1958 and 1965 would extend S. 1480 to deal with releases of oil into navigable waters.

Provisions similar to those contained in S. 1480 and the proposed amendments have been considered by various committees of the House of Representatives.<sup>1</sup>

The first part of this pamphlet contains a description of present law. Part II follows with a description of the revenue-related provisions of S. 1480 and the proposed Senate amendments (numbered 1958 and 1965). Part III contains a summary of the similar revenue-related provisions considered by the House of Representatives; and Part IV contains a description of the Administration proposal (introduced as S. 1341, by request). Finally, an Appendix presents a comparison of selected features of State oil spill liability funds.

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<sup>1</sup> H.R. 85 (the "Comprehensive Oil Pollution Liability and Compensation Act") (H. Rept. 96-172, parts I, II, and III) and H.R. 7020 (the "Hazardous Waste Containment Act") (H. Rept. 96-1016, parts I and II) are scheduled for consideration by the House of Representatives on September 10, 1980. H.R. 85 deals with releases of both oil and hazardous substances into navigable waters. H.R. 7020 deals with releases of hazardous wastes into media other than navigable waters, such as air, land and ground water.

## I. PRESENT LAW

### *Overview*

Under present law, there is no specially designated fund intended to compensate for damages and economic losses resulting from discharges of environmentally hazardous substances and wastes, such as oil and various organic and inorganic chemicals. Similarly, there is no excise tax or general fee imposed with respect to such substances, and earmarked for use in compensating for damages from harmful discharges. However, there are various State and Federal funds designated to compensate for damages and economic losses resulting from specific types of spills, releases, and discharges. The existing Federal funds that may pay third-party damages apply only with respect to oil spills and not to discharges of hazardous substances. In addition, in some instances, particular fees are imposed under present law with respect to certain petroleum.

Although present law contains numerous provisions which prohibit, or impose liability for, environmentally hazardous discharges, some damages remain uncompensated. This is due, in part, to inadequacies in existing State tort laws and economic and procedural barriers to timely recovery.

### *Selected Statutes*

#### *Federal Water Pollution Control Act ("Clean Water Act"), Section 311*

Section 311 of the Federal Water Pollution Control Act (33 U.S.C. 1331) establishes a \$35 million revolving fund maintained by fines, penalties and appropriations of general revenue. The fund may be used for cleanup of releases of oil and designated hazardous substances into navigable waters and restoration of accompanying natural resources. The Act also establishes strict, joint and several liability pertaining to responsibility for cleanup expenses, and authorizes the fund to seek reimbursement from parties who release oil or designated hazardous substances into navigable waters.

#### *The Trans-Alaska Pipeline Authorization Act (TAPAA)*

The TAPAA (43 U.S.C. sec. 1651) established a \$100 million Trans-Alaska Pipeline Liability Fund, and required the pipeline system (TAPS) to collect and deposit a \$.05 charge for each barrel of oil passing through TAPS. The Liability Fund is a quasi-public entity, and the fund's revenues are intended to be used to compensate for damages, including cleanup, restoration of natural resources, and economic loss, resulting from spills of oil transported through TAPS. Owners and operators are strictly liable, and the fund may seek to recover its expenses from responsible parties. Because of a \$100 million ceiling to which the Fund is subject, the fee will be suspended for such time as that maximum is achieved and maintained.

### *Outer Continental Shelf Amendments of 1978*

A \$200 million Offshore Oil Pollution Compensation Fund was established in the Treasury by the 1978 amendments to the Outer Continental Shelf Lands Act (43 U.S.C. sec. 1331). This Fund consists of monies generated by a fee of not more than \$.03 a barrel imposed on owners of oil from the Outer Continental Shelf. The fee is collected by the Internal Revenue Service, and may be reduced when the balance in the Fund reaches the \$200 million cap. The Fund may be used to compensate for damages, including cleanup, property damage and loss of income and tax revenue, resulting from spills of oil produced on the Outer Continental Shelf. Liability and financial responsibility requirements for facilities and vessels are defined, and the Fund may seek to recover its expenses from responsible parties. Collection of the fee is not subject to the generally applicable IRS enforcement powers.

### *Deep Water Port Act of 1974*

The Deep Water Port Act of 1974 (33 U.S.C. sec. 1502) established a \$100 million fund to compensate for damages resulting from oil pollution from vessels or facilities engaged in deepwater port operations. When operational, this fund will be maintained by a \$.02 a barrel fee assessed on oil loaded at a deepwater port. A spiller of deep water port oil would be strictly liable for resulting damages.

### *Resource Conservation and Recovery Act*

The Resource Conservation and Recovery Act provides for the regulation and control of operating hazardous waste disposal facilities, as well as the transportation, storage, and treatment of these wastes. Permits are required for treatment or storage facilities. The Environmental Protection Agency may sue to require cleanup of an active or inactive disposal site if the site is posing an imminent and substantial hazard to public health and if there is a known, solvent responsible party. However, this provision does not provide funds for cleanup of hazardous waste disposal sites when the owner is unknown, is not responsible, or is financially unable to pay for these costs.

### *Black Lung Benefits Revenue Act of 1977*

The Black Lung Benefits Revenue Act of 1977 (Pub. Law 95-227) imposes an excise tax on the sale of coal (other than lignite) by its producer. The tax is \$.50 a ton in the case of coal from underground mines, and \$.25 a ton in the case of coal from surface mines (Code sec. 4121(a)). However, the tax imposed on any ton of coal may not exceed 2 percent of the price at which the coal is sold. Receipts from this tax are earmarked for the Black Lung Disability Trust Fund.

The Act also allows coal mine operators to establish tax-exempt black lung trusts to finance liability for claims for compensation for disability or death due to pneumoconiosis under Black Lung Acts (Code sec. 501(c)(21)).

Under the Act, the Federally established Black Lung Disability Trust Fund may be used to compensate for covered disability if a coal mine operator does not initiate or continue timely benefit payments or to reimburse coal mine operators for benefit payments made to miners whose last coal mine employment preceded January 1, 1970. The Secre-

tary of the Treasury is instructed to seek reimbursement for benefit payments from coal mine operators when the Secretary determines that an operator was required to pay all or a portion of the benefits.

*State Statutes*

States have responded to the specific problems of hazardous substance releases by the enactment of a variety of laws. Responding to a request from the Senate Committee on Environment and Public Works, the Library of Congress identified twelve States which had enacted laws recognizing a right of recovery for damages suffered by private persons. Most of these expressly impose strict liability. Those States were: Alaska, California, Florida, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, North Carolina, Oregon, South Carolina, and Washington. Pennsylvania also expressly imposes strict liability, though its statute apparently is restricted to escapes of oil from pipelines which pollute wells. (The Appendix contains a list of States which maintained oil spill liability funds as of 1979.)

## II. DESCRIPTION OF S. 1480 AND PROPOSED AMENDMENTS

### A. S. 1480—Environmental Emergency Response Act

S. 1480, as reported by the Senate Committee on Environment and Public Works, applies to the release of hazardous chemicals onto land, into ground or surface water or into the air (hereinafter referred to collectively as the environment). It would establish a "Hazardous Substance Response Fund" (hereinafter referred to as the "response fund") for the purpose of providing funds necessary to pay for removal and cleanup costs and certain damage-claims resulting from release of hazardous substances (including waste oil but not other petroleum oil) into the environment. However, the bill does not apply to releases giving rise to claims for which an employer is liable under workmen's compensation laws, normal field application of fertilizer, emissions from the exhaust of a motor vehicle, and releases of certain radioactive materials. The bill also would create a permanent "Post-closure Liability Fund" which, under specified conditions, would assume responsibility for liabilities arising in connection with waste disposal facilities operated and later closed in accordance with permits issued under present law (subtitle C of the Solid Waste Disposal Act).

#### *Purposes of the response fund*

The response fund could be used to pay for the costs listed below.

(1) The costs of removal and certain damages resulting from releases if a person liable is not known, cannot be identified, or if a person liable has been presented a claim and has not satisfied it. Covered damages include:

(a) any injury, destruction or loss of government-controlled natural resources, including reasonable damage assessment costs,

(b) loss of income or profits or impairment of earning capacity due to personal injury or injury or destruction of real or personal property or natural resources (limited to 100 percent of lost income in the first year after the incident and 80 percent in the second year); and

(c) all out-of-pocket medical expenses within six years following discovery of exposure due to personal injury in cases in which there is a reasonable likelihood that the release significantly contributes to the injury.

(2) All costs of removal and other costs of carrying out the National Contingency Plan, as amended, including removal costs incurred and approved under the plan.

(3) The costs of establishing and maintaining Federal strike forces, emergency task forces or other response teams under the National

Contingency Plan, including the costs of equipment, similar overhead, and damage assessment capabilities.

(4) The costs of assessing injury, destruction or loss of natural resources.

(5) The costs of Federal or State restoration, rehabilitation or replacement of injured, destroyed or lost natural resources.

(6) Reimbursement of States that use monies they collected or appropriated to pay claims for costs of removal or damages for injury to resources, medical expenses or loss of income, providing such payments are pursuant to the National Contingency Plan and a contract under the Act.

(7) The costs of a program to identify, investigate and take abatement action under the Act.

(8) The costs of research related to the natural resource protection purposes of the Act and section 311 of the Clean Water Act, up to a maximum of \$10,000,000 per fiscal year.

(9) The costs of research to develop methods and technology for removal and remedial actions, including portable onsite technology.

(10) The administrative and personnel costs of administering the fund and the Act.

(11) The costs of epidemiologic studies, a victim registry for long-term health effect studies, and diagnostic services not otherwise available to determine the presence of long-latent diseases in exposed populations.

(12) The reasonable costs of expert witnesses to assist victims and the fund in recovering damages.

(13) Payment for loss of income or capital loss due to destruction, loss, condemnation, or restriction on use of fish, seafood or agricultural products and resources when sustained by agricultural producers or processors or commercial fishermen or fish or seafood processors.

(14) The costs of a program to protect the health and safety of response personnel.

Uses of the fund would be restricted further by the requirement that at least two-thirds of the fees and appropriations to the fund (\$2.7 billion over six years) be available to finance governmental costs. These costs are defined, in effect, as expenditures of the fund other than for items 9, 12 and 13 above, for item 1 (to the extent it relates to loss of income or profits or medical expenses) or administrative costs described in item 10 (to the extent attributable to uses of the fund which are not chargeable to governmental costs). The Fund could not be used for damage claims under items 1, 3, 4, 5, and 6 resulting from the field application of a registered pesticide. Individuals could not receive compensation for the same damages both under this act and under other laws. Except for items 1, 6, and 13, spending from the Fund would be subject to amounts provided in appropriations acts.

The bill establishes rules for liability of parties responsible for releases, and, generally, the Fund could recover its expenses from responsible parties. However, the Fund could not recover when the responsible party is not known or financially unable to pay, or when the release is caused by an act of God or an act of war. In addition,

the Fund could not recover damages under this act in cases in which emergency response or remedial action was not undertaken unless there were a significant amount of damages or a substantial danger to public health and welfare. Further, the Fund could not recover costs or damages resulting from the field application of a pesticide or from releases due to activities which have received a permit under various Federal environmental laws.

The third-party damages which may be compensated from the fund (items (1) (ii) and (iii), above) are fewer and of narrower scope than the damages for which a discharger of hazardous substances may be liable under other provisions of the bill. For example, a victim would have a Federal cause of action based on the principles of strict, joint and several liability to recover for damages to real and personal property from the discharger of a hazardous substance but could not recover these property damages from the fund.

The response fund would not be liable for any claim in excess of the total monies available in the response fund. These claims could be paid as additional monies are collected from fees or recoveries from responsible parties, etc. In addition, the response fund, if short of money, could borrow from the Treasury up to the amount of the fees and appropriations expected during the next fiscal year. The fees and response fund would terminate after September 30, 1986, unless the Congress took further action.

#### ***Financing of the response fund***

The response fund would be financed by industry fees, appropriations, penalties, recoveries from responsible parties, transfers of the Clean Water Act section 311 and section 504 funds, and interest on any invested monies. The industry fees could not exceed \$250 million in fiscal year 1981, \$525 million in fiscal year 1982, and \$700 million in subsequent years through fiscal year 1986. Thus, the fees could generate a total of up to \$3.575 billion over a six-year period. These fees would be imposed on the producer, manufacturer, importer, or exporter of any of 11 specified primary petrochemical (i.e., feedstocks) or 34 specified inorganic substances. A fee also would be levied on each barrel of petroleum oil received at a U.S. refinery or imported to, or exported from, the United States. (Thus, fees would be imposed on a total of 46 substances.)

During fiscal year 1981, the fees imposed on these substances would be those specified in the bill. The amount of the fee varies with the substance involved. These fees would continue in effect until the Secretary of the Treasury, in consultation with the Administrator of the Environmental Protection Agency, established a rate schedule. This schedule of fees could not result in fees in excess of 2 percent of the price of the taxable chemicals. In addition, the fee on primary petrochemicals feedstocks could not exceed \$20.00 a ton, the fee on inorganic substances could not exceed \$10.00 a ton, and the fee on petroleum oil could not exceed \$.03 a barrel. Further, the total revenues for any particular fiscal year may not exceed the limits specified in the following table:

[In millions of dollars; fiscal years]

Source of revenue	1981	1982	1983 and each year through 1986	Total 1981-86
<b>Fees</b>				
All primary petrochemicals	162	338	450	2,300
All inorganic raw materials	50	112	150	762
All petroleum oil	38	75	100	513
Subtotal	250	525	700	3,575
Appropriations	35	75	100	510
Total	285	600	800	4,085

In establishing fee rates based upon production volumes of the taxable substances, the bill also would permit the Secretary of the Treasury, beginning in the fourth year, to take into account the frequency with which particular chemicals are released into the environment. Additional provisions are included exempting fees on taxable primary petrochemicals and inorganic raw materials produced by recycling, used as a fuel used in the production of fertilizer, or produced solely as a by-product of pollution controls. The fee could be collected only once on any given quantity of a substance.

The fees would be assessed and collected by the Secretary of the Treasury through the Internal Revenue Service as if the fee were a manufacturers excise tax.

S. 1480 would authorize appropriations to the response fund in the amount of \$35 million in fiscal year 1981, \$75 million in fiscal year 1982 and \$100 million in each of the succeeding four years. Thus, \$510 million in appropriations would be authorized over a six-year period.

#### ***Post-closure Liability Fund***

The bill also would establish a separate Post-closure Liability Fund which would assume completely the liability of owners and operators of hazardous waste disposal facilities granted permits and properly closed under subtitle C of the Hazardous Waste Disposal Act (the Resource Conservation and Recovery Act). This fund would pay for monitoring and maintaining closed sites and assume liability for damages and cleanup expenses of such sites only if the facility meets three requirements. First, the facility must have been issued an individual permit under subtitle C of the Hazardous Waste Disposal Act. Secondly, the facility must have complied with each condition of the permit and the applicable regulations relating to closure or affecting the performance of the facility after closure. Finally, the facility and surrounding area must have been monitored by the taxpayer for up to five years after closure to demonstrate that there is no substantial risk of a release of hazardous waste into the environment.

The post-closure liability revolving fund would be financed by fees imposed on each unit of hazardous waste which is received by a per-

mitted or interim status hazardous waste facility and which will remain at the facility after its closure. The precise level of the fee on any particular substance would be determined by the Administrator of the Environmental Protection Agency who would also be required to conduct a study on the adequacy of the size of the fund. Initially, the fee is to be established at levels adequate to provide \$200 million, five years after fee collection begins. The post-closure fees would be separate from the response fund fees, and the post-closure liability fund would be permanent.

***Effective date***

The bill generally would be effective upon enactment except that fees would not be imposed until 180 days after enactment. However, claims could be paid with respect to loss of income or capital loss involving agricultural producers or processors with respect to releases after January 1, 1974, or involving commercial fishermen or fish or seafood processors with respect to releases after January 1, 1978. The Fund could also pay claims for medical expenses and for loss of income resulting from personal injury due to releases after January 1, 1977, or for diseases discovered after that date. Authority to collect fees or make expenditures from the response fund (but not the Post-closure Liability Fund) would expire on October 1, 1986.

## B. Senate Amendments to S. 1480—Oil Pollution Funds

### 1. Amendment No. 1958 ("Oil Spill Liability Act")

Senate amendment No. 1958 (proposed by Senator Magnuson) deals with issues relating to the discharge of oil into navigable waters. It would establish an "Oil Spill Compensation Fund" to provide the funds necessary for cleanup of, and compensation for damages resulting from, releases of oil into the navigable waters of the United States or the high seas.

The fund would be constituted from fees on crude oil received at any U.S. refinery or exported from or entered into the United States. The Secretary of the Treasury would set the fee at a level not in excess of 3 cents a barrel. The fee would be designed to maintain the fund at the level of \$250 million. In addition to the industry fees, fund assets would include monies recovered from parties responsible for spills and interest earned on any invested fund balance.

The fund would be available to pay claims for damages resulting from any discharge of oil including (1) cleanup costs; (2) personal injury; (3) injury to, or destruction of, real or personal property; (4) loss of use of any real or personal property; (5) injury to, or destruction of, natural resources; (6) loss of use of natural resources; (7) loss of profits or impairment of earning capacity resulting from damage to property or natural resources; and (8) loss of Federal, State, or local governmental revenues for a period not to exceed one year.

The new Oil Spill Compensation Fund would replace or absorb other existing Federal funds relating to oil spill liability, including the Offshore Oil Pollution Compensation Fund, the Trans-Alaska Pipeline Liability Fund, the Deep Water Port Fund, and the section 311 revolving fund of the Clean Water Act.

#### *Effective date*

The amendment would be effective upon enactment.

### 2. Amendment No. 1965 ("Oil Pollution Liability and Compensation Act of 1980")

Amendment No. 1965 (proposed by Senator Gravel) deals with issues relating to the discharge of oil into navigable waters. It would establish an "Oil Spill Liability Fund" to provide the funds necessary for cleanup of, and compensation for damages resulting from, releases of oil into the navigable waters of the United States or the high seas.

The fund would be constituted, in part, from a tax of 0.8 cents a barrel on crude oil received at any U.S. refinery or exported from the United States and on petroleum products entered into the United States. If the fund balance is \$150 million or less on September 30 of any year, the tax imposed during the following calendar year would be 1.6 cents a barrel. Similarly, if the fund balance exceeds \$250 million on September 30, no tax would be imposed during the following

calendar year. The Secretary of Treasury also could impose a surcharge of up to 1.4 cents a barrel if necessary to retire the fund's obligations to the Treasury.

In addition to the tax revenues, fund assets would include monies recovered from parties responsible for spills, interest earned on any invested fund balance, and any assets received from absorbed or replaced funds.

The fund would be available to pay claims for damages resulting from any discharge of oil including (1) cleanup costs; (2) personal injury; (3) injury to, or destruction of, real or personal property; (4) loss of use of any real or personal property; (5) injury to, or destruction of, natural resources; (6) loss of use of natural resources; (7) loss of profits or impairment of earning capacity resulting from damage to property or natural resources; and (8) loss of Federal, State, or local governmental revenues for a period not to exceed one year.

The new Oil Spill Liability Fund would replace or absorb other Federal funds relating to oil spill liability, including the Offshore Oil Pollution Compensation Fund, the Trans-Alaska Pipeline Liability Fund, the Deep Water Port Fund, and the section 311 revolving fund of the Clean Water Act.

***Effective date***

The amendment would be effective for discharges occurring after December 23, 1979. The taxes would be effective upon enactment.

### III. SUMMARY OF HOUSE OF REPRESENTATIVES ACTION

#### A. H.R. 85—Comprehensive Oil Pollution Liability and Compensation Act<sup>1</sup>

H.R. 85 deals with issues related to the discharge of oil and hazardous chemicals into navigable waters. It would establish a Comprehensive Oil Pollution Liability Trust Fund and a separate Hazardous Substance Pollution Liability Trust Fund for the purpose of providing the funds necessary to expedite the clean-up of, and the compensation for certain damages resulting from, releases of oil or hazardous substances which may occur in the navigable waters of the United States or the high seas. Except for Treasury regulations, regulations issued under this bill would be subject to a one-House veto.

##### *Excise taxes and trust funds*

H.R. 85 imposes excise taxes on crude oil, specified petrochemical feedstocks, and specified inorganic substances. These excise taxes are expected to raise \$75 million a year from oil, \$50 million from petroleum feedstocks and \$25 million from inorganic chemicals. Revenues from the excise tax on crude oil (1.3 cents a barrel) are to be deposited into a new "Comprehensive Oil Pollution Liability Trust Fund," the proceeds of which can be used to finance cleanup costs and pay claims for certain damages resulting from the discharge of oil into the navigable waters of the United States. Similarly, revenues from the excise taxes on petrochemical feedstocks (\$1.18 a ton) and on specified inorganic chemicals (\$0.31 a ton) are to be deposited into a new "Hazardous Substance Pollution Liability Trust Fund," the proceeds of which can be used to finance cleanup costs and to pay certain claims arising from discharges of hazardous substances into the navigable waters of the United States.

These new trust funds will absorb or replace other Federal funds relating to oil and hazardous substance liability—including the Off-shore Oil Pollution Compensation Fund, the Trans-Alaska Pipeline Liability Fund, the Deep Water Port Fund, and the section 311 revolving fund of the Clean Water Act. In addition to financing cleanup and removal costs, both Trust funds could pay (1) claims for property damage, (2) certain claims for loss of profits or impairment of earning capacity, and (3) claims for destruction of natural resources (if the claim is asserted by the President or by a State). The Trust Funds cannot borrow from the United States Treasury except that, to the extent necessary to accomplish the purposes of the fund, each fund

<sup>1</sup> H. Rept. 96-172, parts I, II, and III. This description refers to a substitute for H.R. 85 printed in the Congressional Record for August 27, 1980 (pp. H8029-8040). This substitute is made in order under the rule reported by the House Committee on Rules.

may borrow up to \$75 million during the first year of operation. No claim against a Trust Fund constitutes an entitlement from the United States. Claims against a Trust Fund will be payable only to the extent the Trust Fund has assets in excess of a \$30 million "cleanup reserve." Claims which are unpaid due to this reserve requirement will be deferred until excise tax revenues become available to pay them. The excise taxes will terminate after September 30, 1985.

In addition, the bill requires annual reports to the Congress by the Secretary of the Treasury on the operation and status of the trust funds.

#### *Effective date*

The provisions imposing excise taxes and establishing the trust funds would be effective October 1, 1980. The excise taxes would terminate after September 30, 1985. The liability and other provisions with respect to oil would be effective 180 days after enactment. Those relating to hazardous substances would be effective upon enactment.

#### *Revenue effect*

The excise taxes imposed under H.R. 85 would raise \$138 million in fiscal year 1981 and \$150 million per year in fiscal years 1982-1985, as shown in the following table.

#### ESTIMATED REVENUE EFFECTS FROM EXCISE TAXES ON PETROLEUM AND SPECIFIED CHEMICALS IN H.R. 85

[Millions of dollars]

	Fiscal years				
	1981	1982	1983	1984	1985
Excise tax on—					
Petroleum.....	69	75	75	75	75
Petrochemical feedstocks.....	46	50	50	50	50
Inorganic feedstocks.....	23	25	25	25	25
Total.....	138	150	150	150	150

## B. H.R. 7020—Hazardous Waste Containment Act<sup>1</sup>

### *Trust fund purposes*

H.R. 7020 creates a Hazardous Waste Response Trust Fund to address the release of hazardous waste from inactive waste sites to land, air, or ground water. The bill does not deal with the release of oil or other pollutants into the navigable waters of the United States. The trust fund may be used, to the extent provided in appropriations, to pay for (1) containment or removal of hazardous wastes released or in danger of being released into the environment, (2) emergency assistance to minimize the damages resulting from the release or threat of release, and (3) the reimbursement of expenses incurred in cleanup of hazardous waste releases. Rules for liability are provided, and the trust fund may seek to recover its expenses from responsible parties.

In addition, the bill as amended requires annual reports to the Congress by the Secretary of the Treasury on the operation and status of the trust fund.

### *Trust fund revenues*

The trust fund would be constituted from excise taxes, appropriations, and from recoveries from, and penalties imposed on, persons liable for the release of hazardous wastes. An estimated \$1.2 billion would go into the trust fund over a 4-year period. Appropriations to the trust fund in the amount of \$300 million over 4 years would be authorized. The remaining \$900 million would be raised by excise taxes on crude oil, specified petrochemical feedstocks and specified inorganic substances. These excise taxes are expected to raise \$164 million in fiscal year 1981 and \$179 million per year in fiscal years 1982 through 1985 as shown in the table below.

### ESTIMATED REVENUE EFFECTS FROM EXCISE TAXES ON PETROLEUM AND SPECIFIED CHEMICALS IN H.R. 7020

[Millions of dollars]

	Fiscal years				
	1981	1982	1983	1984	1985
Excise tax on—					
Petroleum.....	32	35	35	35	35
Petrochemical feedstocks.....	99	108	108	108	108
Inorganic feedstocks.....	33	36	36	36	36
Total.....	164	179	179	179	179

### *Effective date*

The excise tax and other provisions of H.R. 7020 would be effective October 1, 1980. The excise taxes would terminate after September 30, 1985, and payments out of the trust fund would be prohibited after September 30, 1985, unless further actions are taken by the Congress.

<sup>1</sup> H. Rept. 96-1016, parts I and II. This description refers to the bill as amended by the Committee on Ways and Means.

#### IV. ADMINISTRATION PROPOSAL

The Administration's proposal for a comprehensive fund (or "superfund") to compensate for environmental damages from hazardous discharges is substantially embodied in S. 1341 (introduced by request). The bill would create an "Oil, Hazardous Substances and Hazardous Waste Liability Fund," that would be used, to the extent provided in appropriations, to pay for cleanup costs; and, in the case of spills, (1) damages resulting from injury to, or destruction of, real or personal property; (2) damages resulting from injury to, or destruction of, natural resources; and (3) damages resulting from loss of opportunity to harvest marine life due to injury to, or destruction of, natural resources.

The fund would be constituted from \$1.625 billion in fees and appropriations (over a 4-year period), from recoveries from, and penalties imposed on, persons liable for releases of oil and hazardous substance, and from amounts presently held in other environmental funds that would be merged into the single fund contemplated in the bill. Appropriations to the fund in the amount of \$325 million over 4 years (\$50 million in fiscal 1981) would be authorized.

The Secretary of the Treasury would be required to impose fees (within specific limits) on oil refiners and exporters, petrochemical feedstock suppliers, and suppliers of inorganic elements and compounds to generate \$1.3 billion in revenue over a 4-year period (\$200 million in fiscal 1981). The precise amount of the fee with respect to any particular substance would be set by regulations prescribed by the Secretary of the Treasury. Assessment and collection of the fees would be accomplished by the Treasury and the Internal Revenue Service under the same rules as apply in assessment and collection of manufacturers excise taxes.

The fee and other provisions of S. 1341 would become effective with the first month beginning on or after the 180th day after enactment, and would be the subject of a comprehensive report to Congress within three years of the effective date.

## APPENDIX

### State Oil Spill Liability Funds

State	Authorizing State statute	Fund name	Method of financing	Size of fund
Alaska	Alaska Statutes, Title 22, 46.03.50 et. seq.	Oil Mitigation Coastal Protection Fund Account.	Annual risk charge, penalties, appropriations.	\$30 million.
California	California Codes, 13440.	State Water Pollution Cleanup and Abatement Account.	Appropriations, criminal and civil assessments.	No established size.
Florida	Florida Statutes Annotated, 14:376.11.	Florida Coastal Protection Trust.	Excise tax of 2 cents per barrel, plus registration fees, penalties, judgments.	\$35 million.
Maine	Maine Revised Statutes Annotated, Title 38, 551.	Maine Coastal Protection Fund.	Annual license fees based on 1/2 cents per barrel.	\$4 million.
Maryland	Maryland Code Annotated, Natural Resources, 8:1411.	Maryland Oil Disaster Containment, Cleanup and Contingency Fund.	Annual fees ranging from \$250 to \$5,000.	\$1 million.
New Jersey	New Jersey Statutes Annotated, C.23: 11a-3.	New Jersey Spill Compensation Fund.	1 cent per barrel	\$25 million.

New York	New York Navigation: 180.	New York Environmental Protection and Compensation Fund.	1 cent per barrel fee	\$25 million.
North Carolina	North Carolina General Statutes, 143-483.	Oil Pollution Protection Fund.	Penalties and appropriations funds.	No established size.
Oregon	Oregon Revised Statutes, 468.810.	Oil Spillage Control Fund.	All penalties	No established size.
Texas	Texas Code Annotated, Water, 26. 265.	Texas Coastal Protection Fund.	Appropriations	\$5 million.
Virginia	Virginia Code 62.1-44.34:2.7 (1978 Com. supp.).	Oil Spill Contingency Fund.	Appropriations	No established size.
Washington	Washington Revised Code, 90.48.390.	Coastal Protection Fund.	Civil penalties, fees, charges, and 1 cent per gallon from marine use refund.	No established limit.

**Senator MOYNIHAN.** The Committee on Finance is holding today a formal hearing on a bill not as yet referred to the committee, but which is clearly within the committee's jurisdiction, the Hazardous Substance, Pollution, and Liability Act, also known as the "Superfund."

Today is Rosh Hashanah, and it may be that there are persons who would have wished to testify at today's hearing and are not in conscience able to do so. If there are such, a second hearing will be held by the committee.

I have the honor to serve both on the Committee on the Environment and Public Works and the Finance Committee, and the measure before is one of which I am a cosponsor in the company of the distinguished author and leading advocate of the measure, Senator Culver, who will appear before us shortly.

cord as if read.

**Senator MOYNIHAN.** Senator Roth, good morning to you, and Senator Chafee. Do you gentlemen have statements that you would like to make at this point?

**Senator ROTH.** Mr. Chairman, as the Finance Committee begins consideration of superfund legislation, I want to emphasize my belief that it is urgently important for us to enact legislation to clean up hazardous waste sites. I believe Congress can and must fashion legislation to clean up the old hazardous waste sites which are causing risk and harm to the environment and to individuals.

I believe Congress can and must fashion legislation to protect the American people from the release of hazardous substances abandoned in inactive waste sites and spills. Furthermore, I believe we can and must enact legislation to resolve the question over who has the responsibility for cleaning up the hazardous waste sites. In this regard we must enact legislation which holds particularly accountable those companies and individuals which are responsible for the sites and spills.

I believe that it is important for this legislation to be carefully considered and enacted. We must enact a law which takes into account both the environmental and economic consequences.

Therefore, in my judgment, it is most important to develop legislation that cleans up the hazardous sites and spills, protects unsuspecting individuals from the dangers of such sites, and allows for the continued growth of an industry which employs hundreds of thousands of people, which is facing increased foreign competition, and which is already facing the same problems threatening our other basic industries, such as autos and steel.

Thank you, Mr. Chairman.

**Senator MOYNIHAN.** Thank you, Senator Roth.

**Senator Chafee.**

**Senator CHAFEE.** Mr. Chairman, first I would like to join in your welcome of Senator Culver who on our Environment and Public Works Committee has been the prime mover of this legislation of which I am a cosponsor. He had labored and done a splendid job in moving this along.

I have a statement, Mr. Chairman, which I am going to submit for the record.

[The prepared statement of Senator Chafee follows:]

# chafee



John H. Chafee  
U.S. Senator for Rhode Island  
3103 Dirksen  
Washington, D.C. 20510

Thursday, September 11, 1980

OPENING REMARKS

SEN. JOHN H. CHAFEE (R-R.I.)

COMMITTEE ON FINANCE HEARING

SUPERFUND LEGISLATION (S. 1480)

A lot of people are saying that Congress has run amuck, that we are rushing headlong and misinformed into passing an ill-advised piece of hazardous substance legislation. It is said that if we could "just get past the emotions of upcoming elections, the Members could take a better look at whether legislation is truly needed to deal with hazardous waste sites and spills."

In other words, we should wait.

I respectfully disagree. I serve on the Senate Committee on Environment and Public Works and have since 1977. We have spent the better part of the last three years examining oil and hazardous spill legislation.

Three years is not exactly rushing into something -- in fact, I suspect it is rather slow in the eyes of the millions of citizens who are waiting for the Congress to do something about the wastes seeping into their water supplies and the toxic materials exploding on railcars and being dumped into our streams.

The time has come to pass a superfund bill.

It is true that we have public laws that deal with many environmental problems. The regulations to carry out these laws are awesome, to say the least. But there are gaps, serious gaps, in existing laws -- such as the hundreds, perhaps thousands, of abandoned waste sites, for which no remedy has yet been legislated.

I suspect that we are only beginning to attempt to deal with what is really buried or otherwise present in our land and water. The most sobering thought, as we act on the policy for dealing with hazardous substances, is that our decision now affects generations to come. If we fail to act, the number of abandoned sites and the effects of spills will increase a hundred-fold.

The Environment and Public Works Committee -- and indeed, the entire Senate -- passed an oil and hazardous spill bill (S. 2083) in 1978. We were not able to get final legislation with the House before adjournment. Especially in light of Love Canal and other tragedies, Environment and Public Works spent all of 1979 and half of 1980 developing a hazardous waste site and spill bill (S. 1480), which has been approved by that committee and part of which is the subject of these two days of hearings in the Finance Committee.

for more information contact David A. Narsavage, Press Secretary (202) 224-6167.

We are here to examine the fee system that will provide, along with federal appropriations, the funds for the Hazardous Substance Response Fund (superfund). S. 1480 establishes a fee on petrochemical feedstocks, crude oil and certain inorganic materials. That fee is responsible for seven-eighths of the revenues to the fund. The other one-eighth would come from federal appropriations.

The Environment Committee allowed for the fee to be graduated at a future date, on the basis of spill and waste contribution experience. Other actions were also taken in the committee to handle particular problems, and I assume we will hear further suggestions this morning on additional changes to the fee.

I am not here to say that S. 1480 is perfect. There are concerns which remain and should be debated on the Senate floor. Many of those concerns deal with sections of the legislation that are not the subject of these Finance Committee hearings.

But I do know one thing. The fear that is present among people back home is astounding. And our capability to clean up spills and sites, restore damaged resources, and compensate victims is dismal. This is not a new issue. We have wrestled with it for years. It is time to move.

Senator CHAFEE. Just let me say that a lot of people are saying, let's slow down, let's take our time. This is an emotional issue that we are rushing ahead on. I would like to say, to review the bidding, that on the Environment and Public Works, where both you and I and Senator Culver sit, this matter has been considered since 1977. We spent 3 years of hearings on examining oil and hazardous waste spill legislation. So I don't think that 3 years is exactly rushing into anything.

I personally feel that it is time that we move ahead with this legislation. The time has come to pass the superfund bill. The problems out there are getting worse. I, myself, consider this one of the more serious problems that face our Nation on the domestic side in the balance of this century. Indeed, I don't see that it is going to go away. It is going to get worse.

The spills or the dumps such as Love Canal have received a great deal of publicity, but there are scores of others all over the country that have not received the attention which are just as pernicious as the Love Canal situation.

So I am delighted that we are moving ahead with these hearings, and I commend you for holding them, Mr. Chairman.

Senator MOYNIHAN. Thank you.

May I join you in that last remark. We have before us a number of reports from the Environmental Protection Agency on a whole range of hazardous waste sites that are, in many respects, similar to the Love Canal. Among them is the Stump Gap Creek area in West Point, Ky. There is also the rather dramatic site, the Valley of the Drums, in Bullit County, Ky., and many others that are equally as dangerous.

I would like to emphasize a point that Senator Chafee has made. If the Love Canal was an event that shocked the Nation into the recognition of this problem and the moving of this legislation, I think that it would be equally a shock if the Congress, having gotten this far, failed to complete its work on this bill.

This is a test of the institution and a test of its leadership. We know full well there are persons who are hoping that this legisla-

tion will be killed by the clock, and the clock is running. If they succeed, we will have failed, and I hope the Congress will be put on notice. At least this is the judgment of the members of this committee.

Senator Bradley, welcome, sir.

Senator BRADLEY. Thank you, Mr. Chairman.

I would like to reemphasize your sentiments about the need to get a superfund bill out of this Congress. If Love Canal was the event that shocked the American public as to the need of a superfund, the fire in Elizabeth, N.J., last spring at Chemical Control Corp. only reaffirmed the fears, or confirmed the fears of the American people that there is a toxic time bomb ticking across this country, in undisclosed and enormous numbers of sites, and that it is the fundamental responsibility of government to protect the public health and safety of the American people.

This is what this bill is directed toward. I compliment you on the hearings. I wish they could have been on another day, but I understand fully that this was our only opportunity. I look forward to the hearing.

Senator MOYNIHAN. Thank you, Senator.

Senator Dole, we welcome you this morning.

Senator DOLE. I did want to make an appearance. I will not be able to stay for the entire length of the hearing. There is another matter going on in Kansas that I must attend to, the elections.

Senator BRADLEY. I thought that it was the harvest.

Senator DOLE. No.

I think, as you have already expressed, the best thing to do now is to get on with the hearing, and I will stay as long as I can.

Senator MOYNIHAN. Thank you.

Senator Baucus.

Senator BAUCUS. I have no comments.

Senator MOYNIHAN. Our first witness is our colleague and friend, the most distinguished Senator from Iowa, Senator Culver.

Would you come forward, sir. This is legislation with which you, have been associated as the chairman of the Resource Protection Subcommittee of the Committee on Environmental Public Works. No one knows it better than you, and no one is more fitted to open these hearings.

We welcome you to the committee, sir.

#### STATEMENT OF SENATOR JOHN C. CULVER, U.S. SENATOR FROM THE STATE OF IOWA

Senator CULVER. Thank you very much, Mr. Chairman, and members of the committee.

I am very grateful for this opportunity to appear this morning to speak to you on S. 1480, the Environmental Emergency Response Act.

The Committee on Environment and Public Works reported this bill out on July 11 of this year by a vote of 11 to 1, after 11 days of hearings and 17 days of markup.

As the principal sponsor of this legislation, and as the chairman of one of the two subcommittees that participated in drafting it, I deeply appreciate this opportunity to review with the Senate Finance Committee the provisions of and the need for this bill.

I am appearing today not only to discuss the legislation, but, Mr. Chairman, also to announce that Senator Stafford, Senator Heinz, and I are releasing a report from the Surgeon General of the United States which concludes that toxic chemical releases are creating a major and growing national health problem. The implementation of existing environmental laws will not be enough to prevent this problem from getting worse, the Surgeon General concludes. I would like copies of this report to be made a part of my statement here this morning.

The purpose of this bill is to provide a way for the Government to rapidly clean up and mitigate chemical disasters, to assure injured victims prompt and adequate compensation, and to create incentives for both a high standard of care and for a responsible party to clean up its own releases.

Mr. Chairman, as a result of your own extremely valuable participation in its drafting, you are aware of the four basic elements of the legislation.

First, it makes those who release hazardous substances strictly liable for cleanup costs, mitigation and third-party damages. Thus it assures that the cost of chemical poison releases are borne by those responsible for the releases.

Second, the bill establishes broad Federal response authority and a fund to clean up and mitigate damages where a liable party does not clean up or cannot be found.

Third, the bill provides an opportunity through the courts and a more limited opportunity through the fund for victims to receive prompt and adequate compensation for losses and injuries where the responsible party has not settled the claim.

Fourth, the fund is financed by those industries and consumers who profit from products and services that are associated with the hazardous substances which impose risks on society.

A little more than 2 years ago, the dangers posed by chemical dump sites began to intrude into the national consciousness as a result of the problems at Love Canal, but the magnitude of the problem, as you, Mr. Chairman, have already alluded to, goes far beyond that one site.

EPA has documented damages at 250 known hazardous chemical dump sites. Chemical contamination of ground water has been found at 130 of these sites. The only major water supply for the eastern third of my own State of Iowa has been threatened by leaking waste along the Cedar River.

The Committee on Environment and Public Works has become aware that the scope of toxic chemical releases is far broader than dump sites, and that the impact of these releases is much more pervasive than the health problems suffered by communities around dump sites alone.

Among the major incidents have been the kepone release which contaminated the James River in Virginia, closing a \$2 million a year commercial fishing ground; the PCB dumping that decimated commercial fishing in the Hudson just when it was coming back from other pollution problems; and the sacrifice of about \$100 million of livestock and dairy products due to contamination of cattle feed in Michigan.

Other instances of chemical contamination have recently occurred. In water-short California, 52 wells supplying water to nearly 400,000 residents of the San Gabriel Valley were found to contain up to 600 parts per million of TCE which is poisonous and causes cancer. Just last month, 40 square miles of fishing grounds were closed due to a PCB spill in St. Bernard's Parish, La.

Because of the number of incidents like these, the Senate decided in the last Congress that a much larger fund, financed primarily by industry, was needed to respond to spills and to pay some victim damages.

The chemical industry has downplayed these individual incidents, and at one time the Chemical Manufacturers Association testified that the Environmental Protection Agency had evidence of only 60 chemical spills per year in its files.

Our committee asked the Environmental Protection Agency to search its files and verify what evidence was actually there. Last January we received documentation of 3,076 voluntarily reported hazardous substances spills in the 2-year period between October 1977 and September 1979.

The chemical manufacturers have said that the real problem is just so-called orphan dump sites, and in one press release said that only 431 sites across the Nation were potentially hazardous. But the EPA has cataloged nearly 6,000 disposal sites where further investigation is needed and is adding 200 more each month.

A survey by Congressman Eckhardt, in which the Nation's 53 largest chemical companies cooperated, found 1,100 disposal sites holding about 100 million tons of chemical waste which are not subject to any regulatory control under existing law.

The Committee on Environment and Public Works also sought to document actual damages which have occurred due to mishandling of chemicals. At the request of former Senator Muskie, the Library of Congress compiled a 246-page catalog titled "Research Losses from Surface Water, Groundwater, and Atmospheric Contamination."

This catalog of damages, Mr. Chairman, identifies thousands of well closings or major fill kills as a result of chemical contamination. The catalog cited estimates that half of the potential fishing in the Great Lakes is lost annually due to contamination-related curtailments. The Hudson, the Susquehanna, the James, the Delaware, and the Shenandoah Rivers, among others, are very seriously polluted by chemicals.

Moreover, this catalog did not include agricultural losses resulting from feed contamination, or contamination of livestock or food. Food losses were discussed in another report, "Environmental Contaminants in Food," issued by the Office of Technology Assessment last December. Only six States responded to OTA's question about economic losses due to food contamination. Those six States, however, reported a staggering \$282 million in losses over a 10-year period.

The most important concern of this bill, Mr. Chairman, is the effect that chemical releases are having on public health. The Surgeon General's report that Senator Stafford, Senator Heinz, and I are releasing today was requested on April 25, 1980. The Under

Secretary of Health and Human Services, Nathan Stark, said in his letter transmitting the Surgeon General's report:

The Surgeon General believes that, while at this time it is impossible to determine the precise dimensions of the toxic chemical problem, it is clear that it is a major and growing health problem. We believe that toxic chemicals are adding to the disease burden of the United States in a significant, although as yet ill-defined way. In addition, we believe that this problem will become more manifest in the years ahead. We believe the magnitude of the public health risk associated with toxic chemicals will continue to increase until we are successful in controlling the introduction of these chemicals into our environment.

Further, the Surgeon General writes:

It is our belief that full implementation of recent environmental control legislation will sharply reduce the introduction of toxic chemicals and subsequently the exposure of our people to such chemicals. We believe, however, that through this decade we will have to confront a series of environmental emergencies. Control of the future introduction of chemicals will not in itself be sufficient to address this major health problem. Serious efforts will have to be made to provide for the identification and cleanup of existing sources of toxic chemical contamination.

In summary, Mr. Chairman, our committee documented that at least 3,076 chemical spills have occurred during the past 2 years; that EPA is investigating nearly 6,000 dumping grounds as suspected or known hazards to public health or resources; and that thousands of impoundment are potential threats to water supplies.

The public health is being damaged, irreplaceable water supplies are being lost, and hundreds of millions of dollars worth of crops, livestock, and foodstuffs are being rendered inedible by mishandling of chemicals and their wastes.

To meet these problems, the Committee on Environment and Public Works has reported out S. 1480. In considering the revenue aspects of this bill, I urge that the members of the Committee on Finance keep a number of points in mind.

First, this bill does not duplicate existing Federal law. The environmental laws on the books seek to control certain types of specifically designated pollutants through regulation. With respect to emergency response and cleanup, existing laws provide only for limited Government response to spills into surface waters.

Senator MOYNIHAN. Senator Culver, would you let me interrupt for a question at this point.

You recall our shock when the Love Canal events unfolded and our scurrying through the statute books, to find a mechanism that would enable the Federal Government to respond quickly and efficiently by providing financial aid to that area. We essentially were not able to do so, were we?

Senator CULVER. That is certainly correct, Mr. Chairman. Both the confusion with regard to bureaucratic authority to move into an emergency situation and give it direction and control, and as you properly suggested in terms of having available resources to deal with that particular emergency at appropriate levels of government.

Senator MOYNIHAN. If Love Canal were to appear today, and this bill were on the books, and the funds were in place, we could respond in the precise way that we could not 2 years ago.

Senator CULVER. That is correct.

Mr. Chairman, you might also recall that in Love Canal the cleanup costs were estimated to be immediately in the neighborhood of \$30 million, but we have outstanding law suits in excess of

\$2.5 to \$3 billion currently pending in that same situation. It was estimated on the occasion of our hearings that for \$4 million, if the proper steps were taken at the outset for adequate protection from the waste involved, there would never have been a problem at Love Canal.

Mr. Chairman, to meet these problems, we have proposed S. 1480, and as I indicated, this legislation does not duplicate existing Federal law. The appropriated fund of \$35 million has proven to be insufficient in that limited area where Government response is available for spills into surface waters.

Second, S. 1480 is not a regulatory bill and I think that this is an important aspect and a feature that I think is very laudable and desirable. It does not provide for setting national regulatory standards. It comes into effect only when the parties responsible have failed to take appropriate action, and harm has occurred or is threatened to occur.

Third, this bill does not impose significant new costs on our economy. The costs that it addresses are already being borne today by victims and by the Federal, State, and local governments. The effect of this bill is to shift these costs to those segments of industry that have exposed society to these costs, and to consumers of the products that pose these threats.

The Committee on Environment and Public Works heard testimony from victims, state attorneys general, and private tort attorneys indicating that victims are routinely left totally without compensation for damage, or are forced by high court costs to settle for small fractions of their actual damages.

This testimony was disputed by the chemical industry, and therefore we asked the Library of Congress to commission an independent study of compensation for toxic substances damage. In the course of this study thousands of incidents were revealed, and six were selected for detailed followup. I would like to read from the conclusion of that study, and I quote:

The legal mechanisms in the states studied are generally inadequate for redressing toxic substances related harms. Traditional tort laws present substantial barriers to recovery.

The bill provides, therefore, two ways for a victim to obtain compensation for damages. One of these is a limited access to the fund for certain kinds of damages. These are out-of-pocket medical expenses for up to 6 years after discovery of the ailment, 2 years of compensation for wages lost due to personal injury from a hazardous substances release, and losses of food producers and processors as a result of hazardous substances releases.

Second, a victim may sue in court. The chemical industry has sought to characterize this access to Federal court as unprecedented or uncommon. This is not correct. At least 36 other laws give plaintiffs access to Federal courts.

The bill also creates a 6-year fund totaling \$4.1 billion to finance Government response to releases of hazardous substances where industry is not responding. Two-thirds of the funds would be reserved for emergency response and remedy of releases. The remaining one-third would be available to compensate victims.

The fund would be financed by a combination of industry fees and appropriations in the ratio of \$7 in fees for each \$1 of appropri-

ation. After 6 years, no additional fees could be collected or moneys appropriated without congressional reauthorization.

Other sources of revenue to the fund would include costs recovered from liable parties, interest earnings and a small transfer of funds from the existing appropriated funds under section 311 of the Clean Water Act.

The Chemical Manufacturers Association has called a fund of this size excessive. Unfortunately, Mr. Chairman, it is not excessive, I wish that it were. In fact, based on our most recent information, it appears to be insufficient to even remedy the releases likely to be found at hazardous waste sites that EPA is now currently investigating.

The chemical industry has seriously underestimated the cost of responding to the average hazardous waste site. It has significantly understated the number of such sites requiring Government response, and it has ignored the need to respond to releases of hazardous substances from spills or other chemical incidents.

The chemical companies have also said that to have seven-eighths of the funds come from the industry is punitive. To the contrary, Mr. Chairman, it is based on a simple principle of equity. Those segments of industry and consumers who benefit from commerce in hazardous substances, that is those who really impose the risk initially on society, should properly respond to releases of these hazardous substances. Taxpayers are too often sent the bill for problems they, in fact, did not create.

The chemical industry has also argued that it is unfair for today's industry to pay for past practices of others. Every congressional committee that has considered this legislation so far has rejected this premise. Indeed, Congressman Eckhardt, and a second survey by the Congressional Research Service have found that the bulk of the firms doing commerce in hazardous substances today are the same firms that were in business 10, 20, and even 30 years ago, also some mergers have occurred and names have changed.

Finally, the actual impact on the chemical industry, Mr. Chairman, is substantially less than seven-eighths of the fund. Because the industry's share is tax deductible, the general taxpayer share works out after taxes to 52 percent of the fund, and the industry's share to only 48 percent of the fund.

In selecting an industry fee system from among five major alternatives, the Environment and Public Works Committee attempted to achieve the best balance of five objectives. These are: equity, rapid implementation, legal defensibility, administrative simplicity, and minimum economic impacts. The committee report addresses each of these points in detail.

Finally, the fee system includes several important limitations and conditions, and no major economic impacts have been identified. According to the Congressional Budget Office, which our committee asked to study the fee system, "The effect of the fees on prices and production volumes of final products is small, and the fee should have at most a very small impact on the GNP, the price level, or unemployment."

Mr. Chairman, the Committee on Environment and Public Works welcomes and greatly appreciates the interest of the Finance Committee in the revenue issues contained in section 5 of

this bill. Our committee has considered this issue, as has been pointed out by Senator Chafee and others, for over a year. Its predecessor was passed by the Senate during the 95th Congress. Before reporting this bill, the committee agreed on more than 25 significant amendments.

I respectfully urge the committee to resist modifications beyond the revenue provisions of this bill, and to join with my committee in resolving any other issues on the Senate floor, where all Members may participate in the debate.

Finally, Mr. Chairman, I want to emphasize that time is of the essence. We have heard many times that Love Canal is a national tragedy. It is not a national tragedy, Mr. Chairman, in all due respect, it is a human tragedy, and none of us can go back to our respective States and say that we will not find a smaller version of Love Canals invading someone's backyard.

The bill must come to the floor as quickly as possible, if we are to be able to respond to this overwhelming public expectation and need. I am greatly appreciative, Mr. Chairman, for the opportunity to appear here today, and for your recognition of my time pressure this morning.

[The prepared statement of Senator Culver follows:]

#### STATEMENT OF SENATOR JOHN CULVER

Mr. Chairman and members of the Committee on Finance, thank you very much for this opportunity to speak to you today on S. 1480, "The Environmental Emergency Response Act." The Committee on the Environment and Public Works reported this bill on July 11 by a vote of 11-1, after 11 days of hearings and 17 days of markup.

As the principal sponsor of this bill and as chairman of one of the two subcommittees that drafted it, I deeply appreciate this opportunity to explain the provisions of—and need for—this bill.

I am appearing today not only to discuss the bill, but also to announce that Senators Stafford, Heinz and I are releasing a report from the Surgeon General of the United States which concludes that toxic chemical releases are creating a major and growing national health problem. The implementation of existing environmental laws will not be enough to prevent this problem from getting worse, the Surgeon General concludes. Copies of this report are being made available to the news media this morning.

The purposes of this bill are to provide a way for the government to rapidly clean up and mitigate chemical disasters, to assure injured victims prompt and adequate compensation, and to create an incentive for both a high standard of care and for a responsible party to clean up its own releases.

The bill has four basic elements to achieve its goals. First, it makes those who release hazardous substances strictly liable for cleanup costs, mitigation and third-party damages. Thus, it assures that the costs of chemical poison releases are borne by those responsible for the releases.

Second, the bill establishes broad federal response authority and a fund to clean up and mitigate damages where a liable party does not clean up or cannot be found.

Third, the bill provides an opportunity through the courts, and a more limited opportunity through the fund, for victims to receive prompt and adequate compensation for losses and injuries where the responsible party has not settled the claim.

Fourth, the fund is financed by those industries and consumers who profit from products and services associated with the hazardous substances which impose risks on society.

A little more than two years ago, the dangers posed by chemical dumpsites began to intrude into the national consciousness as a result of the problems at Love Canal. But the magnitude of the problem goes far beyond that one site. EPA has documented damages at 250 known hazardous chemical dumpsites. Chemical contamination of groundwater has been found at 130 of these sites. The only major water supply for the eastern third of Iowa has been threatened by leaking waste along the Cedar River.

The Committee on Environment and Public Works has become aware that the scope of toxic chemical releases is far broader than dumpsites, and that the impact of these releases is much more pervasive than the health problems suffered by communities around dumpsites.

Among the major incidents have been: The kepone release which contaminated the James River in Virginia, closing a \$2 million a year commercial fishing ground; the PCB dumping that decimated chemical fishing in the Hudson just when it was coming back from other pollution problems; and the sacrifice of about \$100 million in livestock and dairy products due to contamination of cattle feed in Michigan. Other instances of chemical contamination have recently occurred. In water-short California, 52 wells supplying water to nearly 400,000 residents of the San Gabriel Valley were found to contain up to 600 parts per million of trichloroethylene (TCE) which is poisonous and causes cancer. Just last month, 40 square miles of fishing grounds were closed due to a PCB spill in St. Bernard's Parish, Louisiana. Because of the number of incidents like these, the Senate decided in the last Congress that a much larger fund, financed primarily by industry, was needed to respond to spills and to pay some victim damages.

The chemical industry has downplayed these individual incidents, and at one time the Chemical Manufacturers Association testified that the Environmental Protection Agency had evidence of only 60 chemical spills per year in its files. Our committee asked EPA to search its files and verify what evidence was actually there. Last January, we received documentation of 3,076 voluntarily-reported hazardous substance spills in the two-year period between October, 1977 and September, 1979.

The chemical manufacturers have said that the real problem is just so-called "orphan" dumpsites, and in one press release said that only 431 sites across the nation were "potentially hazardous." But the EPA has catalogued nearly 6,000 disposal sites where further investigation is needed, and is adding 200 more a month.

A survey by Congressman Eckhardt, in which the nation's 53 largest chemical companies cooperated, found 1,100 disposal sites, holding about 100 million tons of chemical wastes which are not subject to any regulatory control under existing law.

The Committee on the Environment and Public Works also sought to document actual damages which have occurred due to mishandling of chemicals. At the request of former Senator Muskie, the Library of Congress compiled a 246-page catalogue titled "Resource Losses from Surface Water, Groundwater, and Atmospheric contamination."

This catalogue of damages identifies thousands of well-closings or major fish kills as a result of chemical contamination. The catalogue cited estimates that half of the potential fishing in the Great Lakes is lost annually due to contamination-related curtailments. The Hudson, Susquehanna, the James, the Delaware, and the Shenandoah Rivers, among others, are seriously polluted by chemicals.

Moreover, the catalogue did not include agricultural losses resulting from feed contamination, or contamination by livestock or food. Food losses were discussed in another report, "Environmental Contaminants in Food," issued by the Office of Technology Assessment last December. Only six states responded to OTA's question about economic losses due to food contamination. Those six states reported a staggering \$282 million in losses over a 10-year period.

The most important concern of this bill is the effect that chemical releases are having on public health. The Surgeon General's report that Senator Stafford and I are releasing today was requested on April 25, 1980. The Under-Secretary of Health and Human Services, Nathan Stark, said in his letter transmitting the Surgeon General's report:

"The Surgeon General believes that, while at this time it is impossible to determine the precise dimensions of the toxic chemical problem, it is clear that it is a major and growing health problem. We believe that toxic chemicals are adding to the disease burden of the United States in a significant, although as yet, ill-defined way. In addition, we believe that this problem will become more manifest in the years ahead . . . We believe the magnitude of the public health risk associated with toxic chemicals will continue to increase until we are successful in controlling the introduction of these chemicals into our environment.

It is our hope and belief that full implementation of recent environmental control legislation will sharply reduce the introduction of toxic chemicals and, subsequently, the exposure of our people to such chemicals. We believe, however, that through this decade we will have to confront a series of environmental emergencies . . . Control of the future introduction of chemicals will not in itself be sufficient to address this major health problem. Serious efforts will have to be made to provide

for the identification and clean-up of existing sources of toxic chemical contamination."

In summary, Mr. Chairman, our committee documented that at least 3,076 chemical spills have occurred during the past two years; that EPA is investigating nearly 6,000 dumping grounds as suspected or known hazards to public health or resources; and that thousands of impoundments are potential threats to water supplies. The public health is being damaged, irreplaceable water supplies are being lost, and hundreds of millions of dollars worth of crops, livestock, and foodstuffs are being rendered inedible by mishandling of chemicals and their wastes.

To meet these problems, the Committee on Environment and Public Works has reported out S. 1480, "The Environmental Emergency Response Act." In considering the revenue aspects of this bill, I urge that the members of the Committee on Finance keep a number of points in mind.

First, this bill does not duplicate existing federal law. The environmental laws on the books seek to control certain types of specifically designated pollutants through regulation. With respect to emergency response and clean-up, existing laws provide only for limited government response to spills into surface waters. The appropriated fund of \$35 million has proven to be insufficient, even with this narrow scope.

Second, S. 1480 is not a regulatory bill. It does not provide for setting national regulatory standards. It comes into effect only when the parties responsible have failed to take appropriate action, and harm has occurred or is threatened.

And third, this bill does not impose significant new costs on our economy. The costs that it addresses are already being borne by victims and by the federal, state and local governments. The effect of this bill is to shift these costs to those segments of industry that have exposed society to these costs and to consumers of the products that pose these risks. The Committee on Environment and Public Works heard testimony from victims, state attorneys general and private tort attorneys indicating that victims are routinely left totally without compensation for damage, or are forced by high court costs to settle for small fractions of their actual damages. This testimony was disputed by the chemical industry. Therefore, we asked the Library of Congress to commission an independent study of compensation for toxic substances damage. In the course of this study, thousands of incidents were reviewed, and six were selected for detailed follow-up. I would like to read from the conclusion of that study:

"The legal mechanisms in the states studied are generally inadequate for redressing toxic substances-related harms. Traditional tort laws present substantial barriers to recovery."

The bill provides two ways for a victim to obtain compensation for damages. One of these is a limited access to the fund for certain kinds of damages. These are: Out of pocket medical expenses for up to six years after discovery of the ailment, two year's compensation for wages lost due to personal injury from a hazardous substance release, and losses of food producers and processors as a result of hazardous substances releases.

Second, a victim may sue in federal court. The chemical industry has sought to characterize this access as unprecedented or uncommon. This is not true. At least 36 other laws give plaintiffs access to federal courts.

The bill also creates a six-year fund totaling \$4.1 billion to finance government response to releases of hazardous substances where industry is not responding. Two-thirds of the fund would be reserved for emergency response and remedy of releases. The remaining one-third would be available to compensate victims.

The fund would be financed by a combination of industry fees and appropriations, in the ratio of seven dollars in fees for each dollar of appropriations. After six years, no additional fees could be collected or monies appropriated without congressional reauthorization. Other federal sources of revenue to the fund would include costs recovered from liable parties, interest earnings, and a small transfer of funds from the existing appropriated fund under section 311 of the Clean Water Act.

The Chemical Manufacturers Association has called a fund of this size "excessive." Unfortunately, it is not excessive. In fact, based on our most recent information, it appears to be insufficient to remedy the releases likely to be found at hazardous waste sites that EPA is now investigating. The chemical industry has seriously underestimated the cost of responding to the average hazardous waste site, it has significantly understated the number of such sites requiring government response, and it has ignored the need to respond to releases of hazardous substances from spills or other chemical incidents.

The chemical companies have also said that to have seven-eighths of the fund come from the industry is punitive. To the contrary, it is based on a simple principle of equity: Those segments of industry and consumers who benefit from commerce in hazardous substances—that is, those who impose the risks—should provide the

money needed to respond to releases of these hazardous substances. Taxpayers are too often sent a bill for problems they did not create.

The chemical industry has also argued that it is unfair for today's industry to pay for past practices of others. Every congressional committee so far has rejected this premise. Indeed, Congressman Eckhardt's survey and a second survey by the Congressional Research Service have found the bulk of the firms doing commerce in hazardous substances today are the same firms that were in business 10 and even 30 years ago, although some mergers have occurred and names have changed.

And finally, the actual impact on the chemical industry is substantially less than seven-eighths of the fund. Because the industry's share is tax deductible, the general taxpayer's share works out after taxes to 52 percent of the fund, and the industry's share to only 48 percent of the fund.

In selecting an industry fee system from among five major alternatives, the Environment and Public Works Committee tried to achieve the best balance on five objectives: These are equity, rapid implementation, legal defensibility, administrative simplicity, and minimum economic impacts. The Committee report addresses each of these points in detail.

The fee system includes several important limitations and conditions, and no major economic impacts have been identified. According to the Congressional Budget Office—which our committee asked to study the fee system—"The effect of the fees on prices and production volumes of final products is small," and "the fees should have at most a very small impact on GNP, the price level, or unemployment.

Mr. Chairman, the Committee on the Environment and Public Works welcomes the interest of the Finance Committee in the revenue issues contained in section 5 of the bill. My committee has considered this issue for over a year. Its predecessor was passed by the Senate during the 95th Congress. Before reporting this bill, the full Committee agreed upon more than 25 significant amendments. I urge the committee to resist modifications beyond the revenue provisions of this bill, and to join with my committee in resolving any other issues on the Senate floor, where all members may participate in the debate.

Finally, Mr. Chairman, I want to emphasize that time is of the essence. We have heard many times that Love Canal is a national tragedy. It is not a national tragedy, it is a human tragedy. And none of us can go back to our states and say we will not find a smaller version of Love Canal invading someone's backyard.

The bill must come to the floor as quickly as possible, if we are to respond to this overwhelming public expectation and need.

Thank you, Mr. Chairman.

**Senator MOYNIHAN.** Senator Culver, we thank you for superb testimony, as you have given superb leadership in this matter.

I am particularly heartened by your assertion that this bill must go to the floor and pass the Senate, and be enacted in this Congress. You are convinced that this can be done?

**Senator CULVER.** Yes, sir, I am.

**Senator MOYNIHAN.** We have the legislation. We have the time. But the clock is running against us. Senator Bradley referred to a toxic time bomb. We are racing against that clock in this Congress, and I hope that we are not going to let down the American people in this matter.

We will follow the rules of the committee. Do you have a moment to stay with us?

**Senator CULVER.** I have another commitment at 10:30, Mr. Chairman, but I would be glad to respond to your question.

**Senator MOYNIHAN.** Senator Roth, do you have questions?

**Senator ROTH.** I, too, would like to congratulate my dear friend and colleague on his very excellent testimony.

I only have one question. I would like to get a little better hold on the costs. You said, in the case of the New York problem, it cost \$4 million initially, and now there is \$3 or \$4 billion worth of claims?

**Senator CULVER.** The actual cleanup costs, Senator Roth, were in the neighborhood of \$30 million, but we now have outstanding claims in the neighborhood of \$2.5 to \$3 billion.

Senator ROTH. If this legislation were on the books, what would be the total cost?

Senator CULVER. I would have to get an analysis of how that would break out. I believe that some of the lawsuits, as you probably know being an attorney, are excessive in their claim, and that would have to be negotiated. But we have very strict limitations.

For example, in this legislation we would begin with the cleanup costs, clearly, so that that \$30 million would be essentially absorbed. Then, second, with regard to health and property damages, and loss of income from unemployment, we have very strict limitations on the amount: 2 years in the case of unemployment; health damages limited to out of pocket. We have a very tight 6-year statute in effect.

Second, we have very carefully circumscribed the liabilities in that regard so that a lot of the open-ended pain and suffering, and so forth, claims that are implicit in the pending lawsuits would not in any way be compensated for under this legislation.

So it would not cover the ball park range of potential liabilities and costs that I have mentioned.

Senator ROTH. Thank you, Mr. Chairman.

Senator MOYNIHAN. Senator Chafee.

Senator CHAFEE. I have no questions, Mr. Chairman.

Senator MOYNIHAN. Senator Bradley.

Senator BRADLEY. I have no questions, Mr. Chairman, other than to compliment our colleague on his outstanding work here, and we hope that we will bring it to fruition soon.

Senator CULVER. Thank you, Senator.

Senator MOYNIHAN. Senator Dole.

Senator DOLE. I have no questions, except that I think we do need to take a look at this proposal. Our answer to the energy crisis was to tax the oil industry \$227 billion. It did not help anything, but it was a revenue measure. I think there are certain aspects of this proposal that may be more revenue raising than addressing the problem.

I think that we have to take a look at what it may do down the line. If you start imposing heavy fees and taxes, does it have any impact on the economy? I don't suggest that we can avoid the problem, but I can think of businesses in my State that could be hurt. We have a witness later on who might be driven out of business if the costs are increased because fees are imposed.

So I think despite, no doubt, the laudible purposes of S. 1480, I would hope that it is a reasonable proposal that addresses the problem without destroying the industry. We have a habit of doing that.

Senator CULVER. I certainly respect the expression of concern, Senator Dole, and I want to assure you that this is an aspect, the setting of fee, that was very carefully explored. We were sensitive to international competition, the impacts in that regard, the GNP, and so forth. This is one of the primary reasons that we commissioned the studies that we do have available, and that will accompany properly your consideration of it.

I certainly think that we were sensitive to that, and in no way wanted to put it at a distinct economic disadvantage, or with the kind of consequences that you suggest.

I think that we can do both. I believe that reasonable, responsible people will make that same conclusion.

Senator DOLE. I share that view, and I hope we can do both. Our committee does that frequently. I think that we are able to reach a consensus that does not do violence, outside of one case where I think we made a rather vast mistake, but that is debatable.

I am concerned that while we are trying to address the problem, which certainly you and Senator Moynihan have been focusing on more than many of us, we have to keep that in mind. We will have testimony, not from the big chemical companies, but from the small companies with 100 employees, or 200 employees, who would like to stay in business. I assume that we are at least going to give them a hearing.

Senator MOYNIHAN. My memory may be faulty in this regard, but I thought, Senator Dole, that our response to the energy crisis was to allow the oil companies to quadruple their prices. Do I have that wrong? [Laughter.]

Senator DOLE. We just have not gotten any more energy, and that is the problem. We go out and penalize an industry, and then say, "Produce more," and their profits will be addressed through the tax system. We have done that fairly well. But we are not here to address that issue, although I would be happy to debate it at the appropriate time.

Senator MOYNIHAN. Senator Baucus.

Senator BAUCUS. I have no questions, Mr. Chairman, except to commend and praise Senator Culver. He has recognized this problem and he has done more than just talk about it. Senator Culver, you have done something about it. I frankly feel that if this body had more people as courageous and with as much vision as you, and worked as hard as you, we would pass a lot more pieces of legislation such as this.

It is clear to me that without your leadership this bill probably would not pass this year. I wanted to tell you how much I personally appreciate your efforts. I think you have done a terrific job.

Senator MOYNIHAN. Senator Danforth.

Senator DANFORTH. Senator Culver, one of the questions that we are going to have to face is on whom the tax will be imposed—the producer of the substance or the disposer of it.

It is my understanding that the bill that your committee reported imposes the tax on the producer of the hazardous substance and not the disposer.

Senator CULVER. Yes, sir, the primary stocks, so-called, as opposed to the generator of the waste. We looked at a formulation involving a far more sophisticated and complex application of the fees to all the generators. It was just mind boggling in terms of the complexity of our economy.

So I would hope that you would agree that the formula we have adopted is both, I think, economically much more appropriate and efficient to administer, and fairer and less complicated.

Senator DANFORTH. Thank you, Senator.

Senator MOYNIHAN. May I make a point, for those in the audience who have not gone into the details of the bill. The approach that the Committee on Environment and Public Works chose was

to impose fees based on the quantity of the feedstock from which toxic substances eventually are produced.

There are 46 such in the bill, only 46 in a world of chemicals that is incomparably greater, and they involve some 700 producers in a nation with more than 4 million firms. We have sought to be as efficient and precise, and I think that it has been successful, beyond our expectations.

Senator Heinz.

Senator HEINZ. Thank you, Mr. Chairman.

I want to associate myself with the thrust of Senator Culver's testimony. I am a cosponsor of S. 1480, and I want to draw to everyone's attention something that Senator Culver mentioned, which is that he, Senator Stafford, and I are today releasing the Surgeon General's report, wherein the Surgeon General states that the toxic chemical wastes are a major and growing health problem.

He points clearly to the immediate need for a Federal superfund to begin to clean up the over 5,700 known or suspected toxic waste problems in the United States.

Many people mentioned Love Canal and it is a serious problem, but we have our own share of serious problems in my home State of Pennsylvania, and this is a national problem as evidenced at Pittston, Pa., where people lived for days literally with the fear of breathing cyanide gas. Also just recently in Youngsville, Pa., PCB contaminants have infiltrated the soil 400 feet from the town's water supply.

There are literally thousands of Love Canals, Pittstons, Youngsvilles, all over America, and the Surgeon General's report reaffirms what the people who live near the Love Canals, the Pittstons and Youngsvilles already know, which is that toxic chemicals are hazardous to health.

The report is significant in that it places one of the most respected medical investigative teams in the country on record as saying that toxic chemicals in the environment are adding to the disease burden in the United States. I am particularly concerned about the Surgeon General's conclusion, and I quote: "We believe that this problem will become more manifest in the years to come."

For that reason, Mr. Chairman, I believe that Congress must move aggressively to see that the problem is solved before we find that our inaction has caused irreparable damage to public health.

I would ask unanimous consent that my full opening statement be placed in the record at the appropriate point, and I want to commend Senator Culver for very thorough and comprehensive testimony.

Senator MOYNIHAN. Without objection, so ordered.

[The prepared statement of Senator Heinz follows:]

#### STATEMENT OF SENATOR JOHN HEINZ

Mr. Chairman, I commend you for scheduling these hearings on the Superfund legislation to finance cleanup, containment, and compensation of victims of hazardous waste discharges and abandoned sites. My home state of Pennsylvania is literally at the epicenter of this chemical time bomb—producing ten times as much hazardous waste as can safely be disposed of within its boundaries, receiving an illicit cargo of 15,000 truckloads of hazardous wastes per year from neighboring states, and, until the past few months, imposing penalties that represented only a slap on the wrist of hazardous waste law violators. Passage of this legislation is a top priority of the public officials and residents of my state, as evidenced by the

hundreds of letters I have received from constituents supporting the bill. I am therefore heartened that the opposition to S. 1480 represents not outright opposition to a "Superfund" but rather some honest disagreement over the best means to an end.

I would like to spend just a few minutes citing examples of the environmental health hazards related to chemical wastes that have developed in my state in recent years—and why existing Federal law is inadequate. Then, having established the need for some sort of Superfund bill, I would like to suggest some key issues that critics of S. 1480 might wish to address in their testimony so that we might have a more rational basis for assessing alternative proposals.

First, on the need for Superfund . . . , several incidents in Pennsylvania with which I have been personally involved have made me aware of the urgent need for this legislation.

Consider, for example, Pittston, Pa., where over 3.5 million gallons of oil mixed with poisonous industrial wastes were illegally dumped into mineshafts underlying the township. Only when this noxious concoction began spewing into the Susquehanna River at the rate of several thousand gallons per day, forming a 35-mile long slick, were the results of this "midnight dumping" discovered. At one point, other officials and I donned gas masks in Pittston as the combination and reaction of the buried chemicals were forming deadly cyanide gas. Already, EPA has spent hundreds of thousands of dollars just containing the Pittston site and its attorneys have looked the other way as the Clean Water Act's Section 311(k) fund has been put to uses for which it was never intended. But a full-fledged cleanup would cost in excess of \$10 million—or one-third of what is now available nationwide for all such cleanups.

In Montgomery and Bucks Counties, just outside Philadelphia, concentrations of TCE's in drinking water supplies as high as 220 parts per billion have been detected. Although we were able to secure public health testing for residents, the contamination has yet to be removed.

In Northwestern Pennsylvania, at Youngsville, after two and a half years 450 leaking barrels of PCB's were finally removed from an unsafe storage site just 400 feet from the water supply for Youngsville and only 125 yards from the Broken Straw, a tributary of the Allegheny River. Although the drums were finally removed in July, dangerously high levels of PCB contamination in the soil and groundwater still remain.

At the Melvin Wade dump, just outside Philadelphia in Chester, truckload after truckload of drums containing sodium copper cyanide, phenol, benzene, and other toxics was illegally dumped. Only when the dump ignited in a fire that threatened evacuation of the town and resulted in the hospitalization of 47 firemen was the presence of the toxic chemicals discovered. Following several visits to the site to meet with citizens rightfully concerned for their health and that of their children after deformed rat fetuses had been found in the area, I was successful in securing public health testing by the Center for Disease Control for the residents of Chester. And the Pennsylvania Department of Environmental Resources has already spent \$350,000 to remove 15,000 barrels from the site. However, removal of soil and water contamination could cost upwards of \$3 million—well beyond the resources of existing programs.

Rather than spend any more time citing examples of the need for this legislation, let me now turn to several issues that I hope the critics of S. 1480 will address. Over the past several weeks, those of us who serve on the Finance Committee—especially those of us on the Committee who also happen to be cosponsors of the bill—have been told that the provisions of S. 1480 are too onerous, that they represent a radical departure from current legal practice, and that this legislation ought to be scuttled in favor of a more limited approach, the House Commerce Committee bill, H.R. 7020.

I support the thrust of S. 1480 and most of all want to see a Superfund bill signed into law as soon as possible. I have no pride of authorship in and am not wedded to every line of S. 1480. But before we can rationally evaluate S. 1480 compared to other proposals, those who would like to see midnight dumping on or of S. 1480 need to address the following issues:

First, if it is grossly inequitable to finance Superfund through taxes levied on the chemical industry, why is it more equitable to fund it via taxes levied on the public at large? Would a feedstock fee not in fact be passed along the chemical production and consumption chain, thereby internalizing the external costs now imposed on society by those who manufacture and use chemical products?

Second, to what extent are the fees to be levied under S. 1480 actually an onerous burden on industry? What percentage of total sales would the fees represent? And to what extent will the manufacturers of petrochemical feedstocks be able to pass

these costs onto their customers, again reflecting in the price of the product its true cost to society

Third, since a major criticism of S. 1480 is that it is inequitable for innocent companies to pay for the sins of others, is this inequity not corrected to the extent that S. 1480's strict liability provisions make those found to be responsible for hazardous waste discharges bear all of the financial burden and accordingly compensate the fund for expenditures? Is this not a free-market, anti-regulatory approach that incorporates safe handling of hazardous wastes into the profit and loss considerations of individual firms?

Fourth, to what extent, if at all, does the House Commerce Committee bill address environmental health threats created by the discharge of hazardous wastes other than from abandoned sites, for example, releases into navigable waters, contamination of drinking water supplies, and product impurities?

Fifth, what perfections to the fee structure ought we to be considering? Should we attempt to maintain the administrative simplicity of the current fee structure, allowing the workings of the market and recovery from responsible parties for fund expenditures to allocate the cost burden more equitably to those who improperly handle hazardous wastes? What specific exemptions from the proposed fee structure might be warranted given the properties of certain substances or the international competitiveness of others?

In closing, Mr. Chairman, I look forward to these hearings as an opportunity to perfect this vitally needed legislation and to hopefully expedite its consideration by the full Senate.

**Senator MOYNIHAN.** We thank you, Senator Heinz.

Senator Bentsen, who has been a moving force in this matter in the Committee on Environment and Public Works, and is also a member of this Committee on Finance is here.

Senator Bentsen, would you like to make some comments at this point?

**Senator BENTSEN.** I have no comments.

**Senator MOYNIHAN.** In that case, we would like to thank our distinguished witness and colleague, congratulating him as we do, and resolving that this matter will be acted upon in this Congress.

**Senator DOLE.** May I just say a word because I would not want my remarks to be misinterpreted.

I think you are right. I think we should act upon something in this Congress. Certainly, and I think I speak for almost everyone on our side, we want to do that. I think that we can work out some of our differences, but it should be done this year.

[The prepared statement of Senator Dole follows:]

#### STATEMENT OF SENATOR DOLE

Today's hearings focus on an important response to a very serious problem. Recent publicity on Love Canal and similar toxic substances disposal sites have brought home to Members of this Committee and to all Americans the serious consequence that may flow from the release of hazardous chemicals onto the land, into water, or in the air. When we consider this legislation, we must also balance the need to clean up these sites and to compensate victims with the state of our economy and with the international competitive position of the affected industries.

Four bills and three general approaches should be considered by this Committee when we attempt to deal with the problem of spills of hazardous substances. The House bills, H.R. 7020 and H.R. 85, I understand are scheduled to go to the House floor early next week. They apparently take a more limited approach to solving this problem. S. 1480 has been reported by the Senate Committee on Environment and Public Works. Of all the bills, I understand it to be the most sweeping. The Administration's proposal appears to be more in line with bills reported by the House Ways & Means Committee.

I fully understand the problem that these hazardous substances bills address. I fully support the passage at an early time, of legislation that will clean up toxic disposal sites and compensate victims. I hope these hearings will help this Committee answer important questions about the size of the tax needed to fill the Superfund, how the tax should be imposed on industry, whether a waste end tax has

advantages over one that is unrelated to a company's culpability, and whether this fund and the tax should be sunsetted.

Senator MOYNIHAN. May I keep you long enough to repeat what Senator Dole said earlier. This committee, in the manner of the Environment and Public Works Committee, has a tradition of working together on a bipartisan basis, settling differences and emerging unified on a matter of this kind. I think that Senator Dole's statement is extraordinarily important and heartening, and we thank you for it.

Thank you, Senator Culver.

Senator CULVER. Thank you very much, Mr. Chairman.

Senator MOYNIHAN. We next hear a panel from the administration, Hon. Douglas M. Costle, who is the Administrator of the Environmental Protection Agency, and the not less Hon. Emil M. Sunley, Deputy Assistant Secretary of the Treasury for Tax Analysis.

We welcome you, gentlemen, as our most expert witnesses from the administration in this matter.

Can we have order.

Mr. Costle, would you proceed, sir. You do have an associate with you, if you would introduce him for the record.

**STATEMENT OF HON. DOUGLAS M. COSTLE, ADMINISTRATOR,  
ENVIRONMENTAL PROTECTION AGENCY, ACCOMPANIED BY  
SWEP DAVIS, ASSOCIATE ASSISTANT ADMINISTRATOR FOR  
WATER AND WASTE MANAGEMENT**

Mr. COSTLE. Yes, Mr. Chairman, I would like to introduce my colleague, Mr. Swepp Davis, Assistant Administrator for Water and Waste Management, and who has had the primary responsibility within EPA in pulling together the superfund proposal, and working with the Congress in that regard.

Senator MOYNIHAN. Mr. Davis, we welcome you to the committee.

Mr. COSTLE. I appreciate, Mr. Chairman, it is customary to begin testimony by saying that you are pleased to be here and have an opportunity to discuss this bill, but if I may I would like to be more blunt. I am here frankly because I am deeply worried. I share precisely your concern that time is running out for the passage of some of the most badly needed legislation of this decade, legislation which is one of this administration's top five legislative priorities. In fact, the President himself, as you are aware, has written directly to Senator Randolph urging enactment in this session.

In the last 3 years, as several on this panel pointed, the Congress has been taking enormous strides toward legislation that can be enacted, and in this last year there has been a very intensive learning curve, I think, for all of us in terms of the kind of challenge we really face.

The problems being addressed are complex, and as you are keenly aware the end of the session and the time for resolving them is approaching with what seems to be ever-increasing speed.

Because of this, Mr. Chairman, I come today to make a personal plea that the legislation not be allowed to bog down when we are so close now to our goal, that it not be permitted to become a victim of the calendar. Let me begin by raising the most basic

question of all, "Why superfund? 'before we start discussing the financial aspects of the legislation.

The problem of releases of oil and hazardous substances and wastes is real and immediate. During the past 5 years there has been an average of about 11,000 oilspills per year from all sources in the United States, with an average of 17 million gallons being spilled per year. Further, catastrophic spills of the *Campeche* and *Argo Merchant* class can cause the total to leap upward radically in any given year.

Our information concerning spills of hazardous substances is not as complete, but during the fiscal year 1978-79 period, over 3,000 such spills, ranging from minor to serious in about the same proportion, interestingly, as oilspills, were reported to EPA. Because the reporting of hazardous substances spills is now mandatory, we expect as we saw in the case of oilspills a dramatic increase in the number that will be reported over the next few years.

As you know, the more serious spills often have environmental and public health implications, including loss of life, contamination of water supplies and food products, fish kills, and destruction of livestock and wildlife, more dangerous than those of oilspills.

The situation concerning the release of hazardous substances from hazardous waste disposal sites is, frankly, Mr. Chairman, even more grim. The past few years have brought to public attention unforgettable series of incidents resulting from improper hazardous waste management—the continuing tragedy, the human tragedy of Love Canal, the pollution of the water supply of over 300,000 people in Iowa, and the discovery of up to 20,000 to 30,000 discarded, leaking, and unlabeled barrels of chemical wastes in the Valley of the Drums in Kentucky are but a few examples.

In 1979, an EPA contractor estimated the total number of hazardous waste sites to range between 32,000 and 50,000, and the number of sites posing a significant health or environmental problem to be between 1,200 and 2,000.

In spite of early skepticism on the part of certain industrial groups, our investigative efforts and other studies over the last year indicate that the earlier projection was fairly accurate.

Of some 1,000 sites investigated to date, we have found more than 250 that need remedial action. We still have more than 6,000 candidate sites to investigate, and we are becoming aware of about 200 more, as you pointed out, Mr. Chairman, every month. In July alone, we learned of 671 additional sites.

In addition, several States such as New Jersey, New York, and Louisiana have started their own investigative efforts and are finding numerous additional sites that pose or may pose threats to the public and the environment. This legacy of many years of uncontrolled hazardous waste disposal may well be the most serious environmental problem facing the Nation today, and for remaining decades.

Confronted by these problems, we were forced to realize that existing legal authorities are inadequate to deal with them in many respects. The most important statutory tool we have is section 311 of the Federal Water Pollution Control Act, which for notification, emergency governmental response, and liability for

cleanup costs for spills of oil and designated hazardous substances which reach navigable waters.

Section 311 also provides a revolving fund to finance the necessary up-front Government response costs, with recovery from the liable party being returned to the fund. Despite the fact that the response mechanism itself is very effective, there are many limitations which inhibit the value of the section for this larger problem.

First, its applicability is limited to spills or threats of spills into navigable waters. Releases into air, onto land, or into ground water are not covered. This severely limits the section's applicability to releases from waste sites and many hazardous substances spills.

Second, section 311 is applicable only to oil and designated hazardous substances. A discharge of a substance not specifically technically identified or designated under the section, or which cannot be identified because it is commingled waste, would not be covered.

Another critical limitation relates to the size of the fund. The authorized funding level is \$35 million. Even at the full authorized level, there is simply no way that it can adequately finance even the most minimal attempts to deal with the site problem that we find ourselves now confronted with.

The other existing legislation which relates to the problems we are discussing is the Solid Waste Disposal Act. In brief, that act is aimed at preventing hazardous wastes from ever being released in an environmentally harmful way, rather than at trying to deal with such releases when they occur. It is, therefore, not well suited to remedying the critical problem of inactive or abandoned sites, or as referred to "orphan sites."

The administration, in putting together a proposal to be presented to this Congress, used the existing building blocks of the oil only superfund which it proposed to the last Congress and section 311, particularly its valuable emphasis on front-end cleanup with recovery through stringent liability, which also encourages private clean up. The result was Senate 1341, a comprehensive approach to spills of oil and hazardous substances and to releases from abandoned or inactive sites.

Having described the considerations, Mr. Chairman, which impelled us to put forward our proposed bill, I would now like to note some of the provisions of S. 1480 that are similar to those found in S. 1341, and more specifically that the financing mechanism in S. 1480 to a large extent parallels our proposals and reflects a general acceptance of a feedstock approach as do those in the two bills, H.R. 7020 and H.R. 85, scheduled to be brought before the full House for consideration next week.

Both the administration proposal and S. 1480 would establish a fund to finance the implementation of the legislation. Both would base that fund primarily on industry contributions, 80 percent in S. 1341, 87.5 percent, as I recall, in S. 1480. Both have sunset provisions for the fund, both apply limits to the money raised from industry, caps, and both utilize a feedstock system.

A feedstock approach would impose fees or taxes at the beginning of the commercial chain of production, distribution, consumption, transportation, and disposal of hazardous substances. It would do this by assessing 11 primary petrochemicals, 34 inorganic raw

materials, and crude oil produced domestically, imported or exported.

These 46 substances are either hazardous themselves, or they are the basic building blocks used to generate all major inorganic and synthetic organic hazardous products and wastes.

The feedstock system distributes costs broadly, evenly, and we think efficiently among all those who produce and consume hazardous substances and generate hazardous wastes. It can be implemented quickly and with much less redtape and administrative burden than other options. It would involve fewer than 700 companies and, as the chairman pointed out, just 46 substances, instead of hundreds of thousands of firms and hundreds of substances as in the other options.

We felt and feel strongly that funding for the program should come as broadly as possible from those segments of industry which are the most responsible for imposing risks on society and have the greatest knowledge of and control over these risks and have received the greatest direct economic benefits.

The 46 substances subject to the feedstock system meet at least two or more of the following criteria: They are inherently hazardous or hazardous in a number of forms, as intermediates or final products; they are hazardous in some form if released; hazardous wastes are generated in producing them or their intermediate and final products; they are capable in one or more forms of increasing the hazardous potential of other substances; and they are produced in significant quantities.

Thus, a fee may attach to a product even though it is itself environmentally benign, since earlier in the chain of production, distribution, consumption, and disposal it used a hazardous substance; or later in the chain it will be used to generate a hazardous substance.

The 46 substances have a clear nexus to the problem; 32 of the 46 substances are designated now as hazardous or are proposed for designation. All are used in volume to make other hazardous substances. Almost all hazardous substances are made from these 46 substances.

At 250 hazardous waste disposal sites where damages to health and/or the environment have been found, 243 of the sites either contained 1 or more of the 46 substances that we are referring to or a number of derivatives of these substances. Approximately half of the 250 damage cases involved 1 or more of these 46 substances.

The approximately 700 companies who supply these 46 substances and who will pay, therefore, the fee are concentrated in the organic and inorganic, crude oil and heavy metals industries. Almost all hazardous substances are either products of these industries or are generated by using their products, and these industries account for approximately 77 percent of all hazardous wastes that are generated.

Let me stress the fact, if I may, Mr. Chairman, that the feedstock system is not punitive—it is not a scheme for imposing huge fines or liabilities. Actual liability for cleanup costs and appropriate damages is imposed on the specific person or persons responsible for the release or harm. The economic impacts of the industry

contribution would be minimal, a truly insignificant burden in light of the benefits reaped and the size and profits of the industry.

The feedstock fee is levied once at the beginning of the chain of production and commerce, where its impact is minimal. It becomes even less important as a percentage of total production cost as it progresses throughout the chain.

Further, no sector of an industry will be placed at a competitive disadvantage because a feedstock fee or tax is passed on to all subsequent chemicals. In addition, S. 1480 like our bill contains a mix of caps, as we pointed out, to further insure that no undue economic effect is produced.

Another factor, Mr. Chairman, we considered, administrative feasibility boils down to a single assertion that this is the only fee system suggested which we feel is workable. It is quickly implementable.

Under any other fee or tax, levied at any other point in the production chain, there would be tens of thousands more collection points and a corresponding increase in the administrative burden on Government and the paperwork burden on industry.

More importantly, however, the alternative which we considered are just not viable. A system based on the degree of hazard of the substance produced would involve the weighing of basically non-comparable attributes and would be meaningless in the absence of some certainty as to the environment into which any particular release of the substance might occur.

Should a minute amount of a highly toxic substance be charged more or less than a larger amount of a less dangerous one? Should it matter what the likelihood of release is, even if it could be predicted? Whether it is more likely to be into air or water, or upon land?

In short, a degree of hazard fee system would be a perpetual invitation to litigation, and I think that that is not a sound foundation for a major health and environmental program.

Another possibility, frankly, Mr. Chairman, that we investigated was fee imposed upon the end of the chain of production. That is, upon the ultimate receiver of the waste. While that appeared to have some surface appeal, it proved to have more serious drawbacks.

The economic effect on the disposer would be much greater than if the cost had been dissipated throughout the system, and the extra costs would create a considerable incentive to avoid involvement in the regulatory system being established under the Solid Waste Disposal Act. In short, the incentive for "midnight dumping" would be increased substantially.

Let me leave this point by observing that in our discussions of the fee system with many affected groups, we have asked repeatedly for any suggestions they might have for a better system. To date, no one has suggested one that would in fact avoid the problems that I have mentioned. Moreover, no one has ever seriously disputed, to my knowledge, our assessment of the minimal economic impact our system would have.

I might add here that I find it ironic that those who attack our proposals the most have nothing better to offer in their place, and that the industries most opposed to our superfund approach have

much to lose if one is not enacted. Public confidence in their ability and willingness to treat their waste products properly is practically nonexistent, and without the reassurance a strong superfund bill would provide, I think, and that is my personal judgment, their problems of credibility would only increase.

In addition to the feedstock fee, both our proposal and S. 1480 provide the inclusion of some appropriate moneys in the fund in order to provide against any early implementation delays and to assure scrutiny of the use of the fund and of the use of the fund by the administration and the Congress.

The percentage is limited to 20 percent of the fund in our bill, and as I recall 12.5 percent in S. 1480, because of the strong feeling expressed earlier that those who are responsible for the risks and reap the benefits should pay. The taxpayer should not be forced to remedy problems they did not create, when the costs involved can be allocated to those more specifically responsible.

As a final and more philosophical note, Mr. Chairman, I might point out that superfund is the only major environmental legislation for years which does not establish a new regulatory regime or impose new strictures and rules on the Nation at large. It imposes costs and comes into play only where there is a specific problem.

To summarize and conclude, only a comprehensive approach based on adequate and assured funding can provide the basis for an effective governmental response to the grave threats to health and the environment presented by releases of oil and hazardous substances and the nightmare of past hazardous waste disposal practices.

Not surprisingly, the Congress is taking varying approaches to the enactment of such comprehensive legislation, as evidence by the varied provisions of S. 1480, H.R. 85, and H.R. 7020. As stated earlier, enactment of a comprehensive bill is one of the administration's top legislative priorities. Accordingly, my staff and other administration members are available to assist in the final formulation of a bill. To this end we will strive to seek enactment of a bill that: Addresses the problems of oil and hazardous substances spills and releases of abandoned hazardous waste sites; finances the program from a fund based mainly on fees imposed on industries and on appropriations; establishes a joint, strict, and several liability standard; and requires appropriate participation by the States in addressing the problem of abandoned hazardous waste sites.

Finally, Mr. Chairman, I cannot emphasize enough that time is of the essence if legislation is to be passed during this Congress, and personally and on behalf of the administration I urge you strongly to complete any action you may take as quickly as prudent after this hearing as possible.

Existing statutes and programs are, as Senator Culver pointed out, completely overwhelmed by the problem facing us daily from oil and hazardous substances spills and releases from hazardous waste sites.

Mr. Chairman, this concludes my prepared remarks. My colleagues and I will be happy to respond to any questions you may have.

[The prepared statement of Mr. Costle follows:]

STATEMENT OF  
HONORABLE DOUGLAS M. COSTLE  
ADMINISTRATOR  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
BEFORE THE  
COMMITTEE ON FINANCE  
UNITED STATES SENATE  
SEPTEMBER 11, 1980

Good morning, Mr. Chairman. I am Douglas M. Costle, Administrator of the Environmental Protection Agency, and I am accompanied here today by Swep T. Davis, Associate Assistant Administrator for Water and Waste Management for the Agency.

It is customary to begin testimony by saying, "I am pleased to be here to have the opportunity to discuss the bill which is the subject of this hearing," but I will be more blunt and say I am here because I am deeply worried. I am concerned that time is running out for the passage of some of the most badly needed legislation of this decade, legislation which is one of the Administration's five top legislative priorities. In fact, the President himself has written directly to Senator Randolph urging enactment.

In the last year, the Congress has taken great strides toward the passage of a comprehensive scheme for dealing with the problems of spills of oil and hazardous substances and releases from abandoned hazardous waste sites. \*The problems being addressed are complex, however, and as you are keenly aware, the end of the session and of the time for resolving them is approaching with what seems to be ever-increasing speed.

Because of this, I have come here today to make a personal plea that the legislation not be allowed to bog down when we are so close to our goal, that it not be permitted to become a victim of the calendar. Let me begin by raising the most basic question of all, "why Superfund?" before discussing the financial aspects of the legislation.

The problem of releases of oil and hazardous substances and wastes is real and immediate. During the past five years, there has been an average of about 11,000 oil spills per year from all sources in the United States, with an average of 17 million gallons being spilled per year. Further, catastrophic spills of the Campeche and Argo Merchant class can cause the total to leap upward, radically in any given year.

Our information concerning spills of hazardous substances is not as complete, but during the Fiscal Year 78-79 period, over 3,000 such spills, ranging from minor to serious in about the same proportion as oil spills, were reported voluntarily to EPA. Because the reporting of hazardous substances spills is now mandatory, we expect a dramatic increase in the number reported over the next few years. As you know, the more serious spills often have environmental and public health implications, including loss of life, contamination of water supplies and food products, fish kills, and destruction of livestock and wildlife, more dangerous than those of oil spills.

The situation concerning the release of hazardous substances from hazardous waste disposal sites is even more grim. The

past few years have brought to public attention an unforgettable series of incidents resulting from improper hazardous waste management--the continuing tragedy of Love Canal, the pollution of the water supply of over 300,000 people in Iowa, and the discovery of up to 20,000 to 30,000 discarded, leaking, and unlabeled barrels of chemical wastes in the "Valley of the Drums" in Kentucky are but a few examples. In 1979, an EPA contractor estimated the total number of hazardous waste sites to range between 32,000 and 50,000, and the number of sites posing a significant health or environmental problem to be between 1,200 and 2,000.

In spite of early skepticism on the part of certain industrial groups, our investigative efforts and other studies over the last year indicate that the earlier projection was fairly accurate. Of some 1,000 sites investigated to date, we have found more than 250 that need remedial action. We still have more than 6,000 candidate sites to investigate, and we are becoming aware of about 200 more every month. In July alone, we learned of 671 more. In addition, several states such as New Jersey, New York, and Louisiana, have started their own investigative effort and are finding numerous additional sites that pose threats to the public and the environment. This legacy of many years of uncontrolled hazardous waste disposal may well be the most serious environmental problem facing the nation today.

Confronted by these problems, we were forced to realize that existing legal authorities are inadequate to deal with them in many ways. The most important statutory tool we have is section 311 of the Federal Water Pollution Control Act, which

provides for notification, emergency governmental response, and liability for cleanup costs for spills of oil and designated hazardous substances which reach navigable waters. Section 311 also provides a revolving fund to finance the necessary up-front government response costs, with recovery from the liable party being returned to the fund. Despite the fact that the response mechanism itself is very effective, there are many limitations which inhibit the value of the section. First, its applicability is limited to spills or threats of spills into navigable waters; releases into air, onto land, or into ground water are not covered. This severely limits the sections's applicability to releases from waste sites and many hazardous substance spills.

Second, section 311 is applicable only to oil and designated hazardous substances. A discharge of a substance not specifically designated under the section, or which cannot be identified because it is part of commingled wastes, would not be covered. Another critical limitation relates to the size of the fund. The authorized fund level is \$35 million. Even at the full authorized level, there is no way that it could adequately finance even the most minimal attempts to deal with the site problem.

The other existing legislation which relates to the problems we are discussing is the Solid Waste Disposal Act. In brief, that Act is aimed at preventing hazardous wastes from ever being released in an environmentally harmful manner, rather than at dealing with such releases when they occur. It is, therefore, not well suited to remedying the critical problem of inactive and abandoned sites.

The Administration, in putting together a proposal to be presented to this Congress, used the existing building blocks of the oil only "superfund" which it proposed to the last Congress and section 311, particularly its valuable emphasis on front-end cleanup with recovery through stringent liability, which also encourages private cleanup. The result was S. 1341, a comprehensive approach to spills of oil and hazardous substances and to releases from abandoned or inactive sites.

Having described the considerations which impelled us to put forward our proposed bill, I would now like to note some of the provisions of S. 1480 that are similar to those found in S. 1341 and more specifically, that the financing mechanism in S. 1480 to a large extent parallels our proposals and reflects a general acceptance of a feedstock approach, as do those in the two bills, H.R. 7020 and H.R. 85, scheduled to be brought before the full House for consideration next week.

Both the Administration proposal and S. 1480 would establish a fund to finance the implementation of the legislation. Both would base the fund primarily on industry contributions (80% in S. 1341, 87.5% in S. 1480). Both have sunset provisions for the fund, both apply limits to the monies raised from industry; and both utilize a feedstock system.

A feedstock approach would impose fees or taxes at the beginning of the commercial chain of production, distribution, consumption, transportation, and disposal of hazardous substances. It would do this by assessing 11 primary petrochemicals, 34 inorganic raw materials, and crude oil produced domestically,

imported, or exported. These 46 substances are either hazardous themselves or they are the basic building blocks used to generate all major inorganic and synthetic organic hazardous products and wastes.

The feedstock system distributes costs broadly, evenly, and efficiently among all those who produce and consume hazardous substances and generate hazardous wastes. It can be implemented quickly and with much less red tape than other options. It would involve fewer than 700 companies and just 46 substances, instead of hundreds of thousands of firms and hundreds of substances as in other options.

We felt and feel strongly that funding for the program should come as broadly as possible from those segments of industry which are the most responsible for imposing risks on society and have the greatest knowledge of and control over these risks and have received the greatest direct economic benefits.

The 46 substances subject to the feedstock system meet at least two or more of the following criteria: they are inherently hazardous or hazardous in a number of forms (as intermediates or final products); they are hazardous in some form if released; hazardous wastes are generated in producing them or their intermediate or final products; they are capable in one or more forms of increasing the hazardous potential of other substances; and they are produced in significant quantities.

Thus, a fee may attach to a product even though it is itself environmentally benign, since earlier in the chain of production, distribution, consumption, and disposal it used a hazardous substance; or later in the chain it will be used to generate a hazardous substance.

The 46 substances have a clear nexus to the problem. Thirty-two of the 46 substances are designated now as hazardous or are proposed for designation. All are used in volume to make other hazardous substances. Almost all hazardous substances are made from these 46 substances. At 250 hazardous waste disposal sites where damages to health and/or the environment have been found, 243 of the sites either contained one or more of the 46 substances or a number of derivatives of the substances. Approximately half of all 250 damage cases involved one or more of these 46 substances. The approximately 700 companies who supply these 46 substances and who will pay the fee are concentrated in the organic and inorganic, crude oil and heavy metals industries. Almost all hazardous substances are either products of these industries or are generated by using their products. The industries account for approximately 77% of all hazardous wastes generated.

Let me stress the fact that the feedstock system is not punitive--it is not a scheme for imposing huge fines or liabilities. Actual liability for cleanup costs and appropriate damages is imposed on the specific person or persons responsible for the release or harm. The economic impacts of the industry contribution would be minimal, a truly insignificant burden in light of the benefits reaped and the size and profits of the industry.

The feedstock fee is levied once at the beginning of the chain of production and commerce, where its impact is minimal. It becomes ever less important as a percentage of total production cost as it progresses throughout the chain. Further, no sector of an industry will be placed at a competitive disadvantage, because a feedstock fee or tax is passed on to all subsequent chemicals. In addition, S. 1480 like our bill, contains a mix of "caps" to further insure that no undue economic effect is produced.

Another factor we considered, administrative feasibility, boils down to a single assertion that this is the only fee system suggested which we feel is workable. It is quickly implementable. Under any other fee or tax, levied at any other point in the production chain, there would be tens of thousands more collection points and a corresponding increase in the administrative burden on government and the paperwork burden on industry.

More importantly, however, the alternatives which we considered are just not viable. A system based on the degree of hazard of the substance produced would involve the weighing of basically non-comparable attributes and would be meaningless in the absence of some certainty as to the environment into which any particular release of the substance might occur. Should a minute amount of a highly toxic substance be charged more or less than a larger amount of a less dangerous one? Should it matter what the likelihood of release is, even if it could be predicted?

Whether it is more likely to be into air or water, or upon land? In short, a degree of hazard fee system would be a perpetual invitation to litigation--hardly a sound foundation for a major health and environmental program.

Another possibility we investigated was a fee imposed upon the end of the chain of production, that is, upon the ultimate receiver of the waste. While this appeared to have some surface appeal, it proved to have more serious drawbacks. The economic effect on the disposer would be much greater than if the cost had been dissipated throughout the system, and the extra costs would create a considerable incentive to avoid involvement in the regulatory system being established under the Solid Waste Disposal Act--in short, the incentive for "midnight dumping" would be increased substantially.

Let me leave this point by observing that in our discussions of the fee system with many affected groups we have asked repeatedly for any suggestions they might have for a better system. To date, no one has suggested one that would avoid the problems I have mentioned. Moreover, no one has ever seriously disputed our assessment of the minimal economic impact our system would have. I might add here that I find it ironic that those who attack our proposals the most have nothing better to offer in their place, and that the industries most opposed to our Superfund approach have much to lose if one is not enacted. Public confidence in their ability and willingness to treat their waste products properly is practically non-existent, and without the reassurance a strong Superfund bill would provide, their problems will only increase.

In addition to the feedstock fee, both our proposal and S. 1480 provide the inclusion of some appropriated monies in the fund, in order to provide against any early implementation delays and to assure scrutiny of the use of the fund by the administration and Congress. The percentage is limited to 20% of the fund in our bill and 12.5% in S. 1480, because of the strong feeling, expressed earlier, that those who are responsible for the risks and who reap the benefits should pay. The taxpayers should not be forced to remedy problems they did not create when the costs involved can be allocated to those more specifically responsible.

As a final, more philosophical note, Mr. Chairman, I might point out that "Superfund" is the only major environmental legislation for years which does not establish a new regulatory regime or impose new strictures and rules on the nation at large. It imposes costs and comes into play only where there is a specific problem.

To summarize and conclude, only a comprehensive approach based on adequate and assured funding can provide the basis for an effective governmental response to the grave threats to health and the environment presented by releases of oil and hazardous substances and the nightmare of past hazardous waste disposal practices.

Not surprisingly, the Congress is taking varying approaches to the enactment of such comprehensive legislation, as evidenced by the varied provisions of S. 1480, H.R. 85, and H.R. 7020.

As stated earlier, enactment of a comprehensive bill is one of the Administration's top legislative priorities. Accordingly, my staff and other Administration members are available to assist in the final formulation of a bill. To this end we will strive to seek enactment of a bill that:

- \* Addresses the problems of oil and hazardous substances spills and releases from abandoned hazardous waste sites;
- \* Finances the program from a fund based mainly on fees imposed on industries and on appropriations;
- \* Establishes a joint, strict, and several liability standard; and
- \* Requires appropriate participation by the states in addressing the problem of abandoned hazardous waste sites.

Finally, Mr. Chairman, I cannot emphasize enough that time is of the essence if legislation is to be passed during this Congress, and personally and on behalf of the Administration, I urge you strongly to complete any action you may take as quickly after this hearing as possible. Existing statutes and programs are completely overwhelmed by the problem facing us daily from oil and hazardous substance spills and releases from hazardous waste sites.

This concludes my prepared statement, Mr. Chairman. We appreciate very much the opportunity to discuss this badly needed legislation with you, and Mr. Davis and I would be happy to answer any questions you may have.

	S. 1480 as reported out of committee	H.R. 7020 as reported out of Commerce (Florio)	H.R. 7020 as reported out of Ways & Means	H.R. 85 as reported out of Ways & Means
Fund Size	\$4.085 billion over six years	\$600 million over four years	\$1.2 billion over five years <i>Trust fund .40 per</i>	For hazardous substances \$100 million revolving - no cap; for oil, \$200 million revolving - no cap.
Fund Source	\$510 million Federal appropriation \$3.575 billion industry <u>fees</u> 65% petrochemical feedstock, 20% inorganic feedstock, and 15% crude oil.	\$300 million Federal appropriation \$300 million industry fees; 60% petrochemical feedstock, 20% inorganic feedstock, 20% crude oil.	\$300 million Federal appropriation. \$900 million industry <u>tax</u> on 60/20/20 feedstock basis. - <i>Trust fund</i>	All from industry tax of 1/3¢/bbl on petroleum products, \$1.18/T on petrochemical feedstock, and \$0.31/T on inorganic feed stock.
Fee Limitation	No link between fee and appropriation.	Fee payments to match actual appropriations.	Minor link between fee payments and actual appropriations.	No link (no appropriation
Scope	Response to any release or threat of release into the environment. Releases in compliance with a permit are exempted.	Response to an inactive waste disposal site releasing or threatening to release a hazardous substance.	Same.	Spills to water; clean-up of sites that are spilling or threatening to spill to water.
Substances	Any substance designated hazardous under present laws, and any substance found to be dangerous.	Hazardous waste under the existing RCRA law.	Same.	Oil and hazardous substances under the Water Act.

*Emergency*

*... ..*

*... ..*

Liability	Strict, joint & several liability; limited apportionment.	Strict, joint & several; <u>mandatory apportionment.</u>	Same.	Strict, joint & several & only the source owner or operator liable.
Defenses	Caused solely by act of God or war.	Caused solely by: act of God or war, U. S. Government negligence, <u>3rd party act</u> , combination of above.	Same.	To the extent caused by acts of God, war, or 3rd party.
Federal Tort Action Created	Yes.	No.	No.	Yes.
Damages, costs, etc.	Clean-up costs & emergency assistance; natural resources; tax losses; <u>third party personal injury &amp; property claims with retroactive limitation.</u> <i>Restoration of natural resources.</i>	Clean-up costs and emergency assistance.	Same. <i>only in state courts</i>	Clean-up costs; third party property claims; natural resources, tax losses.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

NOV 21 1979

OFFICE OF ENFORCEMENT

MEMORANDUM

To: Regional Hazardous Waste Coordinators  
From: Acting Director, Hazardous Waste Enforcement Task Force  
Subject: Waste Disposal Site Survey (the "Eckhardt Report")  
of October 1979--Additional site-specific information

As promised in the November 9, 1979, memorandum from Barbara Blum, we are enclosing two copies of Regional site-specific information which has just been released to us by the Subcommittee on Oversight and Investigations. This information was extracted from "Form B: Disposal Site Information", which appears on Page XXXVIII and XXXIX of the Waste Disposal Site Survey. Although we forwarded a copy of this report to each Regional Administrator on November 1, we have reproduced and attached Form "B" for reference.

This additional data includes the name of the participating company, the name of the company's division or group, and the name of the facility or plant. Also included are components (or characteristics) of the process waste from these facilities which are disposed of at the indicated sites. These components are listed on the computer printout under "Composition of Waste." The numerical code for each type of waste, as well as a sample interpretation of this numerical system, is attached for your use.

We will be forwarding additional information in response to "Form A: General Facility Information" in the near future.

If you have any questions, please do not hesitate to call Margie Russell at 4266710.

*Douglas MacMillan*  
Douglas MacMillan

Attachments

Potential HW Site Log  
for us



DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF ENVIRONMENTAL QUALITY

*Excerpted from  
D.N. Budget  
FY '81*

## FINANCIAL SUMMARY

	EXPENDITURE FY 1979	PLANNED FY 1980	REQUEST FY 1981	GOVERNOR RECOMMENDS
Administration	\$ 68,269	\$ 180,464	\$ 600,027	\$ 294,181
Water Pollution Control Program	1,000,030	1,270,103	1,732,301	1,264,680
Construction Grants	12,728,024	26,329,795*	20,648,202	20,566,220
Soil and Water Conservation Program	830,161	3,216,362	2,497,956	1,136,491
Air Pollution Control Program	1,222,792	3,775,044	4,061,092	2,027,856
Public Drinking Water Program	206,341	495,411	924,896	860,745
Solid Waste Management Program	368,075	1,311,481	853,568	652,333
Land Reclamation	186,078	1,309,332	3,473,026	3,811,331
Water Resources Planning Program	226,856	536,234	866,394	716,448
Laboratory Services Program	279,765	694,721	598,724	526,415
Regional Offices	1,485,514	1,935,334	2,071,370	2,079,219
Personal Service				
General Revenue	1,351,113	1,643,139	2,023,933	1,834,693
Federal Funds	2,161,990	3,324,805	4,220,445	4,222,604
Other	115,674	123,636	317,876	255,956
Expense and Equipment				
General Revenue Fund	1,088,112	1,413,932	1,865,818	1,321,240
Federal Funds	392,406	959,837	1,217,182	1,057,327
Other Funds	24,180	44,417	142,365	108,279
Grants or Refunds				
General Revenue	931,849	5,064,720	6,046,400	5,066,400
Federal Funds	1,461,860	7,799,995	8,336,250	5,459,460
Other Funds	11,074,721	20,700,000	14,158,467	14,210,000
<b>TOTAL</b>	<b>\$ 18,601,905</b>	<b>\$ 41,074,481</b>	<b>\$ 36,349,754</b>	<b>\$ 33,536,161</b>
General Revenue	3,371,074	8,121,791	9,936,171	8,222,335
Federal Funds	4,016,256	12,084,637	13,773,877	10,739,391
Other Funds	11,214,575	20,868,053	14,619,706	14,574,235
Full-time equivalent employees	250.75	338.81	465.44	366.48

\*Includes \$1,300,000 recommended in a supplemental appropriation.

## DEPARTMENT OF NATURAL RESOURCES

## SOLID WASTE MANAGEMENT PROGRAM

## GOAL

To protect the health and safety of the public through adequate solid and hazardous waste management.

## DESCRIPTION

The solid waste management program is responsible for protecting the public and environment from exposure to hazardous wastes or pollution problems caused by improper management of solid and hazardous wastes. The solid waste program staff reviews engineering plans for waste disposal and processing facilities, provides technical assistance and training to facility operators, and conducts enforcement actions to close improper disposal facilities. Resource recovery, recycling and waste reduction are encouraged through technical assistance and information materials. This program also develops and implements regulations affecting the storage, transportation, treatment and disposal of hazardous wastes.

The Governor recommends \$652,335 for the core program which includes cost-of-living, merit and position salary adjustments. A reduction of \$200,000 in federal funds for solid waste management grants is recommended to reflect availability of federal funds. This federal assistance from the U.S. Environmental Protection Agency has gradually decreased to reflect progress already achieved by local governments in developing solid waste management plans and the need to direct more funds to the area of hazardous waste management.

HB Sec. <u>7.280, 7.285</u>	EXPENDITURE FY 1979	PLANNED FY 1980	GOVERNOR RECOMMENDS
<b>PERFORMANCE</b>			
Solid Waste Management Plans Reviewed	42	40	30
Disposal Site and Facility Plans Reviewed	69	60	60
Enforcement Actions:			
Administrative Orders	8	36	36
Court Cases Filed	2	10	12
Hazardous Waste Generators Registered	0	2,500	2,150
Transporter Manifests Processed	0	0	18,000
Hazardous Waste Facility Permits Reviewed	3	20	40
<b>COST</b>			
Personal Service			
General Revenue Fund	\$ 78,704	\$ 91,712	\$ 100,971
Federal Funds	174,544	239,250	263,332
Expense and Equipment			
General Revenue Fund	17,604	53,452	53,452
Federal Funds	11,271	59,322	34,580
Grants or Refunds			
Federal Funds	85,952	867,745	200,000
TOTAL	\$ 368,075	\$ 1,311,481	\$ 652,335
General Revenue Fund	96,308	145,164	154,423
Federal Funds	271,767	1,166,317	497,912
Full-time equivalent employees	16.00	20.06	20.06

Senator MOYNIHAN. Thank you, Mr. Costle.

Unless there are members of the committee who wish to address questions to Mr. Costle at this moment, I would like to suggest we hear from Mr. Sunley, and then we can ask questions of both of them. Mr. Sunley, good morning, and welcome back to our committee.

**STATEMENT OF EMIL M. SUNLEY, DEPUTY ASSISTANT SECRETARY, TAX ANALYSIS, DEPARTMENT OF THE TREASURY**

Mr. SUNLEY. Thank you, Mr. Chairman, and members of the committee. I welcome the opportunity to appear before you and to comment on the superfund legislation.

I have a prepared statement, which I would like to read some of this morning, but I would hope that the full statement would be entered into the record.

Senator MOYNIHAN. Without objection.

Mr. SUNLEY. It is only reasonable that the cost of cleaning up hazardous substances released into the environment should be reflected in a cost to the users of hazardous substances rather than being paid for by general revenues.

While the fees would not reflect individual firms' experience, the fees would be representative of the fact that there are costs associated with the use of hazardous substances which up until now have not been reflected in the price of the products made from them.

The report on S. 1480 by the Committee on Environment and Public Works points out that it elected to levy the fees on the basic building materials that are used to make all hazardous products and waste rather than the wastes and end products themselves. This approach has the advantage of reducing the number of entities liable for the fees by 99 percent.

We consider this an excellent method of minimizing the work of both industry and the Treasury Department, while still causing the necessary costs to be reflected in the prices of the end products.

Purchasers of the basic materials who carry out further processing will be relieved of the details of computing liability on thousands of products, but their selling prices will reflect the fact that their material costs have increased because they are operating within the stream of hazardous materials and waste.

While S. 1480 would serve to implement the President's 1979 recommendations, I do want to suggest several changes in the revenue and trust fund aspects of the bill that I believe will simplify it for both industry and the Treasury Department.

Before going on to this point, however, I should mention that the bill is not as complete as it should be because it does not cover the problem of oil spills. One approach to closing the gap is Senator Gravel's proposed amendment No. 1965 for an oil spill liability fund.

There are five aspects of the revenue and trust fund provisions that give us concern. I would like to discuss four of these in my oral statement.

Our first concern relates to the structure of the levies, whether the levy should be fees or taxes. The tax approach used in Senator Gravel's amendment is preferable to the use of the fee designation in S. 1480. An internal revenue tax carries with it provisions for

enforcing collection, that is to say, provisions relating to the method of assessment penalties and interest for late filing, late payment, underpayment, etc. These provisions are more detailed and effective than the rules available for collection of fees.

Of course, S. 1480 does provide that the fees on petroleum oils, etc., shall be assessed and collected under the rules applicable to the manufacturers excises in the Internal Revenue Code, but there is no valid reason for not fully nominating the fees as taxes if they are to be collected as though they were taxes. H.R. 85 and H. R. 7020, which are House bills comparable in part to S. 1480, utilize the tax approach.

Our second concern relates to limits on collections in any one year. S. 1480 would limit the amount to be collected in any one year from the three categories of primary petrochemicals, inorganic raw materials, and petroleum oil.

A provision of this sort could be difficult for both taxpayers and the administrators to comply with if the rates were set so high that collections approached the specified limits for the year and thus required suspension of collections toward the end of the year.

Collection of a tax requires a lengthy process of preparing forms, instructing Internal Revenue Service employees, and getting information disseminated to taxpayers. New taxes or changes in rates cannot be implemented overnight, and if there were to be changes in the hazardous substances taxes within a year, or year by year, there would be an unreasonable high degree of extra work for the Internal Revenue Service and confusion on the part of the taxpayers.

Also, any comparison of collections and the specified limit during the year could only be an approximation. Excise tax data for individual taxes are available only on a quarterly basis. But the actual data for a given quarter cannot be collected until very late in the next quarter at the earliest because returns are filed 30 or 40 days after the end of the quarter and then the returns have to be tabulated.

Our third concern relates to the minimum and maximum amounts in the fund. Senator Gravel's proposal for an oil spill liability fund requires that the tax rate be doubled in any year following that in which it is determined by the Secretary of the Treasury that the balance is \$150 million or less. If the balance is \$200 million or more, then the tax is to be reduced to zero for 9 months.

In addition, we understand that there has been interest expressed in having limits set on the balance that can be accumulated in the hazardous substances response fund of S. 1480.

While it is always convenient to have a substantial balance in any account, providing that the account must be maintained with a certain balance is equivalent to collecting moneys and then never allowing them to be used for the purposes for which they were collected. This does not seem to be a reasonable policy.

Revision of rates to comply with the minimum and maximum limitations either by Executive decision or under the specific rule set forth in Senator Gravel's proposed amendment also would result in the same type of administrative and compliance complexities as a limitation on current year collections discussed earlier.

Mr. Chairman, our fourth concern relates to experience rating.

S. 1480 contains a directive providing for administrative adjustment of the fee for the three categories of primary petrochemicals, inorganic raw materials, and petroleum oil after the first 3 years, and biannually thereafter, to reflect the claims experience of the fund with respect to each of the three categories. Provision also is made for possible adjustment of the levies by industrial categories based on experience.

With a new program of this type it is only reasonable to believe that a future adjustment of rates to reflect claim experience is likely to be warranted. Even with the best information at the time of enactment of the law, experience is likely to show the conditions were different than assumed. And the situation can also change over time. But we question the need or desirability of making such adjustments by administrative action. Direct legislation action would provide a better forum for evaluation of needed changes.

We recommend, therefore, Mr. Chairman, that the taxes be set initially for a fixed period of time at the level best estimated to reflect the liabilities that will result from the named products and their derivatives. There also would be no limit on annual collections or on the size of a trust fund.

After a period of time, the receipts and expenditures would be reviewed to see if revisions are needed to make the program more equitable and provide the needed amount of revenue. This can be effected by the provision in S. 1480 for a report by the Administrator of the Environmental Protection Agency before the end of the fourth year of operation as to desirable changes in the levies and funding needs.

We believe a review of this type is all that is needed to give the Congress the information needed to assure a reasonable adjustment of initial taxes.

Mr. Chairman, I would like to conclude with some comments with respect to the exemption for recycled products and byproducts.

S. 1480 provides that the Secretary of the Treasury, after consultation with the Administrator of the Environmental Protection Agency, may reduce the levy to as low as zero that would otherwise be imposed on a substance if the substance is: (1) Reintroduced into the production of substances subject to the fee; (2) removed from the waste stream of a production process and recycled in such production process; (3) derived from recycled material; (4) produced solely as a byproduct of pollution controls and used onsite or sold to other persons; or (5) used as a source of fuel or other energy when used onsite or sold to other persons.

My first comment is that any such adjustment should be specifically required by the law rather than be discretionary. We do not think that it should be up to us to make a basic policy decision of this type.

Item number one appears to be unnecessary. Under the basic rule for tax free sales for further manufacture in chapter 32 of the Internal Revenue Code such use would be tax free.

Item No. 2 would seem to fall within the same concept as item number one in some cases. However, if the end product is not listed as a hazardous substance, then exemption of the so-called waste

product seems unjustified. Its further use is no different in effect than if the same product were purchased from another producer in which case it would not be exempt.

An exemption for products derived from recycled material presumes that the hazardous substance so produced was originally part of the recycled material and therefore already had been subject to tax. However, there could be considerable difficulty in making sure that the material considered to be recycled had actually been used and was not merely an intermediate product.

It would be preferable not to have this criterion for exemption at the time. Further consideration of the recycling case could be the subject of a study such as that proposed by H.R. 7020.

Special treatment of byproducts of pollution control conflicts with the overall purpose of the proposed legislation. A hazardous substance is not less hazardous because it is a byproduct of pollution control.

The reference to substances used as a source of fuel or other energy is, we understand, directed to petroleum gases which are largely used for heating and cooking. Such uses are not the source of hazards that the proposed legislation addresses.

In conclusion, while I have spent considerable time in commenting on certain aspects of S. 1480 and a proposed amendment for an oil spill liability fund, I want to emphasize that the general principle behind the measure has our full support and we hope that Congress can move forward with legislation to meet the problems created by oil spills and hazardous substances.

My comments were directed toward details of the measures which we think could be revised to make them more efficient and effective for industry and the Treasury Department. We will be very glad to participate in any of the technical work of revisions that may be agreed to by the committee.

Thank you, Mr. Chairman.

[The prepared statement of Mr. Sunley follows:]

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For Release Upon Delivery  
September 11, 1980

STATEMENT OF EMIL M. SUNLEY  
DEPUTY ASSISTANT SECRETARY OF THE TREASURY (TAX POLICY)  
BEFORE THE SENATE FINANCE COMMITTEE  
SEPTEMBER 11, 1980

Mr. Chairman and members of the Committee. We welcome the opportunity to comment on the so-called Superfund.

Background

In June of 1979 the President transmitted to the Congress legislation addressed to protecting the public and the environment from the effects of oil spills and the release or improper disposal of hazardous chemical substances. S. 1480 represents the approach of the Committee on Environment and Public Works toward implementing the President's recommendation.

S. 1480, the "Environmental Emergency Response Act", embodies a comprehensive and responsive program for cleaning up hazardous substance released into the environment, the cleanup of uncontrolled hazardous waste sites, asserting liability against responsible parties, and payment of damages to injured parties. Even though those who are responsible for spills, releases, etc. can be held liable for cleanup

costs and damages, there is need for an additional program to finance governmental responses where action needs to be taken for cleaning up and containing spills or threatened or actual releases of hazardous substances, the payment of damage claims when the responsible party is not known, and payment of claims (with right of subrogation) where the injured party has been unable to obtain satisfaction from the liable party within a reasonable time.

S. 1480 proposes to finance much of the cost of these needs by fees on petroleum and designated primary petrochemicals and inorganic raw materials. The bill provides (sec. 5(g)) that the fees shall be assessed and collected under the provisions of the Internal Revenue Code as if the fees were taxes described in Chapter 32, the manufacturers excises. The fee revenues, general fund appropriations, recoveries from liable parties, and transfers from certain existing funds are to be placed in a "Hazardous Substance Response Fund" administered by the President and the Secretary of the Treasury.

Although provision is made for the use of some general appropriations to finance the trust fund, the emphasis is on financing by the fees. Seven eighths of the annual revenues would be derived from the fees. Collections from the producers, importers, and oil refiners of the named

substances would finance amounts needed to fill out the gaps in present laws and any inadequacies and delays associated with the strict liability principle embodied in the bill for those involved with hazardous substances.

### Evaluation

It is only reasonable that these gaps and delays should be reflected in a cost to the users of hazardous substances rather than being paid for by general revenues. While the fees would not reflect individual firms' experience the fees would be representative of the fact that there are costs associated with the use of hazardous substances which up until now often have not been reflected in the price of the products made from them.

The report on S. 1480 by the Committee on Environment and Public Works points out that it elected to levy the fees on the basic building materials that are used to make all hazardous products and waste rather than the wastes and end products themselves. This approach has the advantage of reducing the number of entities liable for the fees by 99 percent. We consider this an excellent method of minimizing the work of both industry and the Treasury Department while still causing the necessary costs to be reflected in the prices of the end products. Purchasers of the basic

materials who carry out further processing will be relieved of the details of computing liability on thousands of products, but their selling prices will reflect the fact that their material costs have increased because they are operating within the stream of hazardous materials and waste.

### Suggested changes

While S. 1480 would serve to implement the President's 1979 recommendations, I do want to suggest several changes in the revenue and trust fund aspects of the bill that I believe will simplify it for both industry and the Treasury Department. Before going on to this point, however, I should mention that the bill is not as complete as it should be because it does not cover the problem of oil spills. One approach to closing the gap is Senator Gravel's proposed amendment No. 1965 (Cong. Rec. August 5, 1980, p. S. 10845) for an Oil Spill Liability Fund which I will also comment on.

### Revenue and trust fund provision

There are five aspects of the revenue and trust fund provisions that give us concern. These are: 1) the formal structure of the levies on hazardous substances; 2)

limitations on the amount to be collected in any one year from a category of products; 3) provision for Administrative adjustment of levies to reflect claims experience; 4) minimum and maximum limits on the size of a fund; and 5) the use of multiple funds.

1. Structure of the levies

If we consider S. 1480 as proposed to be amended by Senator Gravel as a unit, we find that the bill proposes setting up a total of three trust funds: the above mentioned "Hazardous Substance Response Fund", a "Post-closure Liability Fund" and the "Oil Spill Liability Fund." The first would be financed by "fees" on refiners and producers of petroleum oil, primary petrochemicals, and inorganic raw materials, and some appropriation from general funds; the second by a "fee" on each unit of hazardous waste received at a licensed hazardous waste disposal facility; and the third by an internal revenue tax on refiners or importers of petroleum or petroleum products.

We believe that the tax approach used in Senator Gravel's amendment is preferable to the use of the fee designation in S. 1480. An internal revenue tax carries with it provisions for enforcing collection (method of assessment penalties and interest for late filing, late payment, under-

payment, etc.) that are more detailed and effective than the rules available for collection of fees. Of course, S. 1480 does provide that the fees on petroleum oils, etc. shall be assessed and collected under the rules applicable to the manufacturers excises in the Internal Revenue Code, but there is no valid reason for not fully nominating the fees as taxes if they are to be collected as though they were taxes. H.R. 85 and H.R. 7020, which are House bills comparable in part to S. 1480, utilize the tax approach.

## 2. Limits on collections

S. 1480 would limit the amount to be collected in any one year from the three categories of primary petrochemicals, inorganic raw materials, and petroleum oil. A provision of this sort could be difficult for both taxpayers and the Administrators to comply with if the rates were so high that collections approached the specified limit for the year and thus required suspension of collections toward the end of the year.

Collection of a tax requires a lengthy process of preparing forms, instructing Internal Revenue Service employees, and getting information disseminated to taxpayers. New taxes or changes in rates cannot be implemented overnight, and if there were to be changes in the hazardous

substances taxes within a year, or year by year, there would be an unreasonably high degree of extra work for the Internal Revenue Service and confusion on the part of taxpayers. Also, any comparison of collections and the specified limit during the year could only be an approximation. Excise tax data for individual taxes are available only on a quarterly basis. But the actual data for a given quarter cannot be collected until very late in the next quarter at the earliest, because returns are filed 30 or 40 days after the end of the quarter and then the returns have to be tabulated.

While we recognize that limitations on annual collection were in the draft legislation forwarded by the President in 1979, further reflection has led to the concern just expressed that this is an unnecessary complication. H.R. 85 and H.R. 7020, incidentally, do not have this annual collection limitation.

### 3. Minimum and maximum amounts in funds

Senator Gravel's proposal for an Oil Spill Liability Fund requires that the tax rate be doubled in any year following that in which it is determined by the Secretary of the Treasury that the balance is \$150 million or less. If the balance is \$200 million or more, then the tax is to be reduced to zero for nine months. In addition, we understand

that there has been interest expressed in having limits set on the balance that can be accumulated in the Hazardous Substance Response Fund of S. 1480.

While it is always convenient to have a substantial balance in any account, providing that the account must be maintained with a certain balance is equivalent to collecting monies and then never allowing them to be used for the purpose for which collected. This does not seem a reasonable policy.

Senator Gravel's amendment does not preclude the use for a short period of time of the balance below \$150 million in the oil spill fund, but the long run effect is the practical equivalent.

Revision of rates to comply with the minimum and maximum limitations either by Executive decision or under the specific rule set forth in Senator Gravel's proposed amendment, also would result in the same type of administrative and compliance complexities as a limitation on current year collections discussed in the prior section.

Discontinuance of collections for some period of time followed by reinstatement could be particularly bothersome to taxpayers if the changes took place after price lists had gone out.

#### 4. Experience rating

S. 1480 contains a directive providing for Administrative adjustment of the fee for the three categories of primary petrochemicals, inorganic raw materials, and petroleum oil after the first three years (and biannually thereafter) to reflect the claims experience of the Fund with respect to each of the three categories. Provision also is made for possible adjustment of the levies by industrial categories based on experience.

With a new program of this type, it is only reasonable to believe that a future adjustment of rates to reflect claim experience is likely to be warranted. Even with the best of information at the time of enactment of the law, experience is likely to show that conditions were different than assumed. And the situation also can change over time. But we question the need or desirability of making such adjustments by Administrative action. Direct legislative action would provide a better forum for evaluation of needed changes.

Recommendation

We recommend that the taxes be set initially for a fixed period of time, at the level best estimated to reflect the liabilities that will result from the named products and their derivatives. There also would be no limit on annual collections or on the size of a trust fund. After a period of time, the receipts and expenditures would be reviewed to see if revisions are needed to make the program more equitable and provide the needed amount of revenue. This can be effected by the provision in S. 1480 for a report by the Administrator of the Environmental Protection Agency before the end of the fourth year of operation as to desirable changes in the levies and funding needs. We believe a review of this type is all that is needed to give the Congress the information needed to assure a reasonable adjustment of the initial taxes.

5. Number of trust funds

As noted earlier, the combination of S. 1480 and the Gravel amendment provide for a total of three different trust funds to be used for different purposes. As a matter of administrative efficiency, there might be a merging of the oil spill and hazardous substance funds. All the revenues

and recoveries collected from producers or importers of substances deemed to be hazardous might well be transferred to one fund to be administered by the Secretary of the Treasury. In turn, the fund should be available for all the purposes for which it is decided to provide aid or amelioration. If desired, there could be an order of priority of expenditures from the fund or limits on expenditures for claims for third party damages.

Exemption for recycled products and byproducts of pollution controls etc.

S. 1480 provides that the Secretary of the Treasury, after consultation with the Administrator of the Environmental Protection Agency, may reduce the levy, to as low as zero, that would otherwise be imposed on a substance if the substance is:

- 1) reintroduced into the production of substances subject to the fee;
- 2) removed from the waste stream of a production process and recycled in such production process;
- 3) derived from recycled material;

4) produced solely as a byproduct of pollution controls and used onsite or sold to other persons; or

5) used as a source of fuel or other energy when used onsite or sold to other persons.

My first comment is that any such adjustments should be specifically required by the law rather than be discretionary. We do not think that it should be up to us to make a basic policy decision of this type.

Item number one appears to be unnecessary. Under the basic rule for tax free sales for further manufacture in Chapter 32 of the Internal Revenue Code (sec. 4221), such use would be tax free.

Item number two would seem to fall within the same concept as item one in some cases. However, if the end product is not listed as a hazardous substance, then exemption of the so-called "waste product" seems unjustified. Its further use is no different in effect than if the same product were purchased from another producer in which case it would not be exempt.

An exemption for products derived from recycled material presumes that the hazardous substance so produced was originally part of the recycled material and therefore already had been subject to tax. However, there could be considerable difficulty in making sure that the material considered to be recycled had actually been used and was not merely an intermediate product. It would be preferable not to have this criterion for exemption at the time. Further consideration of the recycling case could be the subject of a study such as that proposed by H.R. 7020.

Special treatment of byproducts of pollution control conflicts with the overall purpose of the proposed legislation. A hazardous substance is not less hazardous because it is a byproduct of pollution control.

The reference to substances used as a source of fuel or other energy is, we understand, directed to petroleum gases which are largely used for heating and cooking. Such uses are not the source of hazards that the proposed legislation addresses.

### Conclusion

While I have spent considerable time in commenting on certain aspects of S. 1480 and a proposed amendment for an oil spill liability fund, I want to emphasize that the

general principle behind the measure has our full support and we hope that the Congress can move forward with legislation to meet the problems created by oil spills and hazardous substances. My comments were directed toward details of the measures which we think could be revised to make them more efficient and effective for industry and the Treasury Department. We will be very glad to participate in any of the technical work of revisions that may be agreed to by the Committee.

Senator MOYNIHAN. Dr. Sunley, we thank you for a very informative and helpful testimony. I hope that in the course of the questioning, which will commence, you will take the occasion to set forth for the record the distinction in the view of the Treasury between a tax and a fee. There are legal differences and perhaps even conceptual ones, although the persons paying may not know them in particular.

Senator ROTH.

Senator ROTH. Thank you, Mr. Chairman.

A very general question at the beginning, Mr. Costle. In Delaware one of our critical problems in the question of pollutants has been local government. For example, the city of Philadelphia has been one of the primary polluters of the Delaware River as well as dumping off our shores.

Has any of this legislation addressed the problem of State and local governments, and to what extent are these dumps within their control and regulation?

Mr. COSTLE. There is explicit recognition in the legislation with respect to State government on several points. One is the shared responsibility between the Federal Government and the State government in terms of private sites, which provisions are then altered effectively if the State is itself or the municipality for that matter is itself the owner of the site, and is the source of the problem. The cost sharing provisions of the act are adjusted, and there are limits at that point put on the amount of money that the Federal Government would put in.

In most instances, the abandoned sites if they have been municipal or State supervised, we are going to know that. We are going to have records there.

Senator ROTH. Are there any incentives for them to do a better job than they have in the past?

Mr. COSTLE. We have coming along now under the Resource Conservation and Recovery Act and putting in place the system that the Congress directed us to, to begin supervising those sites that are now active and to begin setting standards for new sites that may come into being in to prevent a recurrence of the problem we now have.

Senator ROTH. As you know, it is a fair statement that time is of the essence. I agree with the earlier comments that we should try to get something through this session. In fact, I don't think that Congress should recess until we take up all critical matters, I think, including our tax cut.

But, we have several different proposals on the House side and the Senate, including the administration's own proposals initially. There is the bill immediately before us, S. 1480 which introduces several new aspects including the changing of Federal tort liability. There is the Florio bill. There is H.R. 7020, the Ways and Means bill, as reported out by Ways and Means. There is also H.R. 85.

I understand the House is going to bring this legislation up tomorrow, or next week.

Mr. COSTLE. That is my understanding.

Senator ROTH. Are all these satisfactory, or which one are you recommending?

Mr. COSTLE. Compared with what we originally sent up to the Hill, to both the House and the Senate, we have differences and similarities essentially across all of these bills. The thing that we have been most attentive to is the—

Senator ROTH. They are not very significant differences, however.

Mr. COSTLE. There are some significant differences.

In the context of all of those bills that are now likely to coalesce together, we think the elements of a really good bill are all there.

Senator ROTH. In any one of them?

Mr. COSTLE. No. If you take them all together.

Senator ROTH. Let me ask you, if I may, sir, the question another way.

If the House passed H.R. 7020, would you recommend that it be signed?

Mr. COSTLE. I think there are some limitations in that approach with which we do not agree, and that there are elements of S. 1480 which we think are much closer to the bill that we originally submitted. We are really talking about four or five different bills.

Perhaps Mr. Davis would like to elaborate on some of the specifics.

Mr. DAVIS. Senator Roth, one point to clarify on the House bill H.R. 7020 is the misconception that the two House bills, 7020 and 85, are interchangeable, and that they both do the same thing and one could substitute for the other. That is simply not correct.

One of our main concerns with H.R. 7020 is that it does not address spills.

Senator ROTH. Let's take them together. I recognize that problem. I would assume that you would want both.

Mr. DAVIS. Even taken together, there are sections, such as the liability provisions of 7020 which we think are weak. It would be a mistake, we think, to have the final bill reflect those liability provisions, because you basically take away the incentives for industry to clean up their own sites.

Senator ROTH. I understand your original recommendations did not cover that either.

Let me ask you this question on the cost, because there is wide variance between the bills. As I understand your original recommendation was roughly \$1.6 billion.

Mr. COSTLE. That is correct, Mr. Chairman.

Senator ROTH. According to the documents that you submitted, you said that the economic impact is minimal. Under the administration's 4-year \$1.625 billion fund, the average price increase for final petrochemical products would be less than 6 percent, and

projected price increases for inorganic chemicals and metals would average less than 2 percent.

What would be the cost of S. 1480, and have you had the economic impact of that bill made?

Mr. DAVIS. Senator Roth, we did do an analysis of S. 1480 at the request of the Senate Environment and Public Works Committee staff. We used the same firm that had done our own analysis, Development Resources, Inc., and their conclusion was a price increase that instead of being something less than 0.6 percent, would be 0.77 or 0.8 percent. So there was a slight price increase.

Senator ROTH. But here you have price increases, for example, in the case of inorganic chemicals and metals that average less than 2 percent. Do you know what the change would be on that aspect?

Mr. DAVIS. Both of the bills have internal price increase ceilings, so we could say that if left alone the fee would result in a price increase of 2 percent in any one sector, and it would be cut off at that. So there would be a limitation on any single product or chemical having a price increase in excess of the 2 percent.

Senator ROTH. Could I ask one final question, Mr. Chairman, along this line?

Senator MOYNIHAN. Certainly.

Senator ROTH. Your original recommendation was, as I understand, \$1.6 billion. Do you still stand behind that recommendation, or what is your position now?

Mr. COSTLE. The thrust of our original proposal was the minimum for clean up, basically. As we look at the Senate bill, and if you take out the additional things that the Senate would propose to cover by this bill, then in fact the Senate bill comes out to be almost exactly equal to what we had originally proposed.

So the difference is really made up, as I understand, not so much in the differing estimates of clean up and the amount of money that is to be made available for that, but in the different provisions in terms of coverage, and the extent of coverage.

The one thing that I would urge is that all the bills be compared in cost in that very important respect, and that is that however that comes out, the clean up allocated portion of the cost should be in the neighborhood of \$1.6 billion.

Senator ROTH. My time is up. Thank you.

Senator MOYNIHAN. Thank you, Senator.

May I call the committee's attention to Mr. Costle's statement that unlike all of the previous environmental legislation of this last decade, this legislation does not establish a new regulatory regime. It imposes costs and comes into play only where there is a specific problem. If there are no spills, there will be no expenditures. If there is no damage, there will be no liability.

This is not an enterprise which will spend money regardless as if it were a program. This is a fund to respond to specific problems and specific damages.

Senator CHAFEE.

Senator CHAFEE. Thank you, Mr. Chairman.

Mr. Sunley, as you know, we are very interested in our trade situation here first, I assume that the fee will apply to the 46 substances if they are imports.

Mr. SUNLEY. That is correct.

Senator CHAFEE. What about the problem with the final product that comes in which are made up from the basic feedstock of the 46 substances?

Our domestic final products, of course, would include the fee within it. Somehow that fee would be integrated into the cost of the domestic product, but it would not be integrated into the imported final product. Do you see any problems there, and do other countries that you know of impose any such fees on substances such as this?

Mr. SUNLEY. I do not know of any countries that try to impose a tax on all chemical products. They may have some 100,000, 500,000 different chemical products, and I know of no country that tries to impose a tax on every specific chemical product that would come to the country. I think that it would be very impossible to do.

Senator CHAFEE. I am not asking if they impose it on every product that comes in. I am saying, do you know if other countries impose it on their basic feedstocks, as we would propose here?

Mr. SUNLEY. I am not aware that other countries have used this approach to provide a fund for cleanups, and for the liabilities associated with hazardous wastes.

Senator CHAFEE. Do you think that this will be of any consequence as far as affecting the cost of the final native product vis-a-vis imported products that would not include the tax or fee being incorporated within it?

Mr. SUNLEY. There could be a few instances where that could be the case, but I think most of the time we are actually importing the basic feedstocks more than the final products. You might find a few instances, but I would think that that is not going to be a serious problem.

Senator CHAFEE. Do you have any thoughts on that, Mr. Costle?

Mr. COSTLE. I was just trying to recall, Senator Chafee. I think West Germany has something that is very similar, but I will have to go back and doublecheck that and see if I am correct.

Senator CHAFEE. In your testimony here, Mr. Costle, you made frequent reference to oil spills which is in your legislation and not in S. 1480.

As you know, we kept the oil spills out because of the feeling that this was the best way to get a bill, I think. We felt, as you know, that we had great resistance from the oil industry believing that they might be involved and have to pay for cleanups of hazardous wastes.

Do you want to comment on that?

Mr. DAVIS. Senator, we are aware that in the bill the oil portion was left out over here, and the feeling at the time the bill originated, almost 1 year ago in fact, was that this was the best way to start. Chemicals were by far the most serious human health threat, and it was more important to address that first, and add oil at a later date.

Our feeling simply is that we do think that before this process is finished, whether it be done through amendments in the Senate or in conference, or whatever, that it is important to cover oil spills. As the other problems being addressed here today, they are a serious problem, and they do need the same attention that the chemical problem needs.

Senator CHAFEE. Of course, with the other members of the committee, that is the Environment and Public Works Committee, I share the intense concern to get a bill dealing with the primary problem of the hazardous wastes. Not that the oil spills are insignificant at all, but the oil spills, I think, come from very large crude carriers and from oil blowouts.

Mr. DAVIS. That is correct as far as what you read in the newspaper and those get the most attention by far. But I think it is important to understand that when you get to the larger number of spills, which are usually smaller in nature, a substantial percentage of them, maybe 10 percent or more, are often found in association with chemical spills, either in a spill situation or in a dump site where you will have oil and chemicals comingled. Often, in fact, the oil is the first substance to be identified. It often initially triggers the response effort of some type.

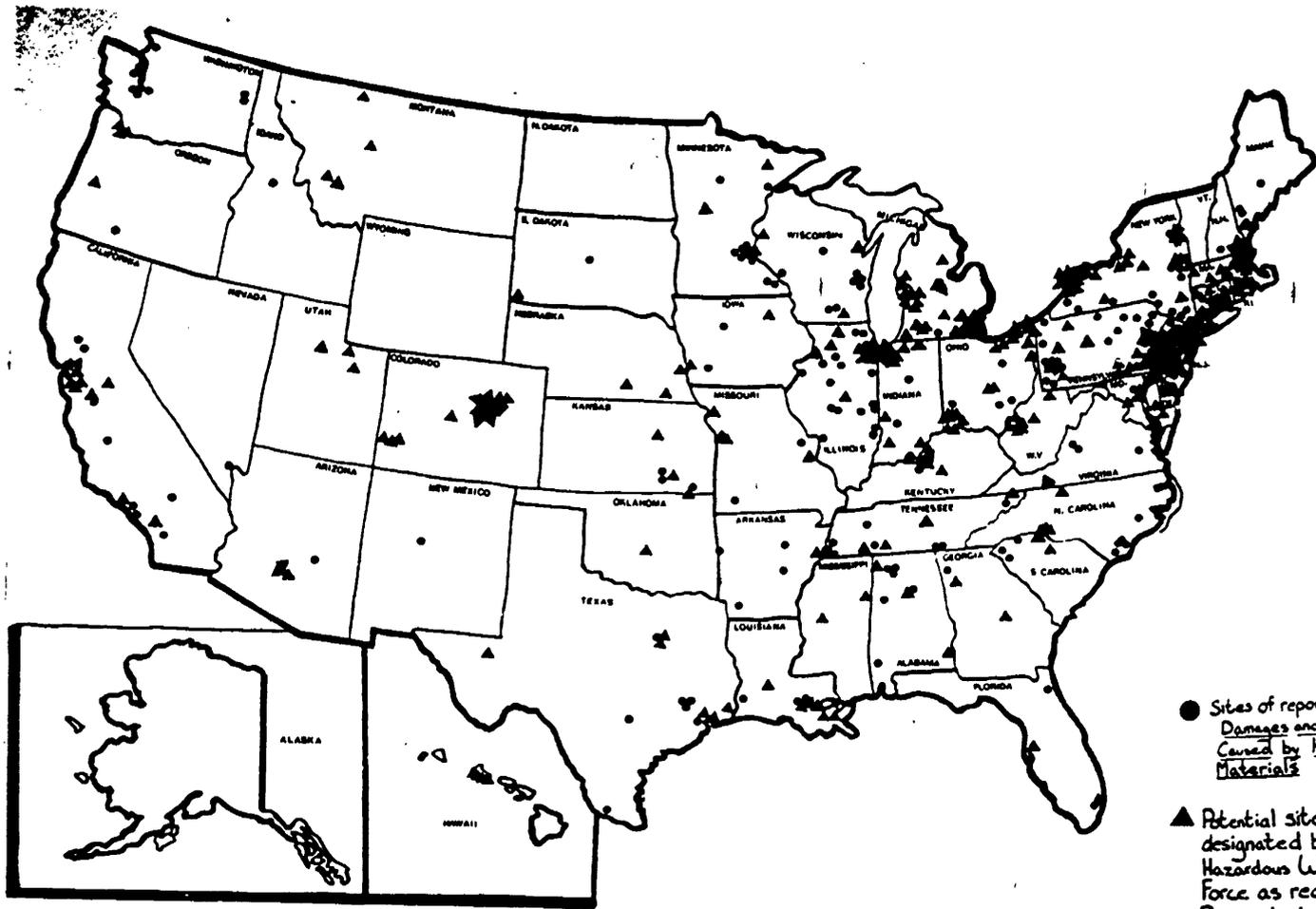
Senator CHAFEE. I see.

Thank you, Mr. Chairman.

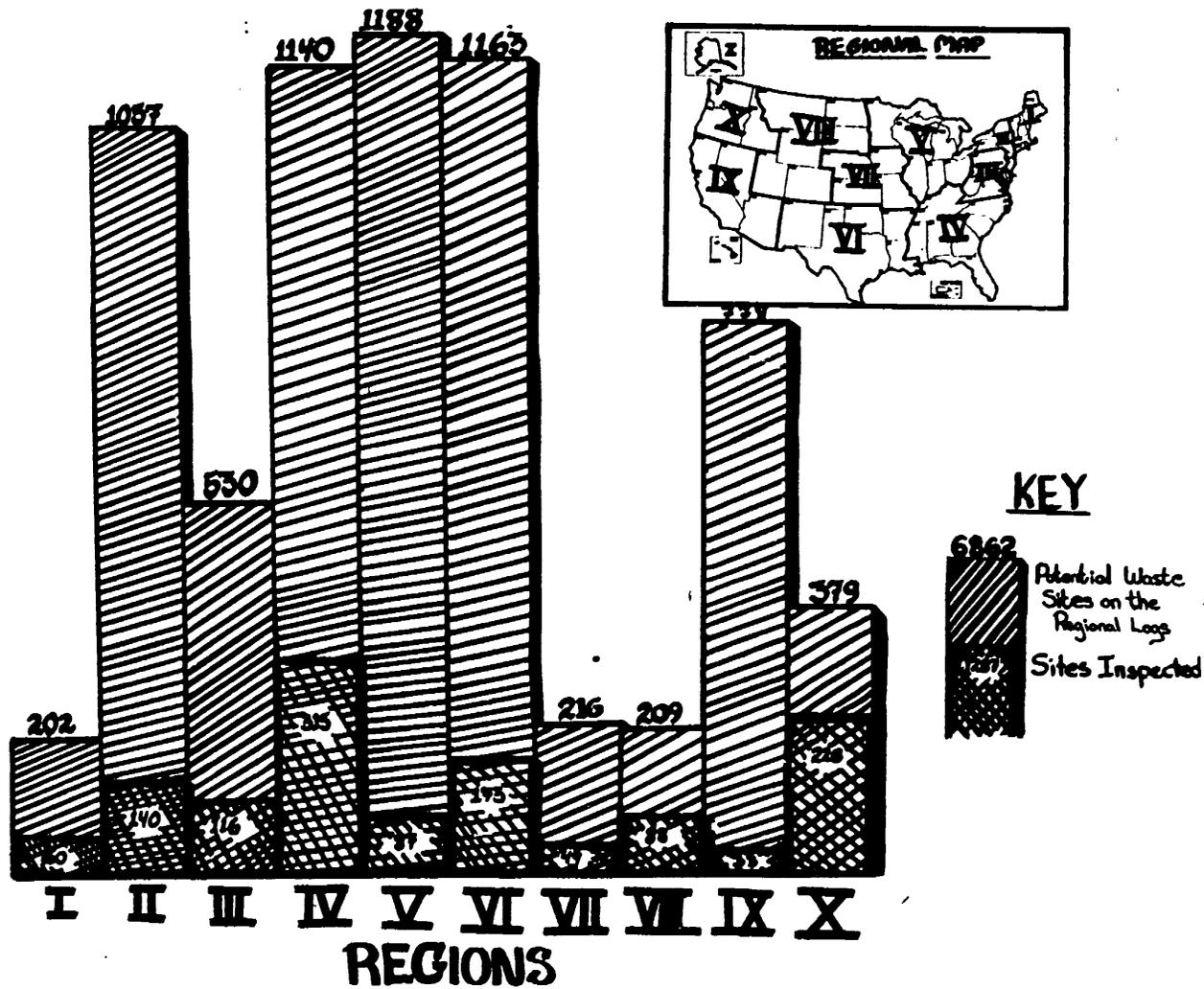
Senator MOYNIHAN. Senator Bradley.

Senator BRADLEY. Thank you, Mr. Chairman.

Mr. Costle, is this a map of the toxic sites in the United States?  
[The map and chart follow:]



- Sites of reported Damages and Threats Caused by Hazardous Materials .381
- ▲ Potential sites designated by the Hazardous Waste Task Force as requiring Remedial Actions .330



BAR GRAPH OF:  
POTENTIAL HAZARDOUS WASTE SITES AND THE NUMBER INSPECTED

Each of the 10 EPA Regional offices have compiled a log of potential hazardous waste sites. The totals as of July 31, 1980, are shown by the striped bars. The grand total for the nation is 6862 sites.

This initial identification of a potential site should not be interpreted as a finding of an illegal activity or confirmation that an actual health or environmental threat exists. The Enforcement and Response System is used to determine if a hazardous waste threat really exists. The crossed portion of each of the bars demonstrates the percentage of inspections which have been completed to date.

Mr. COSTLE. Yes, Senator.

Senator BRADLEY. The known toxic sites?

Mr. COSTLE. Yes.

Senator BRADLEY. I notice that there is only one State that is red. I think there are a lot of explanations for that.

I wondered if you would be so good as to provide for the record the list of all toxic sites in the State of this committee's membership, as well as for the entire Senate, but you can highlight the committee.

[The information follows:]

## THE NEED FOR SUPERFUND: NEW JERSEY.

EXTENT OF PROBLEM

1. On April 22, Earth Day 1980, 40,000 drums of waste being stored at the bankrupt Chemical Control Corp. in Elizabeth went up in flames endangering large population centers in New Jersey and New York.
2. The Meadowlands, a swampy area in the northern part of the State, is so heavily contaminated with mercury that the concentration in the area are greater than many mercury mines. The material was dumped there by the owners of a chemical processing plant which existed on the site until 1974. Area creeks have been poisoned and the seafood contaminated.
3. The groundwater around Garfield, Phillipsberg and Bridgewater have been contaminated by landfills leaching toxic chemicals. Drinking water wells in Jackson TWP, South Brunswick and Dover TWP have been closed due to the effects of illegal dumping of wastes.
4. In New Jersey there are reported by the EPA Enforcement Task Force:
  - ° 355 potential hazardous waste sites identified to date
  - ° 26 sites with preliminary assessments.
  - ° 17 assessed sites with medium to high seriousness rating.
  - ° 5 sites have had enforcement actions initiated
  - ° 6 sites have had some degree of remedial actions initiated.
6. The EPA Surface Impoundment Assessment in New Jersey identified 237 industrial facilities with 696 wastewater impoundments. These impoundments were found:
  - ° containing potentially hazardous waste in over 60% of the cases and may contain potentially hazardous waste in an additional 30%.
  - ° lined in less than about 30% of the cases were potentially hazardous.
  - ° monitored for ground-water contamination in less than 50% of the cases where potentially hazardous.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress. All four have several features in common:
  - ° emergency government response to a variety of environmental emergencies;
  - ° adequate and assured up-front response funds;
  - ° liability provisions, to enable the Fund to recover money where a responsible party can be found.
3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: OKLAHOMA .

EXTENT OF THE PROBLEM

- 1) On August 7, 1979, a tank ruptured in Woodward, spilling 2,000 gallons of hydrochloride acid across the land.
- 2) On December 1, 1978, a tank leaked in Gore, spewing 154 gallons of uranyl and nitrate-hexahydrate into the Arkansas River.
- 3) One person was killed as a result of a tank truck accident in Hallet on October 18, 1978. One thousand gallons of a mixture of 50% natural gas and 50% butane exploded into the air.
- 4) In Oklahoma there are reported by the EPA Hazardous Waste Enforcement Task Force:
  - 209 potential hazardous waste sites identified to date
  - 24 sites with preliminary assessments
  - 1 site identified by the Task Force as requiring remedial action
- 5) The Surface Impoundment Assessment sponsored by EPA in Oklahoma located 246 industrial facilities containing 466 impoundments with the following characteristics:
  - About half may contain potentially hazardous waste
  - Close to 60% of these potentially hazardous impoundments are unlined
  - Only about 15% of these same sites have any groundwater monitoring.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress: the Administration comprehensive bill; S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
  - emergency government response to a variety of environmental emergencies;
  - adequate and assured up-front response and cleanup funds;
  - liability provisions, to enable the Fund to recover money from those responsible for the release.
3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: WYOMING -

EXTENT OF THE PROBLEM

- 1) Various hazardous material incidents have been reported in Wyoming. They include:
  - A truck carrying 3275 gallons of Perchloroethylene had an accident in Laramie on January 1, 1979. The hazardous material spilled onto the road contaminating the surrounding land area.
  - A truck spilled 3300 gallons of sulfuric acid in the course of an accident on the outskirts of Riverton. A spill of this size damaged much of the land surface near the site of the accident.
- 2) In Wyoming the EPA Hazardous Waste Enforcement Task Force reports 19 potential hazardous waste sites identified to date.
- 3) The EPA sponsored Surface Impoundment Assessment conducted by the State of Wyoming located 50 industrial facilities with 124 impoundments. The Wyoming study found:
  - 22 of the 34 sites (over 2/3) were determined to have the potential to contaminate ground water
  - Virtually no ground water quality monitoring is practiced.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress. All four have several features in common:
  - emergency government response to a variety of environmental emergencies;
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: NEW YORK

EXTENT OF THE PROBLEM

- 1) The State of New York has identified over 600 sites which need remedial action to some degree. The worst incidents in the State are legendary such as the Love Canal and the pollution of the ground water on Long Island and the PCB contamination of the Hudson River.

In addition to these sites, there are others in New York which exemplify the destruction of the natural resources and potential hazards to human health and welfare. Some of these sites are:

. Palmer Site: The New York State Dept. of Health has declared this site in the town of Stillwater a public health hazard. Elevated levels of metals, benzene and toluene have been found in leachate samples. Adjacent property owners have complained of skin rashes and various illnesses.

. Saratoga and Washington Counties: Several sites in these counties were found to have received PCB-contaminated materials. Although the State has not yet declared the sites public health hazards, some area residents have suffered chloracne and possible PCB poisoning. The town supervisor has advised the nearest residents to leave their homes.

- 2) The EPA Hazardous Waste Enforcement Task Force reports over 600 potential hazardous waste sites identified to date.
- 3) The New York Surface Impoundment Assessment sponsored by EPA located 265 industrial facilities containing 527 waste impoundments, an unknown percentage of which contains hazardous wastes.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
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  - \*adequate and assured up-front response funds;
  - \*liability provisions, to enable the Fund to recover money where a responsible party can be found.
3. Hazardous sites and spills are a ubiquitous part of today's environment. The public's demanding response. Superfund provides a means for the government to provide assistance, unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: TEXAS

EXTENT OF THE PROBLEM

- 1) In addition to massive damage done to its coastline from oil spills, the interior of Texas has also experienced great natural resource losses due to hazardous waste incidents. These include:
  - ° Austin: Powdered pesticides, including DDT, toxaphene, lindane and Alpha and Beta Benzene hexachloride caused a fish kill in an Austin water body. The pesticides had been dumped in paper bags into the St. Edwards landfill. Bulldozers constructing a baseball field unearthed the chemicals, and rain washed them into the water. Construction in the park had to stop until all the contaminated soil was removed.
  - ° Riverside: Drinking water wells were contaminated with high levels of chromate which was believed to have come from a leak in a cooling tower basin at Structural Metals, Inc.
  - ° Mission: High concentrations of pesticides and other chemicals were found in the area surrounding an abandoned pesticide manufacturing plant. A near-by area was used to park school buses and for a woodworking shop for the mission schools. Samples of dust taken from the seats of the school buses also indicated the presence of pesticides.
- 2) The EPA Hazardous Waste Enforcement Task Force has identified 540 potential hazardous waste sites in Texas.
- 3) The Texas Surface Impoundment Assessment identified 612 industrial facilities containing 2273 waste water impoundments, about 1/3 of which contain potentially hazardous wastes.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress. All four have several features in common:
  - ° emergency government response to a variety of environmental emergencies;
  - ° adequate and assured up-front response funds;
  - ° liability provisions, to enable the Fund to recover money where a responsible party can be found.
3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: GEORGIA

Extent of Problem

1. Lake Hartwell, Lake Weiss and the Coosa River are three examples of fresh water supplies which have been contaminated by toxic substances in Georgia. PCB's were dumped into the waterways as part of the wastes generated by electric companies in the States. The PCB contamination has led to health advisories being issued against eating most fish caught in the lakes.
2. These are but three incidents which have occurred in Georgia. In fact, the EPA Enforcement Task Force reports:
  - 188 potential hazardous waste sites identified to date
  - 9 sites with preliminary assessment
  - 1 assessed site with medium seriousness rating
  - 2 sites have had some degree of remedial action initiated
3. The EPA Surface Impoundment Assessment in Georgia identified 177 industrial facilities with 344 waste water impoundments. These impoundments have the following characteristics:
  - About 90% are unlined.
  - About 90% have no ground-water monitoring.
  - More than 10% have waste which is potentially hazardous and an additional 20% may contain potentially hazardous waste.
  - 80% of these potentially hazardous impoundments are unlined.
  - 100% of these potentially hazardous impoundments have no ground-water monitoring.
  - 21 hazardous waste facilities present a substantial endangerment to water supply wells.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress: the Administration comprehensive bill; S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
  - emergency government response to a variety of environmental emergencies;
  - adequate and assured up-front response and cleanup funds;
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND:

EXTENT OF THE PROBLEM

1. Gross pollution of ground water in Rockingham, Vermont, was observed seven years after a liquid industrial waste disposal facility was established in an abandoned gravel quarry. Ground waters were characterized by elevated levels of specific conductance, BOD, COD, chromium, lead, zinc, potassium and nickel. While not admitting culpability, the operator agreed to furnish potable water to affected neighbors by means of a public water system. The disposal of liquid wastes has been prohibited but the ground water resources remain polluted.
2. The EPA Surface Impoundment Assessment in Vermont identified 23 industrial facilities containing 49 impoundments with the following characteristics:
  - Almost 75% may contain potentially hazardous waste
  - Over half of these potentially hazardous impoundments are unlined.
  - Over half of these impoundments are not monitored for ground water contamination.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: CONNECTICUT -

EXTENT OF PROBLEM

1. One half of the drinking water wells in Southington have been contaminated with tetrachloroethylene, chloroform, carbon tetrachloride and other toxic substances due to improper handling and disposal of hazardous wastes by a waste recovery and disposal company.
2. State Police discovered 1700 barrels of chemical wastes illegally buried in two Plainfield gravel pits. The area groundwater has been contaminated.
3. Groundwater in areas such as Coolcott have been polluted by local service station operators dumping gasoline into floor drains which may have been connected to wells.
3. An idea of the magnitude of the hazardous waste problem in Connecticut is shown below:
  - 49 potential hazardous waste sites have been identified to date.
  - 4 sites have had preliminary assessment.
  - 4 assessed sites have medium to high seriousness rating
  - 7 sites have had enforcement actions initiated
  - 9 sites have had some degree of remedial action initiated
5. The EPA Surface Impoundment Assessment in Connecticut located 178 industrial facilities with 423 impoundments having the following characteristics:
  - 60% contain potentially hazardous waste while an additional 12% may contain potentially hazardous waste.
  - Almost 90% of the hazardous impoundments are unlined
  - Only 15% of the hazardous impoundments have ground water monitoring.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress: the Administration comprehensive bill; S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: MISSOURI.

EXTENT OF THE PROBLEM

1. In 1971 a six year old girl suffered from an inflamed kidney and bladder bleedings. A significant clue to the origin of her illness was the fact that she lived on a farm where the animals were also developing mysterious illness and dying. The incidents occurred shortly after the spraying of waste oil on the farm's horse arena as a dust control measure. Soil samples revealed the presence of dioxin, one of the most deadly chemicals known. The dioxin had gotten into the waste oil sprayed in the horse arenas because the company which sold the farmer the waste oil had used the same storage tanks to store of dioxin it had removed from an industrial site.

This is only one example of environmental damage and the harmful effects of human life which have been experienced in Missouri. Ground water contamination, surface water pollution, animal deaths, and damage to aquatic life have all occurred in the State due to improper handling and disposal of hazardous substances.

2. Further indication of the size of the hazardous waste problem in Missouri is illustrated in the following data summaries:
  - 80 potential hazardous waste sites have been located to date by the EPA Enforcement Task Force.
  - 3 sites have had preliminary assessments
  - 3 sites have had enforcement actions initiated
  - 7 sites have had some degree of remedial action
3. In Missouri, the EPA Surface Impoundment Assessment identified 399 industrial facilities containing 588 impoundments with the following characteristics:
  - Over 30% of the impoundments contain potentially hazardous waste, while an additional 30% may contain potentially hazardous waste.
  - Over 95% of the hazardous impoundments are unlined.
  - No ground water monitoring is conducted at these hazardous impoundments.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress: the Administration comprehensive bill, S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: PENNSYLVANIA

EXTENT OF THE PROBLEM

1. On July 30, 1979, an oil slick was reported on the Susquehanna River at Pittston, Pa. The discharge was ultimately determined to be coming from the mine shafts which honeycomb the Wilkes-Barre/Scranton area. Oil and numerous hazardous substances had been dumped, by a ring of interstate midnight dumpers, into a bore-hole three miles from the River, ultimately entering surface waters via the Butler Tunnel. The discharge continues to date, while EPA and the State search the tunnels and shafts for large pools of contaminants, and continue efforts to contain and treat the discharge.
2. A nearly-completed park on Neville Island, Pa., has been closed indefinitely, after approximately \$1.8 million was spent on its development, when it was determined to have been built on a former hazardous waste disposal site.
3. These are only a few in a long list of sites and spills which are destroying Pennsylvania's natural resources and endangering human health and welfare.
4. In Pennsylvania there are reported by the EPA Enforcement Task Force:
  - 293 potential hazardous waste sites identified to date
  - 49 sites with preliminary assessments
  - 30 assessed sites with medium to high seriousness rating
  - 54 sites identified by EPA's Hazardous Waste Enforcement Task Force as requiring remedial action
5. The EPA Surface Impoundment Assessment in Pennsylvania located 662 industrial facilities containing 1668 impoundments with the following characteristics:
  - Almost 40% contain potentially hazardous waste
  - About 40% of these potentially hazardous impoundments are unlined
  - Fewer than 15% of these same sites have any ground water monitoring

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress: the Administration comprehensive bill, S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: RHODE ISLAND .

EXTENT OF THE PROBLEM

- 1) Although Rhode Island is small in area, it has had more than its share of incidents involving hazardous waste. A few of the worst cases are:
  - ° Coventry: The Candy Box Farm is a pig farm which has also been used as a repository for hazardous wastes. Midnight dumping of flammable chemicals occurred in ditch areas. Approximately 20,000 55-gallon drums were stored on the farm. A large explosion and fire occurred on the farm in 1977 polluting air, water and soil. Additionally, surface water contamination has been confirmed.
  - ° Cumberland: The 10-acre Cumberland landfill has been implicated in the closing of 4 municipal wells, three of which are still closed. The wells are contaminated by tetrachloroethylene and 1,1,1 trichloroethane with concentrations of up to 61 milligrams and 166 milligrams per liter respectively.
  - ° Providence: Local government officials have investigated a private hauler who dumped 55-gallon drums on vacant lots. The hauler is believed to have dumped chemical wastes in a similar manner throughout the area.
- 2) The EPA Hazardous Waste Enforcement Task Force reports 11 potential hazardous waste sites identified to date in Rhode Island, of which 6 are assessed at a medium to high seriousness rating, and 2 are tentatively identified as requiring remedial work.
- 3) The Rhode Island Surface Impoundment Assessment conducted through an EPA grant identified 31 industrial facilities containing 107 waste water impoundments, 75% of which are located in major shallow aquifer systems.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
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  - ° emergency government response to a variety of environmental emergencies;
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## THE NEED FOR SUPERFUND: DELAWARE

EXTENT OF PROBLEM

1. Rainwater and groundwater percolating through the Liangollen landfill in Wilmington have produced a leachate containing high concentrations of iron, chlorides, ammonia, heavy metals and dissolved organics. The leachate migrated from the site and contaminated the Potomac aquifer used extensively in New Castle County for a water supply. An estimated 10 years will be necessary to renovate the aquifer adequately.
2. The Liangollen landfill is but one of the abandoned sites in Delaware wreaking havoc on the environment.
3. In Delaware there are reported by the EPA Enforcement Task Force:
  - 34 potential hazardous waste sites identified to date
  - 8 sites with preliminary assessments
  - 2 assessed sites with medium to high seriousness rating
  - 2 sites have had some degree of remedial actions initiated
4. The EPA Surface Impoundment Assessment in Delaware located 36 industrial facilities containing 88 waste water impoundments. Results of the Assessment indicate that:
  - Over 25% of the sites contain hazardous wastes and an additional 10% may contain potentially hazardous waste.
  - Less than 60% of the sites considered hazardous were lined.
  - Fewer than 15% of the sites considered hazardous were being monitored
  - 80% of the sites have ground water within 10 feet of the impoundment bottoms

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress: the Administration comprehensive bill; S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
  - emergency government response to a variety of environmental emergencies;
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: MINNESOTA

Extent of Problem

1. A major underground source of drinking water in the Twin Cities area has been contaminated by wastes and residues from a creosote manufacturing company. For over 50 years the company disposed of wastes containing phenol and other polynuclear organic compounds on an 80 acre site in St. Louis Park.
2. Contamination of the aquifer has spread more than a quarter mile from the plant site. Numerous private and municipal drinking water wells supplying a large population have been shut down or threatened by contamination.
3. In Minnesota there are reported by the EPA Enforcement Task Force:
  - 57 potential hazardous waste sites identified to date
  - 15 sites with preliminary assessments
  - 13 assessed sites with medium to high seriousness rating
  - 6 sites have had enforcement actions initiated
  - 9 sites have had some degree of remedial actions initiated
4. Through the EPA Surface Impoundment Assessment grant to Minnesota, 116 industrial facilities containing 287 waste water impoundments were identified. These impoundments had the following characteristics:
  - About 20% contain potentially hazardous wastes.
  - Over 60% of these potentially hazardous impoundments are unlined.
  - Fewer than 5% of these potentially hazardous impoundments have ground-water monitoring.

Superfund Solution

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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: ALASKA

EXTENT OF THE PROBLEM

- 1) The worst threat to Alaska's natural resources from hazardous waste contamination has occurred in the Red Devil mine area. Mercury contamination from mercury mine tailing ponds may be entering the Red Devil Creek which is a tributary to the Kuskokwim River. Studies show that over time elemental mercury is converted to the highly toxic methyl mercury by bacteria. Methyl mercury bioaccumulates in aquatic life rendering it unfit for consumption. The Kuskokwim River is an important food source to the local population.
- 2) The EPA Hazardous Waste Enforcement Task Force has identified 10 potential hazardous waste sites in Alaska to date.
- 3) The Alaska Surface Impoundment Assessment sponsored by EPA located 11 industrial facilities with 26 active waste water impoundments. These impoundments have the following characteristics:
  - 22 impoundments receive a total average influent of almost 35 million gallons per day.
  - Although 20 of the 22 active impoundments are lined, no ground water monitoring is done to ensure liner integrity at any facility
  - Potentially hazardous waste is disposed of in the majority of these impoundments.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
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## THE NEED FOR SUPERFUND: INDIANA

EXTENT OF THE PROBLEM

1. In August, 1977, explosions and a fire occurred at Mid-Co Corp., in Gary, Indiana. Hazardous wastes stored and stock-piled in open fields burned out of control for hours. The State has estimated site cleanup would cost \$5 million. EPA has filed suit to require a complete cleanup of the site. A partial cleanup was begun in early 1980 under court order.
2. Sewer lines, streams and farms have been contaminated with the toxic chemical PCB. Westinghouse Electric Corp. has been charged with dumping up to 8 pounds a day into the city's sewers.
3. In Indiana there are reported by the EPA Enforcement Task Force:
  - 130 potential hazardous waste sites identified to date
  - 17 sites with preliminary assessments
  - 7 assessed sites with medium to high seriousness rating
  - 14 sites identified by the Task Force as requiring remedial action
4. The Indiana Surface Impoundment Assessment funded by EPA located 218 industrial facilities containing 503 impoundments characterized as follows:
  - Half contain potentially hazardous waste
  - 30% of these potentially hazardous impoundments are unlined
  - Virtually no ground water monitoring occurs

Superfund Solution

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2. There are four versions of Superfund before Congress: the Administration comprehensive bill; S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
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## THE NEED FOR SUPERFUND: MARYLAND

EXTENT OF THE PROBLEM

1. In Sharptown, Maryland, 34 storage tanks containing 170,000 gallons of waste oil contaminated with PCB's, xylene, benzene and other hazardous substances were inadequately stored adjacent to the Nanticoke River, a tributary of the Chesapeake Bay and a prime spawning ground for rockfish. The oil/PCB liquids are temporarily being stored at a GSA facility in Curtis Bay, Md.
2. In Hagerstown, Md., truckloads of drums containing "fermenting" phosphorus were stalled while owner and transporter argued over which had responsibility for the drums. EPA ultimately took charge, and ordered the trucks moved to an Army base where the drums were detonated several at a time. So serious was the threat of explosion that EPA's On-Scene Coordinator contemplated ordering evacuation of Hagerstown.
3. In Maryland there are reported by the EPA Enforcement Task Force:
  - 77 potential hazardous waste sites identified to date
  - 5 sites with preliminary assessments
  - 4 assessed sites with medium to high seriousness rating
  - 7 sites identified by the Task Force as requiring remedial action
4. The EPA Surface Impoundment Assessment in Maryland identified 129 industrial facilities containing 262 impoundments with the following characteristics:
  - One-third may contain potentially hazardous waste
  - About 60% of these potentially hazardous impoundments are unlined
  - 75% of these impoundments are not monitored for ground water contamination

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
2. There are four versions of Superfund before Congress: the Administration comprehensive bill; S. 1480 for sites and spills; H.R. 85 for oil and hazardous substance spills (in surface waters); and H.R. 7020 for inactive dump sites releasing into all media but surface waters. They all have several features in common:
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3. Hazardous sites and spills are a ubiquitous part of today's environment. The public is acutely aware of the problem, and is demanding response. Superfund provides that response in a broad range of incidents. Unless it becomes law this year, the government will remain helpless to provide assistance, and public outrage at government inaction and unresponsiveness to a problem that threatens their water supplies, their land and their health will increase.

## THE NEED FOR SUPERFUND: WISCONSIN

EXTENT OF PROBLEM

1. Extremely high levels of PCB's in fish have resulted in an Advisory against consuming fish from parts of the Sheboygan, Mullet and Onion Rivers.
2. In February 1979, demolition wastes containing PCB's, mercury, cadmium, lead, copper and chromium were dumped into wetlands adjacent to Lake Innbago.
3. These are only 2 examples of the long list of ground water contamination problems, surface water pollution cases and potential drinking water well problems in Wisconsin.
4. To further illustrate the potential magnitude of the hazardous waste problem in Wisconsin:
  - 34 potentially hazardous waste sites have been identified to date by the EPA Enforcement Task Force.
  - 2 sites have had preliminary assessments
  - 1 site has had enforcement action initiated
  - 5 sites have had some degree of remedial action initiated.
5. The EPA Surface Impoundment Assessment in Wisconsin identified 329 industrial facilities containing 646 impoundments with the following characteristics:
  - Although only 5% contain potentially hazardous waste (about 33 impoundments), another 10% may contain potentially hazardous waste.
  - Almost 90% of those potentially hazardous impoundments are unlined.
  - Fewer than 30% of those potentially hazardous impoundments have ground water monitoring.

Superfund Solution

1. Superfund is necessary because the government, under present law, lacks both funds and authority to respond to emergencies in all environmental media. Under Section 311 of the Clean Water Act the government is now able to respond only to releases of oil and designated hazardous substances into surface waters. Other tools such as penalties and court orders are ineffective when swift action is necessary, and when the responsible party is either unknown, unable or unwilling to take action.
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Mr. DAVIS. Senator, I would add one clarification to what you have said. What is plotted on this map is not all of the known toxic sites. That figure has been estimated at being in the thousands. What we have right now at EPA under investigation, a list of some 6,000-plus candidate sites. We have about 330 that have been investigated enough to determine that they need remedial action. Those 330 sites are plotted in the green marks.

Senator BRADLEY. What was the number 671 sites in July?

Mr. DAVIS. I believe that is the number that had been given some type of investigation at that point in time.

Senator BRADLEY. Could you provide a list that not only gives us those 320, but also the sites under active investigation by member and by State?

Mr. DAVIS. Certainly. We have that broken out by State.

Senator BRADLEY. Let me clarify a point that I think Senator Roth was trying to make about comparative proposals, the administration's and S. 1480.

As I understand S. 1480, two-thirds of it is Government response for cleanups and a third for liability. It is about \$2.6 billion, roughly. It is for a 6-year period. The administration's approach was \$1.6 billion for a 4-year period.

Mr. COSTLE. That is correct.

Senator BRADLEY. So that, in effect, if we are talking about Government response and cleanup, the difference is about \$200 million, \$2.4 billion to \$2.6 billion, over a 6-year period. Is that correct?

Mr. COSTLE. That is technically correct.

Senator BRADLEY. I think that that is important to confirm for the record.

Next, I think there is a question in the House bill that identifies the problem as being limited to orphan sites. In your judgment, is the problem more than orphan dump sites?

Mr. COSTLE. Absolutely. We find that every possible combination seems to be turning up. In many instances, the minute that you move against a site, that may be a currently active site, you run up smack against a lack of financial capability.

For example, the farm in Kentucky, the so-called Valley of the Drums, was on the farmland of a 70-year-old widow, and the fellow who had originally leased the land and had put a dump there was financially bankrupt and had gone out of business.

So, we are seeing just about every possible permutation of this thing, and it is not simply a matter of trying to go back and stub toe on those that somehow have been shut down and have not been used for years. It is a much bigger problem.

Mr. DAVIS. Senator, to take advantage of your terminology, the difference in the way we have characterized the problem as between orphan sites as opposed to abandoned sites, or inactive sites, the difference being that abandoned implies that they have been left and deserted in some way, orphan implying that the parents are dead or have left them in some way.

In this case, the parents are not dead in these sites. They are basically today's companies, 400 to 500 companies. They are often abandoned sites that have just had their back turned to them.

Senator BRADLEY. I would like to ask Mr. Sunley a question about whether he thinks that the Superfund can go through the chain of commerce to the ultimate consumer. There is some question as to whether this fee will be reflected in the ultimate price to the consumer.

I wonder if there are examples that the Treasury is aware of for similar value added processes that take place, and result in a fee that is translated into price at the end of the chain.

Mr. SUNLEY. I believe that the fee will be passed through the chain and will be reflected in the final price of the products that are produced using hazardous substances as well it should be. The fee is nothing more than doing business, the cost of using hazardous substances. It is unlikely that the chemical industry will want to have a lower profit rate, a lower return on their capital because of this fee. They are going to want to pass it on. The users of the products are going to have to pay.

The fact that it is imposed early on in the manufacturing process should not affect the basic underlying economics. In fact, with our manufacturers excise taxes, we tend to impose the tax at that place in the production process which is most easy to collect the tax.

For example, the gasoline tax, the 4-cent Federal excise tax on gasoline, is not imposed and collected at the pump. It is imposed usually on the producer and the wholesaler, yet we fully expect that an increase in the Federal excise tax on gasoline will in fact show up as an increase in the price at the gasoline pump.

Similarly with the cigarette and alcohol taxes, we collect the cigarette tax on the manufacturer of cigarettes, but that excise tax does get reflected in the sale price of cigarettes to the ultimate consumer.

Senator BRADLEY. Could you provide for the record a list of those taxes or fees that are similar to this and the administrative complexity?

Mr. SUNLEY. I will be glad to.

[Material was furnished to Senator Bradley's question:]

Sept. 24, 1980

Insert for reply to question of  
Senator Bradley on p. 72 of the transcript of  
September 11, 1980

The Federal excises listed in the table at the end of this insert are deemed to be similar to the taxes or fees being considered in connection with S. 1480. The taxes listed are those levied on products when sold (or used) by manufacturers, producers, or importers. Taxes or fees on petroleum and hazardous substances would be levied at comparable level of industrial activity.

Every industry and product now subject to a Federal manufacturers excise has its own characteristics which make for certain distinctive problems. We do not compute a scale of the degree of administrative complexity for individual taxes, but I will point out a few of the noticeable differences between the existing taxes. First, however, I will note that when taxes on products are concerned, we prefer that the tax be levied at the manufacturer level because there are always fewer manufacturers handling a given product than wholesalers and retailers. (See subsequent reference to tax on diesel fuels). The manufacturer level does have one drawback in the case of ad valorem taxes in that a constructive price has to be used where a sale is at less than arm's length and at less than fair market price.

We believe this disadvantage is outweighed, however, by the greatly reduced number of taxpayers at the manufacturing level.

The administrative complexity of the Federal excises on manufacturers and importers sales of products basically depends on three factors: 1) the number of taxpayers and their size; 2) the degree of certainty as to what is taxable; and 3) the extent to which taxpayers are required to comply with detailed procedures.

Where an industry is dominated by large firms, the work of administration is minimized in two ways. The number of firms to be reviewed is limited and large firms have the staff to keep adequate books and to keep up with any change in rules and regulations. Most manufacturing industries subject to tax tend to have a relatively small number of firms. The manufacture of trucks, tires, and lubricating oil is concentrated in this fashion. While the number of tire and lubricating oil taxpayers is only about 500, there are, however, more small taxpayers than one normally would expect in the truck category. Truck trailers, for instance, are produced by a number of firms selling in a local market and local firms customize new standard truck chassis. As a result, there are some 2,000 taxpayers in the truck or truck body category. Gasoline is a unique case. While there are

few refiners, the law permits a wholesaler of gasoline to qualify as a producer. This provision greatly expands the number of taxpayers beyond actual refiners. so that the total number of taxpayers is about 7,000. Coal mining is an industry with many small firms. All these cases are insignificant relative to the diesel fuel tax which is paid by the retailer, or the user if he buys in bulk. Here there are over 35,000 taxpayers.

Questions as to what and what is not taxable arise from time to time in the case of all excises, but except for truck replacement parts, we do not consider the situation of great moment. Replacement part questions are continuous. Two factors are involved. In the first place, the law exempts parts that are sold for use on trucks if they also are suitable for use and ordinarily are used as part of or in connection with a passenger automobile or house trailer. In view of the great number of automotive parts and the overlapping usage in many cases, this rule involves a tremendous classification task for the trade and the Treasury. Furthermore, the predominant use of particular parts changes over time, and it is difficult to keep up with the changes. Even when it is known that a part or accessory is used entirely on trucks or truck trailers, a further dividing line has to be drawn because only those parts which serve to augment the load carrying function of the truck are

deemed taxable. Those which serve another function, e.g. a construction derrick mounted on a truck chassis, are not taxable. Very fine dividing lines have to be drawn where a vehicle has a variety of attachments, some of which are considered as enhancing the load carrying function and some not.

The rules for the taxes on alcoholic beverages and tobacco require the keeping of detailed records and specify in detail procedures to be followed. The rules are especially detailed in the case of distilled spirits. These requirements result from the fact that the taxes, especially those on distilled spirits and cigarettes are quite high and thus provide an incentive to evasion. The regulations for other taxes on manufacturers and importers sales generally require only that the taxpayers keep such records as are sufficient to indentify taxable and tax-free sales. Ordinarily, these are records the taxpayer would keep for his own purposes.

## Federal Excises on Manufacturers or Importers Sales of Products

## Tax Rate

Alcoholic beverages

Distilled spirits	\$10.50 per proof gallon
Beer	\$ 9.00 per barrel of 31 gallons
Wine	
Still	17¢, 67¢, \$2.25 per gallon
Sparkling	depending on alcoholic content
Naturally carbonated	\$3.40 per gallon
Artificially carbonated	\$2.40 per gallon

Tobacco products<sup>1/</sup>

Cigarettes	
Weighing more than	
3 pounds per M	\$8.40 per thousand
Weighing not over 3 pounds	
per M	\$4.00 per thousand
Cigars	
Weighing not more than 3	
pounds per M	75¢ per thousand
Weighing more than 3	
pounds per M	8 1/2 percent of wholesale list
	price to retailers inclusive of tax
	but not more than \$20 per thousand

Manufacturers excises

Trucks, truck trailers, truck tractors	10 percent
Truck replacement parts	8 percent
"Gas guzzler" passenger automobiles	
	For those model types which do not meet specified mpg objectives, the tax varies to the extent of the mpg the car falls below the specification. The specified mpg varies year by year from 1980 through 1986 and thereafter. For 1980 models the tax varies from \$200 to \$550 per vehicle if the mpg is not at least 15.

Tires, etc

Type used on highway vehicles	10¢ per pound
Other tires (other than laminated tires)	5¢ per pound
Laminated tires made from scrap rubber	1¢ per pound
Inner tubes	10¢ per pound
Tread rubber (camelback)	5¢ per pound

<sup>1/</sup> There also are taxes on cigarette paper and tubes.

	Tax Rate
Gasoline	4¢ a gallon
Lubricating oil	6¢ a gallon
Coal (except lignite)	
Underground mines	2 percent of sale price but not in excess of 50¢ per ton
Surface mines	2 percent of sale price but not in excess of 25 cents per ton
Sporting goods	
Fishing rods, reels, artificial bait, etc.	10 percent
Bows and arrows	11 percent
Pistols and revolvers	10 percent
Firearms (other than pistols and revolvers) and shells and cartridges <sup>1/</sup>	11 percent

<sup>1/</sup> Firearms subject to the transfer tax under Chapter 53 are not subject to this tax. Chapter 53 covers machine guns, sawed off shotguns, etc.

Senator BRADLEY. Thank you.

Senator MOYNIHAN. Thank you, Senator.

Senator Dole.

Senator DOLE. I just want to follow up.

In other words, you are saying that the consumer will end up paying the cost of this proposal?

Mr. SUNLEY. Yes, and that is what we want. The basic principle here is that products which involve hazardous substances involve costs to the environment, costs to society, and that the users of those products should bear that cost. So, not only do we think that the economics will drive the tax to be reflected on the ultimate consumer, we think that that is the correct result.

Senator DOLE. The CBO indicates that it will add \$40 million to the fertilizer costs to farmers, if it is in accordance with your indication that it is going to be passed on to the user.

How many more people will EPA have to add; by how much is it going to increase your budget for personnel?

Mr. SUNLEY. I am afraid that it does not increase EPA's budget. We are the ones who are going to collect it.

Senator DOLE. It will probably increase both. You are going to add some.

How many are you going to add; about 10 percent?

Mr. COSTLE. I would hardly think so.

Incidentally, on the question of fertilizer that was exempted.

Mr. DAVIS. The figure you were quoting was a correct figure in the earlier draft of the bill. The bill as reported out of the committee did not impose the chemical fee to fertilizer.

Senator DOLE. How much will EPA have to expand its staff in order to carry out the Superfund provisions?

Mr. COSTLE. It certainly will not be 10 percent. It depends, obviously, on what type of bill passes. Our basic mode of operating in this area, and we do have some existing law as experienced in a limited, is that we use almost entirely the private contracting industry to provide the cleanup capability.

Most of the money that is expended, and the greatest manpower requirement from this bill is cleanup, and our assessment of a site before cleanup, and almost all of that is done by private industry and not by the Government. We would not intend to change that pattern in the future.

Senator DOLE. As I understand, you support anything; you support all the bills. Is that right?

Mr. COSTLE. Senator, we did submit a bill, which I characterized in my testimony.

Senator DOLE. Are you still for that, or is that now an orphan?

Mr. COSTLE. No. That is still our basic position.

Senator DOLE. You are also for S. 1480?

Mr. COSTLE. I think S. 1480 is a very good, very strong bill.

Senator DOLE. Which one do you really want?

Mr. DAVIS. Senator, the simple answer is that we prefer the bill that we submitted initially. That position has not changed. We think that it is crucial that there be legislation to deal with this problem.

Senator DOLE. My point is, we have a calendar to look at. We are about ready to recess, at least I understand we may, on October 4.

Mr. DAVIS. All of the basic provisions, all of the basic components that we felt were essential for a minimum bill, availability of a reliable source of funds, authority to respond to emergencies, a liability section to recover costs and provide incentives for industry's own cleanup, all of those provisions are contained in the Senate bill.

Senator DOLE. Let's say that they pass the bill next week in the House, and we are looking at maybe the next week going into recess. It would be your recommendation that the Senate just pass the House bill, and avoid the conference?

Mr. DAVIS. I think that that is the less desirable approach. I think you would end up with a less effective final bill.

Senator DOLE. As I understand it, the so-called Orphan Sites, and I don't claim, to understand all the distinctions, in some areas you can impose liability on somebody who was not at fault even though there is no causation. Still, they have to pick up a part of the costs, whatever the costs may be.

Is that constitutional? Can you make someone who is not at fault pick up the tab?

Mr. DAVIS. I am not aware of any instance where any of these bills would do that. That would sound like an irresponsible thing to do if we did that. I don't believe the bills do that, and I am not aware of any other instance.

Senator DOLE. You would be opposed to it, if the bill does that?

Mr. DAVIS. How could I be in favor of it, it does not solve our problem. Our whole objective here is to attach the liability to those people responsible for the problem.

Senator DOLE. I share that view, and that is why I wondered if, in fact, this bill would impose liability on someone who is without fault just because it may be a so-called orphan site. Then it does not seem to be a fair way to address the problem.

Mr. DAVIS. I don't believe the bill does that, Senator. I could be mistaken, but I don't believe the bill does that.

Mr. COSTLE. I don't believe that the bill does that, nor do the courts behave that way when they attempt to enforce in areas where you have a principle of joint, several, and strict liability.

Senator DOLE. There have been cases, black lung, and others. But I think that is good information because I think there may be a provision that might be interpreted as doing that. If that is the case, we would have your affirmation that it should be corrected.

Mr. DAVIS. Senator, the thing to understand in this bill, which I am sure you have recognized, is that this tax or fee, whatever it ends up being called, is not being placed on people who are not at fault. It is being placed on an industry which is the primary generator of the materials that have caused this problem, an industry that has benefited in the past from higher profits because they were able to use lower cost disposal mechanisms, and industries and companies, in fact, which are in business today which, in fact, contributed to these sites.

Senator DOLE. That is the point, I think, if those fees are later used to take care of some orphan site, then in effect you are imposing a liability on someone who is not at fault.

Mr. DAVIS. That is not really the case because the sites still contain chemicals, and those chemicals come from the people that the fee is being imposed on.

Senator DOLE. Thank you.

Senator MOYNIHAN. I wonder if the Senator would agree that the words should have been "imposing liability on someone who is not at fault." No one is being singled out. A fund is being collected from an industry to compensate individuals who have been harmed, and who have no other recourse. We are not identifying any individual as being liable.

Senator DOLE. That may be the way to approach it, but I think that there may be a constitutional question involved, and I think that it is one that we need to address.

Senator MOYNIHAN. True.

Senator Baucus.

Senator BAUCUS. Thank you, Mr. Chairman.

Mr. Sunley, to what extent do you anticipate the impact on industry to be cushioned by tax deductions and passthroughs to consumers?

Senator MOYNIHAN. It is a very crowded room, and the Senators are addressing questions to witnesses. I know that it is difficult to keep down the buzz, but may I ask that you do so. This is a serious matter, and the committee must hear the replies and must not be distracted.

Mr. SUNLEY. It is our general view that these taxes will be shifted forward in the price, and to the extent that they are, then

you would not expect to find the corporate profits of the chemical industry reduced. To that extent, then, their corporate taxes would not be reduced.

It is true that any ordinary and necessary business expense is deductible in arriving at taxable income, whether that be payment for labor services or payment of a fee or an excise tax which is deductible in determining taxable income. To the extent that the taxable income is lower because of deducting this tax, then in fact 46 percent of it is paid for in the form of less corporate tax payment, and 54 percent would be out-of-pocket of the industry.

Senator BAUCUS. But you expect the 54 percent out-of-pocket of the industry to be passed on to the consumers?

Mr. SUNLEY. I would think that you would pass on the whole cost, just as if you hire a unit of labor for \$3 per hour, then your product price reflects the full \$3 even though the \$3 is deductible as a business expense.

Senator BAUCUS. The main theory of this bill is to transfer the cost.

Mr. SUNLEY. Yes.

Senator BAUCUS. So that victims, State governments, and people in those categories don't pay the cost quite as much as the producers and the consumers of these products. Is that correct?

Mr. SUNLEY. That is correct.

Senator BAUCUS. If that is the case, the question I have is, What carrots or sticks are there in this bill that would help buy incentives for producers of toxic chemicals and hazardous substances to minimize production and take better care of the waste?

I understand that there are provisions to adjust the fees, and so forth, but as I understand that provision applies to industries rather than to specific firms. I am wondering whether we are doing enough here.

Mr. COSTLE. The fee system, per se, I agree that it does not by itself create a particular set of incentives significantly. What does in the bill, however, is the provision for strict liability, which is consistent with the trends emerging in the common law regarding the liability of the industry for hazardous items, be it dynamite or whatever.

We feel quite strongly that it will provide a very effective deterrent to industry's continued dumping, and an incentive to clean up old sites because industry will realize that we have the ability to collect all costs incurred in cleanup, that is, to the extent that we have to go in and spend money to clean up, and to the extent that we can identify the party.

Senator BAUCUS. You are saying that you impose strict liability on the producer in addition to fees paid to the Fund?

Mr. DAVIS. Senator Baucus, there is a confusion on that point sometimes. The fee itself is not intended to be a punitive measure. It is intended to set up a pool of working capital to serve as the buffer between the victims and the people responsible for the incident. It allows the Federal Government to clean up the problem, avoid or headoff the damage, and ask questions later about who did it.

The punitive nature, if there is one in this bill, in the sense of the carrot and stick, comes from the liability provision where you

try to go back and find the single party or set of parties responsible for that incident and recover the money from them. So there are two different things at work.

Senator BAUCUS. What about the effect on prices of herbicides and insecticides? Senator Dole alluded to the increased cost that a farmer would have to pay for the fertilizer. But what about herbicides, insecticides, and pesticides, are those product prices going to be increased?

Mr. DAVIS. Clearly, pesticides and the chemicals used in making pesticides are part of the problem that we are dealing with here. So the fee is going to in some way affect the cost of manufacturing pesticides. The study that I mentioned earlier again projected about .6- to .8-percent price increase. That stands in comparison to a trend over the last 10 years in the organic industry of price increases of 10 to 12 percent per year.

Senator BAUCUS. What about insecticides and herbicides?

Mr. DAVIS. The same thing.

Senator BAUCUS. Would you provide that information for the committee?

Mr. DAVIS. We will.

Senator BAUCUS. Thank you.

Senator MOYNIHAN. Thank you, Senator Baucus.

Senator Danforth.

Senator DANFORTH. The Senate bill in its present form gives the Treasury Department discretion to reduce the fee on recycled materials. The House Commerce Committee bill had a similar provision. The Ways and Means Committee, it is my understanding, deleted the provision. They felt that it was bad policy.

It is my understanding that the Treasury would support a similar amendment in this Senate bill; is that correct?

Mr. SUNLEY. Senator, more than the Treasury, the administration would support a similar amendment.

Senator DANFORTH. The administration would support it?

Mr. SUNLEY. Yes.

Senator DANFORTH. Do you agree with that, Mr. Costle?

Mr. COSTLE. Yes, Senator.

Senator DANFORTH. Let me just ask a general question. It seems to me that the whole question of who should bear the cost for hazardous activity should be related—if we are making decisions like this—to the question of who can do something about reducing the hazards.

Maybe it is impossible to impose the tax on people who dispose of the hazardous material. But it would seem to me much more likely that if the costs were borne by the people who dispose of those hazardous substances as opposed to those people who manufacture it, there would be an incentive to reduce that cost by changing procedures.

What I wonder is if the whole question of reducing hazardous activity has been considered in creating this Superfund, and if there are ways of designing such a fund. I think that everybody concedes that there should be such a thing.

Are there ways of designing a Superfund and determining who should create the Superfund in a way which relates the contribu-

tion to it to the ability to change behavior and, therefore, reduce the risk in the first place?

Mr. DAVIS. Senator, as you understand the Superfund bill, at least a large portion of it, is trying to address a problem which is evolving out of chemicals that are already in place. The chemicals have already been placed in these sites. We are finding out now that they are starting to cause us problems.

So the disposers who are in operation today, for example, no matter how much fee might be placed upon them for the Superfund cannot go back and undo what has already been done in those abandoned or orphan sites, or whatever they are called.

The Superfund is trying to raise the source of money from the general sector of the economy that basically originated this problem, to clean it up. The resource conservation and recovery program is dealing with the future problems, the future disposal of waste. It does, in fact, place the final burden of disposal costs at the site of the point of disposal, and it in fact would have that incentive effect that you are talking about.

Senator DANFORTH. However, we are dealing with the tax aspect of the program in this committee, and clearly the tax is an increased cost of an activity. It would seem to me that what we are doing here is increasing the cost on that part of the chain which is the least likely to be able to do anything about it.

The Treasury, as I understand it, just took the position that it should not be permitted to make future adjustments even on an industrywide basis. What I am talking about is not just an industrywide question. Let's suppose you have some product that is produced by 10 different chemical companies, and it is going to continue to be produced. Those producing companies have very little to say the way it is disposed of.

However, somebody who is in the business of disposing of the product, may have for example, two different alternatives for disposing of it. If one of those alternatives were hazardous and were taxed that would provide an economic incentive, for following safe procedures, would it not?

Mr. DAVIS. That basically would apply for future waste disposals. The problem is that the wastes that we are dealing with here have already been disposed of. There is no opportunity for a disposer in the future to make a choice about doing a good or bad job of it.

Senator DANFORTH. The cost is going to be increased in the future. It is a prospective increase in the cost of an activity. What I am saying is, the prospective increase in the cost of the activity is being imposed on that portion of the process which has the least ability to control the problem.

Mr. DAVIS. That is not always the case. If you look at the waste or the materials being found at dumpsites around the country, abandoned sites, orphan sites, they just as often are the waste products or the off spec material itself from these basic feedstocks. The basic feedstocks themselves are toxic, and often are found in these sites just as much as the products that come three and four steps down the production chain.

So the tax, in fact, is being imposed at the very outset on chemicals and materials that are in fact part of the problem. By putting it there you insure, as Mr. Sunley pointed out, that the tax gets

passed on to all the other chemicals that are showing up in the dumpsites as well.

Senator DANFORTH. I have used up my time, but isn't the case that you are least likely to affect future behavior by increasing the cost at that particular point in the chain?

Mr. DAVIS. One argument has been put forward, and I am sorry for taking up your time and drawing this answer out, is that you might in fact do just the opposite by placing this tax on the disposers. If you place it on the disposer, you have done it at just the point where the generator of the waste has got to make the choice to either dispose of it with a legitimate operation at higher cost, or go to an illegitimate operation or the midnight dumper with lower costs.

So you might, in fact, be enticing the generators of waste to, in fact, follow bad disposal practices.

Senator DANFORTH. That is possible, I suppose. Also, Senator Culver felt that it was unadministrable.

Mr. DAVIS. That part is definitely the case.

Senator DANFORTH. Do you agree with that.

Mr. COSTLE. Yes.

Senator DANFORTH. Do you agree with that?

Mr. SUNLEY. We have concerns. We think we could probably administer the postclosure liability fund the way it is structured because you have a certified dumping site. You impose the tax on the wastes that are put into that dumpsite. But, obviously, trying to tax all wastes wherever they may be dumped is virtually impossible.

Senator DANFORTH. You don't want to tax the sites that you approve of.

Mr. SUNLEY. That is part of the problem with that approach. But at least we could administer the tax.

Mr. DAVIS. One of the distinctions that is between those two funds, also, is that the postclosure fund, in spite of the connotation of that name, is actually in dealing with sites that would become problems 10, 20, or 30 years from now.

We can afford to take the 3, 4, or the 5 years that might be required to develop that more complex collection mechanism. In the case of Superfund we have problems that are festering right at this moment, and we cannot afford any delay like that to create the Fund.

Senator DANFORTH. Thank you.

Senator MOYNIHAN. Thank you, Senator.

Senator Bentsen.

Senator BENTSEN. Thank you very much, Mr. Chairman.

Mr. Costle, I believe that everyone agrees that we have to respond to this problem of the release of hazardous substances that can endanger the public health. I think that most of my colleagues agree with me that we have to have a Federal role, and we have to have a substantial Fund. We have to be in a position to allow the Government to respond quickly, and that we also have to be able to try to prevent the situation before we have a Love Canal or a Chemical Control Corp., and all the human suffering that resulted from those incidents.

I have been told that the cost of cleaning up Love Canal and taking care of that problem will run some \$30 million. If we had had something like this in effect, it probably would not have cost over \$4 million in the beginning, and we would have avoided the human suffering.

Sure, we are in agreement with the general objectives of these bills. The question is how to have equity in the process of bringing it about. I have considerable concern about the liability provisions that were referred to by Senator Dole.

What we are talking about is a new Federal tort law, a substantial expansion of what the State law has been. We are really talking about throwing out the legal concept of negligence and nuisance, and the defenses that they would now have would be an act of war or an act of God. Those are about the only defenses that will be left.

I heard your associate's statement that you did not want someone liable who was innocent, and that such a situation was not the objective. But I read this comment of a Justice Department employee who stated, "Government is perfectly prepared to punish the innocent for the sins of the guilty."

Then I know that in response to your questions, Senator Dole, about someone paying for something they did not do, well at least in this bill there is no apportionment of liability for those that have a significant contribution. A person could have contributed 60 percent of the problem, and yet be forced to pay 100 percent of the liability.

Then I get concerned about what happens to the small companies. I think that some of the big companies can self-insure. But where you have expanded the tort liability to this extent, do you think that the small company, the medium size company are going to be able to get insurance to protect themselves, or are they going to give up? Are they going to sell out to the large companies? Are they going to take the offer that has been waiting around all this time?

That concerns me very much, and I would like to have your response to it.

That is not what was in your bill. That is what is in S. 1480.

Mr. COSTLE. Let me respond. You really made several points, Senator, and I would like to respond to all of them.

We have talked a lot this morning about what sorts of carrots or sticks will in fact change behavior. To be perfectly frank with you, I don't have a lot of confidence that you can hire 10,000 regulators and effectively be sure that you are going to change behavior.

The most effective thing in this area that I can think of, frankly, is a provision that provides for strict liability. It says, "Look, we are in fact dealing with stuff that commonsense now tells us, as the common law is now emerging, can be pretty hazardous."

We are learning about new hazards all the time. I am told repeatedly that while 15 years ago we did not really know about these kinds of hazards, and we just put it in the ground, but that is not a very good answer to me. I think that commonsense tells you that if you are dealing with chemicals that you handle carefully because they are terribly hazardous—

Senator BENTSEN. I understand that, but we knock out all negligence in this thing when we do it.

Since we have only limited time, and I wish we had much more time, let's get just to the question, then, respond to that, the question about getting the insurance for the small and the medium size company. Do you think that they will be able to get it?

Mr. COSTLE. We have been working with the insurance industry. In fact, we are having discussions with them right now.

Mr. DAVIS. Yes, Senator, I could get the actual record for you, but in one of the hearings, and we have had many hearings in the last year, there have been members of the insurance industry who have testified to the effect that insurance is available. These types of risks are insurable.

Senator BENTSEN. No one knows these types of risks because you don't have the case law. We are talking about substantial expansion in liability. I have been in the insurance business, and we do some actuarial work.

Mr. DAVIS. You are raising the question of liability. The Senate bill, in fact, includes an apportionment provision which the administration did not, in fact, include at all.

Senator BENTSEN. That is correct.

Mr. DAVIS. So on the point of tempering that joint and several liability, the Senate bill takes a step that the administration bill did not include.

Senator BENTSEN. I know that.

Mr. DAVIS. The strict liability provision in the Senate bill is essentially identical to the administration bill. There are other provisions in the Senate bill that address or impact in some way court proceedings, and so on, which are not in the administration bill, and those in fact have been controversial. But on the idea of joint and several, and on strict liability, they are very similar to what the common law has done, and to what the administration bill proposed.

Senator BENTSEN. I am trying to draw the line between the administration bill and what is being proposed in S. 1480, and I will ask that it be written for the record because I don't want to take any more time.

Senator MOYNIHAN. I wish that the Senator would take as much time as he thinks is necessary. This is an essential point.

Senator BENTSEN. Then, if the committee will indulge me for a moment.

I would like the administration's position on third-party liability which is only touched on in the administration bill, but as I understand S. 1480 approximately one-third of this Fund will be utilized on third-party liability problems.

Does the Administration feel that they are holding to the way they phrased in their bill, or are they talking about expanding third-party liability to the extent of S. 1480?

Mr. COSTLE. As we originally started out, Senator, as I alluded to in my prepared remarks, our starting point was the acute frustration we felt when Love Canal happened, and we, as the chairman pointed out, searched the authorities, searched the budget, searched the appropriation authorities, and it was clear that there

was going to be a contest over liability and should be responsible for what.

So our initial thrust was to say, we have to have, as Swepp Davis referred to, a buffer that allows us to do what the Government ought to do to move into a situation and take immediate remedial actions, and put in place the machinery for a long-term solution.

Our original proposal, as you point out, covered economic damages, personal or real property, natural resources, loss of opportunity to harvest marine life, which is a traditional. S. 1480 covers those, but as you pointed out it goes on to cover other things, agricultural losses, loss of earnings or profits, out-of-pocket medical expenses. Our proposal did not embrace those.

It is, frankly, our position that that is precisely the issue, the kind of issue that only Congress can finally decide. It is a policy determination as to the breadth of coverage that is a matter of legislation that we really want to afford in this country.

My only caution would be that we have to adjust the size of the Fund accordingly.

Senator BENTSEN. Absolutely. As I understand and remember the testimony, and have researched the testimony, this question of insurance availability did not cover the third-party liability. Here, you are talking about changing the tort law with a paucity of evidence as far as the correlation of the cause and the effect.

That is quite an easing of the entry into the law suit and that obviously expands the liability substantially. Such an expansion, then, increases whatever the insurance claim.

So I think that you have got a situation where small and medium size companies may have some serious problems here, whereas the very large industry can self-insure.

Thank you for indulging me, Mr. Chairman.

Senator MOYNIHAN. Thank you, Senator.

Senator DOLE. May I just add a point there?

Senator MOYNIHAN. Please do.

Senator DOLE. I don't know how it can be done without extending the time, but I am on the Judiciary Committee, as are Senator Baucus and Senator Culver, and I wonder if there is any way that we can take a look at this quickly on the Judiciary Committee, or at least have the staff of the Judiciary Committee address this one area, the toxic tort provision, because it is a major departure.

I know they are relying on some Environmental Law Institute study. There are all kinds of State laws, regarding nuisance and hazardous substances. As far as I know the Judiciary Committee has not been consulted, and maybe that could be done at the same time as we proceed, so that we don't lose time. It is a big problem.

Senator BENTSEN. Thank you, Mr. Chairman.

Senator MOYNIHAN. Thank you, Senator.

Senator Durenberger.

Senator DURENBERGER. Thank you, Mr. Chairman.

Let me start by asking a basic definitional question.

As I understand the substance of S. 1480, we are talking about the releases of hazardous substances into the environment. We identify release as spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, or dumping into the environment. Is that correct so far?

Mr. DAVIS. Yes, Senator.

Senator DURENBERGER. In a general sense, we identify environment as air, land, groundwater, and do we do more than that?

Mr. COSTLE. Surface waters.

Senator DURENBERGER. It seems to me to be a pretty broad definition, and I think particularly the definition of release. I wonder if you could add some specificity to it. I think we can all picture in our mind burying drums of waste. We can all picture in our minds the St. Louis Park creosote manufacturer emptying his creosote in a water recharge area, and that sort of thing.

But when you get into escaping, leaching, and so forth, that can take you into a variety of areas. For example, let me give you one, formeldahyde leaching from asbestos installation into mobile homes and other kinds of homes, would that be covered?

Mr. DAVIS. I am not familiar with that, but I think you have to meet the definition of a facility also before the liability provisions in this bill, and the administration bill as well, would apply. As this has been interpreted in the past, that situation probably would not qualify as a facility.

Senator DURENBERGER. So we would probably be able to eliminate the end-application of a product, let us say, in the construction of a home, or the manufacture of a piece of equipment as that equipment is being used, or the home is being lived in. If the product is leaching, or releasing, or injecting, or whatever, would that be exempt?

Mr. DAVIS. That is a question that the administration bill tried to deal with in a slightly different structural way than the Senate bill did. But what it comes down to is trying to draw a distinction between product related damages where existing laws and developing laws on product liability, for example, would apply, as opposed to waste.

We are dealing with waste in this situation. A classic example that I have used to explain this is if you have Monsanto produced PCB's. The PCB's are used by someone else to manufacture a transformer, and the transformer later is disposed of as a waste residual product, and the PCB leaks out. The person who owned and disposed of the transformer would be liable under the Senate as well as the administration bill.

Monsanto produced the PCB, and they were producing a product. There is no liability in that case.

Senator DURENBERGER. So the bill itself takes further definition of the release of hazardous substances into the area of waste, or waste discharge, or waste leaching, or whatever. Is that correct?

Mr. DAVIS. Yes, sir.

Senator DURENBERGER. All of the evidence that we have here, I take it, is in part passed release and in part current releases. Is that correct?

Mr. DAVIS. The releases being addressed by the bill, I believe that is correct of both the Senate bill and the House bills for that matter, are today's releases. A release that occurred 5 years ago, for example, would not be covered by these bills, as I understand them.

The wastes that have been put in place yesterday or 10 years ago—it is today's discharge that is being addressed.

Senator DURENBERGER. Let me, if I may, make a general comment, and ask you to react to it.

I have been listening to the questions here. I think that it is difficult to tell, as you listen to the questions, where the people are coming from in terms of thinking this is a good or bad idea, but all of the questions seem to focus, and particularly the questions by Senator Danforth and Senator Baucus, on who are we trying to get to do what, really focus on what I think is the heart of defining what we are trying to do.

I don't know about the Love Canal situation, but I would assume that in the Love Canal situation, had there been a waste disposal facility in that area at some time, it would not have cost \$4 million to clean up the problem, to say nothing of the \$20 million.

If you look at my own State of Minnesota, all those red dots up there, I am sure, are frustrated people who don't know where to go with their chemical origin waste. We passed the Solid Waste Disposal Act. We told communities to come up with solutions. The communities and the States around this country are saying, "Not in our State, not in our county, not in our city, we don't want to take that sort of thing."

So I guess what this leads me to is just to say that we ought to define in this bill, and make it clear what we are trying to do. We are trying to get an emergency fund. We are trying to pick it up from manufacturers or importers of products, and we are sort of biding our time until we can really get to a solution of the problem.

That brings us, then, to a consideration of the point that Senator Bentsen has made, and that is: In this interim period, until we find that safe geological disposal site, or whatever it is, who is going to be able to stay in business where they are compounding chemicals, or selling a compound product, or something like that.

The 3-M companies in my State can find a variety of ways for disposing of their wastes. They have the financial resources. They are a big part of the market. They can do it. But how about the little glue factory, a lot of these little folks all over this country who are going to be paying a substantial part of this, and particularly the liability side of this legislation—what are they going to do when they cannot find a place to put it?

I just want to say that this is a concern that is reflected by a variety of members of this committee who would really like to see the tax we are talking about put down on the ultimate consumer, put down there at the State and community level, where there will be pressure on States and communities to come together and find these resources.

I just think that there is a concern here on this committee that the form of this tax is not going to accomplish those ends, and at best it will accumulate a sum of money to do some temporary cleanup.

Mr. DAVIS. Senator, if I may respond. I think that this is a very clear and accurate assessment of what we are dealing with, and what many of the frustrations are. The superfund is trying to clean up and resolve a problem that we are already stuck with. No amount of good behavior in the future is going to make the exist-

ing problem go away, and that is the frustration that I think a lot of people in this country are facing right now.

We do need to get the future problem taken care of, and create acceptable and responsible dump sites, and disposal facilities for small companies. There is an industry growing in this country, very rapidly at this point, responding to that need.

With the guidance that the Congress has given us through the Resource Conservation and Recovery Act, and our abilities to implement that, hopefully those industries will develop in a way that will not create problems that we will be sorry for 10 years from now.

Senator DURENBERGER. Thank you.

Senator MOYNIHAN. I wonder if I could just respond to Senator Durenberger's question, and those of others, having taken testimony in the Environment and Public Works Committee on this very subject.

We have here a classic contemporary problem, the impact of technology on the society. There is a traditional curve in which these things take place. There is a long period where you don't notice that there is an impact, and then you don't know what to do about it, and then finally technology resolves the technologically induced problem, or it usually does.

By and large, and I think it is the case, and I would be interested to know if Mr. Costle and Mr. Davis would agree, that the problem of disposing of hazardous waste is no longer a technological one. We know what to do.

I took testimony, in the Love Canal area, of the Hooker Chemical people who 30 years ago and 20 years ago just dumped barrels in a hole in the ground. They now take those barrels and dump them into an incinerator. While the most toxic of substances are put into the incinerator, only carbon dioxide and water come out. At very high temperatures, this seems to be very manageable.

It poses a problem for the small producer, which could be resolved with the establishment of some sort of commercial or communal disposal facility. But I think it is the case that in technological terms the problem is behind us. We now know how to dispose of this waste and reduce it in practically every case into a harmless substance. The one permanent exception is nuclear waste, which we haven't resolved yet.

Wouldn't you think that this would be so, Mr. Costle and Mr. Davis?

Mr. COSTLE. Given our current state of knowledge, yes. The only footnote that I would put to that observation, Senator, is that there are some wastes that we don't know very much about.

Senator MOYNIHAN. Certainly, but in the main we now know what is toxic and we can get rid of it.

The problem is cleaning up an accumulation, which to a degree is a finite problem. We don't know of all the sites, but there are a limited number of them at the moment, and as we discover them, we can simply get rid of them.

This is not going to be a problem of the 21st century in the way that nuclear waste will be. We know what to do about hazardous waste, and we must find the resources to do it. I think that that is the state of the technology at this point.

Senator BENTSEN. Mr. Chairman, if I may make a comment on that.

Senator MOYNIHAN. Senator Bentsen.

Senator BENTSEN. I want to make the point that the administration bill does not pose a lot of these problems that I was concerned about, and it achieves much of the objectives that we are trying to work on here. It takes care of the Love Canal problem, and the Chemical Control Corp., and many of the others.

But it is this expansion that I see in the tort law that concerns me in S. 1480 that is not in the administration's bill.

Senator MOYNIHAN. That is a good point, and one yet to be resolved, perhaps, in this committee.

I wonder if I could just ask Mr. Sunley a question, which I alluded to earlier.

The distinction between a tax and a fee, I wonder if you would make that for the committee, so that we can have that as a matter of record.

Mr. SUNLEY. Mr. Chairman, the distinction between a tax and a fee is not always an easy one. There probably is a continuum. You start out, on one hand, with an entrance fee into the national park, which is clearly a charge for using the park for 1 day, and no one would say that that is a tax. On the other hand, the other extreme, the individual income tax, no one would suggest that that is a fee.

Just where you draw the line in between? I don't think there are any real standards of where something stops being a fee and becomes a tax. The distinction is important, however, for Congress because, obviously, it affects jurisdiction, which committee gets to consider the legislation.

As you may know, the administration originally proposed a fee, although we do not object to it being designated as a tax, and we support the two House bills which, in fact, have a tax.

Some argued, when we worked on the legislation, that if it was designated a fee there might be two advantages. One is that you could adjust the fee, and that you may not be able to have the executive discretion to adjust the tax. That probably is not true. Congress may be more reluctant to give the executive branch the discretion to adjust a tax than a fee. Clearly, the administration had the discretion to adjust the interest equalization tax, including taking the rate down to zero at one time.

The other possible substantive advantage that some have suggested is that a fee could be imposed on exports, whereas a tax on exports may be unconstitutional. This seems to me to be a little glib. It is true that the Supreme Court in the 1920's held that a sales tax could not be imposed on exports, but that does not mean that a manufacturer's excise tax cannot be imposed on a product which is later exported, and that would be constitutional.

I think I would suggest that regardless of what you call something, a fee or a tax, the court could easily hold that the fee is, in fact, a tax, and the Supreme Court decision in 1920 would so hold, in spite of what the Congress chose to call it, if they in fact found it to be a sales tax in effect.

From the point of view of the administration, and more importantly the Treasury Department, we have three rules that we

would like to see followed. If you would follow the first two in all instances, we would not need our third.

Our first rule is that only the Internal Revenue Service collects taxes, and there does not seem to be much disagreement there. No executive agency wants to collect the tax.

Our second rule is that the Internal Revenue Service only collects taxes, and there we find some disagreement. The Internal Revenue Service currently does collect one fee. Obviously, some believe that IRS is able to do almost anything and everything, including running price controls, collecting fees, and goodness knows what else.

So our third rule, for those who do not accept our second rule, is that if the IRS is going to collect the fee, we want to have all the enforcement and collection powers that we have with respect to excise taxes, and that is what is in fact provided in the Senate bill. It ties into the Internal Revenue Code when it comes to enforcement and collection power.

It does seem to us, just to be a little cleaner, that this committee might want to just strike out the word "fee" and put "tax" in, and it automatically is in the Internal Revenue Code. We have all of our normal enforcement and collection powers, which is what we believe we should have. That is the decision that the Ways and Means Committee made when it considered the bills that were referred to that committee from the other substantive committees, which had in fact had fees instead of taxes.

Senator MOYNIHAN. There is a fourth rule, Dr. Sunley, which is when the Internal Revenue Service sets forth three rules, they are hard to understand. [Laughter.]

And not for nothing are there three when one might do. [Laughter.]

I get you, I think, and you will get us inevitably. Sooner or later we are at your mercy, since thank goodness we have such a distinguished public servant to depend upon in those ultimate travails.

I am forced to recall, in a wholly nonpartisan way, that in 1962 in his campaign for reelection, the Governor of the State of New York, Nelson Rockefeller, announced that he would never again increase taxes in the State of New York. He held to that commitment, and he simply increased the fees for his next three terms in office, and there is some question as to what the difference was as you paid them.

But I think you make an important point that I think this committee will want to consider.

Are there further questions for our panel?

Senator BRADLEY. Yes, Mr. Chairman.

Senator MOYNIHAN. Senator Bradley.

Senator BRADLEY. Mr. Chairman, I would like to ask the panel one question, and it has to do with the proposal that has come forward recently by the Atlantic Richfield Co. as an alternative to S. 1480 and to the various House bills.

It is a proposal that would place an excise tax derived from revenues from the sale of organic or inorganic chemicals, and would be placed on the person or establishment that manufactures those chemicals.

I am curious as to how each of you feels, meaning EPA and Treasury, how you feel it compares to S. 1480, and if you see any special problems with implementation, and how long do you think it would be before the revenues started to flow in from such a tax, for without the revenues there would be no clean up.

Mr. SUNLEY. Let me comment first, if I may, Senator Bradley.

We clearly prefer the version that you have before your committee. We are talking about an excise tax that might apply to 700 companies on 46 substances. If you want to tax every chemical product at the end of the manufacturing process, you may be talking about some 14,000 companies, and maybe 500,000 products, and you just have incredible problems because some of the chemicals are actually inputs into later chemicals, and trying to give credits for taxes that may have been paid at the earlier stage would be virtually impossible.

Senator BRADLEY. So you think that the credit component of that would be impossible to administer?

Mr. SUNLEY. I would say that the Atlantic Richfield Co. is trying to kill the bill by creating a lot of controversy in introducing this idea. It really is unworkable.

Senator BRADLEY. What about EPA?

Mr. COSTLE. I underscore the administrable character that Mr. Sunley has referred to.

Senator BRADLEY. How would the proposal affect small companies versus large companies?

Mr. DAVIS. I think, Senator, it would generally, as I understood it and tried to get people to study it, tend to shift more of the burden of the tax from the large companies, the producers of your major feedstocks, to your smaller companies throughout the chain, and it would do it most likely in a less even-handed fashion.

One advantage of the feedstock approach is that it insures that a certain piece of the tax gets passed to almost all the chemicals, so you have no one chemical or chemical process getting a competitive advantage over another.

When you start trying to, in a bureaucratic sense, almost arbitrarily set a piece of the tax directly to every step along the way, you always will have some unevenness to it, as well as the complexity that Mr. Sunley referred to.

One thing, I was going to comment on the practical effect of this provision. If I am the second or third person in the chain, and I get a credit for what was paid above me, it essentially tends to reduce what I have to pay. To raise the full amounts of money, you have to increase what is paid by the first person, and it further reduces what I have to pay. The net effect when you get through is that no one pays except the first person, and we are right back to the feedstock system all over again.

Senator BRADLEY. Thank you.

Senator MOYNIHAN. Senators?

[No response.]

Senator MOYNIHAN. In that case, we would like to thank our panel, and we would like to note that Mr. Sunley at last offered an unequivocal reply to a question. Whether the Atlantic Richfield Co. will consider it a breakthrough in priority government, I don't

know, and maybe you manufacturers out there will find that there are uses to ambiguity. [General laughter.]

As you know, we have a long day ahead of us, and before the morning session is concluded we want to hear from the first panel of persons representing the industry principally involved here, and we will now do so. We want everyone to understand that there will be plenty of time, and no one will be cut off. We have limits but they will be the traditional, established limits of this committee.

Our first panel consists of five witnesses: First, Dr. Louis Fernandez.

Dr. Fernandez, good morning, sir, and we welcome you. You are the vice chairman of the board of directors, Monsanto Co., and appear on behalf of the Chemical Manufacturers Association.

Second, Mr. Richard Hanneman, and Mr. Hanneman is director of government and public affairs of the National Solid Wastes Management Association. Mr. Hanneman, we welcome you.

Third, Mr. Gene Branscum. Mr. Branscum is the director of the society of the Plastics Industry, Inc., and president of the GOTT Corp. of Winfield, Kan.

Fourth, Mr. Donald Ellison, good morning, sir. You are the manager for government and industrial relations of Virginia Chemicals, Inc., and you appear on behalf of the Synthetic-Organic Chemical Manufacturers. That cannot be, but that is part of the wonders of chemistry and you will explain them to us.

Fifth, Mr. Christian Hansen, good morning. You are president, of course, of the Linden Chemicals and Plastics of Edison, N.J., and you appear on behalf of the New Jersey Chemical Industry.

We welcome you, gentlemen, and I would like to suggest we begin as does the witness list with Mr. Fernandez. We are going to ask, as part of the regular routine of our committee, that each of the witnesses confines his original statement to 5 minutes, and then we will stay here as long as we have questions from the Senators.

Senator CHAFEE. We have three more panels after this. Is it your idea to plunge right along, or do you plan to break for lunch; what do you envision?

Senator MOYNIHAN. I thought that we would take a half-hour break for lunch, unless the committee wishes to stay right here. Does the committee have a wish?

We will break for a half hour for lunch.

Senator CHAFEE. Thank you, Mr. Chairman.

Dr. Fernandez.

**STATEMENT OF LOUIS FERNANDEZ, PH. D., VICE CHAIRMAN OF THE BOARD OF DIRECTORS, MONSANTO CO., ON BEHALF OF THE CHEMICAL MANUFACTURERS ASSOCIATION**

Mr. FERNANDEZ. Thank you, Mr. Chairman.

First I would like to make it known clearly and without any doubt that the CMA and its member companies strongly support new legislation to solve the problem of abandoned hazardous waste sites. Our industry does support the Federal Response Fund which would take action when there is danger to public health.

Senator MOYNIHAN. Would you let me interrupt.

Mr. FERNANDEZ. Certainly.

Senator MOYNIHAN. Ladies and gentlemen, we now have our first panel of industry witnesses, and we would like to hear them. I know the morning is a long one and the room is crowded, but these gentlemen are entitled to your courtesy, and we require it if we are going to hear their testimony.

Now, let us have it as quiet as we can.

Please proceed, Dr. Fernandez.

Mr. FERNANDEZ. I appreciate the interruption because it gives me the chance to repeat that our industry does support new legislation to solve the problem of abandoned hazardous waste sites. For more than a year we have been trying to work with the Congress to achieve sound dump site legislation.

Mr. Chairman, although our industry has opposed fees in principle, we are prepared to contribute a fair share to help clean up dump sites.

Let me summarize our views.

The chemical industry supports House bill 7020 as it was reported by the House Interstate and Foreign Commerce Committee. We oppose Senate 1480 which, in our judgment, is a legislative disaster. It is too broad. It tries to punish the chemical industry.

It sets up a revolutionary Federal toxic tort liability scheme for past actions, which were perfectly legal at the time, and its funding levels are far, far in excess of what is needed.

As to the funding mechanism of 1480, we believe the bill goes at it the wrong way. If Congress wants to draw any relationship between problem and solution, then the fee should be placed on waste and not on the purchase of feedstock raw materials.

This committee and the Senate itself owes a responsibility to society to look at the problem and solution as dispassionately as possible. The enormity of the fund proposed in S. 1480 together with the broadened liability exposure will clearly have a negative effect on the domestic chemical industry, and would be inflationary.

Senate bill S. 1480 is a revenue measure. It levies a substantial fee or tax, as the case may be, on our industry to pay the lion's share of superfund, and it is certain to affect our ability to export.

I have supplied some figures for the record, but let me just remind the committee that our industry is one of the few which is still very competitive around the world. We are making positive contributions to the balance of trade of about \$10 billion annually, and this, Mr. Chairman, is why the chemical industry and other concerned industry groups oppose S. 1480 in its present form, and support instead House bill 7020.

We urge you to look very closely at H.R. 7020. It is a tough, effective bill that will work to solve the abandoned hazardous waste site problem.

What we are asking this committee to do is the following:

One, reduce the funding. The chemical industry has documented that orphan dump sites can be cleaned up at a cost of around \$400 million, or about \$1 million per site.

Two, we suggest that you adopt a waste-end tax. The waste tax would create a broad tax base without a bite out of any specific entry category.

After all, some 17 industry groups, not just the chemical industry, contribute to the generation and disposal of hazardous waste. A feedstock fee falls heavily on just 15 major petrochemical based companies, and that is simply unfair.

Moreover, there is no incentive in the feedstock fee to reduce waste, but a waste-end fee would encourage manufacturers to further reduce their generation of hazardous waste.

We think that the system is now in place to run the waste-end tax. Regulations recently promulgated under the Resource Conservation and Recovery Act set up the necessary record keeping and reporting requirements for industry. We disagree strongly with the EPA on this point. Our analysis indicates that it would be a relatively simple matter to set up a tax payment form.

In prepared remarks, I have submitted background information on what we consider to be one of the most dangerous and precedent shattering parts of S. 1480, the liability section. I would like to give you an example of our concern.

Envision for a moment that an orphan dump site has been discovered. There may have been 50 people that contributed to it, but if the Justice Department decides that just one of those companies, likely to be a large one, should be singled out for attack, under S. 1480 it would be entirely possible that one company might have to bear the entire cost of cleaning up, while at the same time it has been making fee payment into the cleanup fund. This is what is meant by joint and several liability.

I might just add that the Justice Department in testimony by Assistant Attorney General James Morman clearly looks to the liability provisions as a further revenue raising system.

The entire thrust of his testimony was not whether joint or several liability is fair or necessary, or proper, but rather that it is needed to help replenish the superfund. This aspect of the proposal is one that should be directly addressed by members of this committee.

There are other points in my prepared statement but I would like to sum up in the interest of time, if I may, Mr. Chairman.

I would like to reflect on my own experience at Monsanto and the American Chemical Industry. There is no doubt that many disposal practices of the past do not meet today's high standards. That is understandable. We know more today than we did 35 years ago.

My company and others are investing millions of dollars in new and improved environmental safeguards of all types, especially for the handling of hazardous waste. I am concerned, though, Mr. Chairman, about a thread which weaves its way throughout S. 1480, and it is that the chemical industry is evil, that it needs to be punished for past sins, that it does not care about its workers or the citizens of the country, and that it has enormous profits which can be tapped indefinitely to solve societal ills.

I am here today to state flatly that this is a false assumption on the part of some superfund advocates. We have all heard a lot about midnight dumpers. There will always be some bad apples. Midnight dumping should be rooted out and prosecuted wherever it occurs.

The American chemical industry is prepared to work cooperatively and positively with Federal, State and local governments to solve this problem, so that we can get on with the more important job of creating jobs, new products, and discoveries that serve mankind.

Thank you very much, Mr. Chairman.  
[The statement follows:]



## CHEMICAL MANUFACTURERS ASSOCIATION

I am Dr. Louis Fernandez, Vice Chairman of the Board, Monsanto Company. Today I am speaking on behalf of the Chemical Manufacturers Association (CMA), a nonprofit trade association having 192 U.S. company members that represent more than 90 percent of the production capacity of basic industrial chemicals within this country.

### NEW LAW IS NEEDED FOR OLD DUMPSITES

At the outset CMA would like to express its strong support for legislation to address the problem of abandoned hazardous waste sites. Existing law is not adequate in this area and new legislation on inactive sites is needed.

We believe such legislation should include the creation of a federal response fund. The fund would undertake necessary cleanup and containment activities at sites which present an imminent threat to public health or the environment and where no other party is taking responsible action.

For more than a year our industry has been attempting to work affirmatively with the Administration and Congressional committees, principally through CMA, to develop sound dumpsite legislation. On July 19, 1979, CMA testified before the Senate Environment and Public Works Committee and called for the enactment of a bill to clean up and contain problem sites. Since that time we have testified on five different occasions before Congressional committees on this issue. In every

Formerly Manufacturing Chemists Association—Serving the Chemical Industry Since 1872.

instance we have recommended passage of a new law to address old dumpsites.

S. 1480 IS NOT THE ANSWER

Unfortunately, S. 1480, the bill before you today, is not the type of legislation that is needed. It is seriously defective in its overly broad scope, its punitive approach to liability, and in its excessive funding levels which are far beyond demonstrated need. Among CMA's concerns are the following:

- o The scope of S. 1480 far exceeds the problem of abandoned disposal sites. Instead it adopts an all-encompassing "release" concept. The "release" into the environment of any "hazardous substance" -- a term which is very broadly defined -- from a site, vessel or facility would be covered by the bill.
- o Creation of a federal private damages action is unnecessary in light of the adequacy of state tort law, and is unwise in its imposition of potentially large new caseloads on an already overburdened federal judiciary.
- o The liability scheme in S. 1480 is onerous and punitive. Joint and several liability could force companies to pay more than their fair share.

Moreover, the federal liability provisions are a radical departure from current state tort law and make previously acceptable practices unlawful retroactively.

- o The economic implications and insurance implications of the proposed liability provisions in S. 1480 are unmeasured and certain to be massive.
- o The funding mechanism of S. 1480, which would place a fee on primary petrochemicals and feedstocks, bears little, if any, relationship to the problem. Feedstocks funding will have drastic commercial and economic results falling unevenly and unfairly on a broad range of businesses. CMA believes that a waste-end tax system is much more appropriate.
- o The size of the S. 1480 fund is likely to have a negative effect on the domestic chemical industry and the nation's economy.

ISSUES OF CONCERN TO THE FINANCE COMMITTEE

There are many important issues in S. 1480 which should be of concern to members of the Finance Committee.

First, S. 1480 clearly is a revenue measure. It levies a substantial fee or tax on industry to help finance

the work of a government agency. About 85 percent of the cost of Superfund would come from such fees. In addition, the remaining 15 percent of the proposed Superfund would be raised through federal appropriations.

Second, the proposed fee or tax has serious budgetary and fiscal implications. Our nation is going through a period of economic stress, with major efforts being made to bring government spending under control. Congress has recently shown a growing reluctance to initiate costly new federal programs and is taking a closer look at existing programs. Some advocates of Superfund are seeking industry fees simply because the present federal budgetary constraints would threaten the broad-scale and expensive programs which they favor.

We believe strongly that this off-budget approach to raising massive funds is highly unwise and represents undesirable public policy precedent. We believe that federal programs should be subject to the order, care and scrutiny of the budget and appropriations process.

Third, the overbroad nature of S. 1480 could have an adverse impact on business and the economy. The sweeping release concept, coupled with the all-inclusive definition of what constitutes a hazardous substance, extends the coverage of this legislation far beyond what is needed or is desirable. It is difficult to overstate the vast exposure of industry in terms of regulatory impact, standardless executive discretion, liability and cost.

As opposed to the seriously flawed S. 1480, we call your attention to H.R. 7020, a hazardous waste sites clean up bill reported by the House Committee on Interstate and Foreign Commerce on May 13, 1980. Major segments of the business community have responded positively to H.R. 7020. Although that bill remains troublesome in some respects, it appears to strike a number of reasonable compromises and represents significant improvement over previous versions. This measure is far more realistic and acceptable than S. 1480.

SUGGESTED COMMITTEE ACTION

We recognize that this committee may not be in a position to rewrite the entire text of S. 1480. There are a number of important changes, however, that appear to be within your special expertise. We hope you will consider these changes favorably.

1. Reduce the Level of Funding and Raise the Percentage of Federal Revenue Contribution

S. 1480 authorizes approximately \$4.1 billion in funding over a six year period. Over \$3.5 billion of this amount would be raised through industry fees and only \$600 million from Federal appropriations.

Such funding is far in excess of what is needed or is reasonable. It is, for example, almost three times the size of the Administration bill, which recommends \$1.6 billion in funding.

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While not wishing to downplay the seriousness of the hazardous waste site problem or the need to enact properly focused legislation, our own studies indicate that the magnitude of this problem has been greatly exaggerated both as to the number of sites and the cost of corrective action. In particular we would like to call your attention to CMA's State Waste Disposal Management Survey. This survey of the states indicates that the Environmental Protection Agency's projections are grossly over-inflated. Instead of the \$3 to \$6 million forecast by EPA, the survey estimates cleanup and containment costs will average \$1 million per site. Moreover, a fund of \$400 million should be adequate for necessary remedial activities. Consequently there is no justification for the gigantic fund proposed in S. 1480.

In addition, the collection of up to eight hundred million dollars in industry fees and federal appropriations for the Hazardous Waste Response Fund set forth in Section 5(b) vastly exceeds the amount of funds necessary for response actions and associated costs; and the existence of such a massive cash reserve would encourage wasteful expenditures for incidents or conditions posing little or no risk to health and the environment. A limit should be placed on the amount of money which the fund can contain, and such a cap is part of the CMA waste end tax proposal.

Coupled with the large fund is a disproportionate ratio between industry fees and federal appropriations. More

than seven dollars would be collected from industry to every one dollar of federally authorized monies. Such a ratio does not accurately reflect responsibility for the site problem.

Hazardous wastes are not the product of chemical industry activities alone. Rather, they are an integral by-product of our industrial society, and by-products of the daily life of every citizen. The problems associated with abandoned hazardous waste disposal sites reflect more than 100 years of industrial development in the nation. Hazardous wastes have been and will continue to be generated by a wide range of industries, business concerns, government agencies and defense installations, municipalities and scientific facilities. Any funding scheme should recognize the societal nature of this problem, just as the benefits of resolving the problem will inure to all elements of the country. We would suggest that a 50-50 division between industry fees and federal appropriations is a fairer funding formula.

2. Adopt a Waste-End Tax in Place of S. 1480's Front-End Feedstock Approach

S. 1480 would levy fees on the basic raw materials of the chemical industry. Over \$3.5 billion would be raised through a fee on primary petrochemicals, inorganic raw materials and crude oil.

As a matter of principle, we remain opposed to industry funding. However, if Congress is determined to impose a fee on industry to pay for the costs of a "Superfund",

we believe the fee should be a tax placed on hazardous waste. The tax would be collected on each dry weight ton of hazardous waste generated and delivered to a hazardous waste disposal facility for final disposal. I would like to explain why we believe such a waste-end tax is superior to a feedstock fee.

a. A Feedstock Fee is Inequitable

The feedstock fee as proposed in S. 1480 would primarily affect 15 major, petrochemical-based companies. It is estimated that 40 percent of the products these manufacturers produce, which would be charged 90 percent of the fees under S. 1480, do not result in the generation of hazardous waste at all. Moreover, it has not been demonstrated that the feedstock fees can be passed on to downstream product users. In all cases, the result would be inequitable distribution of Superfund costs. On the other hand, a tax on hazardous wastes affects all hazardous waste generators, thereby creating a broad tax base without unduly burdening any specific industrial category.

b. A Feedstock Fee Fails to Provide Incentives to Improve Management of Hazardous Wastes

Placing a fee on feedstocks does not provide an incentive to reduce hazardous waste generation. A Superfund tax on hazardous wastes, however, would provide an additional economic incentive to waste generators to encourage the reduction of wastes and would help reduce the potential for environmental harm. CMA does not believe that a waste-end tax

would be an incentive to "midnight dumpers". The costs to comply with RCRA regulations greatly exceed the impact of CMA's proposed \$3.00 a ton tax on waste disposed.

c. A Feedstock Fee Bears No Relationship to the Problem

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d. The Necessary Data Base for a Waste-End Tax is Available, But the Data Base for an S. 1480-Type Feedstock Fee is Not

Considerable expenditures would be necessary to develop sources to implement such a system. On the other hand, the recordkeeping and reporting requirements of RCRA Sections 3001 and 3004 have been finalized, and provide a very suitable basis for the type of hazardous waste tax on waste generators for those hazardous wastes disposed of according to RCRA regulations. A relatively simple reporting and tax payment form, to be developed by the Department of the Treasury, would be the only additional form required.

CMA has put considerable effort into drafting a workable waste-end tax mechanism, which is described in detail

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3. Change Joint and Several Liability to Apportioned Liability

S. 1480 would impose onerous and punitive liability on owners, operators, generators and transporters. Any such person would be strictly, jointly and severally liable for the discharge, release or disposal of a hazardous substance.

Joint and several liability -- making one defendant pay for the wrongs of all other defendants regardless of responsibility -- is inequitable. It is especially unjust considering that industry fees will provide the primary means of financing for the fund. Imposition of joint and several liability in the face of an industry-based fund is simply the use of an additional funding mechanism. The purpose is to tap the "deep pockets" of industry regardless of fault and siphon more money into the fund.

That joint and several liability is viewed as another funding device was made graphically clear by Assistant Attorney General James W. Moorman in his April 15 testimony before the Committee on Environment and Public Works. Page 9 of his testimony states that "a Superfund will probably not be successfully replenished without a strong liability provision . . . . Without replenishment, the Superfund will not achieve the degree of success intended because the Fund will not have as much money." He further said that the "central purpose of

the various Superfund proposals is to provide the government with the funds for cleaning up releases of hazardous substances" and that the "Fund will simply not be replenished adequately" without such liability. The entire thrust of Mr. Moorman's testimony is not whether joint and several liability is fair or proper but rather that it is needed to "replenish" the fund.

Instead of joint and several liability CMA urges that the principle of apportioned liability be substituted in its place. This would require each person to bear the fair share of his contribution to the problem rather than being forced to pay in many cases for damages that he did not cause. As we explain more fully in our written testimony, we do not believe that the apportionment and contribution provisions of S. 1480, as currently drafted, are adequate to solve the problem.

In addition to the reasons I have outlined above and in our written testimony, there is another compelling reason not to impose joint and several liability in S. 1480. The usual justification for this type of liability is to ease proof problems for individual, resource-poor plaintiffs. But under S. 1480, a resource-rich, governmental entity -- the Fund itself -- will typically be the plaintiff, suing to recover money for claims it has already paid out to injured individuals. In this context, the imposition of joint and several liability is especially arbitrary.

#### 4. Preempt Overlapping State Funds

S. 1480 would establish a \$4.1 billion fund financed primarily by industry fees. The bill makes no provision, however, for preemption of overlapping state funds. This leaves the door open for a proliferation of state funding schemes in this area. Consequently a product could be hit with a fee at both the federal level and the state level to pay for the same class of incidents.

Preemption is necessary to avoid costly and burdensome duplicate fee payments at the state level. We urge you to provide for federal preemption of overlapping state funds, except to the extent used to raise money for matching purposes under this legislation.

#### 5. Limit the Discretion of the Administrator to Spend Funds Without Justification

S. 1480 would give the federal government virtually unchecked authority to take whatever actions it deems necessary with regard to the release of a hazardous substance. The almost unlimited remedial actions authorized by the bill provide the government with a blank check to go far beyond what is actually needed to abate the harm. Moreover, anyone held liable under S. 1480 has no opportunity to contest the technical or economic reasonableness of the government's decision.

This broad authority is especially troublesome given the zero-discharge philosophy of S. 1480. The bill's essential thrust is to regulate every last molecule of a release rather than developing sensible criteria for determining under what conditions or in what amounts a substance may in fact be hazardous. It is the zero-discharge mentality of the authors of S. 1480 that has blown the fund and the size of the problem out of all proportion.

We urge you to place rational limits on the government's authority. Such limits include restricting the Administrator's response action to sites which present a substantial danger; a requirement that he adopt the least-cost alternative; and a provision allowing a liable party to contest the reasonableness of the actions taken. We especially urge you to reject the zero-discharge approach of S. 1480.

#### SUMMARY OF REQUESTED COMMITTEE ACTION

First, we urge you to reduce the level of funding to a more reasonable amount. Rather than \$4.1 billion over six years as envisioned in S. 1480, we believe that a much smaller fund is adequate to address the problem.

Second, we urge you to adopt a three hundred million dollar cap on the fund to prevent unneeded revenue collection.

Third, we urge you to adjust the ratio between industry fees and federal appropriations. Instead of S. 1480's present scheme of seven industry dollars to every one federal

dollar, we believe that a 50-50 breakdown is a more equitable funding formula.

Fourth, we urge you to adopt a waste-end tax in place of S. 1480's front-end feedstock approach. A waste-end fee has far greater correlation to the problems being addressed.

Fifth, we urge you to change joint and several liability to apportioned liability. Joint and several liability, which in the context of S. 1480 is little more than an additional funding mechanism, is unjust and is punitive.

Sixth, we urge you to provide for federal preemption of overlapping state funds, except to the extent used to raise money for matching purposes under this legislation. Preemption is necessary to avoid costly and burdensome duplicate fee payments at the state level.

Seventh, we urge you to place rational limits on the unbounded discretion of the government to spend funds without justification. The zero-discharge approach and the overbroad release into the environment concept should be rejected.

STATEMENT OF DR. LOUIS FERNANDEZ  
ON BEHALF OF THE  
CHEMICAL MANUFACTURERS ASSOCIATION

BEFORE THE COMMITTEE ON FINANCE

UNITED STATES SENATE

ON S. 1480

SEPTEMBER 11, 1980

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5. Covington & Burling Letter of July 30, 1980 on S. 1480.
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7. CMA March, 1980 Summary of Superfund Costs.

I. INTRODUCTION AND SUMMARY OF KEY POINTS

I am Dr. Louis Fernandez, Vice Chairman of the Board, Monsanto Company. Today I am speaking on behalf of the Chemical Manufacturers Association (CMA), a nonprofit trade association having 192 U.S. company members that represent more than 90 percent of the production capacity of basic industrial chemicals within this country.

A. NEW LAW IS NEEDED FOR OLD DUMPSITES

At the outset CMA would like to express its strong support for legislation to address the problem of abandoned hazardous waste sites. Existing law is not adequate in this area and new legislation on inactive sites is needed.

We believe such legislation should include the creation of a federal response fund. The fund would undertake necessary cleanup and containment activities at sites which present an imminent threat to public health or the environment and where no other party is taking responsible action.

For more than a year our industry has been attempting to work affirmatively with the Administration and Congressional committees, principally through CMA, to develop sound dumpsite legislation. On July 19, 1979, CMA testified before the Senate Environment and Public Works Committee and called for the enactment of a bill to clean up and contain problem sites. Since that time we have testified on five different occasions before Congressional committees on this issue. In every

instance we have recommended passage of a new law to address old dumpsites.

B. S. 1480 IS NOT THE ANSWER

Unfortunately, S. 1480, the bill before you today, is not the type of legislation that is needed. It is seriously defective in its overly broad scope, its punitive approach to liability, and in its excessive funding levels which are far beyond demonstrated need. Among CMA's concerns are the following:

- o The scope of S. 1480 far exceeds the problem of abandoned disposal sites. Instead it adopts an all-encompassing "release" concept. The "release" into the environment of any "hazardous substance" -- a term which is very broadly defined -- from a site, vessel or facility would be covered by the bill.
- o Creation of a federal private damages action is unnecessary in light of the adequacy of state tort law, and is unwise in its imposition of potentially large new caseloads on an already overburdened federal judiciary.
- o The liability scheme in S. 1480 is onerous and punitive. Joint and several liability could force companies to pay more than their fair share.

Moreover, the federal liability provisions are a radical departure from current state tort law and make previously acceptable practices unlawful retroactively.

- o The economic implications and insurance implications of the proposed liability provisions in S. 1480 are unmeasured and certain to be massive.
- o The funding mechanism of S. 1480, which would place a fee on primary petrochemicals and feedstocks, bears little, if any, relationship to the problem. Feedstocks funding will have drastic commercial and economic results falling unevenly and unfairly on a broad range of businesses. CMA believes that a waste-end tax system is much more appropriate.
- o The size of the S. 1480 fund is likely to have a negative effect on the domestic chemical industry and the nation's economy.

C. ISSUES OF CONCERN TO THE FINANCE COMMITTEE

There are many important issues in S. 1480 which should be of concern to members of the Finance Committee.

First, S. 1480 clearly is a revenue measure. It levies a substantial fee or tax on industry to help finance

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the work of a government agency. About 85 percent of the cost of Superfund would come from such fees. In addition, the remaining 15 percent of the proposed Superfund would be raised through federal appropriations.

Second, the proposed fee or tax has serious budgetary and fiscal implications. Our nation is going through a period of economic stress, with major efforts being made to bring government spending under control. Congress has recently shown a growing reluctance to initiate costly new federal programs and is taking a closer look at existing programs. Some advocates of Superfund are seeking industry fees simply because the present federal budgetary constraints would threaten the broad-scale and expensive programs which they favor.

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D. SUGGESTED COMMITTEE ACTION

We recognize that this committee may not be in a position to rewrite the entire text of S. 1480. There are a number of important changes, however, that appear to be within your special expertise. We hope you will consider these changes favorably.

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II. WHAT IS WRONG WITH S. 1480 AND HOW IT SHOULD BE CHANGED

A. THE SCOPE OF S. 1480 AND HOW IT SHOULD BE CHANGED

Examination of the various provisions of S. 1480 shows that the coverage of the bill is exceedingly broad. Furthermore, the vagueness of its provisions make its scope unpredictable, and, therefore, compliance difficult. The scope of the legislation is perhaps most objectionable with regard to the type of incidents covered, the zero-discharge approach, and the excessive discretion given to the federal government to order or undertake clean-up actions.

The release concept. Unlike H.R. 7020, the bill reported by the House Committee on Interstate and Foreign Commerce, the Senate bill fails to restrict the scope of the Superfund legislation to releases from inactive hazardous waste sites. Instead, various required or permitted consequences and actions under the bill are triggered by any discharge, release, or disposal of a hazardous substance.<sup>1/</sup> These three terms, defined in the bill or by reference to other laws,<sup>2/</sup> jointly describe the "release concept," a concept which contributes significantly to the breadth of the bill. The term "release" is the broadest of the three

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1/ See, e.g., Sections 3(a)(3); 3(c); 3(d) of S. 1480.

2/ See Sections 2(b)(1), (3) and (16).

terms, and illustrates the dimensions of coverage contemplated in this bill. It means:

"(A) any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, or dumping into the environment, or

"(B) any other release into the environment which presents or may present a substantial danger to the public health or welfare or the environment."

Taken together these three terms include almost every conceivable activity or occurrence from the beginning of the manufacturing process to the final disposal of the resulting waste. The specific exclusion from the definition of "release" for the "normal field application of fertilizer" in itself makes clear the virtually limitless scope of the release concept.

With regard to the notification provisions of the bill, only releases of "hazardous substances" from "facilities" or "sites" must be reported. However, the definitions of "hazardous substances" and "facility" are as broad as the release concept and provide little practical limitation on the scope of the bill. In addition to covering every substance listed in almost every conceivable legislative source, "hazardous substance" includes:

"(G) any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment and upon exposure, ingestion, inhalation, or assimilation into any organism, either directly from the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring."

The operation of these definitions will impose on such a wide variety of persons a duty to notify -- enforced by criminal penalties -- that its breadth will swamp the notification system and threaten constitutional principles of adequate notice in criminal statutes.

The drafters have provided an exclusion from this notification requirement for federally permitted releases and have thus addressed one of the more troublesome aspects of the bill as introduced. Now at least a company will not be required to provide a notice relating to every continuous and periodic emission into the air or discharge into the water which is expressly permitted by a federal permit or regulation. But the exclusion for federally permitted releases addresses only part of the problem created by this notification provision. Only a small portion of the releases covered by the bill and swept into the notice provision will be exempted under the permitting procedures of federal environmental laws. The virtually limitless reach of coverage would appear to put every business and every individual at risk, and subject to prosecution, for failure to live up to the letter of the law. There is no requirement that the release of the hazardous substance cause or threaten injury. Nor is there a requirement that it be of a threshold reportable quantity as provided for in Section 311 of the Clean Water Act. If the substance is a hazardous substance either specifically listed or within the catchall provision, and if

it has been released into the environment, then notification must be provided. For example, the release of a hazardous substance from a facility may well include the emissions from the painting of a building, the irrigation of a field by spraying from a pipe or truck, the fluoridation of water, or any of the other myriad of human activities which involve the "release" from a structure, installation, or equipment of a hazardous substance. Only limited relief is provided by the fact that criminal penalties are not imposed on persons who fail to provide notice of the release of "catchall" substances described in Section 2(b)(13)(g). The government will either be buried in an avalanche of paper so that the provision becomes meaningless, or every business and individual will be subject to the enforcement whims of EPA.

The overbreadth caused by the release concept as to the notification provisions of Section 3 also applies to the Administrator's response authority under that same section. In some ways the release concept is even broader with regard to this authority, since the government's emergency response authority under Section 3(c)(1) includes not only hazardous substances, but "pollutants" and "contaminants" as well.

The zero-discharge approach. The breadth of the release concept, with its application to a virtually limitless field of substances, is made doubly sweeping by the "zero discharge" approach. As presently drafted, the notification and response provisions of S. 1480 can be triggered by the

release of an infinitesimal amount of a substance. This raises serious possibilities of manifest unfairness and gross misallocation of scarce economic resources.

The shortcomings of a zero-discharge approach have been clearly illustrated in the recent Supreme Court case of Industrial Union Department, AFL-CIO v. American Petroleum Institute, 48 U.S.L.W. 5022 (July 2, 1980), in which the Court invalidated the benzene standard of the Occupational Safety and Health Administration (OSHA). Benzene is dealt with there as a suspected carcinogen. In February 1978, OSHA issued a permanent standard specifying a permissible exposure limit of one part of benzene per one million parts of air. The Fifth Circuit Court of Appeals struck down the standard on the grounds, inter alia, that OSHA had not shown that the new benzene exposure limit was reasonably necessary or appropriate to provide safe or healthful employment, and the Supreme Court affirmed. The Court rejected OSHA's position that there is no safe level of exposure to a carcinogen and that the burden is on industry to demonstrate a safe level of exposure.

The benzene case illustrates prevailing judicial discomfort with a zero-discharge approach to regulation of hazardous substances. The prevailing judicial discomfort is, of course, not binding on Congress; rather it shows the difficulty of working out any zero-discharge concept in the face of circumstances which fail to show any actual risk. A far better approach is that adopted by Congress in Section 6 of

the Toxic Substances Control Act, where after lengthy deliberations, an "unreasonable risk" test was imposed as the necessary trigger for any regulatory action. At the very least, the Administrator's action should only be deemed reasonable when supported by hard evidence that the amount of the release acted upon poses a substantial danger to human health or the environment. Finally, a further benefit of discarding the zero-discharge approach will be to redefine within more realistic boundaries the scope of the hazardous substance disposal issue facing this country. Estimates based not on imperceptible trace amounts, but rather on amounts posing a real risk, will provide a much better focus on the true nature of the problem.

Governmental discretion to take response action.

Perhaps the most disturbing aspect of the scope of S. 1480 is that it gives the government excessively broad discretion to take response actions. Since this discretion is contemplated in conjunction with the release concept and zero-discharge approach, the scope of the bill is virtually limitless.

Under Section 3(b) the Administrator is authorized to establish and enforce such control or removal or remedial action requirements as he deems appropriate to protect the public health, welfare and the environment for any facility or site at which hazardous substances are stored, treated or disposed of, if such facility or site is not in compliance with a permit or accorded interim status under Subtitle C of

RCRA. Enforcement is to be carried out under Section 3008 of RCRA and Section 309 of the Clean Water Act. Under this authority EPA would be authorized to adopt regulations and issue orders on the basis of no prescribed statutory standard other than that the Administrator deems the regulation or order to be "appropriate" to protect the public health, welfare or the environment. The provision is not limited to those who own or operate a facility or site. Failure of a person to comply with an order under this provision will give rise to the very substantial penalties of Section 3008 of RCRA and Section 309 of the Clean Water Act.

It is important to understand that the "requirements" of RCRA and the Clean Water Act which are enforced under Sections 3008 and 309, respectively, are those which have been established explicitly in those acts or which have been adopted in accordance with statutory standards set forth in those acts. Section 3(b) of S. 1480 contains no such standards or limitations. The authority in this section to "establish" requirements arguably contemplates rulemaking, but the provision does not so provide nor is it so limited. It would appear to be within the scope of this provision for the Administrator to "establish" a requirement and order compliance with respect to a particular facility based on what he deems to be "appropriate" and to enforce that requirement by use of the broad range of sanctions in RCRA and the Clean Water Act. It is not clear on what basis, if at all, the recipient of such an order could

challenge or object to the Administrator's determination, in spite of the fact that the order could apparently be issued to any person who has ever contributed waste to an inactive hazardous waste site, and require that person to undertake complete responsibility for cleanup and control.

Section 3(c) authorizes the President to take removal and remedial actions with respect to the release of a hazardous substance. As in the case of orders under Section 3(b), there is virtually no statutory standard by which the President's action under Section 3(c)(1) may be judged, since it is based upon his judgment as to what is necessary to protect the public health, welfare or the environment.

Standing by itself this provision would raise substantial questions of governmental power and the use of public resources. This virtually unlimited authority to take removal or remedial actions would almost certainly result in substantial impingements upon the lives and livelihood of citizens. The scope of this provision is made particularly troublesome, however, by reason of the fact that under Section 4(a)(1)(A) the owner or operator of a facility, and any person who has arranged for the disposal of hazardous substances at a hazardous waste site, would be liable for all costs of removal or remedial action incurred by the President. The President would thus have broad authority to incur removal and remedial expenses and to obtain reimbursement from any person who is liable under Section 4(a).

The proper scope of S. 1480. The Senate legislation, like the House legislation, should focus on the real problem in the hazardous substances area: inactive hazardous waste sites. Realistic standards must be devised specifying the amount of a release necessary to trigger responsive action; and such amounts should be based not on unfounded speculation, but on reasonable evidence of substantial endangerment to health or the environment. Furthermore, the drafters of S. 1480 should consider a "site priority" system to help insure that the fund will not be unnecessarily depleted and that administrative action focus on those sites with the greatest potential for harm. All steps should be taken to insure that existing law is rigorously enforced. Step-up of investigative and enforcement capacities of federal and state governments with regard to disposal site practices should continue to be an administrative priority. Finally, there is a need to address promptly the problems of current and future siting of hazardous waste storage facilities. CMA completely shares the concerns expressed by EPA Administrator Costle and other ranking EPA officials with regard to mounting local opposition to the location of hazardous waste management facilities. If national policy on future siting needs is not promptly addressed, complications in the full implementation of RCRA and potentials for increases in "midnight dumping" are all too clear.

B. THE LIABILITY PROVISIONS OF S. 1480  
ARE OVERBROAD AND PUNITIVE

1. Summary of the Statutory Scheme

S. 1480 would impose an unprecedented federal scheme of strict, joint and several liability on the widest conceivable range of potential defendants. Subject to extremely limited defenses of act of God or act of war, Section 4(a) of the bill would impose such liability for any release of a hazardous substance (not just waste), pollutant or contaminant (neither of which is defined), on four broad categories of persons: (1) present owners or operators of the vessel or facility from which the release occurred; (2) owners or operators at the time of the release; (3) generators who arrange for offsite disposal; and (4) transporters.

The categories of damages recoverable under the bill are no less broad than the categories of liable persons, and include cleanup costs, damages to real or personal property or natural resources, loss of income or earning capacity, medical expenses, and even loss of tax and other government revenue. The applicable standard of proof for recovery of medical expenses under Section 4(c) is a substantial relaxation of the common law evidentiary standards which have evolved over many hundreds of years.

Section 4(f) of S. 1480 allows defendants who are not "significant" contributors to a discharge to attempt to prove apportionment, but this is expressly not permitted until

after liability is established in the first instance and payment of claims is made.

Although Section 4(i) of the bill purports to allow indemnification or other hold-harmless agreements under limited circumstances, the practical effect of the section would be to prohibit virtually all of them.

Finally, Section 4(n)(5) expressly allows double recovery of damages for the same incident, under S. 1480 and under any other provision of state or federal law.

## 2. Inadvisability of Creating a Federal Toxic Tort

The substance and detail of the liability provisions of S. 1480 raise substantial questions in themselves. A more basic question is raised, however, as to the need, advisability and appropriateness of creating a federal toxic tort.

The liability provisions are primarily intended not to compensate injuries resulting from wrongful behavior, but rather to serve regulatory and funding purposes. One of the most serious objections to the liability scheme of S. 1480 as envisioned by its proponents is its complete disregard for the time-tested rationale of the common law tort system. Dean Prosser has written that "[t]he purpose of the law of torts is to adjust . . . losses, and to afford compensation for injuries sustained by one person as the result of the conduct of another."<sup>1/</sup>

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<sup>1/</sup> W. Prosser, the Law of Torts at 6, quoting Wright, Introduction to the Law of Torts, 8 Camb. L.J. 238 (1944).

The liability provisions of S. 1480 may serve these goals, but only incidentally. Rather, the proponents of the legislation have expressly acknowledged that the primary rationale for the liability scheme is to regulate industry by creating a massive economic impact through the device of damages judgments, and to raise vast revenues for the fund -- which is already primarily financed by industry ab initio.

The Senate Report on S. 1480 states that the first major concern of S. 1480 is to "provide incentive for maximum care in handling hazardous substances and for minimizing the effects of any releases by establishing strict liability for responsible parties for cleanup costs, mitigation, and third-party damages." The report goes on to state that "Strict liability, the foundation of S. 1480, assures that those who benefit financially from a commercial activity internalize the health and environmental costs of that activity into the costs of doing business."<sup>1/</sup> Not only will the liability provisions force industry to internalize costs, the report argues, but they will also have a strong deterrent effect -- presumably on any improper disposal of hazardous wastes.<sup>2/</sup> The report assumes that by raising the spectre of huge private damages awards, industry will make every effort to insure "proper" handling, transportation and disposal of hazardous substances.

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<sup>2/</sup> S. Rep. No. 96-848, 96th Cong., 2d Sess. at 12 and 13 (July 11, 1980).

<sup>1/</sup> Id. at 15.

The liability provisions may have some deterrent effect, but whatever minimal benefits can possibly flow from this approach are greatly outweighed by the harshly punitive nature of the legislation. The result of S. 1480 will be to penalize industry merely for doing business. This is starkly illustrated by the internal paradox of the legislation: the avowed purpose of deterrence is to insure "proper" handling, transportation and disposal methods, and yet the sole justification for strict liability is to allocate risks in society when the highest possible degree of due care cannot guarantee safety. The liability scheme of S. 1480 is a blunderbuss, back-door attempt to regulate industry practices, creating glaring inequities while accomplishing nothing that could not be better achieved by less draconian measures.

The second primary purpose of the liability scheme is to provide the fund with substantial infusions of cash, resulting from actions brought against industry. In his April 15 testimony before the Senate Committee on Environment and Public Works, Assistant Attorney General James W. Moorman stated (page 9): "A Superfund will probably not be successfully replenished without a strong liability provision . . . . Without replenishment, the Superfund will not achieve the degree of success intended because the Fund will not have as much money." S. 1480 therefore levies a double tax on industry: first, through imposition of a fee system that calls for approximately 85 percent of the fund's cash pool to be provided by

industry; and second, through replenishment of the fund substantially by recovery from industry of moneys expended through the mechanism of strict, joint and several liability. The punitive nature of this scheme is obvious, and any compliance with the traditional goals of the tort system is incidental.

State tort law is clearly adequate to compensate individuals harmed by a hazardous substance incident. State law, in both its common and statutory form, has proved to be a flexible and dynamic means of coping with the myriad factual and legal problems which may arise in litigation in this area. As the Senate report on S. 1480 acknowledges,<sup>1/</sup> a plaintiff seeking recovery of damages from exposure to hazardous substances has an abundance of common law theories from which to choose: strict liability (including the Rylands v. Fletcher test and the "abnormally dangerous activities" test of the Restatement (2d) of Torts); trespass; nuisance; negligence; and negligence per se. The Restatement test, or similar versions of it, has been applied under a strict liability theory to the storage of phosphate slime; storage of natural gas; the escape of fluoride fumes into the atmosphere; the escape of gasoline from an underground storage tank; and to the inhalation of toxic gas vapors.<sup>2/</sup>

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<sup>1/</sup> S. Rep. No. 96-848, 96th Cong., 2d Sess. at 14, 33 (1980).

<sup>2/</sup> See, respectively, Cities Service Co. v. States, 312 So.2d 799 (Fla. App. 1975); McLane v. Northwest Natural Gas Co., 467 P.2d 635 (Ore. 1970); Dutton v. Rocky Mountain Phosphates, 438 P.2d 674 (Mont. 1968); Yommer v. McKenzie, 257 A.2d 138 (Md. 1969); Luthringer v. Moore, 190 P.2d 1 (Cal. 1948).

The Senate Report, however, asserts that state tort law is inadequate. As authority for this proposition, it relies on a report prepared by the Environmental Law Institute under the supervision of the Congressional Research Service of the Library of Congress for the Senate Committee on Environment and Public Works (96th Cong., 2d Sess.) entitled "Six Case Studies of Compensation for Toxic Substances Pollution: Alabama, California, Michigan, Missouri, New Jersey, and Texas" (June 1980) (The "ELI report" or "report"). This report, which focuses on hazardous waste incidents arising in the six states listed, purports to demonstrate the need for a federal toxic tort by documenting the inadequacy of private damages recovery under state law. Specifically, the report concludes that (1) legal theories available under state law are inadequate for redressing toxic substance-related harms; (2) seeking compensation for pollution-related injuries is cumbersome, time-consuming, and expensive; and (3) compensation, if recovered at all by the injured parties in litigation or settlement, is generally inadequate. See pp. xii-xv of the report. The report goes on to make the general conclusion that the inadequacy of state law in the six states analyzed may be typical of state law in general.

The ELI report is seriously flawed by unscholarly, incomplete legal analysis and unsupported, conclusory statements. Many of the citations relied on are either outdated or irrelevant, and misstatements of law are not infrequent.

Furthermore, as the authors of the report implicitly acknowledge, the information base relied on is grossly inadequate to support the sweeping generalizations made in the report. For example, on page 2 the authors concede that it is difficult to generalize from the six incidents analysed in the report as to the adequacy of state law as a whole, and yet proceed to do so. And on page 3, the reader is told "to assume that source reliability and time constraints qualify all assertions of fact that have not been legally adjudicated."

Where the authors of the report have attempted to document their conclusions in some sort of detailed way, frequently the assumptions upon which their analytical techniques are premised are totally invalid. A typical analytical technique used by the authors to prove state law's ineffectiveness in providing full damages compensation is to compare the sizes of the suits instituted with the amount of ultimate recovery. That this is a woefully misleading way of evaluating the adequacy of existing state remedies is illustrated by the following example. In Alabama, with regard to the PCB contamination of Weiss Lake, the summary indicates no reported acute medical damages, no reported latent medical damages, but \$1.6 billion in damages claims filed against the defendant. See report, pages 15-16. The mere filing of a massive damages suit by a creative plaintiff, unaccompanied by proof of harm, does not in itself prove that harm. The report's recitation of the relatively small settlement amounts hardly constitutes

proof (or even persuasive evidence) of the inadequacies of state remedies, when in fact the claims themselves may have been totally unfounded and any settlement made, ultimately generous.

The deficiencies noted above by themselves render the validity of the report's conclusions suspect. Ironically, however, perhaps the most damning evidence lies in the blatant inconsistency between the authors' analysis and their conclusions: the authors have incongruously juxtaposed an analysis suggesting broad bases for recovery under state law with conclusory assertions as to the inadequacy of state law. This is particularly true with respect to the analyses of California and New Jersey law: as the report shows, both states provide broad avenues of recovery under both common and statutory law. Much of the conflict in the report between analysis and conclusion may reflect the fact that the desire of the authors to prove a point overrode the natural consequences of their legal analysis: that creation of a federal toxic tort would not only be unwise, but unnecessary.

Two major criticisms of the state law system made by the ELI report are the difficulty of proving causation and the cost of litigation. The argument that these practical (as opposed to theoretical) problems of litigation may sometimes bar full redress has some surface appeal, and is no doubt true in scattered instances. But the argument hardly leads inexorably to the conclusion that some type of federal legislation will

solve these problems. Proof and cost barriers are not unique to the area of hazardous wastes, but rather pervade the entire legal system. Passage of unprecedented federal legislation will not ipso facto banish them to the past.

Furthermore, state legal systems, free to experiment without the burden of overlapping federal law,<sup>1/</sup> have adopted and will continue to devise mechanisms which greatly lessen such burdens on plaintiffs. Some states have lowered the quantum of proof necessary to establish causation, either by statute or through case law.<sup>2/</sup> Some have effectively abolished the defense of intervening cause.<sup>3/</sup> Some courts have adopted the principle of joint and several liability, even where the independent acts of polluters cause similar or

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<sup>1/</sup> One is reminded of the famous words of Mr. Justice Brandeis: "It is one of the happy incidents of the federal system that a single courageous state may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country." *New York State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting).

<sup>2/</sup> For example, in California an injured plaintiff need only establish a reasonable or "preponderance of the evidence" causal connection between the injury and the defendant's act. See report, pp. 173-74. Many courts now accept circumstantial evidence to establish causation, and do not require the exclusion of all other possible causative factors. E.g., *Watson v. Great Lakes Pipeline Co.*, 182 N.W.2d 314, 318 (S.D. 1970); *Food Machinery & Chemical Corp. v. Meader*, 294 F.2d 377 (9th Cir. 1961).

<sup>3/</sup> E.g., *Hagy v. Allied Chemical & Dye Corp.*, 265 P.2d 86 (Cal. 1953).

cumulative injury.<sup>1/</sup> As discussed more fully below, merely because some states have found joint and several liability appropriate has no bearing on its appropriateness under federal law, particularly where it is tied, as in S. 1480, to an industry fee system. With regard to cost, California permits court appointment and compensation of experts and their services; and contingency fee and class action arrangements will undoubtedly become popular as specific precedent regarding hazardous waste pollution becomes more widespread, and the public and the legal profession become more aware of the existing adequacy of remedies under state law.

Congress has shown restraint in creating private federal tort actions. Establishment of a federal toxic tort is clearly unnecessary; it is also unwise. Even in areas intensively regulated by federal statutes, both Congress and the courts have concluded that it would be unwise and inappropriate to establish a scheme of federal private tort liability. The Federal Food, Drug and Cosmetic Act, the Safety Appliances Act, the Occupational Safety and Health Act, the Federal Aviation Act, the Clean Water Act, and the Clean Air Act are just a few of the federal statutes which establish comprehensive programs of federal controls but for which Congress deemed it inappropriate to establish private causes

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<sup>1/</sup> E.g., *Michie v. Great Lakes Steel Division*, 495 F.2d 213 (6th Cir.), cert. denied 419 U.S. 997 (1974); *Maddux v. Donaldson*, 108 N.W.2d 33 (Mich. 1961); *Borel v. Fibreboard Paper Products Corp.*, 493 F.2d 1076 (5th Cir. 1973); *Landers v. East Texas Salt Water Disposal Co.*, 248 S.W.2d 731 (Tex. 1952).

of action beyond those available under state common law. On the limited occasions when Congress has created private federal actions for damages, the focus has been in two areas: first, those which have significant interstate impact and are thus beyond the effective reach of state law, such as consumer protection, antitrust, and securities regulation; or else those which present novel and unique risks of harm with which state law is totally inadequate to deal, such as nuclear incidents. "Toxic torts" fall into neither of these categories, and indeed are demonstrably susceptible to adequate state law remedies.

Creation of a private federal tort action would further aggravate the crisis for the federal courts. Past Congressional restraint in this area reflects a perception of the effectiveness of state remedies together with a reluctance to intrude into areas traditionally regulated by the state. It also shows a reluctance to impose on the federal judiciary the added burdens of duplicating the state common or statutory law of torts. Creation of a federal tort cause of action for injuries caused by any release of a hazardous substance or by hazardous waste would seriously aggravate the existing congestion in the federal courts at a time when reform movements are attempting to limit federal causes of action, such as those arising from diversity jurisdiction, which merely duplicate state law remedies.

The current caseload of the federal judiciary, which has been described by former Attorney General Bell and others

as a "crisis in the courts," has been viewed with concern by a number of prominent jurists and legislators. As recently as March of this year, in his Annual Report on the State of the Judiciary, Mr. Chief Justice Burger remarked:

"A striking change in the work of the federal courts in recent years is the tremendous increase in cases filed, along with the novelty and complexity of questions presented. In 1970 there were 317 cases for each district judge. In 1980 we estimate that the figure will be approximately 400 cases. Filings in the courts of appeals have doubled in the past ten years. We can see that measured by the case filings per judgeship. The impact of 152 new federal judges in the omnibus bill last year will soon be wiped out.

"The quality of the performance of the courts is bound to suffer with this overload."<sup>1/</sup>

The House Committee on the Judiciary, which held hearings on this "crisis," suggested the following: ". . . [T]he state court system must be accorded a respected role in the American judicial system. They are ready, willing, and able to provide needed relief to the Federal system."<sup>2/</sup> Resort to federal statutes creating private causes of action is clearly undesirable where state common and statutory law provides an existing and comprehensive system of compensation.

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<sup>1/</sup> 66 A.B.A. Journal 297 (March, 1980) (emphasis added).

<sup>2/</sup> H. Rep. No. 95-893, 95th Cong., 2d Sess. at 2 (1978).

### 3. The Specific Liability Provisions of S. 1480

With these general objections in mind, attention is directed to specific analysis of some of the more egregious aspects of the Section 4 liability provisions of S. 1480 not addressed above.

Hazardous substance, pollutant, contaminant. The bill creates strict, joint and several liability for a release of a "hazardous substance." The definition of "hazardous substance" in Section 2(13) is, as Senators Domenici, Bentsen and Baker observe in the Senate report at p. 120, "exceedingly broad and brings too wide an array of business under the umbrella of engaging in an 'ultrahazardous activity' . . . ." Furthermore, the bill does not define "pollutant" or "contaminant," even by reference to other legislation. Under these circumstances, the bill represents a gross aberration from the established principle that legislation should be drawn with specificity so that those affected know they are affected and can mold their behavior accordingly. This principle, of course, applies with equal force to the concepts of strict liability and joint and several liability.

Joint and several liability. The conjunction of a joint and several liability scheme with an industry-financed fund is grossly inequitable and could cause serious economic dislocation among the leaders of industry. The drafters of S. 1480 are clearly looking to supposed "deep-pocket" corporations to take care of all the costs of hazardous

substance damage, regardless of proof of harm or culpability. This may be a convenient way for government to "replenish" the fund, in Assistant Attorney General Moorman's phrase, but it is hardly fair.

Mr. Moorman points out, correctly, in his April 15 testimony that courts acting under state law have applied joint and several liability to hazardous waste incidents. But he fails to discuss the crucial differences between a state tort law scheme and S. 1480 that make its application under the proposed federal legislation inappropriate and unfair. First, under state common law much stricter evidentiary standards, particularly with regard to proof of causation, are required than would be necessary under S. 1480, even as to multiple source polluters. Under the lax evidentiary standards of S. 1480, on the other hand, an entirely innocent generator perceived to be a "deep pocket" could easily be held liable for a massive damages claim. Second, states have not used a joint and several liability scheme to replenish compensation funds financed by industry: and yet, this is exactly what S. 1480 proposes. The inequity of this scheme is compounded by the fact that S. 1480 does not create any "quality-control" mechanism on the proper expenditure of money from the fund. In other words, an expenditure could be entirely wasteful or ineffective, but the fund will be replenished anyway.

The drafters have apparently tried to modify some of the more drastic inequities of a joint and several liability

scheme by providing for apportionment and contribution in Section 4(f), but they have merely created more confusion while failing to eliminate the unfairness. For example, the burden of proof to distinguish harm or show apportionment is placed on the defendant, who must also show that his contribution to an injury was not a "significant" factor. "Significant" is not defined. "Significant" contributors who can nevertheless show apportionment are not aided by the subsection: they remain jointly and severally liable for the total amount of damages.

In addition, Section 4(f)(3)'s provision that determinations of apportionment or contribution shall not occur until after determination of liability and claims payments to claimants clearly undercuts the overriding purpose of apportionment: to avoid the necessity for innocent defendants to incur massive financial obligations, which may or may not be reduced in the future.

Our final objection to these provisions has its source in Section 3(a)(4)(A), which precludes any limitation of (or defenses to) liability as to any person who fails to comply with the notification provisions of that subsection. Given the excessive vagueness and self-incriminating aspects of the notification provisions, it is unfair to prohibit limitations and defenses to liability, at the very least without a prior determination that the defendant in question was in fact obligated to comply.

Liability for Medical Expenses. Although the drafters of S. 1480 have modified the language of Section 4(c) on more than one occasion,<sup>1/</sup> it still violates all rules of evidence by eliminating any need for the plaintiff to trace the cause of his injury to the conduct of the defendant. A plaintiff need only show that his injury or disease could have been caused, or contributed to, by a particular substance in the environment, and that he was exposed to such substance which also happened to be found in a discharge or release which the defendant caused or to which he contributed even the smallest amount. The bill does not even state that the plaintiff must show a likelihood of exposure to the defendant's particular release. In short, every injury or disease which is arguably related to substances in the environment (including substances in consumer products) would create liability on the part of those who release or introduce those substances into the environment. As Senator Simpson points out in the Senate report at p. 116, the effect of this section is "to simply brush off on the floor many of the rules of evidence which have been so closely crafted and observed in our procedural life as lawyers."

The effect of the medical expenses provision is to convert industry into a catch-all insurer for many injuries or diseases traceable to nothing more specific than the environment

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<sup>1/</sup> See remarks of Senator Stafford in Senate report at pp. 108-115.

of the twentieth century. The difference between the chemical industry and other insurers, however, is clear: industry will not receive any premiums. On the contrary, it pays a premium, in the form of the industry-based fee system, and receives increased liability in return.

Retroactivity. As originally drawn, S. 1480 in effect applied retroactivity to conduct that took place before the date of enactment and that was reasonable at the time. The harsh unfairness of this scheme was obvious, and indeed the drafters have attempted to ameliorate the situation in sections 4(n)(1) and 4(n)(3). However, to quote Senators Domenici, Bentsen and Baker, "[t]he issue of applying the new standards retroactively remains a troubling one." Senate report at p. 120. For example, a claimant could still recover full damages under section 4(n)(1) of S. 1480 as to completed conduct at the time of enactment, as long as the alleged damages occurred after the date of enactment. Furthermore, section 4(n)(3) is only a partial limitation of retroactivity, since the effective date is January 1, 1977 instead of the date of enactment.

The proper limits of liability under S. 1480. The drafters of H.R. 7020, the Superfund legislation reported by the House Interstate and Foreign Commerce Committee, have wisely decided that creation of a federal private damages scheme is unnecessary and unworkable and have struck such provisions from the text of that bill. We urge the Senate to do the same to

S. 1480. We advocate that, as in H.R. 7020, S. 1480 be limited to strict liability to the Administrator for clean-up costs. Furthermore, liability should be apportioned instead of joint and several. Finally, the bill should provide for more defenses than act of God and act of war.<sup>1/</sup> At the very least Section 4(a)(1) should provide for a third-party defense, shielding a defendant from liability when an intervening act of a third party, or the willfulness or gross negligence of the plaintiff, is the proximate cause of the alleged injuries. To quote Senators Domenici, Bentsen and Baker (Senate report at p. 120):

"The only available defenses under the bill are an Act of God or an Act of War. As a consequence, what S. 1480 does is to simply throw out negligence and nuisance as legal concepts relating to the ongoing activities of America's entire industrial base.

"The effects of such a doctrine are clear. For example, in the case of a mining operation where certain chemicals are used in the extraction process, the owner or operator of that mine would have no defenses available to him if an unidentified third party unconnected to his operation, came onto the mine site and mishandled those chemicals. He would find

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<sup>1/</sup> Section 2(15)(B) provides that where a generator arranges for offsite transport, he "shall not be considered to cause or contribute to any discharge or release during such transportation which resulted from circumstances or conditions beyond his control." Whether this provision is intended to have any effect on such a generator's liability is unclear, since there is no "caused or contributed" standard in Section 4, except with reference to evidentiary standards in proof of liability for medical expenses in Section 4(c). In any event, a generator would face the heavy burden of proving that a release under these circumstances resulted solely from circumstances beyond his control. The subtle gradations of "causation" cannot be reduced to such yes or no absolutes.

himself facing a barrage of suits in which he was being held [sic] strictly liable for all of the damages regardless of whether or not he had any control over the situation."

The basic premise of S. 1480 appears to be that regulatory programs established under existing environmental laws have failed to discourage releases of hazardous substances into the environment. S. 1480, however, by attempting to regulate hazardous substances through creation of a massive federal liability scheme, seeks to shift the problem wholesale to the federal courts. This is no less than an abdication of what is essentially an executive branch responsibility. The result will be to plunge the country into a storm of toxics litigation where the competing interests will be increasingly polarized. S. 1480 may be of great benefit to lawyers, and it may be uniquely in the adversary tradition of American culture; but it is a highly unfair and inefficient method of regulation in which society as a whole will lose.

C. THE FEES IMPOSED UNDER S. 1480  
ARE EXCESSIVE AND INAPPROPRIATE

1. Summary of Funding Scheme

S. 1480 would establish a \$4.1 billion federal fund constituted primarily from industry fees. These fees would be levied on the basic raw materials of the chemical industry. More than \$3.5 billion would be raised through assessments on primary petrochemicals, inorganic raw materials and crude oil.

## 2. Economic Impact

The potential adverse economic effect of the large fees imposed in S. 1480 has not been adequately addressed. The Administration did prepare an Economic Impact Study of its proposed Superfund legislation, which contained a much smaller fee than that to be imposed under S. 1480. This study justified an industry fee on the basis that companies could pass the burden of the fee on to customers and that the overall inflationary impact would be negligible because the fee is small in comparison to GNP. The Administration's analysis, however, is in error and certainly would not support the much larger fee system contained in S. 1480.

Inflationary impact. First, the additive inflationary impact of primary industry price increases has not been recognized. The argument that industry will be able to pass along fees imposed under such legislation is no justification. It ignores the inflationary impact which results from the additive effect of price increases by primary industries being passed on through various value-added manufacturing steps until they reach the ultimate consumer.

Cost pass-through is not assured. Second, the ability of individual companies to pass the fee through is not assured. Those who subscribe to the concept of industry funding contend that the fee will not be inequitable or burdensome for individual companies because it can always be passed on. This assumption ignores basic economic reality. Price is

determined in the marketplace and not just by cost. The ability to pass through a fee depends on the strength of demand and the alternatives available to purchasers. Pass-through could be impossible in a number of specific instances. The chemical industry is experiencing inflationary cost increases, declining production, profit margin erosion, and requests from the President of the United States for pricing restraint.

Under these circumstances, the chemical industry is not at all confident that cost pass-through can or should be achieved.

The chemical industry is already in a slump. The chemical industry is currently in a severe slump. Predictions by analysts and the industry itself indicate that the slump will extend into 1981. The large fees proposed in S. 1480 would exacerbate this situation.

Production has fallen from an index of 217.7 in January of 1980 to 209.7 in May of 1980. There have been significant declines in production, operating rates, and shipments of most chemical products and man-made fibers. Declines of 25-30 percent in second quarter 1980 earnings are common throughout the industry. Most companies predict further declines and significantly lower earnings for 1980 compared to 1979.

Employment declined 16,000 in June and is down 20,000 from the high points of January, March and April. There was a sharp drop in productivity (physical output for work hour) during the spring of 1980. The index was 192.8 (1967 = 100) which is one percent below April and one percent below May of 1979. Plastics, which is one of the fastest growing sectors of the chemical industry, has been especially hard hit. Polyester sales were down 43 percent from a year ago May. Epoxies were down 26 percent, phenolics down 27 percent, low density polyethylene down 29 percent, polypropylene down 21 percent, polystyrene down 31 percent, and polyvinylchloride down 36 percent for an average decline of 29 percent for all these plastics. Return on equity for chemical and allied products was 15.4 percent in the fourth quarter of 1979 which is slightly lower than the 15.7 percent for all manufacturing and significantly less than the 18 percent for non-durables of which chemicals is one sector.

We would also mention that burdens imposed on the industry by Superfund should not be considered in isolation. Additional costs will also result from decontrol of natural gas and oil prices. These materials provide the industry not only with energy, but also with raw materials. Innovation and new product development are apparently declining because of the Toxic Substances Control Act. Five to ten percent of investment is now going into pollution abatement equipment.

National industrial growth rates of the future continue to be depressed by the flow of U.S. dollars to the oil-rich countries.

Fees could diminish the export capabilities of the industry. The most serious long-term problem the industry faces, however, is where, and on what economic base, its competition will grow. This is the same pattern seen in the difficulties of the other basic U.S. industries. Production of chemicals by foreign governments is likely to be the single greatest problem the industry faces. About 40 percent of a number of basic petrochemicals produced outside the U.S. are made in government-owned facilities. Within five years Eastern Europe's chemical makers will produce 28 percent of world chemical production. Western European production will have dropped to the same percentage and the U.S. producer's share will decline to 24 percent.

Even without the additional costs of Superfund, international chemical markets will be increasingly competitive. Oil-rich countries are just coming into production of petrochemicals, most of which will be channeled into export markets including that of the United States. Most OPEC countries have made it clear that they will make products from oil and gas, and not continue to supply other countries with these products for raw material use. Mexico will dedicate 10 percent of its oil and gas production to petrochemical output.

3. An Industry-Based Fee System Raises Serious Constitutional and Policy Objections

CMA is aware of the political considerations which argue in favor of an industry-based fee system, and we have stated that if the Senate is unwilling to accept a fund comprised primarily of appropriations, then at the very least it should adopt a 50-50 system -- a much fairer funding formula than the 85 percent contribution currently called for in S. 1480. Nevertheless, we believe that the concept of an industry-based fee system seriously undermines fundamental constitutional principles.

The fund would be used to cover certain costs of abating the harmful effects of hazardous substances. Although the purposes for which expenditures from the fund are permitted are limited to conform to various conditions described below, two things about the fund are clear: (i) it could be used to remedy the effects of the past industrial activities that were consistent with the best handling practices at the time, and (ii) it could be used to remedy situations for which the individual feepayer or the group as a whole had no responsibility whatsoever.

In our view the funding of abatement and other costs relating to hazardous substances by imposing fees on certain segments of the chemical industry would raise very substantial constitutional questions under the due process clause of the Fifth Amendment. In large part a fund operated and financed

in this way would impose upon a specified class of commercial enterprises liability for abatement and related costs attributable to sites for which no responsible party is able to pay. The proposals would thus create a retroactive liability for events which have occurred in the past and for which the enterprises bearing the liability have no causal responsibility whatever.

Recent decisions by the Supreme Court have closely scrutinized the imposition of industry-based fees to satisfy claims that arise from a more narrow causal relationship. See Usery v. Turner Elkhorn Mining Company, 428 U.S. 1 (1976) (upholding the Black Lung Benefits Act). Where such a scheme has been upheld, it has been constitutionally justified as a rational allocation to producers of an "actual, measurable cost of [their] business." 428 U.S. at 19. Furthermore, unlike in the present case, it has occurred in the employer-employee relationship, over which Congress has exercised traditionally broad powers. The constitutionality is doubtful, however, where the damages for which charges are imposed are not costs of the operator's business. 428 U.S. at 24-25. Fee payments for fixed expenditures at sites unrelated to the individual payer's conduct cannot be said to satisfy this causal nexus. Nor can it satisfy even an industry nexus, since EPA has indentified over 17 industries as contributors to the hazardous substance disposal problem.

Imposing fees on the chemical industry to clean up hazards created possibly years ago by commercial users of chemicals and other products is reminiscent of the Railroad Retirement Act scheme declared unconstitutional by the Supreme Court in Railroad Retirement Board v. Alton, 295 U.S. 330 (1935). In Alton the Court declared:

"The provision is not only retroactive in that it resurrects for new burdens transactions long since past and closed; but as to some of the railroad companies it constitutes a naked appropriation of private property upon the basis of transactions with which the owners of the property were never connected. Thus the Act denies due process of law by taking the property of one and bestowing it upon another." 295 U.S. at 349-50.<sup>1/</sup>

These principals of constitutional law are not technical legal matters for the exclusive consideration of courts and lawyers: rather they reflect basic principals of fairness and equity which, while constituting mandatory legal norms, also elicit on sober reflection voluntary allegiance and support. To impose liability on the chemical industry in this case would be analogous to imposing upon current coal miners the cost of abating pollution caused, not by coal's production, but by its use in other industries such as steel or utilities. Some chemicals are toxic, and when mishandled cause injury to persons and the environment. However, a

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<sup>1/</sup> As the Supreme Court observed in Usery, the entire Court agreed that this portion of the Railroad Retirement Act was unconstitutional. 428 U.S. at 19 n.13.

scheme that imposes liability on producers of a substance that causes harm when mishandled by others raises serious constitutional questions under the leading Supreme Court cases on the subject.

Finally, it is worth noting that the principles of due process reflected in the Supreme Court's Usery opinion are also embodied in the constitutional proscriptions against bills of attainder and ex post facto laws (U.S. Const. art. I, § 9). These constitutional prohibitions reflect two basic values which are threatened by proposed S. 1480: that legislation shall not (i) impose new penalties for past conduct nor (ii) impose burdens on a narrow class of persons without judicial process.

Both the bill of attainder and ex post facto concepts directly limit Congressional action which in the bill of attainder identifies individuals in a narrowly drawn class and inflicts upon them some punishment-(see, e.g., United States v. Nixon, 433 U.S. 425 (1977)), and in an ex post facto law "punishes as a crime an act previously committed, which was innocent when done...." Dobert v. Florida, 432 U.S. 282, 292 (1977). Although the Superfund provisions of S. 1480 may not technically come within the somewhat narrow historical concepts of a bill of attainder or an ex post facto law, United States v. Lovett, 328 U.S. 303, 321 (1946) (Frankfurter, J., concurring opinion), it is clear that they are in conflict with the broad standard of fairness written into the Constitution in the due

process clause as interpreted and applied by the Supreme Court.

D. A WASTE-END TAX SHOULD BE SUBSTITUTED  
FOR THE FEEDSTOCK FEE

1. The Advantage of a Waste-End  
Tax Over a Feedstock Fee

If Congress is determined to impose a fee on industry to pay for the costs of a "Superfund", we believe the fee should be a tax placed on hazardous waste. The tax would be collected on each dry weight ton of hazardous waste generated and delivered to a hazardous waste disposal facility for final disposal.

A waste-end tax is superior to a feedstock fee for the following reasons:

A feedstock fee is inequitable. The feedstock fee as proposed in S. 1480 would primarily effect 15 major, petrochemical-based companies. It is estimated that 40 percent of the products these manufacturers produce, which would be charged 90 percent of the fees under S. 1480, do not result in the generation of hazardous waste at all. Moreover, it has not been demonstrated that the feedstock fees can be passed on to downstream product users. In all cases, the result would be inequitable distribution of Superfund costs. On the other hand, a tax on hazardous wastes affects all hazardous waste generators, thereby creating a broad tax base without unduly burdening any specific industrial category.

A feedstock fee fails to provide incentives to improve management of hazardous wastes. Placing a fee on feedstocks does not provide an incentive to reduce hazardous waste generation. A Superfund tax on hazardous wastes, however, would provide an additional economic incentive to waste generators to encourage the reduction of wastes and would help reduce the potential for environmental harm. CMA does not believe that a waste-end tax would be an incentive to "midnight dumpers". The costs to comply with RCRA regulations greatly exceed the impact of CMA's proposed \$3.00 a ton tax on waste disposed.

A feedstock fee bears no relationship to the problem. Fees levied against basic raw materials of the chemical industry would be related only indirectly to the source, extent, or nature of the problems they are intended to solve. A tax on hazardous waste, however, is directly related to the key problem which must be addressed: that of improper disposal of hazardous wastes and the clean up and containment of those wastes.

The data base necessary to assess and collect a feedstock fee is not currently in place. A waste-end tax structure would present no unusual administrative problems. The administration of most taxes and fees, including the feedstock fee now contained in S. 1480, depends to a large extent on voluntary compliance, coupled with a system of penalties for non-compliance. Both the feedstock fee and

the waste-end tax would be subject to the administrative and collection provisions of Subtitle F of the Internal Revenue Code. In both cases, the filing of returns would be required on a frequent, perhaps a quarterly, basis. In the case of the feedstock fee, the chemical manufacturing companies and petroleum companies would form almost the entire pool of taxpayers, and less than 100 companies would pay about 90 percent of the total fees. Although a waste-end tax would involve a more extensive pool of taxpayers, probably numbering several thousand, the greatest portion of a waste-end fee would be collected from large manufacturing companies.

The Resource Conservation and Recovery Act provides for a system of accounting for the disposal of hazardous wastes and requires generators of hazardous waste, as well as operators of hazardous waste disposal facilities, to file reports with the EPA. A waste-end tax could easily be imposed using the RCRA accounting and reporting system as its base, so that there would not be duplicative record-keeping by the persons subject to the waste-end tax.

Under RCRA, a manufacturing company that disposes of its own waste on its own premises must keep records of the hazardous wastes disposed of. A company that disposes of its waste at an independently operated disposal facility must prepare a manifest that provides a record of the waste and transmit copies of that manifest to all persons who then

handle the waste. The operator of the disposal facility receives a copy of the manifest.

The waste-end tax can easily be computed simply by transposing the information maintained for RCRA purposes to a tax return. The copies of manifests received by operators of disposal facilities will provide a check on the compliance with the law of small generators of waste.

Contrasted with a waste-end tax structure, a fee on feedstocks will require burdensome new records to be maintained by taxpayers and will require an administrative mechanism to avoid taxing a feedstock more than once.

## 2. Specific Discussion of CMA's Waste-End Tax

Basic considerations. There are several basic considerations which must be addressed in the process of developing a workable tax on hazardous wastes.

The first consideration should be the definition of a "hazardous waste." The problem of old dumpsites is caused by "hazardous wastes" which were buried years ago. Although not everyone agrees on the definition of "hazardous waste," the RCRA Regulations promulgated in May 1980 have listed numerous substances, waste streams and characteristics which are now defined as "hazardous." These Regulations provide the basis for a waste-end tax system.

In addition, there are several large volume, low toxicity waste streams which should be treated separately from

the RCRA regulated wastes and not be subject to a Superfund tax. Examples of such wastes are: the aqueous portions of large volume, low toxicity waste streams, mining and milling wastes, fly ash, bottom ash, drilling fluids, and certain agricultural wastes among others. The risks that these wastes pose to human health and the environment are usually minimal.

A tax imposed on hazardous waste would encourage reuse and recycling, and sound waste management, including reduced waste generation and waste destruction. Moreover, the Superfund tax should focus on wastes that are truly hazardous. It should accommodate all generators in an equitable manner, such as by statutory exclusion where appropriate or by a lower tax based on relative degree of hazard. For those industries which generate large volume waste streams with some hazardous waste constituents, listed by the RCRA Regulations, an apportioned tax could be calculated.

The second important consideration involves the selection of factors needed to develop a waste-end tax. Depending on the alternative selected, the tax should rely on only those factors which can be readily accounted for and consistently measured. Suggested tax mechanisms have been based on: the volume of all listed wastes generated; the volume of all listed wastes received at disposal facilities; and the dry weight volume of both these alternatives. The factors chosen must also address a related problem -- administration. A mechanism for tracking any of these suggested

alternatives must be already in place or capable of quick implementation.

Based on evaluations of these alternatives and considering administrative complexity, the recommended system would be to place a tax on RCRA regulated hazardous waste generation, with certain statutory exemptions. The tax would be assessed on the generated hazardous wastes which are disposed of at a hazardous waste disposal facility as defined in EPA's RCRA regulations. Such disposal facilities would include secure landfills, land treatment, surface impoundments used as disposal sites, and deep injection wells, but would not include waste treatment facilities, recycling facilities or incinerators. The data base for such a tax system has already been established in the final RCRA regulations, Section 3002 and 3004 Record and Reporting requirements. The Department of the Treasury would develop a tax reporting form, utilizing this existing data base, from which a Superfund hazardous waste tax payment would be made.

The exemptions to the waste tax would be specific, and would have the dual effect of initially exempting high volume/low hazard wastes, and taxing only hazardous wastes which are "disposed" in the context of the final RCRA regulations. Specific statutory language would direct the development and incorporation of the degree of hazard concept into the tax on hazardous waste disposal within a two year period.

Another consideration is the immediate generation of funds for emergency actions on failing dumpsites. One method would be to provide for a loan program through the Treasury Department if the fund is inadequate at any point in the four year program. Such loans could not exceed one year's revenue in any given year and the Secretary of the Treasury would prescribe the rules and regulations for such borrowing.

Operation of a waste-end response fund. The Department of the Treasury would be authorized to establish a Response Fund. The Fund would be administered by the President and the Secretary of the Treasury. Components of the Fund would be taxes collected on waste disposal, moneys recovered on behalf of the Fund, Congressionally appropriated money and interest received from the investment of Fund money.

The total amount which may be collected in taxes shall not exceed \$50 million for fiscal year 1981, \$75 million for fiscal year 1982, \$75 million for fiscal year 1983 and \$100 million for 1984. The authorized appropriations for the following fiscal years would be: 1981 - \$50 million, 1982 - \$75 million, 1983 - \$75 million, 1984 - \$100 million. Based on the data taken from the EPA Background Documents used to prepare RCRA regulations, estimates were made on the impact of a waste-end tax on manufacturing industries. The data indicate that approximately 97 percent of the taxes would come from the following industrial categories:

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Chemical	88%
Paper	3.5%
Petroleum	3.0%
Secondary Metals	<u>2.5%</u>
	97.0%

These estimates are based on 1) an assumed 3.6 percent annual growth rate, 2) 25 million metric tons of taxable waste per year, and 3) an initial tax of \$3.00 per metric ton.

The Secretary of the Treasury would cease imposition of taxes whenever the unobligated balance of the fund exceeds three hundred million dollars. The Secretary would resume imposition of taxes whenever the balance falls below one hundred million dollars.

In order to distribute the costs as broadly as possible among those who generate hazardous wastes while minimizing the burden of collection and encouraging treatment, reuse and recycling of hazardous wastes, a tax would be collected on all hazardous wastes received at, and which will remain at, hazardous waste disposal facilities. Each generator of hazardous wastes listed in Appendix I will pay a tax for each dry weight ton of hazardous wastes generated, delivered to, and remaining at, a hazardous waste disposal facility. Such hazardous waste disposal facilities shall include secure landfills, land treatment, surface impoundments used as disposal facilities, underground injection, and any other facility where hazardous wastes will remain after facility closure. Taxes

will not be assessed on any hazardous waste which after generation is either treated (and thereby rendered either non-hazardous or such that it no longer meets the listing description) at any permitted (including interim permitted) hazardous waste treatment facility (as defined in 40 CFR Part 260.10) or is reused or recycled. The list of hazardous wastes in Appendix I should be reviewed annually by Congress based on changes made to the list of hazardous wastes regulated by EPA under Section 3001 of RCRA. The following materials will not be considered hazardous wastes for the purpose of the tax:

- (A) Domestic sewage;
- (B) Any mixture of domestic sewage and other wastes that pass through a sewer system to a publicly owned treatment works;
- (C) Industrial discharges regulated under Section 402 of the Clean Water Act;
- (D) Source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et. seq.;
- (E) Materials subjected to in situ mining techniques which are not removed from the ground as part of the extraction process;
- (F) Household waste, defined to mean any waste material (including garbage, trash and sanitary wastes in septic tanks) derived from households

- (including single and multiple residences, hotels and motels);
- (G) Wastes generated by any of the following and which are returned to the soil as fertilizers --
- (1) The growing and harvesting of agricultural crops;
  - (2) The raising of animals, including animal manure;
- (H) Mining overburden returned to the mine site and waste generated by beneficiation of ore;
- (I) Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels;
- (J) Drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy; and
- (K) Any other waste excluded by regulation or act of Congress.

For the first year, the tax imposed on all hazardous wastes listed in Appendix I received at, and which will remain at, hazardous waste disposal facilities after such hazardous waste facility closed in accordance with Subtitle C of the Solid Waste Disposal Act, will be \$3 per dry weight ton. In succeeding years, the Secretary of the Treasury in consultation with the EPA Administrator may recommend modifications of the tax based on projections of hazardous waste to be

disposed in that calendar year. The tax will be paid semi-annually or at a frequency to be determined by the Secretary of the Treasury, based on a form provided by the Department of the Treasury, utilizing the information collected and submitted to EPA pursuant to Sections 3002 and 3004 of RCRA. The information contained on the form should include:

- o The amount, in dry weight tons, of each hazardous waste listed in Appendix I disposed of at a hazardous waste disposal facility (as identified by the Environmental Protection Agency Handling Code at 40 CFR Part 265, Appendix I, Table 2 - Part 3, "Disposal") (45 C.F.R. 33253).

The Secretary of the Treasury or his delegate will collect the taxes under provisions of Subtitle F of the Internal Revenue Code of 1954. The Secretary of the Treasury may invest excess Fund monies in interest-bearing ventures of the United States. If at any time Fund monies are inadequate to meet the obligations of this statute, the Secretary of the Treasury may loan the Fund an amount equal to one year's revenue, subject to terms and conditions prescribed by the Secretary of the Treasury.

Within two years after the tax is first initiated, the Administrator of the Environmental Protection Agency, after consultation with the Secretary of the Treasury, will submit a report on the tax system to Congress. Opportunity

will be provided for public review and comment. The report should include:

- o A summary of past expenditures from the Fund; and
- o A brief description of all projects and their current status, specifically listing completed operations and cases.

Two years after the tax is first initiated the Department of the Treasury, with the assistance of EPA, will publish a tiered tax system reflecting the relative degree of hazard, including, for example, such factors as migration potential, persistence, bioaccumulation potential, toxicity and the potential for adverse environmental effects. EPA's background documents used to list wastes under Section 3001 contain the rudiments of a simple degree of hazard system and reference these relative hazards. This information could be used with the additional information provided by the generator's annual report to devise a workable, tiered tax system.

Senator MOYNIHAN. We thank you, Doctor.

As was the case previously, and as it is our practice, we will hear from each member of the panel before we ask questions individually.

Senator CHAFEE. Mr. Chairman, may I ask one question here?

Senator MOYNIHAN. Of course, you may.

Senator CHAFEE. What are the parameters under which this committee can work?

For instance, Dr. Fernandez addressed the joint and several liability situation. Is that within the purview of this committee, or are we restricted to the fees or tax?

Senator MOYNIHAN. I don't want to give an answer to a question of that kind without the advice of counsel, but my position would be to say that we are here to discuss the question of tax or fee, as you wish. That clearly is our responsibility.

I think that it would be case that with respect to establishing a criterion of liability, that originates with the Committee on Environment and Public Works, or other committees. That would be my judgment.

Senator CHAFEE. I am not critical of Dr. Fernandez's testimony at all. I am just trying to get the ground rules, because we are not the recipients of referrals too often.

It is my understanding, and if I am wrong on that I would like the staff to correct me, that we deal solely with the fee or the tax aspect.

Senator MOYNIHAN. I can state to my friend, Senator Chafee, that that is the purpose for which this hearing is convened. We are prepared to entertain observations from persons on whatever issues they wish, but they ought to know that we are concerned here with the question of tax or fee.

Senator CHAFEE. Thank you, Mr. Chairman.

Senator MOYNIHAN. Is that agreeable to the committee?

Senator ROTH. Mr. Chairman, I would like to make the point that in determining the size of the fee, I think we also have some responsibility as to the basis of that liability, and to what extent certain actions would bring the fund.

I don't have the expertise either, in all candor, but I would not want to tend to limit the authority of this committee until we had some expert advice on that.

Senator MOYNIHAN. The committee is not so limited by anything that I have said, and as I have made the point earlier on, we are holding a formal hearing, but this bill has not been referred to the committee. This has yet to be negotiated.

On the House side, the Ways and Means Committee chose not to make changes in the liability provisions, but had to take into consideration what those provisions were in order to make a judgment of whether the financing was adequate, which of course we will do.

But let us not delay our witnesses.

Mr. Hanneman.

**STATEMENT OF RICHARD L. HANNEMAN, DIRECTOR, GOVERNMENT AND PUBLIC AFFAIRS, NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION**

Mr. HANNEMAN. Thank you, Mr. Chairman, and members of the committee.

The National Solid Wastes Management Association appreciates this opportunity to share with the committee our thoughts on two specific portions of the bill you are considering today.

First the portion of the bill that was only touched upon earlier this morning by Mr. Sunley, Mr. Costle, and Mr. Davis, and that is the necessity for retaining the postclosure liability fund created in section 5(k) as an essential step in creating the additional capacity of hazardous waste management facilities required under the new Federal regulatory program and, second, the desirability of retaining the broad-based fee mechanism to fund any superfund as contained in the version of S. 1480 approved by the Committee on Environment and Public Works.

The National Solid Wastes Management Association represents the leading private firms engaged in the proper management of this Nation's wastes, residential, commercial, and more to the point today, industrial. We have been working constructively with committees of the Congress for the past decade to design the Federal solid waste management program. We are proud of our part in helping to fashion the Resource Conservation and Recovery Act of 1976, and the bill introduced by Senator Randolph, S. 1325, to

create a postclosure liability fund, which has been incorporated by the Environment and Public Works Subcommittee into S. 1480.

The postclosure sections of the legislation are designed to provide the solution to one aspect of the "financial responsibility" requirements for facilities which will be permitted under the Resource Conservation and Recovery Act. This is a separate and distinct purpose to that of the general superfund which, in the main, addresses problems of existing and past disposal practices. It is essential that the postclosure sections of the bill be retained, hopefully as written and unanimously accepted by the Environment and Public Works Committee.

The most compelling reason why we feel the Congress should create a postclosure liability fund is that with the additional quantities of hazardous wastes which will be subject to regulation under RCRA, this country will need in the very near future 50 to 60 additional regional, commercial hazardous waste sites and specialized facilities for proper treatment, storage and disposal of hazardous waste.

Companies need now to begin to develop those facilities. They are expensive, and they require some lead time for construction. But development of these facilities is being stymied by public opposition, the "not in the backyard" syndrome mentioned earlier by Senator Durenberger. Everyone agrees the sites are needed, but no one wants one nearby.

If we don't have sufficient sites, however, it is back to the real hazard of hazardous wastes, which is the mismanagement of hazardous wastes. If we are going to solve our problem with hazardous wastes, we need more than laws and regulations. We need more capacity and this fund offers an incentive to the creation of that capacity.

The postclosure liability fund which we envision would be fashioned very much like an insurance program. Participating companies would pay fees similar to an insurance premium into the fund, and would in return call upon the fund to satisfy liabilities incurred by the facility.

No one really knows how large a fund will be required. We believe that the likelihood of releases from RCRA-permitted facilities in the future will be much, much lower than has been our experience in the past with facilities not so regulated. But no one can issue an ironclad guarantee that they won't have problems, and if they did, the insurance industry would be willing to insure those risks, which they are not willing to do.

The Environment and Public Works Committee proposed a \$200 million fund to be replenished by adjustment of the fee schedule if necessary so that the fund remained at \$200 million. The EPA was directed by terms of S.1480 to conduct a 3-year study on the adequacy of the amount so that Congress might examine the question of the size of the fund in the future.

It should be very clear that while the Federal undertakes the responsibility for managing the fund, all moneys which are in the fund are generated by a special from operators of RCRA-permitted disposal facilities. This is entirely fair and appropriate and would pose only a very slight additional burden on our industry which we are fully prepared to accept. The fee would be less than \$1 per ton.

Let me turn quickly now my attention to the funding mechanism of the larger superfund. The Environment and Public Works Committee approved a broad-based schedule fee for this fund. If this committee is to create a superfund, we strongly recommend that this broad-based fee approach, as embodied in S. 1480, be adopted.

Administrator Costle well expressed this morning, and documented the reasons for the fee being placed early in the production phase. Such fee, as he explained, would have a minimal increase in prices.

One alternative considered by the Environment and Public Works Committee was to assess the fee at the point of disposal rather than the broad fee on industries who produce products which become hazardous wastes. The Environment and Public Works Committee opposed a disposal tax because of the dislocation which a fee on disposal would create.

We strongly second that judgment and urge you to accept the mechanism contained in the present bill. Combined with the other significant increases in disposal costs which will soon hit waste generators who are called upon to comply with the new set of Federal regulations which go into effect in November, this huge incremental increase, perhaps as much as 50 percent over the present disposal charge, could pose a serious obstacle to willing compliance with the regulatory program upon which success of this program is largely predicated. A more broadly based fee would cushion the shock of raising the funds necessary for a superfund.

We appreciate the opportunity to be here this morning and will be happy to respond to questions.

[The prepared statement of Mr. Hanneman follows:]

STATEMENT OF RICHARD L. HANNEMAN, DIRECTOR, GOVERNMENT AND PUBLIC AFFAIRS, NATIONAL SOLID WASTES MANAGEMENT ASSOCIATION

Mr. Chairman and members of the Committee, my name is Richard L. Hanneman and I am Director of Government and Public Affairs for the National Solid Wastes Management Association. NSWMA appreciates this opportunity to share with the Committee our thoughts on two specific portions of the bill which you are considering today: the necessity for retaining the post-closure liability fund created in Section 5(k) as an essential step in creating the additional capacity of hazardous waste management facilities required under the new federal regulatory program and the desirability of retaining the broad-based fee mechanism to fund any Superfund as contained in the version of S. 1480 approved by the Committee on Environment and Public Works.

NSWMA has been working constructively with committees of Congress for the past decade to design the federal solid waste management program. We are proud of our part in helping fashion the Resource Conservation and Recovery Act of 1976. We are also proud of our role in developing, in this Congress, the bill S. 1325 to create a post-closure liability fund, which has been incorporated into S. 1480.

The post-closure sections of the legislation are designed to provide the solution to one aspect of the "financial responsibility" requirements for facilities which will be permitted under the Resource Conservation and Recovery Act. This is a separate and distinct purpose to that of the general Superfund which, in the main, addresses problems of existing and past disposal practices. It is essential that the post-closure sections of the bill be retained, hopefully as written by and unanimously accepted by the Environment and Public Works Committee.

Meaningful insurance coverage for waste disposal facilities is not available today, especially in the post-closure period. And only those who would oppose construction of these facilities altogether would suggest that the insurance mechanism is inappropriate to manage these liabilities. The post-closure liability fund would supplement the existing hazardous waste management program created by RCRA. As part of that program, EPA requires "financial responsibility" in the form of available liquid assets or insurance up to a fixed amount during the period of facility operation and accumulation of a trust fund sufficiently large to meet all anticipated

expenses of proper facility closure and routine monitoring and maintenance for 30 years following closure. NSWMA supports the concept of "financial responsibility" because it provides necessary assurances to facility neighbors and the public at large and also because it creates an incentive to manage facilities in a manner which minimizes risks.

By their very nature, however, EPA's regulations will fall short in two respects: they cannot guarantee resources above and beyond the minimum "financial responsibility" requirement during the operating life of a facility and they cannot assure the existence of any funds to satisfy unanticipated claims after operations cease and a facility has been closed.

To protect the public in these cases, Senator Randolph introduced S. 1325 to create a post-closure liability fund to pay damages greater than \$5 million—the figure EPA was using at that time to represent an operator's "financial responsibility"—and pay all damages from closed RCRA facilities. Thus, operators would be required, in effect, to buy supplemental "insurance" without the limits of available commercial insurance during facility operation and perpetual coverage in the post-closure period.

The Environment and Public Works Committee adopted Senator Randolph's recommendations in the post-closure period and these are embodied in S. 1480.

During the past several years, commercial insurance companies have struggled with the question of "non-sudden" coverage—that is, protection for damages caused by slow, gradual escapes of hazardous substances from a facility. Operators have had no difficulty in obtaining conventional "sudden" insurance for their facilities to cover, for example, explosions and fires. Now the insurance industry has given indication that "non-sudden" coverage, in limited amounts, is becoming available for hazardous waste disposal operations, but only on a "claims made" basis. Only those claims received while the policy is in effect are insured. No insurance company has come forward with an "occurrence" basis policy for non-sudden events, the type of insurance that would provide protection for the public in perpetuity. This post-closure fund provides that protection.

This leads to the most compelling reason why we feel that the Congress should create a national post-closure liability fund. With the vast additional quantities of hazardous wastes which will be subject to regulation for the first time under the Resource Conservation and Recovery Act, this country will need, in the very near future, 50-60 additional regional commercial hazardous waste sites and specialized facilities for proper treatment, storage and disposal of hazardous wastes. Companies need to begin developing these facilities now. They are expensive and they require 3-5 years for development and construction.

Development of these facilities, however, is being stymied by public opposition to these sites—the "not-in-my-backyard" syndrome. Everyone agrees the sites are needed; no one wants one nearby. But consider the alternative. If sufficient facilities are not available to manage hazardous wastes properly, it's back to the real hazard in hazardous wastes—mismanagement. In all of the attention which we have given to hazardous wastes in the past several years, the one clear lesson is that the biggest hazard on hazardous wastes is not the wastes themselves, but in how they are managed. If we are going to solve our "problem" with hazardous wastes, we need more than laws and regulations, we need many new modern treatment and disposal facilities. Creation of a post-closure liability fund offers part of the solution to this problem. Without question, the enormous amounts of publicity which past mismanagement practices have received in the media have reinforced the "not-in-my-backyard" syndrome. Citizens reading of the confusion and delays at Love Canal where it has been difficult to assign responsibility, where municipal agencies lack resources, and where state and federal agencies quarrel over the types and amounts of assistance to be made available, only reinforce this public aversion to having a hazardous waste facility in their neighborhood. Assurance that funds are readily available to clean up and restore problem facilities and to pay all legitimate claims for property damage or personal injury, will reinforce public confidence which will also grow as a result of the strength and regulatory program created in RCRA.

We feel a national fund is necessary to insure financial capacity to meet any problems from RCRA-permitted hazardous waste facilities. No mechanism exists today to permit responsible parties to manage the present and perpetual liabilities associated with such facilities. For operating facilities only limited insurance coverage is possible and, for closed sites, no insurance is available or likely to become available. The post-closure liability fund which we envision would be fashioned very much like an insurance program. Participating companies would pay fees similar to insurance premiums to the fund and would, in return, call upon the fund to satisfy liabilities incurred by the facility.

No one really knows how large a fund will be required. We believe that the likelihood of releases from RCRA-permitted facilities will be much, much lower than has been our experience in the past with facilities which have not been held to high regulatory standards. But, no one can issue an ironclad guarantee that regulated facilities will be without problem. If we could, insurance companies would be more than happy to insure these risks and the Environment and Public Works Committee would not have seen fit to create this post-closure liability fund. The Committee has proposed a \$200 million fund which would be replenished by upward adjustments of the fee schedule, if necessary, so that funds would always be available to satisfy judgments. The \$200 million level was approved by the Environment and Public Works Committee with a proviso that EPA conduct a 3-year study on the adequacy of this amount so that the Congress might reexamine this question in several years. This is entirely reasonable. It is unlikely that this fund will be required for many years. Thus, there is no immediate need to be exact in determining the amount of the fund. What is needed immediately is assurance that the fund will be created and to begin accumulating its reserves. Two hundred million dollars would be an appropriate initial target.

It should be very clear that while the federal government undertakes the responsibility for managing this fund, all monies which are in the fund are generated by a special fee on operators of RCRA-permitted disposal facilities. This is entirely fair and appropriate and would pose only a very slight additional burden on our industry which we are fully prepared to accept. The fee would be less than \$1 per ton.

Let me now turn my attention to the funding mechanism for the larger Superfund. The Environment and Public Works Committee has approved a broad-based fee schedule for this fund. If this Committee is to create a Superfund, we strongly recommend that this broad-based fee approach, as embodied in the present S. 1480, be adopted.

One alternative considered by the Environment and Public Works Committee was to assess the fee at the point of disposal rather than the broad fee on industries who produce products which become hazardous wastes. The Environment and Public Works Committee opposed a disposal tax because of the dislocations which a fee at disposal would create. We strongly second that judgment and urge you to accept the mechanism contained in the present bill. In order to generate \$4.1 billion over the next six years with a tax at disposal, the incremental cost would be at least \$10 per metric ton. Combined with the other significant increases in disposal costs which will soon hit waste generators who are called upon to comply with the new set of federal regulations which go into effect in November, this huge incremental increase could pose a serious obstacle to willing compliance with the regulatory program, upon which success of this program is largely predicated. A more broadly based fee would cushion the shock of raising the funds necessary for a Superfund.

We appreciate this opportunity to appear before your Committee today and to present our perspective on this important bill and urge your speedy action so that the beneficial effects of this program can begin early in 1981 rather than await a complete re-hearing and drawn out legislative proceedings in the next Congress.

Thank you.

Senator MOYNIHAN. You are very generous, Mr. Hanneman.

I observe that each of our witnesses has prepared testimony and we very much appreciate that. That will be put in the record, and if you summarize it, or as Dr. Fernandez did, if you skip about, the whole of your testimony will be there in any event.

Now, Mr. Branscum, on behalf of the Society of Plastics Industry.

**STATEMENT OF GENE BRANSCUM, DIRECTOR, THE SOCIETY OF THE PLASTICS INDUSTRY, INC., PRESIDENT OF GOTT CORP.**

Mr. BRANSCUM. Thank you, Mr. Chairman and members of the committee.

I am also president of Gott Corp. in Winfield, Kans. I appear this morning on behalf of the Society of the Plastics Industry, Inc., a 1,400 member trade association representing raw material suppliers, machinery manufacturers, and processors of plastic products. I am director of SPI and a member of its executive committee.

In addition to the statement which I am making on behalf of SPI, I have been asked to submit to hearing record a written

statement by the Flexible Packaging Association, representing another important segment of plastics processing industry.

Senator MOYNIHAN. We will be happy to include that in the record.

[The prepared statement of Mr. Branscum follows:]

## STATEMENT OF

T. E. (Gene) BRANSCUM, PRESIDENT

GOTT CORPORATION

ON BEHALF OF

THE SOCIETY OF THE PLASTICS INDUSTRY, INC.

Good morning. I am Gene Branscum, President of the Gott Corporation, Winfield, Kansas. I appear this morning on behalf of The Society of the Plastics Industry, Inc.,<sup>\*/</sup> a 1400 member trade association representing raw material suppliers, machinery manufacturers, and processors of plastic products. I am a Director of SPI and a member of its Executive Committee.

SPI's membership includes those companies that manufacture plastic resins from petrochemical feedstocks. But, two-thirds of our members are processors of plastics products. Most are small manufacturers with half having fewer than 100 employees. I suppose this makes Gott Corporation a fairly large processor. We have 350 employees and last year did \$16 million in business.

Gott is a manufacturer of insulated containers. We make metal containers, but plastics are our principal mate-

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<sup>\*/</sup> The Society of the Plastics Industry, Inc. (SPI) is a Corporation organized under the Not-for-Profit Corporation Law of the State of New York. Its 1400 member companies and individuals and 49 operating units include those who supply raw materials, process or manufacture plastics or plastics products; engineer or construct molds or similar accessory equipment for the plastics industry; and engage in the manufacture of machinery used to make plastics products or materials of all types. SPI is the major national trade association of the plastics industry. The majority of its members are the processors and converters of plastic resins into end products which represent 75% of the dollar volume sales of plastics in this country.

rial. Our markets include consumer products, such as picnic coolers and drink dispensers, as well as industrial insulated containers for use in oil fields and other outdoor work locations. Gott markets in all 50 states and over 35 foreign countries. The fastest growing part of our business is in exports, last year accounting for 15% of sales.

The principal interest of the plastics industry in S. 1480 and other "superfund" proposals stems from our complete dependence upon petrochemical feedstocks for raw materials. Any proposal or action that would potentially affect the price of feedstocks is of concern to us. There are aspects of S. 1480 that concern SPI, such as the size and scope of the fund, but I leave that to others who are closer to the problem to discuss. Of particular concern to SPI is the financing mechanism of the bill because of the negative effect it will have upon the nearly 800 plastics processors within our association.

The legislation before you would establish over a six-year period a \$4 billion fund, \$2.3 billion of which would be raised from fees on petrochemical feedstocks. The Senate Committee on Environment and Public Works stated in its report on S. 1480 that it had rejected a waste-end fee because "such a system would have significantly increased government paper-

work in the industry." In advocating instead a fee on chemical raw materials the committee said, "because a fee on feedstocks can be passed on to customers, it does not single out the chemical industry's profits as its source of revenue." The presumption is that all affected companies downstream from the feedstock producer which pays the original fee will in turn pass on their increased costs to their customers, with the ultimate tab being paid by the consumer of the finished product.

The Committee's report states that a fund "based only on appropriations would not be in the public interest. Taxpayers too often are asked to remedy problems they do not help create." Ironically, if the pass-through theory of fees on industry works as envisioned by the authors of S. 1480, the taxpayer they claim to be protecting will end up paying the cost anyway. But, what if we as customers of the chemical companies are unable to pass through the additional costs brought on by a superfund, as is sure to be the case regarding plastics processors?

Like the taxpayer, the bill's supporters claim they seek to protect, the plastics processor is being asked to remedy a problem it did not help create. Let's use Gott Corporation as an example.

We are processors of high-density polyethylene resin. High and low-density polyethylene together account for nearly one-third of all plastics produced in this country. We do not, have not, and never expect to contribute to the hazardous waste problem S. 1480 seeks to correct. The same can be said for most processors of plastic products. Plastics are by their nature inert and while some plastics processors do handle some hazardous substances, the vast majority do not. Why, then, should all of us be saddled with higher costs?

Supporters of S. 1480 claim there will be no inequity resulting from the industry fee because any additional costs can be passed on to our customers, just as our raw materials suppliers will be passing on their increased costs resulting from the feedstock fee. This is wrong.

S. 1480 calls for an initial fee of \$3.88 per short-ton on ethylene, the feedstock from which high-density polyethylene is derived. Our best estimate is that this would translate into about a half cent per pound increase in the cost of our raw materials. In the reality of the marketplace, it could easily reach one cent per pound, or 2% of our cost.

This may not seem like much, but raw materials account for 55% of my company's cost of doing business. The average processor's profit is slightly under 4%. If we were simply

competing with other domestic plastic processors, perhaps we could all safely raise our prices. But, this is not the case. For Gott Corporation, our competitors include manufacturers of metal insulated containers who will not have a comparable cost increase in raw material. A 2% price raise would place us at a serious disadvantage in the marketplace at home as well as abroad. Our foreign competitors, whether they manufacture metal or plastic containers, would find themselves at a convenient advantage. Thus, that 1-2% resin price increase may likely have to be absorbed and further reduce the already slim profit margins for processors.

This circumstance is not unique to my company. Most of my fellow processors are competing in markets where the competition includes products made from other raw materials like steel, aluminum, glass and paper. We continue to be competitive but it is getting tougher. It is difficult for us to believe in the equity of yet another price rise increase to solve a problem to which we do not contribute.

Mr. BRANSCUM. Their position is generally parallel to ours, and we have provided copies to the staff prior to the meeting this morning.

Senator MOYNIHAN. We appreciate that, sir.

Mr. BRANSCUM. SPI's membership includes companies that manufacture plastic resins from petrochemical feedstocks. But, two-thirds of our members are processors of plastic products. Most are small manufacturers, in fact, over half have less than 100 employees. I suppose that that would make our company a fairly large processor. We have about 350 employees, and do about \$16 million in sales.

We happen to manufacture insulated containers. We also make metal containers, but plastics are our principal materials. Our markets include such consumer products as picnic chests and drink dispensers, as well as the industrial insulated container for use in oilfields and other outdoor work locations.

Gott markets in 50 States and over 35 foreign countries last year. In fact, the fastest growing part of our business is in exports, and last year accounted for 15 percent of our sales.

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There are aspects of S. 1480 that concern SPI, such as the size and scope of the fund, but I will leave that to others who are closer to the problem to discuss that. Of particular concern to SPI is the financing mechanism of the bill because of the negative effect it will have on the nearly 800 plastics processors within our association.

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Our foreign competitors, whether they manufacture metal or plastic containers, would find themselves at a convenient advantage. Thus, the 1- to 2-percent resin price increase may likely have to be absorbed and further reduce the already slim profit margins for processors.

This circumstance is not unique to my company. Most of my fellow processors are competing in markets where the competition includes products made from other raw materials like steel, aluminum, glass, and paper. We continue to be competitive but it is getting tougher. It is difficult for us to believe in the equity of yet another price increase to solve a problem to which we do not contribute.

Senator MOYNIHAN. We thank you, Mr. Branscum.

I would not want to pick a point, but the Government is continually distorting prices in one way or another in these fields. The petroleum basis of much of your feedstock, your raw material for many years was well below world prices because we kept low prices here. This gave the chemical industry an advantage overseas which was much protested in the common market, for example. The assertion was made that producers in Europe had to pay world prices for oil, whereas in the United States they were paying a Government-controlled price, and a very low one. So it goes up and it does down. The result is often difficult to ascertain.

Mr. Ellison, on behalf of the Synthetic-Organic Chemical Manufacturers Association. Before you say another word, please explain that.

**STATEMENT OF DONALD ELLISON, MANAGER, GOVERNMENT AND INDUSTRY RELATIONS, VIRGINIA CHEMICALS, INC., ON BEHALF OF SYNTHETIC ORGANIC CHEMICAL MANUFACTURERS ASSOCIATION, INC.**

Mr. ELLISON. I shall in my testimony.

Mr. Chairman, members of the committee, I am Donald Ellison, manager for government and industry relations at Virginia Chemicals. I am pleased to appear before you today on behalf of the small business community of the Synthetic Organic Chemical Manufacturers Association, known as SOCMA.

SOCMA is a nonprofit trade association composed of 107 manufacturers of organic chemicals. Members produce some 5,000 products, including everything from pesticides intermediates to flame retardants, and from perfume materials to intermediates for artificial penicillin.

Over half of SOCMA's members have annual sales under \$50 million. For our industry, those are small companies. I should emphasize that SOCMA believes that a bill that is well structured for the entire chemical industry will be good for smaller companies. However, we are concerned that the small companies must be

kept in mind. Unless the particular problems we face are considered, an otherwise good bill could be very bad, indeed.

The financing of the fund is complex. As proposed, money would be paid out of the fund to compensate injured parties and to pay for cleanup efforts. Revenues would come into the fund through the fee system and through Federal subrogation of victim's claims—where people are compensated by the funds, the Government would take over their claims. Thus the liability elements of the bill become deeply involved in this committee's consideration of the size, scope, and uses of the fund.

In this oral presentation, I will address only one issue, whether the liability provisions of S. 1480 should be applied retroactively.

Although the bill applies only to damage suffered after January 1977, it imposes liability on disposal conduct of past years or even decades. We think this is a mistake. Applying the liability provisions to past conduct is a poor liability policy and a poor approach to financing the fund.

According to the Environment and Public Works Committee report, the goal of strict liability is to provide incentives for careful disposal of wastes. However, even if such incentives are a good way to control future practices, past disposal conduct cannot be changed by such incentives.

In fact, retroactive imposition of strict liability is contrary to the expressed goal of properly spreading disposal costs. The Environment and Public Works Committee report emphasizes, and I quote: "The most desirable system of loss distribution is one in which the prices of goods accurately reflect their full costs to society."

Under the proposed language, the price of today's goods will bear not only the costs of present disposal practices, but also the costs associated with past goods. Thus, the bill violates its own principle by imposing more than the "full cost of goods to society." It is therefore clear that the bill's approach misallocates the cost burdens, it is a bad financing scheme.

Thus, it is clear that policy considerations do not require imposing liability retroactivity. This is fortunate because, if enacted, this liability scheme could threaten the existence of small companies.

Let me emphasize that small companies are not reluctant to be responsible for any damage that we cause. If we make mistakes, we should bear the appropriate costs of those mistakes. What we object to and cannot afford is being responsible for mistakes which others made.

Many small companies, ours is one, try to succeed by doing our job with exceptional care. The environmental area is no exception to this approach. We cannot survive if we must pay for the mistakes of other companies.

No matter how much care a small company takes and how little waste it generates, the bill imposes the threat of huge liability. Small companies have often disposed of wastes in small, easily traced barrels. In contrast, tank cars full of waste, which have been emptied, cannot readily be traced. We even face the prospect of being accused of liability when our labeled barrels are used by other firms.

Without large legal departments, small companies would be inviting targets for plaintiffs using joint and several liability. Small

companies would often be unable to bear the costs of legal defense, let alone the costs of seeking subsequent apportionment from other firms. A small company that contributes a modest amount to a disposal site should not have to risk bearing the costs of the whole site.

If we must face liability stemming from past as well as future disposal, there is no guarantee that insurance will be available. Senators Domenici, Bentsen, and Baker have recognized this problem in a statement quoted in my written submission.

Of course, even if insurance is available to small companies, trying to pass on the double costs of insuring against liability from past as well as present production may put many small firms in precarious financial shape. Small companies are particularly threatened by this double pass-through problem because of low profit margins and competitive conditions.

Fortunately, the Environment and Public Works Committee has left unresolved the question of retroactive application of the liability scheme. This committee has an opportunity to adhere to the policy goals of the bill while avoiding paying for past disposal practices through undue burdens on firms, particularly small firms.

While SOCMA does not approve of the liability scheme in general, its retroactive application to past disposal practices is particularly unjustified and should certainly be deleted.

I would be happy to answer any questions.

[The prepared statement of Mr. Ellison follows:]

## WRITTEN SUBMISSION

OF

DONALD ELLISON

ON BEHALF OF

## THE SYNTHETIC ORGANIC CHEMICALS MANUFACTURERS ASSOCIATION

Mr. Chairman, members of the Committee, my name is Donald Ellison and I am pleased to be able to appear before you and try to help in your effort to design sound hazardous-waste-site legislation. I am Manager for Government and Industry Relations, at Virginia Chemicals Inc. Today, I am appearing as a member of the Small Business Committee of the Synthetic Organic Chemical Manufacturers Association ("SOCMA").

SOCMA is a non-profit trade association comprised of 107 manufacturers of organic chemicals,<sup>1/</sup> over half of which are companies with annual sales under \$50 million. The members of SOCMA produce more than 5,000 distinct synthetic organic products. Most of these products are intermediates and finished chemicals for industrial use. They include dyes, pigments, flavor and perfume materials, surface active reagents, fire retardants, plasticizers, rubber processing chemicals, and medicinals. The products of the organic chemical industry are essential to many other industries, including agriculture, textile, paper, steel, automobiles, rubber and ink.

I appear before the Committee to stress the particular concerns which smaller chemical companies have with the proposed Superfund legislation. The Small Business Committee of SOCMA

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<sup>1/</sup> A list of SOCMA member companies is attached as an Appendix.

believes that legislation that is well structured for the entire chemical industry will also be good for smaller companies. However, we are concerned that the industry is too often thought of as composed of a few giant companies. Unless you carefully keep in mind the many smaller companies -- and the particular problems we face -- an otherwise good bill could be very bad indeed.

We feel that it is important to take care that small companies are not unintentionally and unfairly burdened by Superfund legislation. In general, small companies are critical to the American economy. The President, the Congress and our national political parties have recognized repeatedly the important role which small companies play in every industry.

In the chemical industry, small companies are important. More than seventy-five percent of the establishments in the industry employ less than fifty workers.<sup>1/</sup> Indeed, ninety-six percent of all chemical firms have sales of less than \$30 million per year.<sup>2/</sup> Small chemical companies, when put together, employ tens of thousands of workers and contribute billions of dollars to the GNP. Perhaps most importantly, small companies have been responsible for a very significant share of innovation in the industry -- both in terms of new products and production methods.

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<sup>1/</sup> "Impact of TSCA Proposed Premanufacturing Notification Requirements" prepared by A.D. Little, Inc., for EPA's Office of Planning and Evaluation (December 1978), at II-16.

<sup>2/</sup> "Analysis of Options for Definition of Small Business and Estimated Cost of the Initial Section 8(a) Reporting Requirements" prepared for EPA by A.D. Little, Inc., (November 1977) at 14.

The financing of the fund is complex. As proposed, money would be paid out of the fund to compensate injured parties and to pay for cleanup efforts. Revenue would come into the fund through the fee system and through federal subrogation of victim's claims -- where people are compensated by the fund the government would take over their claims. Thus, the liability elements become deeply involved in this Committee's consideration of the size, scope and uses of the fund.

In discussing the liability scheme, and related provisions, of S. 1490, I will make two major points. In particular, the proposal is unfair and unduly burdensome, and it is not necessary.

Before I get into the specifics of those problems, let me make a general point. Small companies are not reluctant to be responsible for any damage that we cause. If we make mistakes, we should bear the appropriate costs of those mistakes. What we find objectionable is being held responsible for mistakes which others have made. Many small companies -- ours is one -- try to succeed by doing our job with exceptional care. The environmental area is no exception to this approach. As I hope my specific points will make clear, the burdensome, unfair and unnecessary provisions now before the Committee make it very likely that we will have to bear the costs of future mistakes by other companies and by government decision makers as well as mistakes made by our whole society -- industry, government, technical, and public sectors alike -- in the past. We'll pay for our mistakes, but smaller companies cannot survive if we must bear the costs of other peoples' mistakes as well.

- (1) The liability provisions are unfair and unduly burdensome.

The bill imposes liability with the broadest possible sweep. Anyone involved in the disposal of a hazardous substance -- no matter how tenuous the relationship or how small the amount contributed -- can be liable under the bill's joint, several, and strict liability. The bill also alters causation requirements opening the door to rampant litigation.

The report of the Environment and Public Works Committee takes solace in various examples of other strict liability schemes.<sup>1/</sup> Of course, each example relates to a relatively narrow type of damage -- for example, damages attributable to Alaska pipeline oil. This bill applies strict liability to any release of any hazardous substance. The Price-Anderson Act may have imposed strict liability for some nuclear incidents, but it also recognized the difficulties of coping with the potential damages by establishing special insurance provisions and limiting liability to a level which critics have long argued is very low. The Price-Anderson Act is cited as precedent for S. 1480's strict liability, but I can find nothing in S. 1480 that offers small companies any federal insurance for the liability imposed or offers limits on the extent of the liability strictly imposed. The examples cited would be more persuasive if they were adhered to more thoroughly.

Of course, none of the precedents for strict liability cited in the report involves strict liability for actions taken

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<sup>1/</sup> S. Rep. 96-848, July 11, 1980, at 34-36.

years or decades ago. As I will explain later, there is good reason for this -- the cited policy rationales for strict liability simply do not apply when the regulated behavior is in the past.

No matter how much care a small company devotes to waste disposal in the future, or devoted in the past, and no matter how small its contribution was to a waste site, it can be faced with total liability for damages. We won't even have full protection of the long established rules of evidence.

Proponents will say that we can use the apportionment or contribution provisions. They are not much help. We cannot resist liability under those provisions. All a small company can do is wait until it is "held liable" and then try to qualify for apportionment. To qualify for apportionment, we have to distinguish our contribution from others; this is the same burden which has been called "cumbersome, time-consuming and expensive" when applied to injured parties. Moreover, the bill doesn't even define what level of contribution makes one a "significant factor" in a discharge. Although a small company may have contributed only a few barrels to a large site, we may be more likely than big contributors to be stuck with the cost. First of all, many small companies dispose of materials in identifiable barrels. Companies with larger disposal requirements often use tank cars; our barrels can be found and identified, but once the tank car is empty that is almost impossible. Thus, small companies take a big chance -- they may be the only easily identified contributor. Because barrels are often reused -- without removing company labels -- we could even be charged with liability for

other firms' waste. Of course, there is also the risk of contributing a small amount and being the only financially solvent party.

Even if identification and solvency problems don't nail the little companies, litigation strategy may finish us. Consider the choices of an injured party where a little company contributed, say, five percent of the waste at a site and an unidentified big company contributed 95 percent. If you were the lawyer for the injured person, would you search to identify the big company? Of course not. You'd sue the smaller company -- which lacks the big legal department ready to defend the case -- and let the small company worry about collecting from the other fellows (assuming they can meet the criteria of section 4(f)(1)). These various problems make small companies fear strict, joint, and several liability.

Because S. 1480 rushes into imposing strict, joint, and several liability, companies, and particularly small companies, may face grave problems. Senators Domenici, Bentsen and Baker put the problem aptly: <sup>1/</sup>

In general, the development and application of such concepts as strict liability, ultrahazardous activities, and joint and several liability to extensive third party damages take place over an extended time frame. During this period, asset risk assessment and insurance probabilities can be developed. Decisions can be made in an orderly manner. One result of S. 1480 is that it accelerates the development and application of these complex concepts. In doing so, it prevents the private sector decision-making process from being able to assess its liability risks.

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<sup>1/</sup> Additional views annexed to the Committee Report at 121-122.

Consequently, it would appear that private sector decisions will have to be made on the worst case that might result from passage of the bill. That case would be: (1) the defendant faces litigation brought by the Federal government; (2) he is one of a few or the single defendant in a case where the release was largely caused by another operator; (3) the more significant contributor is insolvent; (4) actions beyond his reasonable control caused the release, precluding his use of the defenses available under S. 1480 (Act of God and Act of war); (5) large third party damages are at issue; and (6) joint and several liability in S. 1480 expose the defendant to the possibility of paying for all of the damages.

Under this scenario, the elements of this bill will push the decision-maker in directions that will likely lead to adverse consequences for the national economy. Small companies may be forced to close because insurance will be unavailable or too costly. Middle-sized companies will not likely risk their assets for new ventures when faced with these liabilities at existing facilities. (Emphasis added.)

The liability provisions, as they now stand, almost guarantee that the innocent will be punished for the sins of the guilty.<sup>1/</sup> If S. 1480's liability measures are approved, small, environmentally careful, profitable firms -- innocents -- will confront grave financial risks which will be virtually impossible to insure. The bill, as now written, permits insolvent firms, careless firms whose waste cannot be traced to them, and big firms whose capability to defend themselves in court deters suits to expect small companies

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<sup>1/</sup> Perhaps this is intended by some proponents, see Committee Report at 121.

to bear disproportionate liability. Congress surely would not intend such a result.

The causation provisions of the bill open the door to huge medical and rehabilitation costs. Although the bill limits the use of the changes in the rules of evidence to recovery for medical and rehabilitation costs, its practical implications have not been fully analyzed. Although the Environment and Public Works Committee report mouths respect for the courts and their procedures, can we really expect that the jury hearing evidence, which Congress says it may consider only for medical costs, not to apply the evidence elsewhere in the case? While I'm not a lawyer, common sense tells me that you can't show the jury a study for one purpose and hope it will be ignored for other purposes.

Thus, although the changes in the rules of evidence may appear to be limited to certain costs, they cannot reasonably be expected to work that way when used. Just as this tampering with rules may cause results far beyond Congressional intent, other areas of civil procedure may be gravely disrupted. Senator Simpson has noted that "such areas of civil procedure as res judicata, collateral estoppel, conflict of laws, and bar and merger have been wholly overlooked in the [Environment and Public Works] committee's efforts to fashion this new federal remedy."<sup>1/</sup> Common sense suggests that all these issues of civil procedure would confront small chemical companies with an incredible legal mess.

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<sup>1/</sup> Minority views annexed to the Committee Report at 117. (Emphasis added.)

Just as the report accompanying the bill cites examples of other statutes in discussing the strict liability provisions, so does it cite "precedents" in addressing causation. Of course, no example is offered that includes (1) strict liability, (2) joint and several liability, (3) relaxed proof requirements, and (4) was applicable to past as well as future conduct. This is the multiple threat which chemical companies fear and to which small companies are particularly vulnerable.

(2) The most onerous provisions are not necessary.

Fortunately, many of the most troublesome provisions of the bill as it is drafted are not necessary or justified by the rationales offered by advocates.

There is great concern about the hazards of abandoned waste sites. SOCMA joins Congress and the public-at-large in this concern. But, we are very troubled that these concerns are being used by people who wish to go beyond them. Neither strict liability, joint and several liability, nor changes in the rules of evidence are needed to provide for the containment and cleanup of abandoned sites. The measures are being linked together only so that advocates of these extra provisions can take advantage of the concern about releases from historic disposal sites.

Moreover, an important distinction between past conduct and future conduct is missed in analyses such as the Environment and Public Works Committee report on S. 1480. The rationales for strict liability and the industry fee may be valid for the future, but they do not have any application to past conduct. In a number

of ways, the expressed goals of the bill do not conform to its language as drafted.

For example, the report accompanying the bill states that the "liability scheme essentially codifies the common law liability standard applicable in cases involving hazardous substances and materials."<sup>1/</sup> Let me assure the Committee that we would not be here with grave concerns if the bill did no more than "codify" the existing common law. The same report, only a few pages before describing the bill as mere codification, claims that<sup>2/</sup>

without the bill's liability provisions, victims of hazardous chemicals face a difficult burden in seeking redress through the courts.

\* \* \*

The legal mechanisms in the States studied are generally inadequate for redressing toxic substances-related harms, and traditional tort law presents substantial barriers to recovery.

\* \* \*

seeking compensation for pollution-related injuries is usually cumbersome, time-consuming and expensive.

The S. 1480 liability scheme can hardly be characterized -- in any fair sense -- as codification of common law.

More important, however, the policy rationales offered for strict liability have no application to strict liability imposed for past conduct. The report states that the bill "provides

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<sup>1/</sup> p. 31.

<sup>2/</sup> pp. 13-14.

incentives to all involved with hazardous substances to assure that such substances are handled with the utmost of care."<sup>1/</sup> It explains that the "liability standard is intended to induce potentially liable persons to voluntarily mitigate damages...."<sup>2/</sup> In enumerating "policy considerations," the report explains that strict liability is intended to encourage "that person -- whether a generator, transporter or disposer of hazardous substances -- to eliminate as many risks as possible."<sup>3/</sup> Explaining the economic underpinnings of its scheme, it states:<sup>4/</sup>

Strict liability is, in effect, a method of allocating resources through choice in the market place. The most desirable system of loss distribution is one in which the prices of goods accurately reflect their full costs to society.

These rationales have no application to past conduct.

Strict liability cannot retroactively change the conduct of past decades -- incentives to control risks may influence future practices but can never change behavior 5, 10 or 25 years in the past. The allocation of resources of the past cannot be changed. In fact, strict liability for past disposal conduct violates the report's principle that the best system is one in which goods most accurately reflect their full social costs. Under the proposed language, today's goods will bear an undue burden -- the costs

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<sup>1/</sup> p. 31.

<sup>2/</sup> p. 31.

<sup>3/</sup> p. 33.

<sup>4/</sup> p. 34.

of their proper disposal (which they should bear according to the report's principle) and also the costs of disposal associated with past goods. They end up bearing more than their true social costs. Imposing strict liability on future disposal would create all the desired incentives; imposing strict liability on the past violates the very principle offered as its rationale.

Similarly, imposing a fee on today's feedstocks to pay for costs of past practices violates the same principle. If the fund is used to pay for the costs of past as well as present disposal practices, it will "internalize" more than the true social costs of today's goods. By their advocates own criterion, the fee and liability schemes are unfair and not necessary.

Thus, if one wants to address the problem of historical practices, funds should be appropriated for that purpose. Perhaps, strict liability has a justification for future waste disposal, but certainly not for the past. Fortunately, the propriety of retroactivity was left "unresolved" by the Environment and Public Works Committee.<sup>1/</sup> It can now be seen clearly that the new liability standard should not and need not be imposed retroactively.

If the Congress wishes to consider changing the rules of evidence, it need not act urgently. What may be urgent is action to contain and cleanup waste sites. Changes in proof requirements have no relationship to that effort. As has been suggested,<sup>2/</sup> a Commission should study the various proposed changes

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1/ Senators Domenici, Bentsen and Baker at 120.

2/ Id.

in proof requirements before Congress acts. Guidelines or a model code for state adoption would permit changes without risking stifling development of more advanced common law at the state level.<sup>1/</sup> Thorough study must be made before tampering with the delicate balance struck by the burden of going forward, the burden of proof, and various presumptions.

In closing, there is a choice. Congress can hurry through considering the many implications of this incredibly broad bill -- risking grave injury to the industry, and small companies in particular, and gambling on changes in legal rules that have not been given adequate consideration. In the alternative, Congress can choose a less sweeping measure that speaks to the real concerns of its constituents. The public asks for protection from waste sites. Small chemical companies ask for protection from overarching liability provisions, written without small firms in mind, that would place them in financial peril. Both concerns can be satisfied if Congress opts for a sound, moderate course. I am confident that choices are available which offer the opportunity to draft wise legislation.

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<sup>1/</sup> Senator Simpson, at 117.

SOCMA MEMBERSHIP LISTACTIVE MEMBERS

ACETO INDUSTRIAL CHEMICAL CORP.  
 ALLIED CHEMICAL CORP.  
 AMERICAN COLOR & CHEMICAL CORP.  
 AMERICAN CYANAMID CO.  
 AMERICAN HOECHST CORP.  
 ARAPAHOE CHEMICALS, INC.  
 BASF WYANDOTTE CORP.  
 BERNCOLORS-POUGHKEEPSIE, INC.  
 BIDDLE SAWYER CORP.  
 BOFORS LAKEWAY, INC.  
 BORDEN CHEMICAL CO.  
 BUFFALO COLOR CORP.  
 CAREY INDUSTRIES, INC.  
 CARROLL PRODUCTS, INC.  
 CELANESE CORP.  
 CHATTEM, INC.  
 CHEMISPHERE CORP.  
 CHEMTAN CO., INC..  
 CIBA-GEIGY CORP.  
 CP CHEMICALS, INC.  
 CROMPTON & KNOWLES CORP.  
 DAY-GLO COLOR CORP.  
 DEGUSSA CORP.  
 DOW CHEMICAL U.S.A.  
 DRAKE CHEMICALS, INC.  
 DREW CHEMICAL CORP.  
 DU PONT DE NEMOURS & CO., E.I  
 DYE SPECIALTIES, INC.  
 EAST SHORE CHEMICAL CO., INC.  
 EM INDUSTRIES, INC.  
 EMERY INDUSTRIES, INC.  
 EVANS CHEMETICS  
 FABRICOLOR, INC.  
 FAIRMOUNT CHEMICAL CO., INC.  
 FIRST CHEMICAL CORP.  
 FIRST STATE CHEMICAL CO.  
 FMC CORP.  
 GAF CORP.  
 GANE'S CHEMICAL WORKS, INC.  
 HEXCEL -- SPECIALTY CHEMICALS  
 HILTON-DAVIS CHEMICAL CO., THE  
 HOOKER CHEMICALS & PLASTICS CORP.  
 HUMPHREY CHEMICAL CO., THE  
 ICI AMERICAS, INC.  
 INMONT CORP.  
 INTERNATIONAL MINERALS & CHEMICAL CORP.  
 KOHNSTAMM, H. & CO., INC.  
 KOPPERS CO., INC.

LOCTITE CORP.  
 LONZA, INC.  
 M & T CHEMICALS, INC.  
 MALLINCKRODT, INC.  
 MARTIN MARIETTA CHEMICALS  
 MILLIKEN CHEMICAL  
 MINEREC CORP.  
 MOBAY CHEMICAL CORP.  
 MONSANTO CO.  
 MOONEY CHEMICALS, INC.  
 MORTON CHEMICAL CO.  
 MUSKEGON CHEMICAL CO., INC.  
 NICKSTADT-MOELLER, INC.  
 OLIN CORP.  
 OXIRANE INTERNATIONAL  
 PASSAIC COLOR & CHEMICAL CORP.  
 PENNWALT CORP.  
 PFISTER CHEMICAL, INC.  
 PHILLIPS CHEMICAL CO.  
 POLAROID CORP.  
 POLYMER APPLICATIONS, INC.  
 PPG INDUSTRIES  
 PROCTOR CHEMICAL CO., INC.  
 REILLY TAR & CHEMICAL CORP.  
 RSA CORP.  
 RHONE-POULENC, INC.  
 SALSBUARY LABORATORIES  
 SANDOZ COLORS & CHEMICALS  
 SAYTECH, INC.  
 SCHOLLER BROTHERS, INC.  
 SHERWIN-WILLIAMS CHEMICALS  
 SOLUOL CHEMICAL CO., INC.  
 SOUTHLAND FINE CHEMICALS  
 STANDARD CHLORINE CHEMICAL CO., INC.  
 STAUFFER CHEMICAL CO.  
 SUN CHEMICAL CORP.  
 SYNALLOY CORP.  
 THIOKOL/SPECIALTY CHEMICALS DIV.  
 TOMS RIVER CHEMICAL CORP.  
 UNION CARBIDE CORP.  
 UPJOHN CO., THE  
 VIRGINIA CHEMICALS, INC.  
 WHITE CHEMICAL CORP.  
 WITCO CHEMICAL CORP.

ASSOCIATE MEMBERS

ATLANTA CHEMICAL CO., INC.  
 BRETON ASSOCIATES, INC.  
 DAINICHISEIKA COLOR & CHEMICALS, INC.  
 DELPHI MARKETING SERVICES, INC.  
 NEAL M. DRAPER & ASSOCIATES  
 ENVIRONMENTAL RESEARCH & TECHNOLOGY, INC.  
 FANWOOD CHEMICAL, INC.  
 R.W. GREEFF & CO., INC.  
 INTERNATIONAL DYESTUFFS CORP.  
 KENNEDY & KLIM, INC.  
 CHARLES H. KLINE & CO., INC.  
 KOCH CHEMICAL CO.  
 LUMMUS CO., THE  
 MERICHEM CO.  
 HOWARD L. MINCKLER & ASSOCIATES  
 MONKMAN-RUMSEY  
 MONTEDISON USA, INC.  
 SUBURBAN CHEMICAL CO.  
 WILSON DYE & CHEMICAL DISTRIBUTORS, INC.

Senator MOYNIHAN. We thank you, and we will be going to questions after we have heard from our last witness, Mr. Christian Hansen, on behalf of the New Jersey chemical industry.

Senator Bradley, would you welcome Mr. Hansen.

Senator BRADLEY. Thank you, Mr. Chairman. I am pleased to welcome Mr. Hansen. We have met in New Jersey. The chemical industry in New Jersey is one of the most productive in the country. It is no longer No. 1 in quantity, it is about No. 3 at this stage; we are certainly, along with Delaware, the oldest.

I think, the New Jersey chemical industry has been extremely cooperative with the State authorities in coming to recognize and trying to rectify the very serious problem that we are dealing with today.

I am glad to have you here.

**STATEMENT OF CHRISTIAN A. HANSEN, PRESIDENT, LINDEN CHEMICALS AND PLASTICS, INC., ON BEHALF OF THE NEW JERSEY CHEMICAL INDUSTRY**

Mr. HANSEN. As the Senator said, I am here today in my role as chairman of the Chemical Industry Council of New Jersey, and I would like to thank you for allowing us time to express our concerns in regard to S. 1480.

The 65-member companies of our council are opposed to S. 1480 as it is currently written.

Perhaps because New Jersey, as Senator Bradley has pointed out, is one of the Nation's oldest chemical producing States, and one of the largest chemical producing States, we have more of a hazardous waste disposal problem and orphan dumpsite problems than most States. We also feel that this fact gives us a good idea about how to begin to solve the problem.

I would like to emphasize that in our view the major problems are orphan dumpsite and sitings for future hazardous waste disposal operations.

I would like to set the record straight, about the chemical industry and hazardous waste disposal. Many people erroneously believe that the chemical industry is responsible for the vast majority of hazardous wastes. That simply is not true. The EPA has indicated that there are 16 industry groups contributing to the hazardous

waste disposal problem. Tables I and II in my testimony that you have demonstrate that 15 other industry groups contribute more to the problem than does the entire chemical industry.

In New Jersey, we estimate that chemical companies represent only about 15 percent of the 10,000 hazardous waste generators, and perhaps one third of the volume.

So in a very basic sense, we feel that S. 1480 by taxing chemical producers and not hazardous waste generators and disposers overlooks those responsible for the hazardous waste problem. Any tax plan on industry should be based on the amount of hazardous waste generated, and reported under a hazardous waste manifest system such as we have in New Jersey with the full force of law.

Our specific disagreement with the bill fall into four general categories.

First, the CIC of New Jersey feels that the scope of the bill is much too broad. As introduced, the bill's release concept given a depth to the bill which would seem to have no limit. Table III attached to my written statement sets forth several specific requirements under S. 1480 that are already controlled by existing laws and regulations.

Senator Bradley, this is in response to your request for information the other day.

S. 1480 would confuse the existing situation. The problem we need to address is that of abandoned dumpsites. All of the recent examples of hazardous waste disposal problems have dealt with these orphaned sites and facilities. S. 1480 will be more effective, and will do more immediate good if it addressed itself simply to the issue of orphan sites, and promptly.

Second, S. 1480 establishes joint, several and strict liability for anyone contributing to the release of hazardous substances from waste dumpsites or chemical spills. This portion of the bill does not make any attempt at apportioning liability. If a company was responsible for only 1 percent of a material in a hazardous waste dumpsite, and no other contributor could be identified, that known company would be liable for any and all damage suits. We find this very unfair.

Third, we find the funding for S. 1480 excessive. The total of \$4.1 billion, and industry's of \$3.5 billion is far in excess of what is reasonable or even needed. The Chemical Manufacturers Association's State Waste Management Survey indicates that the EPA has greatly exaggerated the projected cost of cleaning up problem sites. Instead of the \$3 to \$6 million per site quoted by EPA, the CMA data estimates an average cost of only \$1 million, or a total cost of less than \$400 million for the country.

Fourth, our industry is worried about S. 1480's impact on New Jersey's unique position. Our State now taxes the chemical industry \$7 million per year to deal with the abandoned dumpsites and chemical spills. This not only places the State's chemical industry at a competitive disadvantage with other regions, but if S. 1480 is passed it will force our chemical companies to pay twice for the same purpose.

We feel that since New Jersey has 10 percent of the Nation's chemical sales, and will be taxed accordingly, there should be a

guarantee in the bill that an equitable share of funds be returned to New Jersey to cleanup abandoned sites.

With these objections to S. 1480 in mind, let me assure the Senators on this committee that our industry is not stonewalling the concept in the legislation. We vigorously support legislation which will equitably and fairly deal with the hazardous waste abandoned dumpsite problem.

As responsible industry leaders, we recognize our role and will assume our fair share of responsibility for cleaning abandoned dumpsites in New Jersey.

As we informed Senator Bradley, we support the scope and liability provisions of H.R. 7020 and the financing provision as amended by the bill's sponsor, Congressman Florio of New Jersey. We believe that it is fair legislation and gets on with the immediate problem.

A detailed statement is attached and I thank you for the opportunity to delivery this summary of our testimony. I certainly would welcome any questions.

[The prepared statement of Mr. Hansen follows:]

SUMMARY  
OF  
TESTIMONY  
PRESENTED TO THE  
U. S. SENATE FINANCE COMMITTEE  
ON  
S-1480

PRESENTED BY:  
CHRISTIAN A. HANSEN  
CHAIRMAN  
THE CHEMICAL INDUSTRY COUNCIL OF NEW JERSEY

Mr. Chairman, members of the Committee, I am Chris Hansen, President of Linden Chemicals and Plastics in Edison, New Jersey. I am here today in my role as Chairman of The Chemical Industry Council of New Jersey and I'd like to thank you for allowing me to express our concerns in regard to S-1480.

For reasons which I will soon delineate, the 65 member companies of our Council are opposed to S-1480 as it is currently written.

Perhaps because New Jersey is the nation's second leading chemical producer (next to Texas) we have more of a hazardous waste disposal problem than most states. We also feel that this fact gives us a good idea about how to begin to solve the problems.

First, I'd like to set the record straight about the chemical industry and hazardous waste disposal. Many people erroneously believe that the chemical industry is responsible for the vast majority of hazardous wastes. The E.P.A. has indicated that there are 16 industry groups contributing to the hazardous waste disposal problem. Combined, the 15 other industry groups contribute more to the problem than does the entire chemical industry. (See tables I and II in my written statement). In New Jersey we estimate that chemical companies represent only 15 percent of the 10,000 hazardous waste generators and perhaps 1/3 of the volume.

So in a very basic sense, we feel S-1480, by taxing chemical producers and not hazardous waste disposers, overlooks those directly responsible for the hazardous waste problem. Any tax plan on industry should be based on the amount of hazardous waste generated, and reported under a hazardous waste manifest system such as we have in New Jersey.

Our specific disagreements with the bill fall into four general categories.

First, the chemical industry feels that the scope of the bill is much too broad. As introduced, the bill's "release concept" gave a depth to the bill which would seem to have no limit. Table III attached to my written statement sets forth several specific requirements under S-1480 that are already controlled by existing laws and regulations. The problem we need to address is that of abandoned dump sites. All of the recent examples of hazardous waste disposal problems have dealt with these orphaned sites and facilities. S-1480 would do more immediate good if it addressed itself only to this issue.

Second, S-1480 establishes "joint several and strict," liability for anyone contributing to the release of hazardous substances from waste dump sites of chemical spills. Neither does this portion of the bill make any attempt at apportioning liability. If a company was responsible for only 1 percent of the material in a hazardous waste dump, and no other contributor could be identified, that known company would be liable for any and all damage suits. We find this very unfair.

Third, we feel the funding for S-1480 is excessive. The total of \$4.1 billion and industries' share of \$3.5 billion is far in excess of what is reasonable or even needed. The Chemical Manufacturers Association's (CMA) State Waste Disposal Management Survey indicates that the EPA has greatly exaggerated the projected costs of cleaning-up problem sites. Instead of the \$3 to \$6 million per site quoted by EPA, the CMA data estimates an average cost of only \$1 million.

Fourth, our industry is worried about S-1480's impact on New Jersey's unique position. Our state now taxes the chemical industry \$7 million per year to deal with abandoned chemical sites and chemical spills. This not only places our state's chemical industry at a competitive disadvantage to other regions, but if S-1480 is passed it will force our chemical companies to pay twice for the same purpose.

We feel that since New Jersey has 10 percent of the nation's chemical sales, and will be taxed accordingly, there should be a guarantee in the bill that an equitable share of funds be returned to New Jersey to clean-up abandoned sites.

With these objections to S-1480 in mind, let me assure the Senators on this Committee that our industry is not "stonewalling" the concept in the legislation. We vigorously support legislation which will equitably and fairly deal with the hazardous waste disposal problem. As responsible industry leaders, we recognize our role and will assume our fair share of the responsibility for cleaning-up orphaned dump sites.

As we informed Senator Bradley, we support the scope and liability provisions in HR7020 and the financing provision as amended by the bill's sponsor, Congressman Florio of New Jersey.

A detailed statement is attached and I thank you for the opportunity to deliver this Summary of our testimony and would welcome any questions.

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Outline Of The Chemical Industry Council's PositionOn Hazardous Waste Management**I. Introduction**

The Chemical Industry Council of New Jersey (CIC) supports a Federal program to solve the "orphan dump site" problem. All industries responsible for off-site disposal of hazardous waste and general revenues should finance the costs.

The N.J. CIC has been actively involved with N.J. DEP and the Governor's Hazardous Waste Advisory Commission in solving the off-site hazardous waste disposal problem.

We desire to continue working with concerned legislators and government officials to resolve the hazardous waste disposal problems through plans which will not cripple industry.

We support federal legislation to relieve New Jersey's industries of an unfair burden in the cost of cleaning up hazardous waste dumping sites.

**II. Status of the Chemical Industry in New Jersey's Economy**

- o 130,000 employees statewide;
- o 16% of all New Jersey's manufacturing employees;
- o Production in excess of \$10 billion annually;
- o 10% of nation's chemical and chemical product output;
- o Now second in production to Texas after being the nation's leader for many years;
- o Over 1,100 production and research plants and facilities statewide;
- o Over \$3 billion in capital investment since 1950;
- o However, \$10-15 billion would have been invested if New Jersey had grown at the national rate;
- o New Jersey chemical industry is functioning under a competitive disadvantage:
  - Higher energy costs than the South,
  - More stringent environmental regulations,

(Over)

- Higher taxes than the South,
- Labor and construction costs are still relatively high.

### III. Hazardous Waste Problem in New Jersey

- A. Orphan dump sites and illegal dumping are the major hazardous waste disposal problems in New Jersey.
- B. EPA has indicated that there are 16 industry groups contributing to the hazardous waste disposal problem. Combined, the 15 other industry groups contribute more to the problem than does the entire chemical industry (see attachments).
- C. N.J. DEP estimates there are potentially 10,000 hazardous waste generators in the state. The CIC estimates that the chemical industry represents less than 15% of those generators and perhaps one-third of the volume.
- D. The Chemical Control Corp. at Elizabeth was not a part of the chemical industry and would have paid no taxes under S1480 or any other proposed legislation.
- E. The Eckert Congressional survey determined that 94% of hazardous waste disposed of by 53 large chemical companies was disposed of "on-site."
- F. The final disposition of 99.4% of all waste is known to the 53 large chemical companies involved.
- G. Poor operation of properly licensed disposal facilities has been directly responsible for New Jersey's serious disposal problems.
- H. N.J. DEP estimates that there are 720,000 tons of hazardous waste generated annually in state, and 95,000 tons generated out of state which comes into the state for disposal. Of these 815,000 total tons:
  - 1) 320,000 tons are disposed of by generators on-site in state,
  - 2) 382,000 tons are disposed of off-site in state,
  - 3) 113,000 tons are disposed of off-site out of state.

### IV. CIC Efforts on Hazardous Waste Problem

- o The industry has provided assistance during the last few years to help solve problems arising from hazardous waste disposal sites:
  - Provided lab teams,

- In Elizabeth, CIC organized programs which resulted in voluntary removal of 10,000 drums by generators before the fire at no cost to the state,
- gave emergency support at the Elizabeth Chemical Control site clean-up.
- o Helped DEP develop a hazardous substance survey. Strongly supportive of the needed improvement in the hazardous waste Manifest System;
- o Worked as members of, and supported Governor Byrne's Hazardous Waste Advisory Commission;
- o Has supported an equitable system of taxation based on hazardous waste generation to help finance the needed solutions.

V. New Jersey's Hazardous Waste Problems And Programs As They Relate To Federal Hazardous Waste Clean-Up Legislation

- A. N.J. concern is containment/clean-up of abandoned sites;
- Need is for funds.
- B. N.J. has taken lead and has passed legislation taxing chemical and petroleum industry for funds to address abandoned sites and spills;
- 1) Current legislation taxes chemical industry \$7 M/yr. with pressure to raise to \$10 M;
    - rate can be doubled if needed.
  - 2) Tax is on fair market value of hazardous chemicals;
    - has no relationship to hazardous waste generation,
    - tax burden falls mostly on N.J. chemical industry rather than broad industrial group which generated waste,
    - Out of state generators who have significantly contributed to the abandoned site problem are exempted from taxation.
  - 3) CIC continues to work with legislature and administration to arrive at more equitable and workable legislation;
    - supporting funding of a strike force to pursue illegal dumpers.
- C. While obtaining the benefit of funding clean-up of abandoned sites, the substantial tax burden places N.J. chemical industry at a further competitive disadvantage to other regions - principally the Gulf.

- D. N.J. CIC supports federal legislation funding clean-up of abandoned sites which would eliminate or reduce the need for state taxation.

## VI. Financing

### A. Impact of S1480 on New Jersey's Unique Position

- 1) Will it be another legislative layer on top of existing N.J. regulations? If so, it continues N.J. chemical industry at an economic disadvantage.
- 2) Will it provide that N.J. gets its fair share or at least a return of what it pays into the fund? Otherwise, N.J. industry in addition to paying its way on the state level will be in the position of subsidizing clean-up in other states.

### B. Excessive Funding Levels in S1480

The bill creates a \$4.1 billion set up over a six-year period with 87.5% of the money coming from fees on industry and 12.5% from general appropriations. Thus industry will pay ca. \$3.6 billion over a six-year period or approximately \$600 million per year. Two-thirds of the amount credited to the fund in any fiscal year is to be used only for removal costs and "certain governmental costs." The other one-third may be used for third party claims (see Legal, below). This funding is far in excess of the demonstrated need. It could result in increased bureaucracy and would be inflationary. There is also some question that the approximately \$400 million per year available for removal costs and clean-up could be efficiently deployed with the available resources. This fund is in excess of what EPA or industry estimates would be required or could be spent constructively.

## VII. Legal Aspects

### A. Liability

S1480 would establish "joint, several and strict" liability for anyone contributing to the release of hazardous substances from waste dump sites of chemical spills. Thus if no other causer or contributor could be identified or is financially capable, any single contributor could be held liable for the entire clean-up cost and for nearly every expense even remotely connected with a hazardous release including:

- all claimed out-of-pocket medical expenses
- natural resource and property damage
- loss of income or profits (such as rental income or commodities lost such as produce)
- lost livestock, fish or agricultural products
- capital loss (buildings, vessels or machinery)
- payment of expert witnesses
- health studies
- diagnostic examinations

The only defenses are an Act of God or an Act of War. The bill does not require apportionment of liability. Thus any single person (company) which caused only a portion of the damages could be held responsible for all costs.

In addition to this punitive approach to liability, S1480 establishes legal procedures which expose industry to incalculable financial liability. Because of its liability features, S1480 will lead to considerable legal entanglements and lawsuits.

#### VIII. Other Major Problem Areas With S1480

##### A. Scope

Very broad and addresses all "releases" or "threats of releases" from any facility of any substance "which may present...danger to the public." Rather than creating a mechanism to respond to old and abandoned dump sites, this sweeping "release" concept would conflict with, confuse and duplicate much of the Federal air, water and waste legislation and regulations now existing.

##### B. Broad Definition of Hazardous Substance

Hazardous substance is very broadly defined and extends coverage far beyond what is needed or desirable. Virtually any substance could be included.

##### C. Disincentive for U.S. Investment

S1480 will discourage U.S. chemical industry from investing in new domestic production capacity. It could lead to escalation of off-shore investment to avoid the onerous liability provisions thereby affecting employment and balance of trade.

##### D. Inflationary Impact

The \$4.1 billion fund is bound to have an excessive inflationary impact on the economy.

##### E. Burden of Proof in Personal Injury Claims

S1480 completely revises existing law on proof of personal injury claims. The burden of proof is placed on the defendant to show that the "releases" did not cause injuries or illnesses which the plaintiff alleges he/she suffered. This is blatantly unfair.

#### IX. Summary and Conclusions

- A. New Jersey chemical industry is extremely important to the economy of the State.

- B. Because of many factors, New Jersey is often a non-competitive state in which to operate compared to the Gulf states or overseas operations. We need help!
- C. Federal legislation should provide New Jersey an equitable share of the funds to clean up our state's sites.
- D. We believe that apportionment of liability is equitable and should avoid legal entanglements.
- E. We prefer simple legislation dealing with just orphan dump sites that will proceed through the legislative and legal processes smoothly so that we can begin the enormous task of orphan dump site clean-up quickly.

\* \* \*

ATTACHEMENT

Table 1

From 1977 EPA Study:

	<u>Million TPY</u>
Organic Chemicals	11.7
Primary Metals	9.0
Electroplating	4.1
Inorganic Chemicals	4.0
Textiles	1.9
Petroleum Refining	1.8
Rubber & Plastics	1.0
Mis. (paints, pharmaceuticals, etc.)	<u>1.0</u>
	34.5

ATTACHMENT

Table 2

Data From 1978 EPA Study "Cost of Complying with Hazardous Waste Regulations"  
(Uses proposed RCRA definition of "Hazardous Waste")

<u>Industries</u>	<u>Million Metric Tons</u>
Electronic Components Mfg.	0.07
Electroplating & Metal Finishing	0.64
Inorganic Chemicals	3.0
Leather Tanning & Finishing	0.17
Metal Smelting & Refining	13.9
Organic Chemicals	10.9
Paint & Allied Products	0.1
Pesticides	0.7
Petroleum Refining	1.5
Petroleum Re-refining	0.07
Pharmaceuticals	0.07
Rubber Products	0.05
Specialty Machinery Mfg.	0.07
Storage & Primary Batteries	0.15
Textiles	1.7
Plastics	<u>0.9</u>
	34.0

TABLE 3

EXAMPLES OF DUPLICATIONS OF EXISTING LAWS BY REQUIREMENTS IN S-1480

<u>MANDATED BY S-1480</u>	<u>APPLICABLE STATUTE</u>
1. Spills or discharges of hazardous chemicals from on-shore facilities or vessels, trucks, or rail onto or into navigable waterways. This includes swamps, creeks or mud ponds or land from which hazardous materials may contaminate subsurface waters.	1. Section 311 of Clean Water Act 40CFR Parts 116-119. At 117.23 "The Administrator may act to mitigate the damage to the public health or welfare caused by a discharge and the cost shall be considered a cost incurred under Section 311(c). Where a discharge is excluded from this regulation by 117.12(b)(3) the owner, operator, or person in charge shall be liable for any costs incurred in the removal - in an action brought under Section 309(b) of the Act."  1. (a) Public Law 93-633, Title 1 - Hazardous Materials Transportation Act. "to improve the regulatory and enforcement authority to adequately protect against the risks to life and property inherent in the transportation of hazardous materials." Section 110(a) provides for a civil penalty of \$10,000/day for each day of violation of any regulations under this Act.
2. Discard or leak or spill of hazardous materials onto public drinking water systems or onto land or groundwater which may lead to drinking water systems.	2. PL 93-523 Safe Drinking Water Act. Title XIV Part D Emergency Powers Sec. 1431 (a) "the Administrator -- may take such actions as he may deem necessary to protect the health of such persons" and Sec. 1431 (a) (2) "may commence a civil action for appropriate relief" Sec. 1449 (b) "any person may commence a civil action on his own behalf against the U. S. Gov. or any person (to the extent permitted by the 11th Amendment) who is alleged to be in violation of any requirement prescribed under this title" Sec. 1431 (b) "Any person who fails to comply with Adm. Order under (a) (1) be fined up to \$5000 for each day violation occurs."

(Over)

TABLE 3 (CONTINUED)

MANDATED BY S-1480	APPLICABLE STATUTE
2.(a) As above but from hazardous wastes which are being stored or handled or treated.	2.(a) PL 94-580 Resource Conservation and Recovery Act of 1976 Subtitle G Sec. 7003 "any hazardous waste which is presenting an imminent and substantial endangerment to health or the environment the Administrator may bring suit to stop such handling of wastes or to take other action as may be necessary" Sec. 3008 (2) "any person in violation of any requirement of this subtitle, the Administrator shall give notice and after 30 days may issue a compliance order or may commence civil action. If violator fails to take corrective action, he shall be liable for a civil penalty of up to \$25,000 for each day of non-compliance."
2.(b) Transportation of hazardous wastes to a non-permitted facility i.e., under Sec. 3005 or discharges a hazardous waste without permit.	2.(b) RCRA Sec. 3008 (d) "Any person etc." upon conviction can be fined up to \$25,000 for each day of violation and imprisonment not to exceed one year. \$50,000 for each day on a 2nd offense."
3. Notification, containment or clean-up of any chemical substance or mixtures of chemical substances <u>anywhere</u> which presents a substantial risk to health or the environment.	3. PL 94-469 Toxic Substances Control Act. Sec. 8(e) Administrator must be informed Sec. (7)(a) Imminent Hazards "may commence civil action for both seizure and relief" and Sec. (7) (f) "including disposal of the chemical substance or mixture or any combination of such activities which is likely to result in such injury to health or the environment."
4. Containment, clean-up, or operation of unclosed hazardous wastes storage or disposal sites.	4. PL 94-580 RCRA Sec. 3010 (a) "Any person owning or operating a storage or disposal site for hazardous waste, as defined under Sec. 3001, must notify the Administrator (or with states having authorized hazardous waste permit programs under Sec. 3006)" no later than 90 days after promulgation of regulations under Sec. 3001 Sec. 3010 (b) "permits for such activity shall take effect 6 months after promulgation of regulations." Regulations under 40CFR Part 265. Ground water monitoring. Closure and post-closure."

Senator MOYNIHAN. We thank you, sir. We particularly thank you for your tables I and II. Those provide useful information that this committee needs.

Senator Roth.

Senator ROTH. Mr. Chairman, I would like to ask the panel two or three series of questions.

As I have listened to the testimony of the administration this morning, and now the panel of industry representatives, it does seem to me that there is at least some area of consensus.

First of all, I would say to the industry, I think there is a consensus on the committee that we want to have some kind of legislation adopted this year before we recess, or adjourn as the case may be.

As I listened to the testimony, it seems to me that there is general agreement that there needs to be some kind of Superfund to cover the problems of hazardous disposal sites. Does anyone disagree with that?

There is disagreement, perhaps, as to the amount, and how you secure those funds, but there certainly is agreement that we should create such a fund, and there seems to be agreement, at least on the congressional and governmental side, that the Fund should be at least somewhere between \$1.4 and \$1.6 billion, as I understand the testimony.

Senator BRADLEY. Is that for 4 years, Senator Roth?

Senator ROTH. That is right. I recognize that the other was for a longer period.

Where the broad disagreement comes, and the most controversial issue, is the point raised by Senator Bentsen and Senator Dole. That is, for lack of a better term, the creation of a new Federal tort liability. Is that the most controversial aspect of the Senate bill?

What is the reaction of the panel to that?

Mr. FERNANDEZ. I would react and say that there are two things that are particularly controversial. The one you have indicated, and the other in the scope of this legislation, which is best defined by the definition of release of hazardous substances into the environment, because what that does, in many cases, it supersedes the existing legislation such as the Clean Air Act, the Clean Water Act, RCRA, all of which are designed to deal with problems of that nature.

Senator ROTH. With that modification, is there any disagreement with my statement.

Mr. HANSEN. Senator, we have concern that by getting into areas beyond the abandoned and orphan dumpsites, we will really be slowing down the bill. I would add that as a concern of the New Jersey group.

Senator ROTH. Again, if I understand the reason that S. 1480 goes up to its \$4.6 billion—being for a longer period of time is part of the answer—it is also to cover this, shall we say, third party liability that individuals can go directly to Government for their claims.

Senator BRADLEY. It creates a Federal claim.

Senator ROTH. Roughly you have in that figure a \$2 to \$3 billion additional amount to cover those potential individual claims.

Senator BRADLEY. No, \$1.4 billion.

Senator ROTH. Would that figure, in the judgment of industry, be adequate to cover the new liability provided under S. 1480? Have any of you taken a look at that aspect of the legislation?

Mr. FERNANDEZ. I am not sure that I am clear what your question is.

Senator ROTH. S. 1480 creates a new type of liability, the Federal tort liability if you want to call it that. Has any effort been made on the part of industry to study what that potential exposure is, or is it, as perhaps Senator Bentsen pointed out, very difficult to guesstimate?

Mr. FERNANDEZ. I think that that is correct. I think Senator Bentsen was exactly right when he indicated that it is very difficult to estimate what the liability is going to be when you take into consideration the broad definition of hazard, the broad definition of release into the environment, which is encompassed in the Senate bill. I know of no way that one could make that judgment.

Senator ROTH. So in your judgment, we are not in a position to say whether or not the Fund we are establishing is adequate for that purpose.

Mr. FERNANDEZ. If it is going to continue to have in it the provisions of strict, joint, and several liability, the liability that could be imposed on the individual companies is really basically infinite. So I don't think that one can reasonably define it.

Senator ROTH. In your testimony on behalf of the Chemical Manufacturers Association, you say that the size of the S. 1480 Fund is likely to have a negative effect on the domestic chemical industry and the Nation's economy.

Now there has been some testimony by the administration to the contrary. I think you heard me read earlier the section saying that the economic impact is minimal. Under the administration's 4-year \$1.625 billion fund, the average price increases for final petrochemical products would be less than 0.6 percent, and projected price increases for inorganic chemicals and metals would average less 2 percent.

We are talking, admittedly, in S. 1480 of a larger figure. But I wonder if you could be more precise as to why you make the conclusion that this could have a negative effect on the domestic chemical industry and the Nation's economy.

Mr. FERNANDEZ. I think that there has been testimony given today here that suggests that we operate with rather narrow margins. We are not the companies that are making exorbitant profits.

As pointed out in the manufacture of chemical products, particularly since the enormous increase in oil prices has occurred, the proportion of our total manufacturing cost attributable to raw materials is three or four times as high as it was 10 years ago, Senator.

Therefore, a modest increase percentagewise in the raw material feedstocks reflects itself as an important percentage of the total manufacturing costs.

Mr. ELLISON. In our particular industry at Virginia Chemicals, as an example, we have succeeded by using other people's waste products to compete competitively on both the domestic and international markets.

Needless to say, if we are penalized with a feedstock tax, that is something that would make us less competitive as we would have an additional cost that would make it harder for us to compete.

Senator ROTH. Our chairman, I think, properly pointed out earlier that with the cost of oil going up this is changing the competitive picture internationally. The American chemical industry is already facing some difficult competitive problems because of the fact that in the future you will be dealing with the world oil price. Is that correct?

Mr. FERNANDEZ. Yes, sir.

Senator ROTH. Having been very concerned recently as to what happened to the automobile industry, I don't think that we should overlook what the impact of any new legislation has cumulatively. For that reason, I would urge you people, if you can, to submit more specific facts that show what the impact would be on the world competitive picture.

Thank you.

Senator MOYNIHAN. Thank you.

Senator Chafee.

Senator CHAFEE. Thank you, Mr. Chairman.

The problem I find with the testimony is that we have a real problem here, and I am not sure that we are finding the solutions, even though each of the speakers is in agreement that it is a serious problem and they are anxious to find the solution.

For example, in Mr. Branscum's testimony, he indicates that taxing the feedstocks puts his company, which is dealing with plastics, in a noncompetitive position with alternate forms of raw materials that are used to make competitive products.

Mr. BRANSCUM. Yes, sir.

Senator CHAFEE. Where does that leave us? What do you suggest?

We have the suggestion, don't tax the feedstocks which are passed along to the plastics processors. What should we do?

Mr. BRANSCUM. I think some suggestions earlier indicated that there is a way to collect those necessary fees on the waste end, as opposed to taxing the feedstocks at the front end. A very high percentage of those feedstocks are used to make materials that pose no threat so far as hazardous waste, yet you are taxing all of them.

Senator CHAFEE. What would you suggest?

Do you mean taking the people who make the end product, which in itself is hazardous, and we tax them in some manner?

Mr. BRANSCUM. No. I think that we take those who dump whatever the hazardous waste may be, those that create it and dump it.

Senator CHAFEE. Of course they are not meant to dump under the existing law, and they are not going to come forward and identify themselves as illegal dumpers.

Mr. HANSEN. If I may break in, Senator.

Senator CHAFEE. Yes. I am seeking guidance here.

Mr. HANSEN. In New Jersey we presently have a feedstock tax to generate funds to deal with abandoned dump sites, and chemical spills. We have severe problems with that tax. We thought that it would be a simple way to handle the problem, but it is not working out that well.

The direction in which we are moving in New Jersey, and I think we are working with the State government to come up with an effective way to deal with the problem, is to place a tax on the generator of the hazardous waste, and to tax the person, the company, or whatever, that is actually producing that hazardous waste.

It does a couple of things. It puts the responsibility where it belongs, on the person that is creating the problem. Second, it will provide him an incentive to reduce the amount of waste he produces, and there are many ways to do that.

We are finding in New Jersey, as a result of the manifest system which has been put into effect in our State on hazardous waste and which will be going into effect nationwide as a result of the RCRA Act, that taxing the hazardous waste generator is a feasible, viable, and desirable way to go. It solves the problem that was mentioned by the other gentleman.

Senator CHAFEE. We have had testimony, as you know, on the tremendous difficulties in enforcing that. Actually in the Environment and Public Works Committee we had the people of New Jersey in, and we looked at the New Jersey plan which is one of the more vigorous plans in the country.

Mr. FERNANDEZ. I was simply going to point out that in the full text of the testimony which has been submitted to you by me under the auspices of the Chemical Manufacturers Association, there is set out the details of a workable waste-end tax.

This would not have been possible, as pointed out by Mr. Hansen, a year ago, but the RCRA manifest system now requires us to report regularly every pound of hazardous waste that we produce. We must do that, and that is information that will be in the hands of EPA. So the system is in place to do it, and it will be simple.

Mr. HANSEN. I would like to add one other comment to what has been said.

By going in this direction, and using the RCRA manifest system to provide the funds for a Superfund, you also can build in a system of criminal and civil penalties for people not complying with the tax on the disposal of their hazardous waste. You actually have created a mechanism to handle the midnight dumper, which we are all concerned about.

So I think the combination of an effective manifest system along with the tax on those hazardous wastes as they are generated, really provides a very fine answer to the problem.

Mr. ELLISON. If you will look at S. 1480 it taxes sulfuric acid, as an example. Yet, in our particular company, we have approximately 100 tons per day of sulfur dioxide which is recovered from smelter gas use. This would be considered a feestock and as such we would be taxed for a recycled waste.

If the smelter gas was scrubbed to control the sulfur dioxide emissions, there would be the generation of some 5 to 10 times the amount per day of lime/SO<sub>2</sub> sludge. So we are acting in an environmentally conscientious manner yet we would be taxed under the current system.

That is just one example.

Senator MOYNIHAN. Under the proposed system.

Mr. ELLISON. Yes.

Another example, we have 85,000 tons per year of sulfur which we recover from crude petroleum stock. We use that for sulfur dioxide and other sulfur chemicals. Again, under the proposed system, we would be taxed.

We have some 20,000 to 40,000 tons per year of sodium formate that would be taxed, and again this is recovered from a couple of waste streams from another company.

We have cases one after the other like that where we would be taxed under the proposed system, yet we are doing something that RCRA is encouraging, and the manifest system would give you an idea as to which companies produce the waste.

Senator CHAFEE. My time is up. Thank you, Mr. Chairman.

Mr. HANNEMAN. I would like to respond to a couple of the comments that were made—I think the administration witnesses have more than adequately addressed it, but one of the concerns of both the Environment and Public Works Committee and the administration has been the avoidance of the system.

We have lobbied very hard for an effective manifest system, but we don't want to create incentives for those who might otherwise be inclined to avoid the system, to try to avoid the system. So we would not want to burden the system with an additional large fee.

Also, I would remind you that EPA has received about 50,000 notifications of people engaged in the handling of wastes in their notification system, and that represents a large number of people to keep track of.

Senator MOYNIHAN. Exactly.

Senator Bradley.

Senator BRADLEY. Thank you, Mr. Chairman.

As I said to Mr. Hansen the other day when we had a conversation, I was in the unique circumstance of having a member from the industry come in and argue for more regulation with the national manifest system.

Did you agree with that, Mr. Fernandez?

Mr. FERNANDEZ. Yes, I did.

Senator BRADLEY. Good.

Mr. FERNANDEZ. I would not call that more regulation, however.

Senator BRADLEY. Dr. Fernandez, I think one of the questions that the committee is going to have to address is the size of the Fund. We have about \$4.1 billion. If you eliminate the liability components, which is about a third, you are left with about \$2.6 billion.

Putting the liability on the side—I understand that it is difficult to determine that. There are some insurance companies that are insuring in the country now, Howard & Swann being one, on that basis. We know that in some European companies, they do have this type of insurance available. But it is sufficiently cloudy that I prefer not to get into that discussion.

But we have heard testimony today, and in the Environment and Public Works Committee from Senator Culver, from EPA, from CRS, from the Office of Technology Assessment, all of which, if anything, said that \$2.6 billion was too little.

So I was curious as to what evidence do you have for your statement that you think it is much too much to clean up the toxic waste problem.

Mr. FERNANDEZ. We have included in the testimony data that supports that, but let me address first the preliminary point which I think has to be taken into account, and that is, before one can calculate the cost that is going to be required to accomplish this job, we are going to have to ask ourselves what is the job we are trying to accomplish.

It has been the contention of our industry that the job we are trying to accomplish is to cleanup waste sites that are leaching into the environment, and creating a health or environmental hazard, and for which there is no party available to be responsible to do something about it.

Under that definition, which in my judgment is the problem we are trying to deal with, and is the problem that H.R. 7020 deals with, the amount of money that is required, as we have indicated again in the testimony, based on State surveys in which we worked with and went into the various States, talked to the various environmental agencies of the States—

Senator BRADLEY. Who is we?

Mr. FERNANDEZ. We meaning the CMA and member companies of the CMA.

Senator BRADLEY. You contacted each State government, each department?

Mr. FERNANDEZ. Yes, we have, with the exception of three States.

Senator BRADLEY. And all of that data is in your possession?

Mr. FERNANDEZ. Yes.

Bear in mind that this is based on the definition that says what the problem is, it is abandoned waste site where there is no responsible party, and where there is indeed a demonstrated leakage out of that site that is creating a hazard.

Under those circumstances, coupled with the fact that as chemical companies we have on our own premises disposal sites that we monitor and look after, and we have some experience because over the years if a site begins to leak we have had to deal with it. Under those circumstances, we have firsthand knowledge of what it costs to repair those sites.

We are not speculating, but it is on the basis of that that we come up with the average of \$1 million.

Senator BRADLEY. I suppose that the definition problem is also important for the definition of site versus facility. If I understand what you are saying, such things as a PCB dump into the Hudson River, or the chemical contamination in the Great Lakes, or the problem with the James River in Virginia, none of that would be covered under a superfund for only sites. Is that correct?

Mr. FERNANDEZ. I think we have to think in terms of pre- and post-RCRA, and we have to think in terms of the authorities that are already granted to the EPA under the Clean Water and the Clean Air Acts. There are a number of those things where there is already a remedy in the law to handle.

Senator BRADLEY. Let's take the Clean Water Act, section 311. Are you saying that all the things that I mentioned would have to be cleaned under the authority of section 311, and that is all?

Mr. FERNANDEZ. No. We are in favor of a fund that will deal with the situation where there is not existing authority, and where there is not clearly distinguishable parties.

Senator BRADLEY. Could I ask one more question. I would also like to put this to Mr. Fernandez.

Another issue here is what is the inflationary impact of the Superfund. We have had studies from CBO that said that it is minimal. Senator Roth has mentioned a number of figures that EPA gave today.

For the benefit of the committee, I wonder if you could show us what is the analysis that you have done to conclude that it would have significant inflationary impact?

Mr. FERNANDEZ. First of all, I did not use the word "significant." Nonetheless, it will have an inflationary impact.

In my judgment, if we impose this fee, we are going to somewhere, somehow involve the American public with picking up a tab in excess of \$4 billion, but that is only the beginning because under the liability provisions that are included in this proposed bill a company may be subjected to considerably more damages than the fee it pays into the fund. That is where you get into the problem of trying to calculate what is the potential liability cost.

This bill has to be looked at in its total fabric, in our judgment. It is not possible to pick out one item and deal with it alone. You start out with a concept of release into the environment, which is very broad, that ripples into a definition of what is hazardous substance, which is very broad.

It, in turn, ripples into giving the Administrator of the Fund great authority, discretionary authority to use it as he sees fit, and then establishes strict, joint, and several liability, which creates a totally open-ended liability. It is on that basis that it becomes inflationary.

Senator BRADLEY. Have you included an analysis of that in your testimony?

Mr. FERNANDEZ. There is not an analysis of that in the testimony, and I don't know that it can be in the testimony because, as it has already been indicated, the impact of liability cannot be measured.

Senator BRADLEY. Mr. Chairman, could I trouble the committee for one more question?

Senator MOYNIHAN. Certainly.

Senator BRADLEY. Just another point that you made about the U.S. competitive position, the increased costs that would be placed on U.S. feedstocks with the tax. Yet, you have supported a fee on generators and disposers.

In your judgment that fee could not be applied to importers, and it certainly would be applied to the exporters of those products.

In your judgment is that fair to make them less competitive than they were before the fee, the generators and disposers, and how is that different simply in the equity circumstance from placing the tax on the feedstocks?

Mr. FERNANDEZ. I think the issue of where you place the fee, whether you place it on the feedstock or whether you place it on the generator of a hazardous waste, in and of itself is only important in that the latter, the imposition of a fee on the generator of hazardous waste, as Senator Danforth has pointed out, would be a more logical way to encourage all industry to make efforts to avoid the generation of hazardous waste.

I think that that is the reason for suggesting that as a more logical way to go this route, particularly when there is a mechanism for doing it readily.

Senator BRADLEY. So you would disagree with EPA when they said that by placing it on the generator, which is at the end of whole process, you give the generator an incentive to dump illegally?

Mr. FERNANDEZ. I have already said in my testimony that the midnight dumper is reprehensible, and we ought to band every effort to deal with those people in the harshest way. We would encourage that. But, I really think that is something we are all in agreement on.

Senator BRADLEY. Thank you.

Senator MOYNIHAN. Senator Danforth, before I turn to you, I am going to have to depart for a moment, since I have some other responsibility. Senator Roth is going to assume the chair and will continue with our panels.

Senator Danforth.

Senator DANFORTH. I would like to break in on the last question.

First of all, I am not a member of the Environmental and Public Works Committee, so I am not as familiar with the mechanics of this as some other members of this committee are.

Why wouldn't a waste-end tax encourage the midnight dumper?

It would seem to me, for example, if you were to tax people for putting out their garbage and having it collected, unscrupulous persons would simply take their bag of garbage and put it in their neighbor's yard.

Why is it that a waste-end tax would not necessarily encourage the unscrupulous people—those who do not have a social conscience, those who create situations such as this Valley of the Drums, why wouldn't it just encourage them to go out and put their waste somewhere where nobody would know about it?

Mr. HANSEN. We have wrestled with this question in New Jersey, and I will give you our feelings and experience on the matter, Senator.

The midnight dumper, so to speak, has the incentive today of doing that, of putting material in the sewer, or whatever, at midnight because it is costing him \$50 or \$100, or whatever to get rid of a drum of material today. There is substantial incentive for his actions today.

We think that it is very important to have a good manifest system so that the Government knows who is generating hazardous waste, where it is going, and how it has to be disposed of. I think that is critical, and that is being put in place through the RCRA Act.

We already have it in New Jersey, and it is operating, and it is working. We think that the manifest system should have civil and criminal liability to go along with it. Audits can then be made of what people are doing with their hazardous waste. We can tell who should be generating some hazardous waste by virtue of what they are doing.

There may be some controversy of whether hazardous waste is 1 percent or 5 percent, but the nature of the operation determines whether hazardous waste is generated. An audit of operations will

ascertain whether or not the wastes, by virtue of having a good manifest system, are going to the proper places. Appropriate action can be taken if it not.

The imposition of a tax on top of present costs will not make any substantial difference on the incentives for the people who have been in the Midnight dumping practice.

We think, furthermore, that that practice is a very small part of the entire industry. It is done by only a few irresponsible people who should be prosecuted. A hazardous waste tax would be borne by the responsible element of industry who will be paying most of the tax.

Senator DANFORTH. If the goal is to reduce undesirable activity by furnishing economic incentives to do what is right, it would seem that the waste-end tax may be counterproductive. It would increase the cost on the desirable activities of bringing the product to wherever you are supposed to bring it.

Mr. HANSEN. Yes, sir, you are correct. That is the reason you need the manifest system to go along with the tax. To have the tax without an effective manifest system would not be good; you are right.

Senator DANFORTH. Let me ask another question.

In Dr. Fernandez' statement, on page 8, there is a comment that I am not sure I understand:

It is estimated that 40 percent of the products these manufacturers—that is the 15 petrochemical companies—produce which would be charged 90 percent of the fees under S. 1480 do not result in the generation of hazardous waste at all.

I am not sure I understand the meaning of that. Do you mean by that that of these feedstock products, a significant proportion of the feedstock products, in turn, are converted into other products, or are sold for a purpose which will not conceivably create a hazardous waste. Is that what that means?

Mr. FERNANDEZ. Let me, if I may, make sure that I give you a correct answer. The short answer is yes.

Senator DANFORTH. As I understand it, for these feedstocks, let's take feedstock A on which the tax would be imposed, when Monsanto sells this feedstock product, product A, 60 percent of that would go to something that could conceivably cause a hazardous waste, and 40 percent would not. Is that right?

Mr. FERNANDEZ. That is correct.

I think a good example was pointed out by Mr. Branscum. If you take ethylene, for example, and you convert it into polyethylene, which goes into a particular product, there is no hazardous waste that is going to be generated.

Senator DANFORTH. Do you know at the time you make the sale which purpose it is going to be used for, whether it is going to be in the 40 percent or in the 60 percent?

Mr. FERNANDEZ. We don't always, but in some circumstances it can be determined. If it is a large company which has multiple use for the same basic material, we would not have any way of clearly knowing exactly how it was going to be used, or how each pound would be used.

Senator DANFORTH. Supposing that we were to proceed ahead with this feedstock fee, would there be any way of concentrating the fee, or would it be advisable or inadvisable to administer the

fee on that portion of the feedstock which would be used for potentially hazardous products?

Mr. FERNANDEZ. I think that this would set up a rather cumbersome mechanism, and I have not thought about it in those terms. So I would have to think about it more carefully, Senator. But my initial reaction is that it would be awkward to try to spell out which pound of product was going to which end use.

So offhand, I don't think that it would be easy to accomplish that.

Senator DANFORTH. Could I ask one more question?

Again, I am not as conversant with the industry as I should be, but would it be possible to devise a system where the tax is imposed on the purchaser of the feedstock, and a credit is given when the product is delivered to an approved waste disposal site?

I don't know, but it would seem to me that if the tax is imposed on somebody who could do something about the way the product is used and disposed of, then if the product is disposed of in the appropriate way there is a reward for that. But that would be more sensible than simply imposing the tax on the product itself.

Mr. HANNEMAN. The fee, in the first place, is not a regulatory measure. That is, hopefully, going to be addressed in our EPA program with the manifest, and the addition of new sites that can handle these waste. Rather it is a means to identify those industries that may have in the past, although certainly not presently necessarily, contributed to the problem of these facilities that the EPA map noted, and to find an easy way to aggregate a rather large sum of money that can be used to clean these up.

It is really the macro-concern here, not an attempt to use the tax system to direct waste here and there, that I think was behind the thinking of the Environment and Public Works Committee.

Senator DANFORTH. With that kind of method, would that be possible or not, the method that I described?

Mr. HANNEMAN. I think that it would be very complicated.

Mr. ELLISON. With RCRA where you have to register as a producer of waste, and you have to register if you store it, and you have to follow through the disposal process. RCRA takes care of most of the concerns that you have.

Mr. HANNEMAN. There is one problem. There is a very significant exemption of small businesses and small producers, and that is the provision of the present regulation that those who generate about 1.1 tons, or 1,000 kilograms of hazardous waste a month or less are exempted from all of the requirements.

They don't have to take their waste into the manifest system at all. They don't have to report that they are producing it. They don't have to tell the waste hauler or the disposal facility operator that they are giving him hazardous waste.

So they would be unable to claim any credit for proper management.

Senator BRADLEY. Senator, just let me follow up there, and go back to the topic you raised earlier on the recyclables, and why they are in here, and maybe ask the panel to comment.

If this waste end-fee would not prevent dumping from continuing, illegal dumping, I think that it would be logical to assume that

it will not also prevent recycling. Indeed, it would encourage recycling. Do you agree with that?

Mr. ELLISON. I am not quite sure. Please restate what you are saying.

Senator BRADLEY. The panel testified that a fee at the end, waste end fee, would not increase illegal dumping. Isn't that what you said?

Mr. HANNEMAN. I would not associate myself with the other panelists on that.

Senator BRADLEY. You think that it would?

Mr. HANNEMAN. I do think it would, and I have so testified.

Senator BRADLEY. If you are using the same logic at the beginning, if you had that fee, then would it increase recycling?

Mr. ELLISON. Yes, it would encourage it. It would encourage more recycling because you would have an additional incentive to make sure that you have no generated hazardous waste.

Senator BRADLEY. Does the whole panel agree to that?

Mr. HANSEN. Yes.

Senator ROTH. The Senator from Montana.

Senator BAUCUS. Gentlemen, I was here earlier, and I have a few questions with respect to the effect this might have on international trade. I understand the importance of the feedstock fee.

My question goes to what percentage of feedstocks that are utilized by American industry are imported, compared to the percentage produced here in the United States?

I ask the question because on some industries we impose fairly strict environmental pollution standards, and that has an adverse effect on domestic companies' ability to compete in international trade. I am wondering if the same kind of problem applies here at all.

Is it your judgment that it does apply?

Mr. FERNANDEZ. I think the problem applies, but just offhand I don't think that I could answer your question with numbers. I would be glad to try to provide that information.

[The following was subsequently supplied for the record:]



## CHEMICAL MANUFACTURERS ASSOCIATION

October 29, 1980

1. What percentage of feedstocks that are utilized by American industry are imported compared to the percentage produced here in the United States?

2. Have you identified some areas or some industries that might be adversely affected?

(1) It has been estimated by the First Boston Corporation that the cost of foreign oil going into petrochemicals was \$2.8 billion in 1979. This was 14% of the total cost of petrochemical raw materials used including those from domestic natural gas (\$8.7 billion) and domestic oil (\$8.0 billion).

(2) Any new cost burden for the U.S. chemical industry will definitely affect its exports and domestic sales. The industry exported \$17.3 billion of its products in 1979, and, after accounting for imports, provided a \$9.8 billion contribution to the large U.S. trade deficit of \$24 billion. Obviously, the chemical industry performance in overseas markets is an important prop to the country's export objectives and the value of the dollar.

Added cost to the industry from the fee system and liability settlements or judgments are not similarly borne by foreign competitors. The industry currently is in a financial slump. Profit margins in selling costs are very small, sometimes non-existent. The \$7.3 billion of chemical imports present severe competitive difficulties to a number of chemicals. Exports are sold on a similarly small margin basis.

The prices at which chemicals are sold are not determined in the marketplace by an increase in cost such as that imposed by a fee system and liability. Prices are determined by what the market will bear. The ability to pass new costs along is limited by the competitive pricing. Very often a new cost cannot be recovered in prices. Further, it is wrong to think of average cost increases because they are in no way applicable to the real situation. The difficulties occur on a product by product basis with a wide variety of results. The averaging process therefore ignores those cases where products will become non-competitive while others can recover the new cost in pricing.

The market does not provide the producer higher prices just because the costs increase. The present U.S. chemical industry strength in export markets will clearly be lessened by the costs imposed by Superfund in addition to all the other regulatory costs the industry now bears.

Senator BAUCUS. Is it significant?

Mr. FERNANDEZ. It is meaningful, and it is selectively meaningful in the sense that there could be a particular company who is manufacturing a specialty chemical of some kind, and where he is competing with a foreign producer. He would be at a distinct disadvantage, and to that particular company it could be quite meaningful.

Senator BAUCUS. I wondering, off the top of your head, can you identify some industries or some areas that might be adversely affected? Do they come to mind at all?

Mr. ELLISON. Needless to say, the product area. It would be cheaper to bring a product into the United States, not having to pay feedstock, than produce it domestically and thus pay that tax.

Senator BAUCUS. Which product?

Mr. ELLISON. If you have to pay on the part going into plastics, and you can just automatically bring the plastics into the United States, it puts the plastics industry at a disadvantage here in the United States.

Mr. FERNANDEZ. I think that we can attempt to quantify that for you. I just don't have that data available. I would say that it is real, however.

Senator BAUCUS. If you would provide that information, I would appreciate it because I think sometimes these areas as it affects the cost of environmental controls on international trade is overlooked.

We are really in a position in our country's history where we are trying to compete more effectively in the international area. We want to increase our exports. We don't want to let this particular problem be overlooked, if in fact it is a problem.

Apart from the liability question, the strict liability, do you agree generally that this bill would not have any significant effect on incentives or lack of incentives for industry to clean up?

It seems to me that this bill is basically a transfer of cost. Generally, most of the companies will pass on the costs here. I understand that there is some dispute in that regard, but I understand that generally most of the fees will be passed on as a business cost, therefore, the consumers will ultimately bear the burden.

So apart from the strict liability provision, I am wondering if you agree that by and large there is no incentive in this bill to encourage industry to clean up?

Mr. HANSEN. That is true, in my opinion.

Mr. FERNANDEZ. I think, as we have discussed at some length here, a fee based on the waste-end would provide that incentive, but otherwise not.

Senator BAUCUS. If that is the case, do you have any suggestions as to what amendments we might pass, or what changes we might make to help us to have better disposal of the hazardous waste?

Mr. FERNANDEZ. With regard to better disposal, I think we have in place today legislation that takes care of that. We don't need new legislation to take care of how we are going to dispose of the material in the future. We are now regulated from womb to tomb.

With regard to hazardous waste sites that are abandoned, I think that is the issue that we are trying to deal with, and that is the problem that we are trying to solve, and not how we are going to

dispose of waste in the future. We have plenty of rules and regulations to deal with that.

Mr. HANSEN. The tax on the hazardous waste generation is what we would suggest to provide an incentive to help reduce the generation of hazardous wastes and could possibly increase recycling. It would provide some incentive for the reduction of the generation of hazardous waste.

Senator BAUCUS. You are willing to put up with the administrative regulatory nightmares?

Mr. HANSEN. We don't think it is an administrative nightmare, but we are willing to put up with it.

Mr. FERNANDEZ. It is already taken care of. The RCRA regulations and the RCRA manifest system already require us to report every pound of hazardous waste that we generate. It requires every transporter to record that he has transported it. It requires everyone who eventually disposes of it to report it. So the mechanism is already in place.

Senator BAUCUS. Would you support a bill that raises the same amount of revenue in the same period of time, but with individual taxes on those companies which generate a certain quantity or quality, or lack of quality of hazardous waste?

Mr. FERNANDEZ. I would not support that because as I have already indicated, the sum of money that is indicated here is far in excess of what we think is necessary to deal with the real problem, far in excess.

Senator BAUCUS. What amount do you think is needed to take care of the problem?

Mr. FERNANDEZ. We have indicated, and I have included in my testimony, that a careful analysis on a State-by-State basis, suggests that the size of the problem that we are dealing with, with sites that are a genuine hazards, is no more than in the order of \$400 million.

Senator BAUCUS. You would agree that instead of the system that you have discussed, instead of an industry fee, a category fee, you would place the tax or the fee on the individual producer as long as we could do what is appropriate.

Mr. FERNANDEZ. We definitely agree that there should be a fund.

Senator BAUCUS. You would welcome an EPA person to your office who tried to measure the degree of toxicity in your company?

Mr. ELLISON. EPA is already there.

Mr. HANSEN. It is already there, and we are reporting that.

Senator BAUCUS. You don't mind it?

Mr. ELLISON. We mind it, but EPA is already there.

Senator BAUCUS. Thank you.

Senator ROTH. Thank you.

I want to express my appreciation to the panel for sitting through the lunch hour. Thank you very much, gentlemen.

I told the chairman that in the interest of time, to expedite these hearings, that I would be happy to preside so that there would be no break. So at this time I would like to call the next panel, which will be composed of:

Mr. L. P. Haxby, on behalf of the American Petroleum Institute, and Rocky Mountain Oil & Gas Association, and Western Oil & Gas Association; Mr. Donald W. McPhail, vice president, ARCO

Chemical Co.; Mr. Max Levy, vice president, Columbia LNG Corp., on behalf of the American Gas Association; and Mr. Jerome J. McGrath, president, Interstate Natural Gas Association of America.

We will proceed with this panel. I would appreciate it if each of you would try to limit your remarks to 5 minutes, and your entire statement will, of course, be included as part of the record.

We will start with Mr. Haxby, who is appearing on behalf of the American Petroleum Institute.

You may proceed, Mr. Haxby.

**STATEMENT OF L. P. HAXBY, ON BEHALF OF AMERICAN PETROLEUM INSTITUTE, ROCKY MOUNTAIN OIL & GAS ASSOCIATION, WESTERN OIL & GAS ASSOCIATION**

Mr. HAXBY. Thank you, Senator Roth.

My name is L. P. Haxby, and I am the environmental manager for Shell Oil Co., and today I am speaking on behalf of the American Petroleum Institute, Rocky Mountain Oil & Gas Association, and Western Oil & Gas Association.

Gentlemen, our written testimony on S. 1480 has been submitted outlining our views on this proposed legislation. In short, while we, along with most of the industry business and others, agree that enacting legislation is needed to cope with the abandoned hazardous waste dumps problem, we see no need at this time for further legislation on hazardous substances or oilspills.

Congressional action in 1978 on the Clean Water Act directed EPA to conduct an intensive study on hazardous substance spills and to report to you for further consideration. This study has not yet been done. In the meantime, spills of both oil and hazardous substances are covered by the Clean Water Act, and are being reported, and the majority of them are being cleaned up by industry.

S. 1480, however, attempts to embrace both abandoned dumps and hazardous spills, and even possibly oil spills. This proposal sets forth untried, new concepts of liability and judicial standards, created under the poorly designed concept of releases to the environment, all to be covered by a trust fund generated by fees and interest.

We believe that if the trust fund is to be created for management of abandoned dump sites by imposition of industry fees and taxes, we would prefer the tax system. But we do also believe, as many others have expressed this morning, that such a tax should be placed on the dry waste generated for disposal, rather than on upstream crude oil, inorganic chemicals, organic chemicals, and petrochemical feedstocks, thereby relating the tax directly to the problem.

An administrative system to accomplish this will be in place under RCRA by November 19, 1980, as has been discussed.

We do not believe the tax on crude oil, in organic chemicals, and petrochemical feedstocks bear a relationship to abandoned dump sites, and we think it an inequitable burden on the raw material suppliers and their customers.

With regard to taxes we further would suggest, however, that such taxes not be levied on an estimated basis but, rather, be paid

after the taxable event. To reduce the recordkeeping burden we would suggest the tax be paid within 15 days after each quarter.

But, as has been discussed in other testimony, fees or taxes are not the only part of S. 1480 with which we have problems. The overly broad definition of the term "released to the environment", along with a lack of causal evidence for medical claims, coupled with unlimited liability created by the joint and several language, creates an unpredictable cost burden on industry.

Some of these unestimable costs may be retrievable from the marketplace, but many will not, thereby adversely affecting the viability of both large and small business.

The retroactive and strictly liability provisions of the bill as they relate to generators and transporters of waste are of particular concern. Even though amendments have attempted to restrict the impact of this provision, it is patently a search for the deep pocket. Thus the generator, transporter, site owner, and past site owner can all be liable without fault. Such an unlimited liability we do not believe that the insurance industry is prepared to provide coverage for.

We have been asked to comment on the proposed amendments of Senator Magnuson and Senator Gravel for an oil spill trust fund. Addressing these proposals, we see the problem not specifically in the trust fund but with the coupling of it with the similar problems and activities. Our testimony explains past and current support for such a fund that would preempt the multitude of State funds, but points out that coupling with other funds is not favored for valid reasons.

We urge this committee to become thoroughly familiar with the onerous provisions of S. 1480 and to seek a new approach to managing the critical public issue of abandoned dump sites that can gain the support of all concerned. We suggest that legislation similar to H.R. 7020 reported by the House Interstate and Foreign Commerce Committee, with fees placed on dry weight of waste generated, would form a good starting point that could garnish strong support from business and industry.

We thank you for the opportunity to present our views on this critically important question and we welcome questions on our industry's position now or later.

Senator ROTH. Thank you.

[Mr. Haxby's prepared statement follows:]

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Summary for  
 Senate Finance Statement  
 of the  
 American Petroleum Institute  
 on S-1480

- The real issues is the abandoned hazardous waste dump site problem. Superfund legislation should be confined to this problem, and not combined with hazardous substance and/or oil spills.

- Hazardous substance and oil spills are already covered by existing legislation and clean up of such spills are handled by industry.

- The proposed fees on petrochemical feedstacks, crude oil and inorganic chemicals for use in cleaning up abandoned dump sites are grossly inequitable.

- The logical fee is placed on dry waste generated for disposal.

- The "fee" should be a tax, not a fee.

- The legislation should not create a federal liability regime.

- S-1480 creates uninsurable liability since it imposes strict, joint and several liability that is unlimited.

- Off budget financing should not be used for financing solutions to complex societal problems that require periodic Congressional review.

- We recommend legislation similar to H.R. 7020 modified to (1) place the tax on the dry weight of waste generated and presented for disposal and (2) restriction of the broad discretionary power given the Administrative Agency.

## American Petroleum Institute

Comments before the

Senate Finance Committee

Regarding S.1480

The American Petroleum Institute appreciates this opportunity to comment on S.1480, now under consideration by your Committee. The API is a national trade association representing all sectors of the domestic petroleum industry. Many of its member companies also have extensive involvement in the chemical industry.

The public record shows that API has recognized the need for separate legislation to deal with the serious problems arising from oil spills, hazardous substance spills, and abandoned hazardous waste disposal sites. We again state our resolve to help solve the problems associated with the needs of each of these three special situations.

API has considered the problems associated with hazardous substances spills and abandoned hazardous waste disposal sites. Like you, we would like to see these national issues resolved. We, therefore, respectfully suggest that your Committee give consideration to the following:

First, deal with the liability and compensation issues of hazardous substance spills through separate legislation, but only after the Environmental Protection Agency completes the study of hazardous spills mandated by the 1978 amendments to the Clean Water Act. This amendment directed EPA to conduct the study and to report to Congress on "methods, mechanisms, and procedures to create incentives to achieve a higher standard of

care in all aspects of the management and movements of hazardous substances." Congress, appropriately, asked EPA in this study to consider limits on liability, liability for third-party damage, penalties and fees, spill prevention plans, and relevant practices in banking and the insurance industry. To enact hazardous substance spill legislation without the benefit of this study, which would scope and define the problem, is premature.

Second, deal with problems of abandoned waste disposal sites through an amendment to the Resource Conservation and Recovery Act (RCRA). A dry weight waste-end basis fee would provide effective incentives to recycle and reuse potential wastes. RCRA in Section 3001 provides an existing administrative mechanism for assessing unit charges at the time of waste disposal. Given the urgency of the need, it would seem wise to build on existing administrative instruments rather than create a whole new federal reporting system.

The most pressing societal issues are addressed by those sections of S.1480 which relates to abandoned waste disposal sites. API has previously stated and continues to believe there is a need for carefully drafted legislation that addresses the problems posed by abandoned hazardous waste dumpsites. However, as presently written S.1480 has serious defects with far-reaching financial implications. S.1480's attempt to treat two specialized events, hazardous substances spills and abandoned hazardous waste dumpsites, results in administrative tangles and gross

inequities. Among the many defects of this bill are several that fall within the jurisdiction of this committee. They are:

- o funding, both source and the method;
- o uninsurability due to the application of three concepts
  - zero release,
  - strict, joint and several liability, and
  - lack of need to show causation; and
- o off-budget financing.

#### Funding Source and Method

S.1480 would create a \$4 billion fund over a period of six years, with only one-eighth of the funds to come from general appropriations. Fees would be imposed on crude oil, petrochemical feedstocks and inorganic raw materials. This structure is inequitable. There is no relationship whatsoever between the problems associated with abandoned hazardous waste dumpsites and the current use of these raw materials. The inequity is made more burdensome by the imposition of a double fee on the oil industry -- once on the crude oil itself and once again on the feedstocks created from it. Feedstock fees are a basically inequitable method of funding remedial programs for a broad societal problem. They impose a penalty on use of raw material rather than the production of wastes. Further, the current wording of the bill imposes yet another charge on petrochemicals used in or as fuel. Methane, for example, is used widely as a fuel for both domestic and industrial purposes and

fees such as those proposed simply drive heating and industrial goods costs even higher, adding unnecessarily to inflation. We do not believe that the fund income estimates included the extent to which these raw materials are used as fuels. Therefore, we believe that the estimated tax revenue will be even higher than forecast; all this to solve a problem that has yet to be defined.

Fees imposed on certain segments of industry for the purpose of funding cleanup of abandoned hazardous waste sites created by other segments raises substantial constitutional questions under the due process clause of the fifth amendment. A fund financed as proposed by S.1480 imposes upon a given business enterprise retroactive liability for events which occurred in the past and for which the enterprise may have had no causal responsibility whatsoever. At the very least, any tax or fee system should be levied on the activity that led to the problem -- the production of wastes -- not on unrelated use of petrochemical feedstocks and crude oil.

Taxing the generation of hazardous wastes would be more equitable and have the salutary effect of discouraging those very acts. It will stimulate recycling, reuse, and development of techniques to avoid the creation of wastes in the first place. By contrast, there is no social benefit in taxing petrochemicals, which are used to produce hundreds of non-hazardous consumer items. A typical example of the materials made from only one feedstock is shown in Attachment A.

If a trust fund is established for managing abandoned hazardous waste dumpsites, we believe a tax system to be more workable than a fee system. We strongly believe that the tax should be placed on the dry weight of waste generated for disposal, rather than on petrochemical feedstocks, oil and inorganic raw materials. Such taxes should be levied only after the occurrence of the taxable event and paid within 15 days after the ending of each fiscal quarter.

Taxes paid on the dry weight of waste generated can easily be assessed and after November 19, 1980, these wastes will already be accounted for under Section 3001 of RCRA. The manifest system created by these regulations provides an existing system for administering this program in a non-duplicative manner.

It is argued that the waste-generated tax would place undue burden on high volume waste materials of low hazard. If, however, they are indeed of low hazard, we suggest that they be either exempted or reclassified as nonhazardous.

#### Uninsurability

S.1480's whole approach contains three basic concepts that, taken together, create such astronomical risks as to make many existing activities uninsurable. Should S.1480 pass in its present form, we would expect to see a fundamental restructuring of many industrial sectors with the smaller firms being forced out of business and only those corporations who are able to self

insure being able to continue. The three concepts are zero release; strict, joint and several liability; and the lack of a requirement to show a connection between an injury and the actions of a defendant. Each of these is discussed below.

#### Release

S.1480 introduces a "zero release" concept which represents a fundamental departure from the approach adopted by existing environmental law. It sets aside the technology and health effects approach of the Clean Air Act, Clean Water Act, and Resource Conservation and Recovery Act. Under S.1480, any discharge or emission, even with those that are federally approved, the President is authorized to intervene and incur costs for remedial action. Sweeping powers are granted the President and the Administrator with virtually no statutory standards to govern their actions. Seldom does one see legislation proposed which attempts to usurp all existing law and grant such uncontrolled power to a single agency.

Since the term "release" would encompass all types of movement of substances into the environment, liability could be imposed for a wide range of activities integral to the normal functioning of the economy and daily life.

#### Liability

S.1480 provides that the liability of all persons who caused or contributed to a release of a hazardous substance

shall be joint and several. "Joint and several liability" refers to a situation in which more than one person is found to have caused or contributed to certain damages. The "joint" portion means that all such persons are together liable for all of the damages involved. The "several" portion means that each of such persons is liable for all such damages. "Joint and several liability," then, means that a party entitled to a recovery can recover the entire amount of his damages from any one of the persons found to have caused or contributed in some way, no matter how minimally, to the damages in question.

The situation in which a number of unrelated generators of hazardous waste coincidentally happen to contract with the same hazardous waste disposal site operator is vastly different from the situations which warrant imposition of joint and several liability. Yet, under S.1480, generators would face joint and several liability, not because of any fault of theirs but because of the acts of the disposal site operator. The establishment of joint and several liability is both grossly unfair and unnecessary for the achievement of the purposes of the bill.

Although the impact of this liability has now been somewhat reduced by the apportionment amendment, the defendant may recover some of his costs only after liability assignment is made and claims are already paid.

The obvious intent of the sponsors of S.1480 is to bring justice to parties injured by the mismanagement of hazardous materials. To impose liability on one party for the acts of another also leads to injustice. Careless law is no less damaging than the careless dumping of hazardous wastes. It is also important to assure that liability is not imposed retroactively on generators and handlers of hazardous wastes located in third party disposal sites unless there is some related causal action.

S.1480 places no limitation on the liability that might be assessed against a generator or disposer of hazardous waste. Unlimited liability is not insurable. It is, therefore, possible, particularly in view of the joint and several liability provisions and the strict liability without fault provisions discussed above, that a party could be bankrupted by the liability provisions of the bills.

Any legislation in this area should set a reasonable, insurable limit to liability that would be equitable for both generators and disposers of hazardous wastes. Precedents for such a provision are found in Section 311 of the Clean Water Act and in various oil spill bills introduced before Congress.

#### Causation

We believe it inappropriate to create a new federal tort law without first identifying the problem to be remedied.

This bill would create such law for injuries resulting from the release of hazardous substances. Thus, for the first time, individuals would be able to bring a lawsuit under federal law rather than under the common or statutory law of one of the states.

Our federal system is based on an allocation of responsibilities between the federal government and the various state governments. Historically, the establishment of causes of action and liability for injuries resulting from such an act as the release of a hazardous substances has been left to the states. The creation of a federal cause of action for injury from releases of hazardous substances would constitute an unwarranted intrusion of the federal government into an area which is traditionally relegated to state law and which is of basic concern to the states and their citizens. Further, there is no reason why a special federal cause of action should be created for persons injured by hazardous substances but not for persons injured, say, by medical malpractice, an automobile accident or an explosion at an oil refinery.

Only rarely, and under highly unusual and specialized circumstances, has Congress deemed it appropriate to establish a federal cause of action for personal injuries. There has not been, and indeed there could not be, any showing that state common law is inadequate to deal with and appro-

priately compensate for losses occasioned by injuries caused by the release of hazardous substances into the environment.

Drains on the Fund and Off-budget Financing

S.1480 allows the trust fund to be used for a wide variety of purposes in addition to cleanup and compensation costs. These include epidemiologic and expert witness costs, research costs, capital and income loss, medical expense, undefined and speculative natural resource damage costs, as well as its assessment and associated research costs, and state claims. Claims may be presented to the person responsible but, if not settled in the unreasonable time of 15 days, they may be paid by the fund. Under these unrealistic rules and time constraints, it is unlikely any claims could be paid by the person responsible and this, along with the discretion allowed the Administrator, could well be expected to place an inordinate and unnecessary drain on the fund.

One of the greatest vices of all this is that it is accomplished through an off-budget funding mechanism. S.1480 would hide the commitment of substantial national resources, whether collected as a fee or a tax, from the salutary public exposure and scrutiny inherent in the normal budgetary process.

The fund further may be used to assess long- and short-term damage, cover the costs of restoration and replacement, and provide up to \$10 million dollars for research on natural resource damage assessment, again an off-budget approach.

Natural resource damage and its assessment are not yet well defined by either technology or protocol. Nor does S.1480 provide advancement to this science since it fails to define what is meant by natural resource damage. However, the bill is not hesitant in allowing claims against individuals or use of the fund for assessment of short- and long-term damage, restoration and replacement, and further research. All again an off-budget approach. We urge that payable damages for natural resources be restricted to those of traditional economic importance, be solely compensatory, and apply to damaged resources or financial losses that are ascertainable, not speculative.

The sweeping changes in existing environmental law proposed by S.1480, combined with its aggressive overlapping of other basic environmental acts, can lead to an administrative and legal nightmare. The reporting and notification requirements, combined with record-keeping duties, foretell the growth of uncounted new regulations to implement this proposal.

Such an administrative burden should not be taken lightly. API has surveyed the environmental expenditures of its member companies yearly. We have noted an alarming growth of administrative expenditures over the past 10 years. In 1969, our members reported administrative, operating and maintenance expenditures of \$146 million. In 1978, they reported expenditures of \$1.497 billion for this category, a 10-fold increase. The full report, from which these figures are taken, API Publication 4314, is attached. Such administrative cost burdens and

uninsurable unlimited liability can affect the viability of today's businesses, particularly if they are small in nature.

Oil Spill Cleanup, Liability and Compensation for Damages

API strongly objects to any attempts to combine oil spill issues with those of abandoned hazardous waste disposal sites and hazardous substances spills. We do not object to the concept of federal legislation which addresses oil spills separately. If such single-purpose legislation were proposed, we would look for the inclusion of the following concepts:

- o Full preemption of state laws covering liability, clean-up funds, civil penalties and equipment pools;
- o responsibility of the spiller for cleanup costs and damages up to an insurable limit;
- o Establishment of a fund to pay for cleanup and damages for spills in which there is no identifiable spiller and for those costs that exceed a spiller's liability.
- o Limits compensable damages to real economic losses;
- o Limits uses of the fund to cleanup and compensation only;
- o Allows defenses to liability which recognize acts of God, war and third parties; and
- o Complements existing international regimes established through IMCO and industry supported organizations.

The character of petroleum movements, both crude and product, is international and interstate in nature. Faced with

proliferating state laws regarding oil spills, in which no two states approached the issue the same way, the petroleum industry has previously sought a uniform comprehensive federal regime. Today, some members of our industry are now questioning the need for such legislation.

Individual state cleanup and compensation funds are in place. Industry sponsored regimes that establish requirements for insurance coverage and provide for compensation for losses that exceed that coverage are in place. State taxes that feed the small individual state funds are in place. The bottom line is that the protective mechanisms have been designed and implemented. Finally, in those instances where accidents have occurred that caused petroleum to be discharged to the marine environment, the spillers have generally acted in a responsible manner to clean up and compensate for losses.

The only areas not being adequately addressed are cleanup and compensation for those instances where: (1) the spiller is not identifiable or capable of paying for damages; or (2) a major spill similar to the Bay of Campeche occurs. These instances can easily be covered through adequate funding of the trust fund established by Section 311 of the Clean Water Act.

Both Senators Gravel and Magnuson have proposed amendments to S.1480 which would create an oil spill cleanup and compensation regime that embraces most of the concepts endorsed by API.

Senator Gravel has proposed Amendment No. 1965 to S.1480. There are two important areas where we differ with Senator

Gravel's approach. The first involves his intention to combine the proposed amendment with S.1480. The Institute is quite apprehensive about this approach. It is our fear that it will be all too easy, at some future juncture, to tap the \$200 million oil spill fund for cleanup and compensation for losses caused by abandoned hazardous waste dumps or spills of hazardous substances. The petroleum industry has never tried to duck its responsibility for oil spills. However, it will never willingly accept an approach that has the potential of penalizing the petroleum industry for the actions of others.

Secondly, Amendment No. 1965 would authorize payments of \$11,000,000 per year for research expenditures not related to either cleanup or compensation for economic losses. If adopted, these authorizations become precedents for other off-budget financing proposals. It is our firm belief that all research proposals should stand the same scrutiny of the budgetary process as all proposed expenditures of federal funds. If Congress and the Executive Branch together decide that these research proposals warrant a high enough priority to be included in appropriated funds, then so be it. We object to their being included here.

Senator Magnuson's proposed Amendment No. 1958 also contains two areas with which we have a disagreement. Like Senator Gravel's amendment, we most strongly object to its attachment to S.1480. The second concerns preemption. The only rationale for

a federal oil spill cleanup and compensation regime such as is being proposed is to avoid duplicating and conflicting requirements and to bring economies of scale to bear on the problem. Senator Magnuson's amendment would preempt states in the area of funds and financial responsibility but would allow the states to impose taxes on petroleum for the purpose of purchasing and repositioning containment and cleanup equipment and allow them to set differing levels of liability.

It can be anticipated that these equipment pools will most likely be located along side existing industry equipment stockpiles and that mobilization contracts will be signed with the same cleanup contractors now under contract to industry and the U.S. Coast Guard. Allowing this provision to remain in Amendment No. 1958 allows the states to create a redundant capability whose costs will be borne by the consumer.

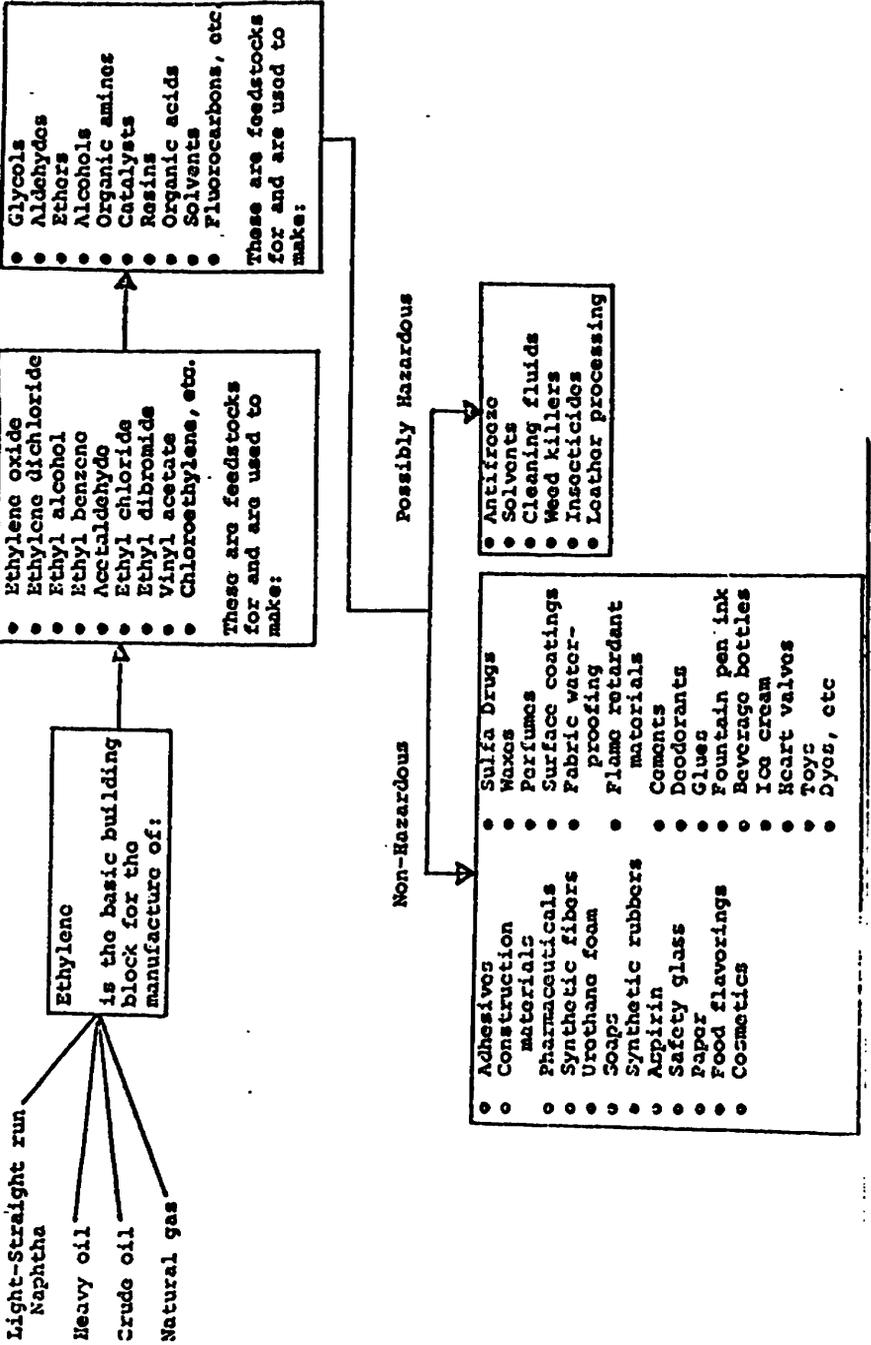
In addition, it seems inconsistent to preempt states in the areas of establishing taxes whose purpose is to finance cleanup and compensation funds and financial responsibility requirements but still allow them to set levels of liability that differ from the federal regime. We strongly suggest that Amendment No. 1958 be modified to strengthen the preemption language to cover cleanup equipment pools and liability laws.

S.1480, with or without oil spill provisions, is a poorly conceived approach to solving a serious public problem. We urge this committee to recognize the overly broad scope of S.1480 and

its inequitable approach. We encourage you to seek a new approach to managing the critical public issue of abandoned hazardous waste dumps that will gain broad public and industry support. We suggest that legislation similar to H.R.7020, modified to (1) place the tax on the dry weight of waste generated and presented for disposal and (2) restrict the broad discretionary power given the Administrative Agency, would form a good starting point for your consideration.

ATTACHMENT A

Ethylene



**Environmental Expenditures  
Reported to API**
**TABLE I  
SUMMARY TABULATION  
(Millions of Dollars)**

	YEAR										TOTAL
	1966	1970	1971	1972	1973	1974	1975	1976	1977	1978	
<b>TABLE II — TOTAL EXPENDITURES</b>											
1. Air .....	\$231	\$320	\$571	\$550	\$737	\$932	\$1,039	\$1,216	\$1,188	\$1,349	\$8,133
2. Water .....	224	259	415	379	402	530	629	822	950	884	5,494
3. Land and other .....		60	101	91	100	150	456	336	383	194	1,871
<b>TOTAL .....</b>	<b>\$455</b>	<b>\$639</b>	<b>\$1,087</b>	<b>\$1,020</b>	<b>\$1,239</b>	<b>\$1,612</b>	<b>\$2,124</b>	<b>\$2,374</b>	<b>\$2,521</b>	<b>\$2,427</b>	<b>\$15,498</b>
<b>TABLE III — CAPITAL EXPENDITURES</b>											
1. Air .....	\$145	\$181	\$391	\$305	\$436	\$527	\$601	\$536	\$339	\$429	\$3,890
2. Water .....	136	163	224	184	194	271	356	411	434	340	2,713
3. Land and other .....		34	57	51	52	97	396	269	184	89	1,229
<b>TOTAL .....</b>	<b>\$281</b>	<b>\$378</b>	<b>\$672</b>	<b>\$540</b>	<b>\$682</b>	<b>\$895</b>	<b>\$1,353</b>	<b>\$1,216</b>	<b>\$957</b>	<b>\$858</b>	<b>\$7,832</b>
<b>TABLE IV — ADMINISTRATIVE, OPERATING, AND MAINTENANCE EXPENDITURES</b>											
1. Air .....	\$ 62	\$108	\$143	\$198	\$251	\$352	\$389	\$635	\$792	\$864	\$3,794
2. Water .....	84	92	185	187	201	249	262	401	502	532	2,695
3. Land and other .....		24	41	37	43	50	55	63	197	101	611
<b>TOTAL .....</b>	<b>\$146</b>	<b>\$224</b>	<b>\$369</b>	<b>\$422</b>	<b>\$495</b>	<b>\$651</b>	<b>\$706</b>	<b>\$1,099</b>	<b>\$1,491</b>	<b>\$1,497</b>	<b>\$7,100</b>
<b>TABLE V — RESEARCH AND DEVELOPMENT EXPENDITURES</b>											
1. Air .....	\$ 24	\$ 31	\$ 37	\$ 47	\$ 50	\$ 53	\$ 49	\$ 45	\$ 57	\$ 56	\$ 449
2. Water .....	4	4	6	8	7	10	11	10	14	12	86
3. Land and other .....		2	3	3	5	3	5	4	2	4	31
<b>TOTAL .....</b>	<b>\$ 28</b>	<b>\$ 37</b>	<b>\$ 46</b>	<b>\$ 58</b>	<b>\$ 62</b>	<b>\$ 66</b>	<b>\$ 65</b>	<b>\$ 59</b>	<b>\$ 73</b>	<b>\$ 72</b>	<b>\$ 566</b>

**Environmental Expenditures  
Reported to API**

**TABLE II  
TOTAL EXPENDITURES  
(Millions of Dollars)**

	YEAR										TOTAL
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	
<b>1. AIR:</b>											
Capital .....	\$145	\$181	\$391	\$305	\$436	\$527	\$601	\$536	\$339	\$429	\$3,890
Administrative, operating & maintenance .....	62	108	143	198	251	352	389	635	792	864	3,794
Research & development ..	24	31	37	47	50	53	49	45	57	56	449
<b>TOTAL .....</b>	<b>\$231</b>	<b>\$320</b>	<b>\$571</b>	<b>\$550</b>	<b>\$737</b>	<b>\$932</b>	<b>\$1,039</b>	<b>\$1,216</b>	<b>\$1,188</b>	<b>\$1,349</b>	<b>\$8,133</b>
<b>2. WATER:</b>											
Capital .....	\$136	\$163	\$224	\$184	\$194	\$271	\$356	\$411	\$434	\$340	\$2,713
Administrative, operating & maintenance .....	84	92	185	187	201	249	262	401	502	532	2,695
Research & development ..	4	4	6	8	7	10	11	10	14	12	86
<b>TOTAL .....</b>	<b>\$224</b>	<b>\$259</b>	<b>\$415</b>	<b>\$379</b>	<b>\$402</b>	<b>\$530</b>	<b>\$629</b>	<b>\$822</b>	<b>\$950</b>	<b>\$884</b>	<b>\$5,494</b>
<b>3. LAND AND OTHER:</b>											
Capital .....	\$ 34	\$ 57	\$ 51	\$ 52	\$ 97	\$396	\$269	\$184	\$ 89		\$1,229
Administrative, operating & maintenance .....	24	41	37	43	50	55	63	97	101		611
Research & development ..	2	3	3	5	3	5	4	2	4		31
<b>TOTAL .....</b>	<b>\$60</b>	<b>\$101</b>	<b>\$ 91</b>	<b>\$100</b>	<b>\$150</b>	<b>\$456</b>	<b>\$335</b>	<b>\$383</b>	<b>\$194</b>		<b>\$1,871</b>
<b>4. AIR, WATER, LAND AND OTHER:</b>											
Capital .....	\$281	\$378	\$672	\$540	\$682	\$895	\$1,353	\$1,216	\$957	\$858	\$7,832
Administrative, operating & maintenance .....	146	224	369	422	495	651	706	1,099	1,491	1,497	7,100
Research & development ..	28	37	46	58	62	66	65	59	73	72	566
<b>TOTAL .....</b>	<b>\$455</b>	<b>\$639</b>	<b>\$1,087</b>	<b>\$1,020</b>	<b>\$1,239</b>	<b>\$1,612</b>	<b>\$2,124</b>	<b>\$2,374</b>	<b>\$2,521</b>	<b>\$2,427</b>	<b>\$15,498</b>

**Environmental Expenditures  
Reported to API**

**TABLE III  
CAPITAL EXPENDITURES  
(Millions of Dollars)**

	YEAR										TOTAL
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	
<b>1. AIR:</b>											
Exploration & production.	\$ 8	\$ 9	\$ 15	\$ 17	\$ 14	\$ 27	\$ 59	\$ 85	\$ 68	\$ 59	\$ 361
Transportation.....	2	3	8	3	10	22	37	30	26	20	161
Marketing.....	5	54	39	21	43	105	55	36	15	18	391
Manufacturing.....	130	115	329	264	369	373	450	385	230	332	2,977
<b>TOTAL.....</b>	<b>\$145</b>	<b>\$181</b>	<b>\$391</b>	<b>\$305</b>	<b>\$436</b>	<b>\$527</b>	<b>\$601</b>	<b>\$536</b>	<b>\$339</b>	<b>\$429</b>	<b>\$3,890</b>
<b>2. WATER:</b>											
Exploration & production.	\$68	\$ 74	\$ 82	\$ 68	\$ 62	\$ 92	\$117	\$135	\$187	\$206	\$1,091
Transportation.....	4	11	20	16	22	37	84	57	45	38	334
Marketing.....	8	8	10	14	17	19	25	16	13	13	143
Manufacturing.....	56	70	112	86	93	123	130	203	189	83	1,145
<b>TOTAL.....</b>	<b>\$136</b>	<b>\$163</b>	<b>\$224</b>	<b>\$184</b>	<b>\$194</b>	<b>\$271</b>	<b>\$356</b>	<b>\$411</b>	<b>\$434</b>	<b>\$340</b>	<b>\$2,713</b>
<b>3. LAND AND OTHER:</b>											
Exploration & production.	\$ 15	\$ 13	\$ 22	\$ 27	\$ 38	\$ 57	\$ 70	\$ 54	\$ 59	\$ 355	
Transportation.....	4	6	8	9	37	322	188	106	18	698	
Marketing.....	10	11	14	8	6	4	3	3	4	63	
Manufacturing.....	5	27	7	8	16	13	8	21	8	113	
<b>TOTAL.....</b>	<b>\$ 34</b>	<b>\$ 57</b>	<b>\$ 51</b>	<b>\$ 52</b>	<b>\$ 97</b>	<b>\$396</b>	<b>\$269</b>	<b>\$184</b>	<b>\$ 89</b>	<b>\$1,229</b>	
<b>4. AIR, WATER, LAND AND OTHER:</b>											
<b>TOTAL.....</b>	<b>\$281</b>	<b>\$378</b>	<b>\$672</b>	<b>\$540</b>	<b>\$682</b>	<b>\$895</b>	<b>\$1,353</b>	<b>\$1,216</b>	<b>\$957</b>	<b>\$858</b>	<b>\$7,832</b>

Environmental Expenditures  
Reported to API

**TABLE IV**  
**ADMINISTRATIVE, OPERATING AND MAINTENANCE EXPENDITURES**  
(Millions of Dollars)

	YEAR										TOTAL
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	
<b>1. AIR:</b>											
Exploration & production.	\$ 4	\$ 6	\$ 8	\$ 8	\$ 12	\$ 15	\$ 20	\$ 21	\$ 28	\$ 32	\$ 154
Transportation.....		6	6	3	4	3	7	16	11	12	68
Marketing.....	2	8	13	15	21	43	34	24	30	29	219
Manufacturing.....	56	88	116	172	214	291	328	574	723	791	3,353
<b>TOTAL.....</b>	<b>\$ 62</b>	<b>\$108</b>	<b>\$143</b>	<b>\$198</b>	<b>\$251</b>	<b>\$352</b>	<b>\$389</b>	<b>\$635</b>	<b>\$792</b>	<b>\$864</b>	<b>\$3,794</b>
<b>2. WATER:</b>											
Exploration & production.	\$ 42	\$ 16	\$ 84	\$ 66	\$ 69	\$ 90	\$ 87	\$ 115	\$ 141	\$ 154	\$ 864
Transportation.....	3	18	21	15	16	25	28	46	37	36	245
Marketing.....	4	3	5	6	7	8	11	13	13	22	92
Manufacturing.....	35	55	75	100	109	126	136	227	311	320	1,494
<b>TOTAL.....</b>	<b>\$ 84</b>	<b>\$ 92</b>	<b>\$185</b>	<b>\$187</b>	<b>\$201</b>	<b>\$249</b>	<b>\$262</b>	<b>\$401</b>	<b>\$502</b>	<b>\$532</b>	<b>\$2,695</b>
<b>3. LAND AND OTHER:</b>											
Exploration & production.		\$ 11	\$ 16	\$ 16	\$ 20	\$ 24	\$ 29	\$ 27	\$ 31	\$ 38	\$ 212
Transportation.....		4	5	9	8	8	8	14	128	24	208
Marketing.....		5	7	4	5	5	3	3	4	5	41
Manufacturing.....		4	13	8	10	13	15	19	34	34	150
<b>TOTAL.....</b>		<b>\$ 24</b>	<b>\$ 41</b>	<b>\$ 37</b>	<b>\$ 43</b>	<b>\$ 50</b>	<b>\$ 55</b>	<b>\$ 63</b>	<b>\$197</b>	<b>\$101</b>	<b>\$ 611</b>
<b>4. AIR, WATER, LAND AND OTHER:</b>											
<b>TOTAL.....</b>	<b>\$146</b>	<b>\$224</b>	<b>\$369</b>	<b>\$422</b>	<b>\$495</b>	<b>\$651</b>	<b>\$706</b>	<b>\$1,096</b>	<b>\$1,491</b>	<b>\$1,497</b>	<b>\$7,100</b>

Environmental Expenditures  
Reported to API

TABLE V  
RESEARCH AND DEVELOPMENT EXPENDITURES  
(Millions of Dollars)

	YEAR										TOTAL
	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	
<b>1. AIR:</b>											
Product .....	\$ 11	\$ 20	\$ 22	\$ 18	\$ 19	\$ 18	\$ 15	\$ 18	\$ 24	\$ 25	\$ 190
Process .....	12	10	14	26	29	33	32	25	30	28	239
Sampling & testing .....	1	1	1	3	2	2	2	2	3	3	20
<b>TOTAL .....</b>	<b>\$ 24</b>	<b>\$ 31</b>	<b>\$ 37</b>	<b>\$ 47</b>	<b>\$ 50</b>	<b>\$ 53</b>	<b>\$ 49</b>	<b>\$ 45</b>	<b>\$ 57</b>	<b>\$ 56</b>	<b>\$ 449</b>
<b>2. WATER:</b>											
Product .....	\$ 1	\$ 2	\$ 2	\$ 2	\$ 1	\$ 2	\$ 3	\$ 2	\$ 4	\$ 4	\$ 23
Process .....	2	2	3	4	4	7	6	7	6	7	48
Sampling & testing .....	1		1	2	2	1	2	1	4	1	15
<b>TOTAL .....</b>	<b>\$ 4</b>	<b>\$ 4</b>	<b>\$ 6</b>	<b>\$ 8</b>	<b>\$ 7</b>	<b>\$ 10</b>	<b>\$ 11</b>	<b>\$ 10</b>	<b>\$ 14</b>	<b>\$ 12</b>	<b>\$ 86</b>
<b>3. LAND AND OTHER:</b>											
Product .....				\$ 1	\$ 1		\$ 1	\$ 1			\$ 4
Process .....		\$ 2	\$ 1	1	2	2	2	2	\$ 2	\$ 3	17
Sampling & testing .....			2	1	2	1	2	1		1	10
<b>TOTAL .....</b>		<b>\$ 2</b>	<b>\$ 3</b>	<b>\$ 3</b>	<b>\$ 5</b>	<b>\$ 3</b>	<b>\$ 5</b>	<b>\$ 4</b>	<b>\$ 2</b>	<b>\$ 4</b>	<b>\$ 31</b>
<b>4. AIR, WATER, LAND AND OTHER:</b>											
<b>TOTAL .....</b>	<b>\$ 28</b>	<b>\$ 37</b>	<b>\$ 46</b>	<b>\$ 58</b>	<b>\$ 62</b>	<b>\$ 66</b>	<b>\$ 65</b>	<b>\$ 59</b>	<b>\$ 73</b>	<b>\$ 72</b>	<b>\$ 566</b>

Senator ROTH. Mr. McPhail.

STATEMENT OF DONALD W. McPHAIL, VICE PRESIDENT, ARCO  
CHEMICAL CO.

Mr. McPHAIL. My name is Don McPhail, and I am vice president of finance and planning of ARCO Chemical Co., a division of Atlantic Richfield.

We appreciate this opportunity to discuss the funding aspect of S. 1480 with you.

I want to emphasize two points at the outset: First Atlantic Richfield recognizes the urgent need to identify, contain, and clean up abandoned waste disposal sites.

Second, we believe the chemical industry as a whole should contribute to the needed cost of the cleanup. As one member of this industry, Atlantic Richfield supports congressional action to deal with this problem. We stand ready to pay our fair share. However, we cannot support the funding and liability provisions of S. 1480 because in our view these provisions are not equitable.

The funding system must be broadly based and fair. The report of the Senate Environment and Public Works Committee makes clear that the fund should work so that the price of produced goods fully reflects their total cost to society, including environmental costs.

The committee further states that the funding system should provide, and I quote, "The best balance of equity, rapid implementation, legal defensibility, administrative simplicity, and a minimum of any adverse, economic, and environmental impacts."

We agree with these goals but the present funding system, particularly that for organic chemicals, does not achieve them. Ideally, the fund should be based on hazardous wastes, taking into account the degree of risk. This polluter-pays concept is the most equitable approach. However, we recognize that it will take time to develop such a system. To start the fund quickly we propose an interim excise tax on the revenues from sales of, first, organic chemicals as defined by Standard Industrial Classification Major Group 28, chemical and allied products; second, specified inorganic elements and compounds; finally, refined petroleum products. Our written submission includes language to accomplish this.

Our excise tax is broadly based, equitable, and can be implemented quickly, and will be simple to administer and enforce.

The funding scheme of S. 1480, on the other hand, is inequitable in several respects. S. 1480 assumes that the fee can be passed down from the initial stage of the chemical production cycle through all of the subsequent stages. The committee hoped this scheme would spread the cost broadly. We seriously question whether passthrough will always occur. Passthrough will depend upon competitive market conditions, relative technologies of specific petrochemical plants, and the general economic climate.

In today's depressed market we could not pass through the feedstock fee. Whenever passthrough does not occur, producers of highly toxic chemicals such as those identified in the committee report to have polluted Love Canal and other sites, would not contribute to the fund.

Spreading the organic chemicals fee over the entire SIC code will make certain that each stage of the production cycle will pay its share. An excise tax on sales will also reflect the increase in value throughout the production cycle.

A further example of S. 1480's inequity is that methane and butane used as fuel are subjected to the feedstock fee. When burned as fuel, these substances do not generate any hazardous waste. And remember that natural gas is 98 percent methane and only 5 percent is used for chemical feedstocks.

Our excise tax proposal is easy to administer and implement; tax collection could start with the first quarter following enactment. It could use the existing tax enforcement structure. S. 1480 would also require Treasury and EPA to promulgate regulations establishing a new reporting and accounting system. This would take a good deal of time and could delay abandoned waste site cleanup.

I appreciate Senator Bradley's raising and bringing to your attention the Atlantic Richfield proposal this morning. I would like to clarify a number of responses that were made to questions.

In response to Mr. Sunley's remark regarding a tax credit, we eliminated this provision from our tax proposal after our discussions with Treasury indicated an implementation problem. Our written submission to the committee reflects this change.

In addition, the number of collection points can be reduced dramatically and the burden on small companies reduced by exempting companies below a predetermined revenue level.

In response to a question from Senator Chaffee, Mr. Sunley made an assertion concerning chemical feedstock imports. Contrary to Mr. Sunley's answer, only relatively small volumes of the primary

petrochemicals identified in 1480 are imported. However, they are imported in the form of downstream products, which therefore would escape the feedstock fee.

This would add another burden on domestic manufacturers that would not fall on their foreign competitors. Our tax proposal would subject most of these imports to the tax.

I want to assure the committee that contrary to Mr. Sunley's comment, we are not trying to delay the legislation but we feel that our proposals are made in a constructive manner and, if anything, will speed the legislation.

Let me just quickly summarize our position: Atlantic Richfield Co. supports responsible and equitable legislation to deal with the problem of abandoned waste sites. We cannot support the inequitable funding and liability provisions of S. 1480. A broad-based excise tax should be adopted to initiate the fund quickly. Our proposal would spread the cost over the appropriate substances and would eliminate the inequities such as those concerning the fuel use of methane or butane

The legislation should mandate the development of a waste-based fee system weighted for the degree of hazard. The legislation should cover abandoned waste sites only and, a person's liability should be determined by the damages he causes and not his ability to pay.

Thank you for your time.

Senator ROTH. Thank you.

[Mr. McPhail's prepared statement follows:]

## TESTIMONY

OF

DONALD W. McPHAIL  
VICE PRESIDENT  
ARCO CHEMICAL COMPANY

- o Atlantic Richfield Company supports responsible and equitable legislation to deal with the problem of abandoned waste sites
- o We cannot support S.1480 because of the inequitable funding and liability provisions
- o A broad based excise tax should be adopted to initiate the fund quickly. This tax would spread the cost over the appropriate substances and would eliminate inequities such as those concerning the fuel use of methane and butane
- o The legislation should mandate the development of a waste based fee system, weighted for degree of hazard
- o The legislation should cover abandoned waste sites only, and a person's liability should be determined by the damages he causes and not his ability to pay.

## ATLANTIC RICHFIELD STATEMENT

S. 1480

"ENVIRONMENTAL EMERGENCY RESPONSE ACT"

SENATE FINANCE COMMITTEE

SEPTEMBER 11, 1980

Atlantic Richfield Company recognizes that waste disposal sites, abandoned during past decades, pose especially troubling environmental and health problems to society at large and that some legislation should be enacted by Congress to remedy those problems. Given our overall industry experience in hydrocarbon production, petroleum refining, petrochemicals and nonferrous metals mining and manufacturing, we believe we are somewhat uniquely positioned to offer informed opinion as to the appropriate means of redressing the problems American society has incurred while enjoying the benefits of chemical technologies brought to market over the past several decades.

We understand the sense of urgency that has compelled the drafting and consideration of S. 1480 to date. We understand the broad societal concern resulting from recent severe and troubling incidents. We are convinced, however, that S. 1480 in its present form contains major funding and liability inequities that must be corrected before legislation of its kind becomes law.

Atlantic Richfield's position is that any emergency response fund should be based on the generation or disposal of hazardous wastes, according to degree of hazard. Realizing the time required to implement such a waste based fee system properly, we have also proposed a two-year interim excise tax on the sales of petroleum refiners, producers of specified inorganic elements and compounds, and most organic chemical companies as defined by Standard Industrial Classification Major Group 28, "Chemicals and Allied Products." Our proposal is contained in Attachment A.

The report issued by the Senate Committee on Environment and Public Works (No. 96-848) to accompany S. 1480 makes clear that the prices of produced goods should equitably reflect their full costs to society, including environmental costs, and that the funding mechanism for remedial legislation should operate accordingly. Atlantic Richfield Company supports this concept in principle. Unfortunately, the specific funding mechanism of S. 1480, in our judgment, is seriously deficient in that: (1) it does not mandate a fee system based on the generation or disposal of hazardous wastes according to their degree of hazard, and (2) its fee system imposes an inequitable, counterproductive burden on the petrochemical industry, far in excess of its relative contribution to the hazardous waste disposal problem.

The Environment and Public Works Committee report contends that the funding mechanism proposed in S. 1480, primarily fees to be levied on specified petrochemical feedstocks,

represents "the best balance of equity, rapid implementation, legal defensibility, administrative simplicity, and a minimum of any adverse economic and environmental impacts (page 72)." Respectfully, we beg to differ. The proposed fee system ignores critical structural aspects of the chemical industry.

The petrochemical industry and the highly competitive market in which it operates make it probable that in a significant number of cases a fee on specified feedstocks will not be able to be passed through completely, or at all times. Since the nature of the petrochemical market is relatively demand elastic -- that is, a percentage price increase will reduce demand by a larger percentage -- and since both excess production capacity and differing operating technologies exist, some producers will probably be forced by market conditions to absorb the fees in part or in toto, to retain their market shares.

Passthrough, in sum, will always depend upon competitive market considerations, relative technologies of specific petrochemical plants and the general economic climate.

The structure of the chemical industry is also important in terms of what the industry produces. If one considers the list of 297 hazardous substances contained in Section 311 of the Clean Water Act, it can be seen that only approximately 60 percent of primary petrochemical feedstocks--ethylene, propylene, butadiene, benzene, xylene and toluenes--ultimately goes

into the production of hazardous substances. It is clear that substantial percentages of petrochemical feedstocks do not end up as hazardous substances. Therefore, under S. 1480, a number of hazardous substances produced downstream in the chemical industry could actually escape any fee. This would constitute a major inequity as far as the stated intention of S. 1480 goes.

It should also be noted that S. 1480 provides no incentives for downstream producers to minimize their generation of hazardous wastes or to reduce the toxicity of their products.

While S. 1480 would create an emergency response fund, the present funding mechanism is radically inequitable given the actual production cycle of the chemical industry.

With respect to the treatment of methane and butane (natural gas is 98 percent methane) in S. 1480, the Environment and Public Works Committee Report clearly stipulates a fuel-use exemption (page 71). But the actual language of S. 1480, Section 5(4)(f) leaves such an exemption vague and at the rulemaking discretion of the Secretary of the Treasury in consultation with the Administrator of EPA. This is clearly an oversight that must be corrected.

If not corrected, the imposition of these fees will cause severe inequities for fuel producers and fuel consumers alike. It is the intent of S. 1480 to levy fees upon those products that result in hazardous waste. When used as fuels, methane and butane do not produce hazardous waste.

An exemption from the fee for methane and butane when they are used as fuel must be guaranteed, as a matter of equity.

For the reasons discussed thus far, Atlantic Richfield has offered an alternative funding proposal along the following lines:

First, the fund should ultimately be derived from a waste based fee system, weighted according to degree of hazard. We believe that all fees should be based on the generation or disposal of hazardous wastes. We have drafted our proposal, however, to accord with the definition of hazardous substances in S. 1480, which includes, of course, hazardous wastes. We recommend that definition be reconsidered, given its unnecessarily broad scope. A focused waste-based fee would provide effective incentives to recycle and reuse what would otherwise be waste, and to put in place safe disposal practices as soon as possible. Moreover, the cost of cleaning up past, present and future problems would be spread broadly among producers. Finally, such a fee would constitute a logical extension of the prospective hazardous waste management system mandated by the Resource Conservation and Recovery Act.

Secondly, to initiate the fund quickly, an interim excise tax should be imposed on the revenues from sales of: (a) chemical manufacturers within Standard Industrial Classification Major Group 28, "Chemical and Allied Products," with minor exceptions, (b) refined petroleum products and (c) specified inorganic elements and compounds. Tax collection

could start with the first quarter following enactment. An excise tax approach would also use the existing tax enforcement structure. S. 1480 would require Treasury and EPA to set up a new reporting and accounting system that would require additional regulations. This will take a good deal of time and could well delay abandoned waste site cleanup.

Moreover, an excise tax would capture the appropriate manufacturing base and allocate the financial burden equitably across those manufacturers perceived by Congress and the public to have substantial responsibility for hazardous waste pollution.

Such an interim excise tax would also provide sufficient time flexibility to actually put in place an equitable hazardous waste based fee system, given the data base and administrative apparatus that will have to be developed. In the proposal we have submitted, the interim excise tax runs through fiscal years 1981 and 1982.

Thirdly, we propose a fund total of approximately \$1.2 billion over its five year statutory life, 75 percent financed by industry/25 percent by federal appropriations, with the actual amount of industry's contribution to be directly proportional to actual federal appropriations. In an era of necessary fiscal restraint, the fundamentally societal nature of the hazardous waste problem dictates that some fiscal control be built into an emergency response fund, so that Congress can effectively maintain some oversight through the annual appropriations process.

The proposal set forth in Attachment A would not only mandate a shift to a hazardous substance based fee system (ideally, a hazardous waste based fee system), but would also create a fund of adequate dimensions in the near term by levying an excise tax upon the sales of petroleum refiners, producers of specified inorganic elements and compounds, and most importantly, upon the sales of major organic chemical companies across the entire chemical industry. This would equitably distribute the costs of an emergency response fund according to the actual hazard and value added at critical points in the production cycle. In addition, unambiguous provisions for exemptions for fuel-use and recycling would immediately provide rational incentives to minimize the future social costs of chemical technologies -- ostensibly the intent of S. 1480.

In summary:

- Atlantic Richfield Company supports responsible and equitable legislation to deal with the problem of abandoned waste sites.
- We cannot support S. 1480 because of the inequitable funding and liability provisions.
- A broadly based excise tax should be adopted to initiate the fund quickly. This tax would spread the cost over the appropriate products and would eliminate inequities such as those concerning the fuel use of methane and butane.
- The legislation should mandate the development of a waste based fee system, weighted for degree of hazard.
- The legislation should cover abandoned waste sites only. A person's liability should be determined by the damages he causes, and not his ability to pay.

## ATTACHMENT A

## ATLANTIC RICHFIELD HAZARDOUS WASTE FEE PROPOSAL

ATLANTIC RICHFIELD HAZARDOUS WASTE FEE PROPOSAL

Atlantic Richfield Company recognizes the need to identify, contain and clean up abandoned waste disposal sites. Given our broad industry experience in petroleum, petrochemicals and mining, we believe we are rather uniquely positioned to speak to the manner in which Congress might proceed. In our judgment, the attached legislative proposal represents a constructive, rational and equitable means of financing "superfund" legislation now under consideration in both Houses.

Philosophically, we believe that any fund should be based on the generation or disposal of hazardous wastes. However, we have drafted the proposal to accord with the definition of hazardous substances in S.1480, which includes, among other things, hazardous wastes. We recommend this definition be reconsidered, given its unnecessarily broad scope. A focused, waste-based fee would provide effective incentives to recycle and reuse what would otherwise be waste, and to put in place safe disposal practices as soon as possible. Moreover, the cost of cleaning up past, present and future problems would be spread broadly among producers of these substances.

We recognize, however, that the data base and administrative apparatus necessary to manage such a fund will take time to implement, but the problem requires immediate remedy. Therefore, we also propose a two-year interim funding mechanism, financed by excise taxes levied upon revenues derived from the sale of organic chemicals, specified inorganic elements and compounds, and refined petroleum products.

In the case of organic chemicals, the interim excise tax would apply to all chemical manufacturers within Standard Industrial Classification (SIC) Major Group 28 (with minor exceptions identified in the attached). Easy to administer, this SIC code approach would include the appropriate manufacturing base and equitably allocate the burden across those industries perceived by Congress and the public to be responsible in regards to the problems of hazardous substance pollution.

Several additional points should be noted with respect to our proposal:

Atlantic Richfield Hazardous Waste Fee Proposal (Cont'd)

- (1) The aggregate size of the Fund would amount to \$1.2 billion. Industry contributions would be tied to federal expenditures on a three to one basis.
- (2) Proper implementation of the proposed two-year interim trust fund raised by excise taxes should entail amendment of subtitle D of the Internal Revenue Code; specifically, addition of a new "Miscellaneous Excise Tax" category for "environmental response," as well as procedural provisions including filing requirements, amended returns, interest and penalties, and refunds in case of overpayment.
- (3) With regard to the fee system for hazardous substances, consideration should be given to credits, against federal fees otherwise required, for fees paid into duplicative state hazardous substance response funds.
- (4) A fee exemption for the fuel use of methane and natural gas liquids (i.e., ethane, propane and butanes) should be guaranteed. When used as fuel, natural gas (methane) and natural gas liquids are completely unrelated to hazardous waste generation, since they generate no waste.

Our proposal is necessarily schematic. We would welcome the opportunity to discuss its details and answer any questions you might have.

Attachment

July 21, 1980

**Section 5: Hazardous Substance Response Trust Fund****(a) Establishment of Fund:**

There is hereby established in the Treasury of the United States a Hazardous Substance Response Trust Fund (hereinafter referred to as the "Fund"). The Fund shall be administered by the President and the Secretary of the Treasury (hereinafter referred to as the "Secretary") as specified in this section. The Fund may sue and be sued in its own name.

**(b) (1) The Fund shall be constituted from:**

- (A) all excise taxes collected pursuant to subsection (c);
- (B) all fees collected pursuant to subsection (e);
- (C) all monies received on behalf of the Fund under section 6;
- (D) amounts appropriated to the Fund pursuant to paragraph (4) of this subsection;
- (E) all monies transferred to the Fund under section 9 (d) (4) of this Act;
- (F) all interest received from the investment of monies held by the Fund.

**(2) The total amount which may be imposed as excise taxes under subsection (c) shall not exceed:**

- (A) \$70,000,000 for fiscal year 1981, and
- (B) \$118,000,000 for fiscal year 1982.

**(3) The total amount which may be collected as fees under subsection (e) shall not exceed \$237,000,000 for each of the fiscal years 1983 through 1985.**

Section 5: Hazardous Substance Response Trust Fund (Cont'd)

- (4) There are authorized to be appropriated to the Fund for the fiscal year:
- (A) 1981, \$24,000,000
  - (B) 1982, \$40,000,000
  - (C) 1983, and each fiscal year thereafter through 1985, \$79,000,000.

(c) Excise Tax

- (1) Beginning ninety days after the enactment of this Act, and for fiscal years 1981 and 1982, the Secretary shall promulgate regulations that shall impose:
- (A) on each person engaged in the production of organic chemicals or specified inorganic elements or compounds, an excise tax upon the revenues derived annually from the sale of such substances, and
  - (B) on each person engaged in the refining of crude oil, or the importation of refined petroleum products, an excise tax upon the revenues derived annually from the sale of such refined petroleum products.

Such excise taxes shall be imposed annually and on the basis of a schedule of rates established by the Secretary at such a level as he estimates necessary to recover the amounts specified in subsection (1). The schedule shall be modified annually by the Secretary in accordance with this subsection, and shall be adjusted to impose excise taxes equitably among the substances subject to the excise tax during the fiscal year.

- (2) The organic chemicals subject to the excise tax imposed under this subsection are those chemicals and substances which are manufactured by one or more persons or establishments designated by the President as having a Standard Industrial Classification Code within Major Group 28 -- "Chemicals and Allied Products" -- excluding those chemicals

Section 5: Hazardous Substance Response Trust Fund (Cont'd)

and substances manufactured by persons and establishments having a Standard Industrial Classification Code for "Industrial Inorganic Chemicals" (Group No. 281) and "Miscellaneous Chemical Products" (Group No. 289) groups of manufacturing establishments.

- (3) The specified inorganic elements and compounds subject to the excise tax imposed under this subsection are:
- (A) arsenic and the weight percent of arsenic in arsenic trioxide, cadmium, chromium and the weight percent of chromium in chromite, sodium dichromate, potassium dichromate, lead and the weight percent of lead in lead oxide, mercury, the weight percent of barium in barium sulphide, antimony and the weight percent of antimony in antimony trioxide and antimony sulfide, cobalt, nickel, the weight percent of tin in stannic chloride and stannous chloride;
  - (B) chlorine, the weight percent of fluorine in hydrofluoric acid and bromine;
  - (C) the weight percent of hydrogen in phosphoric acid, sulfuric acid, hydrochloric acid, or nitric acid; and
  - (D) elemental phosphorous
- (4) The Secretary shall define by regulation categories of firms or persons subject to excise taxes upon revenues derived from the sale of specified inorganic elements and compounds.
- (5) The Secretary shall impose excise taxes irrespective of whether individual substances are defined as a "hazardous substance" under section 2 (b) (13) of this Act.
- (6) No excise tax shall be imposed upon:
- (A) any quantity of organic chemical or specified inorganic element or compound which is used in the fertilizer production industry;

Section 5: Hazardous Substance Response Trust Fund (Cont'd)

(B) any organic chemical or specified inorganic element or compound which is produced or sold as a result of the operation of pollution control facilities, as defined in Section 169 of the Internal Revenue Code of 1954, as amended.

## (d) Amount of Excise Tax

- (1) The aggregate amount of excise taxes imposed during fiscal years 1981 and 1982 pursuant to regulations under subsection (c) with respect to revenues derived from the sale of organic chemicals shall not exceed the lesser of:
- (A) such amount as is necessary to produce revenues equal to, for the fiscal year:
- (i) 1981, \$43,000,000, and  
(ii) 1982, \$70,000,000;
- (B) such amount as is necessary to produce revenues equal to 180 percent of the amounts appropriated under section 5 (b) (4) for the fiscal year concerned.
- (2) The aggregate amount of the excise taxes imposed pursuant to regulations under subsection (c) during fiscal years 1981 and 1982 with respect to the sale of specified inorganic elements or compounds shall not exceed the lesser of:
- (A) such amount as is necessary to produce revenues equal to, for the fiscal year:
- (i) 1981, \$14,000,000, and  
(ii) 1982, \$24,000,000;
- (B) such amount as is necessary to produce revenues equal to 60 percent of the amounts appropriated under section 5 (b) (4) for the fiscal year concerned.

Section 5: Hazardous Substance Response Trust Fund (Cont'd)

(3) The aggregate amount of the excise taxes imposed pursuant to regulations under subsection (c) during fiscal years 1981 and 1982 with respect to the sale of refined petroleum products shall not exceed the lesser of:

(A) such amount as is necessary to produce revenues equal to, for the fiscal year:

- (i) 1981, \$14,000,000, and
- (ii) 1982, \$24,000,000;

(B) such amount as is necessary to produce revenues equal to 60 percent of the amounts appropriated under section 5 (b) (4) for the fiscal year concerned.

(e) Hazardous Substance Fees

(1) Within two years after the date of enactment of this Act, the Administrator of the Environmental Protection Agency, in consultation with the Secretary, shall promulgate regulations establishing a fee system based upon the production, manufacture and importation or generation and disposal of hazardous substances. Such fee system shall, to the extent practicable, be based upon the degree of hazard and the risk of harm to public health and the environment posed by various categories of hazardous substances.

Such fee system shall minimize administrative, regulatory and reporting procedures by relying on existing or readily obtainable information.

(2) Any such fees shall be established at appropriate levels adequate to assure, to the extent reasonably possible, that:

- (A) the costs imposed by such fees are spread as broadly as possible throughout the economy;
- (B) incentives for proper handling and disposal of hazardous substances are maximized;
- (C) disincentives for improper or illegal handling and disposal of hazardous substances are maximized;

Section 5: Hazardous Substance Response Trust Fund (Cont'd)

- (D) incentives to promote resource recovery are maximized, and
  - (E) fee exemptions for the fuel use of hazardous substances otherwise subject to the fee are provided.
- (3) Aggregate funds collected under the hazardous substance based fee system shall be limited to the lesser of:
- (A) \$237,000,000 for each of the fiscal years 1983 through 1985, or
  - (B) such amounts as are necessary to produce revenues equal to 300 percent of the amounts appropriated under section 5 (b) (4) for the fiscal years 1983 through 1985.
- (4) Within two years from the date of enactment of this Act, no further amounts shall be collected under the excise tax system established under subsections (c) and (d), irrespective of whether the hazardous substance based fee system has been promulgated under this subsection.
- (5) All excise taxes paid in excess of the amounts as determined by subsections (c) and (d) shall be credited against payments required under the hazardous substance based fee system promulgated pursuant to this subsection. To the extent that excise taxes paid are in excess of those required under the hazardous substance based fee system, they shall be refunded to the payor at the close of the fiscal year 1983 to the extent in excess of that required under the hazardous substance based fee system.
- (6) There is authorized to be appropriated not more than \$1,000,000 to remain available until expended to carry out this subsection.

Atlantic Richfield Company  
Amendments to S. 1480

Atlantic Richfield Company recognizes that waste disposal sites, abandoned during past decades, pose especially troubling environmental and health problems to society at large, and that some legislation should be enacted by Congress to remedy those problems. We understand the sense of urgency that has compelled the drafting and consideration of S. 1480 to date. We cannot, however, support S. 1480 in its present form -- in large part because the liability scheme it proposes would assess damages according to ability to pay, not according to actual responsibility.

We have, therefore, drafted language to amend liability-related aspects of S. 1480 that are seriously inequitable (see attached). These include:

- (A) Apportionment. Liability should be apportioned according to actual responsibility, without reference to ability to pay.
- (B) Oil and Gas Production. "Releases" common and essential to normal oil and gas production should be exempted. Tens of thousands of abandoned wells, environmentally benign, should not come under the retroactive purview of S. 1480.
- (C) Natural Resource Liability. All relevant factors must be identified and weighed prior to natural resource restoration or rehabilitation. Procedures should be mandated to insure proper evaluation of damages and remedies.

- (D) Financial Limits to Liability. So that companies can remain insurable, and, therefore, able to plan effectively for catastrophic "incidents," limits to liability must be established.
- (E) Identification of Hazardous Substances. Substances should be defined as "hazardous" only after scientific analysis, conducted according to clear cut and consistent regulatory procedures.
- (F) Federally Permitted Releases. The definition of a federally permitted release should be consistent with final RCRA permit compliance as those permits are issued in fact.
- (G) Defenses. Liability defenses should be commensurate with established tort law, including traditional definitions of an act of God and acts of third parties.

We would welcome the opportunity to discuss all our proposed amendments as well as other aspects of S. 1480.

Attachment

AttachmentATLANTIC RICHFIELD COMPANYS. 1480 AMENDMENTS

## A. Liability

(1) Defenses

For S. 4(a), page 24, lines 17-21, substitute the following:

"Except where the person otherwise liable under this subsection can prove that a discharge, release, or disposal was caused by (i) an act of God, (ii) an act of war, (iii) negligence on the part of the Government of the United States, or (iv) an act or omission of a third party if the defendant establishes that he exercised due care with respect to the hazardous substance concerned, taking into consideration the characteristics of such hazardous substance, and notwithstanding any other provision or rule of law--"

With regard to definition of an act of God, on page 3, lines 3-5; delete: "the effects of which could not have been prevented or avoided by the exercise of due care or foresight."

Rationale: Such defenses are equitable and consistent with established legal precedent. Furthermore, they will allow persons exposed to the expanded liability under S. 1480 to remain insurable.

The term "act of God" is defined so narrowly as to virtually eliminate it as a defense against liability. Almost any activity can be challenged retrospectively on the grounds of failure to exercise "due care or foresight."

(2) Apportionment

For S. 4(f)(1), page 31, lines 14-22, substitute the following:

"(A) In any case where a person held liable under this section establishes that only a portion of the total costs described in subsection (a) are attributable to a hazardous substance discharged, released, or disposed by him, the liability of such person shall be limited to that portion of damages to which such person contributed.

(B) To the extent apportionment is not established under subparagraph (A), the court shall apportion the liability, to the maximum extent practicable, among the parties, based upon evidence presented by the parties as to their contributions.

(C) A person held under this section and whose liability has been limited under (A) may seek indemnification from the Fund to the extent his payment of claims under subsection (a) has exceeded his proportionate liability under subparagraph (A)."

**Rationale:** Where responsibility for the costs of damages can be legitimately apportioned among liable parties, equity dictates such apportionments be made. In the event one or more liable parties cannot meet their apportioned liability, equity dictates that the Fund, not the remaining proportionally liable parties, should defray said costs.

(3) Financial limits to liability

On page 40, after line 4, add the following:

"(o) The liability of a person under subsection (a) for a release shall not exceed \$50,000,000 unless the President can demonstrate that such release was the result of willful negligence or willful misconduct within the privity and knowledge of such person. Where the release is non-sudden, gradual, or of a continuing nature the foregoing limit on liability applies to all costs, expenses and damages under subsection (a) during the five years following the date of notification of such release under S.3(a)(3)(A). The President is authorized to establish, with respect to any class or category of facilities, a maximum limit of liability of less than \$50,000,00 but not less than \$8,000,000."

**Rationale:** Congress has repeatedly recognized that some financial limit to strict, joint and several liability must be provided to potentially liable parties; see for example, the Price-Anderson Act, which provides such a financial limit in the case of a nuclear reactor incident. Companies must be able to plan in some fashion for "catastrophic" incidents such as hazardous substance releases particularly when those releases may be non-sudden, gradual, or of a continuing nature; a primary component of such planning is the ability to remain insurable.

The financial limits suggested here are for example only, though they are identical to those in S.311 of the Water Act.

(B) Hazardous Substance Definition

(4) Subrogation

On page 77, line 15, delete "or any" and add a ".".

On page 77, line 25, delete "any law" and substitute "this Act".

**Rationale:** The Fund can only be subrogated to the extent it makes a payment. The Fund can make a payment only for damages pursuant to this law. Therefore, it can only be entitled by subrogation to claims that a claimant has under this Act and were paid by the Fund-not under any other law."

The language appears to permit the Fund, by subrogation to seek indemnification pursuant to state liability law. The result would be that a person who has a defense under this federal statute could nonetheless be sued for indemnification by the Fund under a state law which does not provide a comparable defense.

(5) Identification of Hazardous Substances

For S. 3(a)(2), page 14, lines 1-11, substitute the following:

"The President shall promulgate and revise as may be appropriate, regulations designating as hazardous substances, in addition to those referred to in section 2(b)(13)(A) through (E) of the Act, such elements and compounds which, when discharged or released into the environment, present substantial danger to the public health or the environment, and in such regulations shall determine those quantities of such hazardous substances the discharge or release of which would be harmful to the public health or environment."

With regard to Section 2(b) 13(A) through (G); on page 8, line 21, change "(F)" to "(E)".

Rationale: Defining hazardous substances must entail thoroughgoing regulatory procedures, consonant with rules of scientific evidence, and risk analysis. Ill-defined, all-encompassing definitions must be voided. Sections 2(b)(13)(A) through (E) reflect established regulatory procedures. Section 3(a)(2) should embody such procedures as well.

Moreover, petroleum, including crude oil and fractions thereof, not otherwise specifically listed or designated as hazardous substances under subparagraph (A) through (E) of Section a(b)(13) should not be exposed to inclusion under the catch-all subparagraph (F), since the language of lines 17-21, page 8, purports to exclude such petroleum specifically from definition as a hazardous substance.

(6) Federally permitted releases

With respect to Section 2(b)(18)(E), on page 12, lines 19-23; delete: "when such permit specifically identifies the hazardous substances and makes such substances subject to a standard of practice, control procedure or bioassay limitation or condition, or other control on the hazardous substances in such procedures."

Rationale: The definition of a "federally permitted release" should be consistent with final RCRA permit compliance as those permits are issued in fact. Otherwise, the "federally permitted" release concept cancels itself out.

(7) Crude Oil and Natural Gas Production

1. On page 13, after line 20, add the following subsection:

"(19) the term "injection associated with crude oil or natural gas production" means (A) injection of fluids or other materials for the purpose of stimulation or treating wells for the production of crude oil, natural gas or water or wells for the injection of fluids or other materials associated with the production of crude oil or natural gas, (B) injection of fluids or other materials for the purpose of secondary, tertiary, or other enhanced recovery of crude oil or natural gas, and (C) injection of fluids or other materials which are brought to the surface in conjunction with the production of crude oil or natural gas and which are reinjected."

2. On page 15, line 4, after "release" insert "or an injection associated with crude oil or natural gas production."
3. On page 15, line 11, after "release" insert "or an injection associated with crude oil or natural gas production."
4. On page 15, line 18, after "release" insert "or an injection associated with crude oil or natural gas production."
5. On page 16, line 5, after "release" insert "or an injection associated with crude oil or natural gas production."

Rationale: S. 1480, as presently drafted and amended, covers a number of past and present facilities and "releases" common and essential to oil and natural gas production operations which pose no danger to the public health or environment.

Included are well stimulation and treatment activities intended to improve the performance of crude oil and natural gas production wells, water source wells, water disposal wells and enhanced recovery injection wells. These activities are not within the scope of the federal Underground Injection Control (UIC) program. In some cases, a state or federal permit (on federal lands), similar to a drilling permit, is required; but in the vast majority of cases (thousands per year) no permit is required. The stimulation or treatment is of the zone of production or injection; and the treatment fluids typically are either produced back, dissipated, or become spent chemically.

Another type of activity included in S. 1480 is the injection of fluids for enhanced crude oil or natural gas recovery. This activity has been regulated for many years under effective state permit programs. It would, however, come within the scope of the UIC program once it is finally implemented. As of this writing, implementation of the federal UIC program is one or two years away. EPA standards for state programs were promulgated in June 1980, but the states have up to 18 months to develop their programs. Accordingly, the Bentsen amendment on "federally permitted releases" would not cover active injection operations during this interim period.

The other type of activity, related to the above, is the reinjection of produced water not used in enhanced recovery. Underground injection of produced water is generally into deep, saltwater aquifers located below any fresh water zones. These operations have also been conducted for years under effective state permit programs. As with enhanced recovery injection, these operations would not come within the purview of the Bentsen amendment on "federally permitted releases."

The retroactivity of S. 1480 creates special programs for the types of situations described here. There are literally tens of thousands of abandoned wells which were either stimulated, treated, or used for injection. Will the owners of all these facilities or their operators at some past time(s) be required to comply with the notice, penalties and liability provision? Consider the lack of danger posed and the tremendous number of these facilities and operations; such requirements would be not only impossible, but totally unwarranted.

(C) Technical Amendments

(8) Natural Resources Liability

For S. 4(b), pages 27 and 28, line 25 and following, substitute:

"The President, or the authorized representative of any State, shall act on behalf of the public as trustee of such natural resources to recover for such damages. Sums recovered shall be available for use to restore, rehabilitate, or acquire the equivalent of such natural resources by the appropriate agencies of the Federal Government or the State government. Restoration, rehabilitation, or acquisition shall be contingent upon findings of independent feasibility studies, conducted to identify those appropriate remedial measures most likely to redress effectively the natural resources damage under consideration on a cost/benefit basis. Such studies shall take into account existing and anticipated restoration or rehabilitation processes, engineering aspects, non-environmental impacts (including energy requirements) and such other factors as the President or the authorized State representative deems appropriate."

Rationale: Intelligent redress of natural resource damage must be based upon adequate analysis of many, sometimes competing, considerations. All relevant factors must be identified and weighed prior to restoration, rehabilitation or acquisition decisions requiring sizable long-term commitments. Furthermore, scope of redress should be consistent with established statutes; for example, the authority granted states under the Safe Drinking Water Act.

Intelligent redress is often counter-intuitive. Oil spill response procedures are a case in point, having evolved from procedures that concentrated upon visible damage but in fact entailed further environmental degradation to procedures and decisions specifically designed to minimize total environmental degradation.

To cite one important case: Without doubt, current development of groundwater protection policy will undergo a similar evolution among many options ranging from no action (due to state designations for aquifer usage), to containment, treatment of additional treatment prior to use, cleanup of entire aquifer, or alternate source.

Finally, equity dictates that natural resources damage liability should not exceed the eventual cost of remediation.

**(9) Post Closure Liability Found**

With regard to S. 5(k), pages 57-59; delete

**Rationale:** The national interest clearly dictates that the primary problem of hazardous waste disposal facility siting must be remedied. Several recent studies have been conducted on this problem: the EPA-contracted Siting of Hazardous Waste Management Facilities and Public Opposition (11779), the Eckhardt Subcommittee study (H.R. 96 - IFC-31), and the GAO report, How to Dispose of Hazardous Waste - A Serious Question That Needs to be Answered. They all conclude that as more wastes are declared hazardous, as existing facilities, unable to meet RCRA standards close, and as wastes from inactive problem sites are redispersed, public opposition to new sites will increase, jeopardizing the entire hazardous waste regulatory effort.

Since post-closure provisions cannot be divorced from siting considerations, it is surely premature to legislate and put in place a post-closure liability fund, absent a siting solution.

Rather, logic dictates that post-closure liability provisions should be enacted in legislation that directly addresses the siting problem.

**(10) Notification**

For S. 3(a)(4)(A), page 16, lines 16-25 through page 17, lines 1-3; substitute the following:

"(4)(A) Within one hundred and eighty days after the enactment of this Act, any person who owns or operates a facility or site at which hazardous substances (other than as defined in section 2(b)(13)(G) of this Act) are stored or disposed of, or any person who has generated said hazardous substances stored at such facility or site which is not in compliance with a permit or accorded interim status under subtitle C of the Solid Waste Disposal Act shall notify the Administrator of the Environmental Protection Agency of the existence of such facility or site, specifying the amount and type of any hazardous substances to be found there, and any known suspected, or likely discharges or releases of such substances from such facility or site, to the extent such information is known or reasonably determinable."

**Rationale:** Clearly, the intention of S. 3(a)(4)(A) is to provide for an inventory of hazardous waste sites not discoverable under existing RCRA regulations. Owners and operators of such sites, however - and generators who contribute hazardous substances to such sites - should be given some rational criteria by which to furnish the data which will constitute such a waste site inventory.

**(11) Medical Evidence Relevancy Exclusion:**

In S. 4(c)(2), page 29, line 11, add "or refute" so that line 11 reads "caution evidence tending to establish or refute that the hazardous."

**Rationale:** Statistical correlations, epidemiological studies, animal, tissue culture studies, micro organism studies, and laboratory or toxicologic studies should be admitted impartially by the court as evidence substantiating or refuting causation. Evidence admissible for one but not the other is illogical.

(12) Irrevocable Choice of Remedies

For S. 8(b), page 85, lines 18-25; substitute the following:

"(b) Any person who submits a claim or commences an action for removal costs or damages pursuant to this Act shall be precluded from submitting a claim or commencing an action for the same removal costs or damages pursuant to any other State or Federal law. Any person who submits a claim or commences an action for removal costs or damages pursuant to any other federal or State law shall be precluded from submitting a claim or commencing an action for the same removal costs or damages as provided in this Act."

**Rationale:** Clearly, the intention of 8(b) is to prevent a person from collecting compensation for the same damages under S. 1480 and any other Federal or State law. As now drafted, however, S. 8(b) would not prevent a plaintiff from trying to recover under one theory pursuant to state law and then being unsuccessful, seeking to recover under another theory pursuant to S. 1480.

Atlantic Richfield Company  
Suggested Changes to Amendment 1958

Section 2(11) - Definition of "Oil."

The definition is taken from §311(a) (1) of The Clean Water Act. It includes oil refuse and oil mixed with other wastes. Since this is an amendment to S.1480, which covers wastes, the oil spill fund's use should be limited to crude oil and petroleum products. Otherwise, this fund could be tapped as an additional source of money to clean up waste sites containing some oil. The oil industry would pay for this clean up under S.1480 by the fee on crude oil. Suggested definition: "Oil" means petroleum, including crude oil or any fraction or residue therefrom.

Section 5 - Damages

Only claims for "economic" losses should be covered by this liberalized liability scheme. If not limited to economic losses, a claim could be made under (2) for emotional distress, loss of consortium or pain and suffering and under (6) for loss of the psychic income derived from looking at a non-polluted beach. Suggested change: p.11, line 10, insert "economic" before "loss."

The persons who have standing to raise claims should be spelled out and limited. The limitation is important in order to avoid speculative and remote damages. For example, under 5(a)(7) an

airline serving beach resorts could file a claim for lost profits because of pollution on a nearby beach. The way to avoid such speculative damages is to require that the claimant must derive at least a certain percentage (e.g., 25%) of his income from activities which utilize the property or natural resource.

The section on foreign claimants should be changed. It would permit the Mexican government and/or Mexican residents to recover from the fund although the U.S. government and residents have not been able to collect from the Mexican government for damages resulting from the Campeche Ixtoc I blowout. Special consideration should be provided for Canadian residents damaged by TAPS oil being transported from Valdez to a U.S. port.

Suggested change: Delete (b) on p.12 and substitute:

- (b) A claim authorized by subsection (a) may be asserted.
- (1) Under subparagraph (1), by any claimant:  
Provided, that the owner or operator of a vessel or facility involved in an incident may assert such claim only if he can show that he is entitled to a defense to liability under Section 4(e) (i) or, if not entitled to such a defense, that he is entitled to a limitation

of liability under Section 4(b) and that he has incurred costs in excess of that limitation;

- (2) Under subparagraph (2), by any claimant if he has suffered a personal injury;
- (3) Under subparagraph (3), (4), and (5), by any claimant if the property involved is owned or leased, or the natural resource involved is utilized, by the claimant;
- (4) Under subparagraph (5), by the President, or the authorized representative of any State, as trustee of the natural resources, provided that the sums recovered be used to restore, rehabilitate, or acquire the equivalent of such natural resources by the appropriate agencies of the Federal Government, or such State;
- (5) Under subparagraph (7), by any claimant if he derives at least 25% of his profits or earnings from activities which utilize the property or natural resource;

(6) Under subparagraphs (1) through (7), by any resident of a foreign nation or by any foreign nation if:

(a) The claimant is not otherwise compensated for his loss, and

(b) Recovery is authorized by a treaty or an executive agreement between the United States and the foreign country involved. Provided, however, that this condition shall not apply where the claim is asserted by a resident of Canada and where the discharge involves oil that has been transported through the Trans-Alaska Pipeline and loaded on a ship for transportation from the Pipeline terminus to a port in the United States and is discharged from the ship prior to being brought ashore in that port.

Section 8(a) and (b) - The Fund can only be subrogated to the extent it makes a payment. The Fund can make a payment only for damages pursuant to this law. Therefore, it can only be entitled by subrogation to claims that a claimant has under this Act and were paid by the Fund - not under "any other law."

The language appears to permit the Fund, by subrogation, to seek indemnification pursuant to state liability law. The result would be that a person who has a defense under this federal statute could nonetheless be sued for indemnification

by the Fund under a state law which does not provide a comparable defense.

Suggested change:

1. Page 19, line 14, delete "or any other law."
2. Page 19, line 14, delete "any law" and substitute "this Title."

Section 9(e)(3) - The insurance industry is extremely reluctant to write pollution coverage where direct action against insurers is permitted. As a practical matter, where an action is brought against an owner or operator and that owner or operator is insured, the insurer will defend such owner or operator. There is no reason to permit the insurer to be sued directly.

Section 11(c) - It would be more appropriate to give notice in the area where the incident occurred. There is no way to know where all claimants live. For example, the owners of pleasure boats damaged by an oil spill may live in another state.

Section 16 - Conforming Amendments

There are no conforming amendments to Section 311 of the Clean Water Act. Insofar as 311 establishes defenses to liability, and financial responsibility requirements with respect to oil and authorizes the use of the 311(k) fund for removal of oil, it must be amended to eliminate these overlaps with this amendment.

Senator ROTH. Mr. Levy.

**STATEMENT OF MAX M. LEVY, VICE PRESIDENT, COLUMBIA LNG CORP., APPEARING ON BEHALF OF AMERICAN GAS ASSOCIATION**

Mr. LEVY. Thank you.

I am Max M. Levy, Sr., vice president of Columbia LNG Corp. of Wilmington, Del. I am speaking today on behalf of the American Gas Association. AGA represents nearly 300 natural gas distribution and transmission companies, serving over 160 million U.S. consumers in all 50 States. Together these companies make nearly 85 percent of the Nation's natural gas sales.

We have prepared a detailed written statement which we would like to have made a part of the record. I would like now to summarize our position.

Mr. Chairman and members of the committee, we sympathize with the victims of hazardous waste disposal accidents and we understand their need for relief. However, we believe that this bill must be amended in two ways to carry out the intent of the Environment and Public Works Committee.

The committee's policy of exempting fuel use from the Superfund tax and of exempting natural gas from the liability sections of the bill are unfortunately not specifically set out in the bill. We believe that these policies are correct, but they should be specified in the bill and not left to any administrative discretion.

You heard earlier the support of this position by the Treasury Department.

Let me deal with each of these provisions in more detail. On the fuel use tax exemption, section 5 of the bill creates a fund to clean up hazardous waste dumps and to compensate the victims of hazardous waste spills. Most of the fund would come from a tax on three types of substances, including primary petrochemicals. The list of primary petrochemicals includes methane, the principal constituent in natural gas, and butane, used in some plants producing synthetic natural gas.

Although more than 95 percent of all methane is burned for fuel, this bill taxes nearly 100 percent of all methane sold. Although 66 percent of butane is used for fuel and to make synthetic natural gas, this bill also taxes all butane.

A bill designed to clean up hazardous waste problems, should tax the source of the problem and not penalize the users of our cleanest fuel. Further, the suppliers of feedstocks, not the suppliers of fuel, should collect the tax. We urge you to expressly exclude fuels from the Superfund tax. The definition of a "primary petrochemical" should be amended so that it is clear that the tax does not apply to fuels.

Neither natural gas nor SNG are environmentally hazardous. Natural gas is our cleanest fossil fuel. It emits almost no sulfur oxides or particulates when burned, and its emissions of nitrogen oxides are lower than any other fossil fuel. It is not a criteria pollutant for stationary sources. The SNG processes produce no hazardous waste, only pipeline quality gas, water, and carbon dioxide,

Because natural gas is a clean fuel, it is ironic that the Superfund's broad definition of "hazardous substances" could include natural gas, LNG, and SNG.

We realize the drafters of this legislation had to develop a definition of "hazardous substances" broad enough to include both identified and yet unidentified dangerous chemicals, but the committee also included, specifically, exceptions for substances that were not covered. The committee's report specifically excludes natural gas, LNG, and SNG. Where potential liability is so great, the statute itself, and not just the report, should specify the substances that are either included or excluded. Natural gas, LNG, and SNG should not be inadvertently caught up in a definition of hazardous substances. When used as fuel, they are not toxic.

Furthermore, the Department of Transportation regulates all aspects of gas transmission and distribution under the Pipeline Safety Act. The public and the environment are adequately protected by the watchfulness of Federal and State safety inspectors who are experts at their business.

In many cases this Superfund bill could overlap with, or even worse, conflict with, the Pipeline Safety Act.

We strongly urge the committee to exempt natural gas, LNG, and SNG from the definition of hazardous substance, and thus remove the possibility of taxing those who use natural gas as a fuel.

I will be pleased to answer your questions.

Senator ROTH. Thank you.

[Mr. Levy's prepared statement follows:]

TESTIMONY OF  
 MAX M. LEVY, SENIOR VICE PRESIDENT  
 COLUMBIA LNG CORPORATION  
 BEFORE THE  
 SENATE COMMITTEE ON FINANCE  
 AT HEARINGS ON S. 1480  
 THE ENVIRONMENTAL EMERGENCY RESPONSE ACT  
 September 11, 1980

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- The Environmental Emergency Response Act, popularly known as Superfund, would help protect the public and the environment from unsafe hazardous waste dumps. We sympathize with the victims of hazardous waste spills and we understand their need for relief. To this end, Section 5 of the Bill creates the Hazardous Substance Response Fund (the Fund) to clean up hazardous waste dumps and to compensate the victims of hazardous waste spills. Although we do not oppose the Fund's tax on the building blocks of hazardous substances, we must protest that this section imposes an unfair and unnecessary tax on natural gas consumers.
- Money for the Superfund is to come in part from the public treasury and in part from a tax on three groups of substances, including primary petrochemicals.  
 The list of primary petrochemicals includes methane, a principal constituent of pipeline quality natural gas, and butane, a principal material (in some production processes) of pipeline quality synthetic natural gas (SNG). Although over 97% of all methane is burned for fuel, this Bill taxes nearly 100% of all methane sold as if all methane were used as a petrochemical feedstock. Although butane is used as a fuel and to make some synthetic natural gas, this Bill taxes 100% of all butane as if all butane were used as a feedstock.
- A Bill to clean up hazardous wastes should tax the source of the problem. It should not tax fuels. Further, the suppliers of feedstocks, not the suppliers of fuels, should collect the tax. We urge the Committee to exclude fuels from the Superfund tax. The definition of a primary petrochemical should be amended so that it is clear that the tax does not apply to methane and butane when they are used as fuels or used to make a fuel.
- This Bill will attempt to cleanup and safeguard present and future hazardous waste sites. Because these dumps may store a multitude of potentially dangerous chemicals, the drafters had to develop a broad definition of hazardous substance that would include both identified and as yet unidentified dangerous chemicals. Although the Senate Environment and Public Works Report on S. 1480 shows that the Committee excluded natural gas, LNG and SNG from the definition of a hazardous substance, we believe that where potential liability is so great, the statute itself (and not just the Report) should set out all those substances that are either included in it or excluded from it.
- Natural gas, LNG and SNG should not be inadvertently caught in the definition of a hazardous substance. Because natural gas, LNG and SNG, when used as fuels, are not toxic substances and because the Pipeline Safety Act already pervasively regulates natural gas transmission and protects both the public and the environment, we urge the Committee to exclude natural gas, LNG, and SNG from the definition of a hazardous substance.

TESTIMONY OF  
MAX M. LEVY, SENIOR VICE PRESIDENT  
COLUMBI NG CORPORATION  
BEFORE THE  
SENATE COMMITTEE ON FINANCE  
AT HEARINGS ON S. 1480  
THE ENVIRONMENTAL EMERGENCY RESPONSE ACT  
September 11, 1980

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Mr. Chairman:

I am Max M. Levy, Senior Vice President of Columbia LNG Corporation. I am accompanied today by John Powell, Manager of the Tax Department of the Washington Gas Light Company. I am speaking today on behalf of the American Gas Association (A.G.A.). A.G.A. represents nearly 300 natural gas distribution and transmission companies serving over 160 million U.S. consumers in all 50 states. These companies make nearly 85% of the nation's natural gas utility sales.

Introduction

The Environmental Emergency Response Act, colloquially known as Superfund, would help protect the public and the environment from unsafe hazardous waste dumps. We sympathize with the victims of hazardous waste spills and we understand their need for relief. To this end, Section 5 of the Bill creates the Hazardous Substances Response Fund (the Fund) to cleanup hazardous waste dumps and to compensate the victims of hazardous waste spills. Although we do not oppose the Fund's tax on the building blocks of hazardous

substances, we must protest that this section imposes an unfair and unnecessary tax on natural gas consumers. Although part of the Fund will come from the public treasury, <sup>1/3</sup> the lion's share of the Fund will come from a tax on three types of substances: primary petrochemicals, inorganic raw materials and crude oil.

The list of primary petrochemicals includes methane, the principal constituent of pipeline quality natural gas, and butane, a principal material (in some production processes) of pipeline quality synthetic natural gas (SNG). Although over 97% of all methane is burned for fuel, this Bill taxes nearly 100% of all methane sold as if all methane were used as a petrochemical feedstock. Although some butane is burned as a fuel or used to make synthetic natural gas, this Bill taxes 100% of all butane as if all butane were used as a feedstock.

We believe that a Bill to cleanup hazardous wastes should tax the source of the problem and not penalize our most environmentally desirable fuel. Superfund should not tax fuels. Further, the suppliers of feedstocks, not the suppliers of fuels, should collect the tax. We urge the Committee to exclude fuels from the tax. The definition of a primary petrochemical should be amended so

1/3 The following sums may be appropriated:

- (A) \$35 million in 1981;
- (B) \$75 million in 1982; and
- (C) \$100 million in every year from 1983 through 1986.

The Fund also includes sums spent on behalf of the Fund and recovered under §6 of the Bill; sums recovered or collected under §311(b)(6)(B) of the Clean Water Act (CWA); half of all appropriations (prior to passage to Superfund) under §311(k) of the CWA; all appropriations under §504(b) of the CWA; and interest earned on the Fund's investments. §5(b)(1)(B) through (F).

that it is clear that the tax applies only to primary petrochemicals that are used as feedstocks, and not to those used as fuels or to produce fuels.

Superfund Should Not Tax Fuels

The drafters of S. 1480 intended to exclude fuels from the Superfund tax.<sup>2/</sup> In the Bill's own words, the tax should be tailored to fall on:

those who may generate, distribute, transport, dispose, or benefit from the use of hazardous substances while minimizing the burden of collection, (so that) fees shall be imposed early in the manufacturing cycle on the basic elements and compounds from which hazardous substances are generated.<sup>3/</sup>

Instead, the tax falls indiscriminately on both feedstocks and our cleanest fossil fuel.<sup>4/</sup> Methane is primarily and overwhelmingly a fuel. Over 97% of all methane is used for fuel. Of the remainder, nearly 2% is used to make fertilizer. That means that although slightly less than 1% of all methane is actually used to make

<sup>2/</sup>The Senate Environment and Public Works Committee Report clearly says that:

(a) number of provisions are included in the fee system to assure an equitable fee which avoids unintended economic impacts, including . . . exclusions from the fees for primary petrochemicals and inorganic raw materials which are used as sources of fuel. . . .

Report No. 96-848 at page 21 (July 11, 1980).

Later the Report says:

[t]o assure equity and encourage recycling and reuse, primary petrochemicals or inorganic raw materials are not subject to a fee to the extent they are used as a source of fuel. . . .

Id. at 71.

<sup>3/</sup>Section 5(c)(1).

<sup>4/</sup>Natural gas combustion produces virtually no sulfur oxides or particulates. Its emissions of nitrogen oxides are lower than any other fossil fuel. Methane is not photochemically reactive (it does not cause smog) and it is not a criteria pollutant for stationary sources under the Clean Air Act.

petrochemicals, over 98% of all methane is taxed.<sup>5/</sup> The Bill also taxes 100% of all butane although some SNG processes convert butane to pipeline quality fuel. The SNG process produces no pollutants -- only pipeline quality gas, water, and carbon dioxide.

Methane is taxed at \$3.44 a short ton or 7.2¢ a thousand cubic feet. Our industry sold 20.546 trillion cubic feet of natural gas in 1979. Although we realize that the Bill limits our tax liability, a straight tax on methane and butane penalizes fuel consumers.<sup>6/</sup>

Under Section 5(f)(1)(A), the Secretary of the Treasury, after consulting the Administrator of EPA, may by rule reduce the fee on portions of primary petrochemicals

used as a source of fuel or other energy when used onsite or sold to other persons.

The meaning of this section is a little unclear because the purpose of subparagraph (f) is "to provide suppliers an economic incentive for recycling and reuse of primary petrochemicals." If

<sup>5/</sup> Section 5(e)(3) specifically exempts fertilizer production from the tax.

<sup>6/</sup> We are aware that Section 5(d)(1) limits our industry's conceivable liability to \$20 per short ton and to a portion of the following sums:

\$162 million in 1981;  
\$338 million in 1982; and  
\$450 million in every year from 1983 through 1986.

Section 5(c)(2)(A) also limits the fee to 2% of list price.

We are also aware that the proposed bill permits the Secretary of the Treasury, after consulting the Administrator of the Environmental Protection Agency, to lower the tax on methane and butane after the first three years of taxation [Sec. 5(e)(1)]. The Secretary may even reduce the fee to zero if he finds no evidence of contamination, but he may not refund the tax if it turns out that there has been no contamination from the taxed substance. [Sec. 5(f)(2)]

However, we want to make sure that the tax falls on feedstocks and on the suppliers and users of feedstocks, and not on the people who sell and use natural gas and SNG as fuels.

the Secretary interprets his powers narrowly, natural gas and SNG fuel users may not be able to get an exemption from the Superfund tax. We cannot rely on promises of relief. The statute itself (rather than the Secretary's discretion) should limit the tax to feedstocks and should exclude fuels.

Methane and Butane When Used As Fuels Are Not Toxic Substances

This Bill will attempt to cleanup and safeguard present and future hazardous waste sites. Because these dumps may store a multitude of potentially dangerous chemicals, the drafters had to develop a definition of hazardous substance that would include both identified and as yet unidentified dangerous chemicals. Thus, the definition of hazardous substance includes all the substances that are specifically covered by Sections 311(b) and 307(a) of the Clean Water Act, by Section 3001 of the Solid Waste Disposal Act, by Section 7 of the Toxic Substances Control Act, by Section 112 of the Clean Air Act and any substances that are specifically listed under Section 3(a)(2) of Superfund itself. Needless to say, neither natural gas nor SNG is on any of these lists. However, the definition of hazardous substance also includes a catchall section that may include both natural gas and SNG. The catchall definition includes any element or substance, which after release into the environment and upon exposure or inhalation, will or may reasonably be anticipated to cause .

death.<sup>7/</sup> It is possible for natural gas to fall under the catchall definition. Inclusion would be ironic because it is clear that the drafters meant to exclude natural gas. The Senate Environment and Public Works Committee Report says:

It is also important to note that natural gas, liquified natural gas (LNG), and high Btu synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas) are not considered hazardous substances within the purposes of S. 1480.<sup>8/</sup>

Although the Committee Report excludes natural gas, LNG and SNG from the definition of a hazardous substance, we believe that where potential liability is so great, the statute itself (and not just the Report) should set out all those substances that are either included in it or excluded from it.

Neither natural gas nor SNG should be inadvertently caught in the definition of a hazardous substance. When natural gas is used as a fuel it is nontoxic. Furthermore, stringent Department of Transportation (DOT) regulations under the Pipeline Safety Act of 1968, as amended,<sup>9/</sup> already protect the public and the environment against natural gas transportation accidents. In many cases, Superfund could overlap and conflict with the Pipeline

<sup>1/</sup>The complete text of Section 2(b)(13)(G) on pages 7-8 is:

any element, substance, compound, or mixture, including disease-causing agents, which after release into the environment or indirectly by ingestion through food chains, will or may reasonably be anticipated to cause death, disease, behavioral abnormalities, cancer, genetic mutation, physiological malfunctions (including malfunctions in reproduction) or physical deformations, in such organisms or their offspring. The term does not include petroleum, including crude oil and fractions thereof which are not otherwise specifically listed or designated as hazardous substances under subparagraphs (A) through (F) of this paragraph;

<sup>8/</sup>Op cit. 31.

<sup>9/</sup>49 U.S.C. 1671 et seq.

Safety Act. To prevent jurisdictional conflicts with DOT's pervasive safety regulations, we are urging that the definition of hazardous substance be amended to exclude natural gas, SNG and LNG.

Recommendations

We urge this Committee to amend S. 1480 so that the statute clearly shows that the tax does not fall on those who sell or use natural gas and butane as a fuel or to make a fuel.

We also urge the Committee to specifically exclude natural gas, LNG and SNG from the definition of a hazardous substance so that they are not inadvertently included in the Bill. I will be pleased to answer any of the Committee's questions.

Senator ROTH. Mr. McGrath.

**STATEMENT OF JEROME J. McGRATH, PRESIDENT, INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA**

Mr. McGRATH. Thank you, Mr. Chairman and members of the committee.

I am Jerome McGrath, president of the Interstate Natural Gas Association of America. Our association represents virtually all of the major interstate transporters of natural gas in the United States. We account for approximately 90 percent of all natural gas that is transported and sold in interstate commerce.

I join with Mr. Levy in the comments on the inclusion of methane in this bill. We truly believe it was an oversight on the part of the architects of the bill and we believe it should be exempted from its coverage. The problem is that the bill identifies methane as one of the primary petrochemicals excluding that portion used to make ammonia.

Now, as Mr. Levy points out, methane is the principal component of natural gas. Well over 90 percent of natural gas is methane. Methane can be a feedstock and is used as a feedstock, but the amount of such use is less than 3 percent nationally of all natural gas used.

About 97 percent of all natural gas sold in the United States is used as a fuel. And we just don't believe that the committee intended to include that large amount under the bill.

Now, the bill establishes a fee on methane of \$3.44 per ton. By our estimates this translates into a figure of approximately 7 cents per thousand cubic feet, which would be paid by the consumers using natural gas, and would yield in excess of \$1 billion a year for the Fund. Of course the Fund is limited to the amount that can be collected in a given year. And after 2 years this limit is \$700 million.

Now, of this total, revenue from primary petrochemicals is expected to yield \$450 million a year. You can see just from natural gas alone you would far exceed the goals of this bill in the fund.

Of paramount concern to us is that the fee or tax would be applied to practically all methane. As Mr. Levy has pointed out,

the Public Works Committee, recognizing what we feel to be a clear error, in its report specifically noted that primary petrochemicals used as a fuel are not to be included under the bill. But unfortunately that is not in the language of the statute—the bill, rather. And we don't believe that we should leave that important a matter out of the bill.

We feel that this committee in addressing the tax should clearly exempt natural gas, methane, used as a fuel from the coverage of S. 1480. We don't believe that it should be left to the discretion of the Secretary of the Treasury to determine how much or what the fee should be or how much gas should be included in the fee.

We were pleased to hear Mr. Sunley testify this morning that he agrees it should not be left to the discretion of the Department but it should be a policy matter determined by the Congress.

We for that reason believe that it is very important that an exemption be specifically granted from the fee coverage of this bill. INGAA is submitting testimony tomorrow before the Senate Commerce Committee urging that exemption language be considered there also in the nontax portion of the bill.

We are also concerned with the tax collection mechanism in the bill. As reported by the Environment and Public Works Committee, the supplier of these substances, that is, the person who produces, manufactures, or imports the substance, would be responsible for collecting the fee. If the fee does not apply to all uses of the particular chemical, however, this approach becomes difficult, if not impossible, to administer.

For example, natural gas is frequently sold to industrial users who use part of the gas as feedstock and part as fuel. In this situation the supplier would appear to be the producer of the gas, which could either be the gas company or the individual well owners, but neither the producers nor the gas company could reasonably be expected to know how much of the gas supplied to the user is subject to the fee and how much is not.

In this situation the user, not the supplier of the gas, would most easily know what quantity is subject to the tax and what quantity is exempt. Compounding the problem is the fact that predominantly natural gas from a number of different sources is commingled en route to the ultimate users. Moreover, if the supplier is responsible for collecting the fee, the question arises as to which party, the supplier or the user, would be responsible for the accuracy of the information.

The Ways and Means Committee, when considering H.R. 7020 and H.R. 85, remedied the situation in a direct and realistic manner. When distinctions are to be made between taxable and nontaxable uses of a primary petrochemical, the tax would be paid directly by those companies or individuals actually using the petrochemical as a feedstock. We would urge that process be followed here.

Mr. Chairman, I know my time has expired. I would like to clarify one statement made in my prepared testimony submitted yesterday. We made a calculation on the tax, which we believe is tremendously inequitable and should not apply to methane, using the data in the bill as reported out by the Public Works Committee. And in the bill as reported out a tax on a barrel of crude oil

was 0.13 cents per barrel. We understand that the figure was actually changed to 0.756 cents. But either way you slice it, the tax on a Mcf of natural gas, as compared to the tax on crude oil is still 46 times greater on gas than it is on oil. And natural gas is the cleanest, most environmentally acceptable fuel we have. We don't think it should be in the bill in the first place, and we urge it be exempted from the coverage of S. 1480.

Thank you.

[Mr. McGrath's prepared statement follows:]

STATEMENT OF JEROME J. MCGRATH, PRESIDENT  
INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA  
ON S. 1480, THE ENVIRONMENTAL EMERGENCY RESPONSE ACT  
BEFORE THE SENATE COMMITTEE ON FINANCE  
SEPTEMBER 11, 1980

Mr. Chairman and members of the Committee, on behalf of the Interstate Natural Gas Association of America (INGAA), I wish to express our appreciation for this opportunity to present our views on S. 1480, the Environmental Emergency Response Act. INGAA is a national trade association which represents virtually all the major interstate natural gas transmission companies in the United States. At present, INGAA members account for approximately ninety percent of the natural gas sold in interstate commerce.

A portion of S. 1480, as reported by the Environment and Public Works Committee, grants the President and the Environmental Protection Agency broad authority over the storage and handling of certain hazardous substances. INGAA is deeply concerned that application of these provisions to the natural gas industry could create severe problems by overlapping and conflicting with the existing statutory and regulatory framework that now governs the industry. We hope that these potential conflicts will be resolved as the bill moves through the legislative process. I understand, however, that the Finance Committee is focusing on that portion of the bill which creates the Hazardous Substance Response Fund and the taxes or fees levied to finance the fund. It is these provisions that my testimony will address.

As reported by the Environment and Public Works Committee, S. 1480 creates a Hazardous Substance Response Fund financed in part by government, but primarily through fees or taxes imposed on oil, inorganic raw materials, and primary petrochemicals. In structuring this mechanism the Committee intended to tax those substances which are the "building blocks" used to produce hazardous substances. The Committee's report states:

-2-

"In determining how industrial fees should be levied, the Committee...approved a system which imposes fees on the relatively few basic building blocks used to make all hazardous products and wastes." (Report No. 98-848, p. 19)

S. 1480 identifies a number of primary petrochemicals which the Committee believes meets this criterion including methane, (except that portion used to make ammonia).

Methane is the principal component of natural gas. While exact concentrations vary, well over 90% of most natural gas is methane. Methane can be a feedstock, but less than 3% of natural gas sold nationally is used as a feedstock of any sort. This amount falls below 2% after subtracting the quantity used to produce ammonia, a use that is exempted from the fee. About 97% of natural gas sold is consumed as a fuel. Over 45 million customers rely on gas fuel, including over 3 million businesses. S. 1480, as reported by the Environment and Public Works Committee, establishes the fee imposed on methane at \$3.44 per ton. By our estimates, this translates into a figure of approximately 7¢ per thousand cubic feet of gas. If applied to all gas sold without limitation or any exemption, this fee which would be paid by consumers, would yield in excess of one billion dollars a year. Of course the fund is limited to the amount of money that can be collected in a given year. After two years this limit is \$700 million and of this total, revenue from primary petrochemical is expected to yield \$450 million a year. The bill, in Section 5(c)(2)(A) would limit the fee to a maximum of 2% of the price of the petrochemical, but it's unclear whether this limit applies to the price of gas at the wellhead, when sold to the pipeline company or when sold to the industrial user.

INGAA's paramount concern is that the fee or tax might indeed be applied to primary petrochemicals without any exemption being granted in instances where

the primary petrochemical is used as a fuel rather than a feedstock. The Environment and Public Works Committee in reporting the bill recognized the gross inequity that would occur if fuel-related uses of the primary petrochemicals were subject to the tax. The Committee report states:

"To assure equity...primary petrochemicals or inorganic raw materials are not subject to the fee to the extent they are used as a source of fuel." (Report No. 96-848, p. 7L)

Despite this clear statement of Committee intent, the language of S. 1480 as reported, does not contain this exclusion. Section 5(f) of the bill does permit the Secretary of the Treasury, after consultation with the Administrator of EPA, to reduce at his discretion the tax on the portion of primary petrochemicals and inorganic raw materials used as a fuel. The Secretary is not, however, required to make any reduction and there is no assurance that he will implement the Committee's intent. It is particularly ironic that under the current language of S. 1480 consumers of natural gas, the cleanest and most environmentally acceptable fossil fuel available, might be subject to a tax designed to affect users of substances that may be considered environmentally threatening. If the fuel exemptions remains discretionary and in fact the Secretary does not act to exclude fuel uses of methane from the fee, then the revenue generated from methane alone will quickly exceed the amount the fund is authorized to collect. Given the limits placed on the size of the fund, it seems apparent that the architects of the bill did not intend to tax non-feedstock use of methane. The language of the bill, however, fails to carry this out, leaving it to the discretion of the Secretary.

Mr. Chairman, INGAA strongly believes that S. 1480 must contain a clear, statutory exemption from any tax or fee for primary petrochemicals that are used for nonfeedstock purposes. We believe this exemption should encompass both petrochemicals

used as a fuel or to produce a fuel. In some cases, primary petrochemicals such as butane are converted to synthetic gas to supplement pipeline and distributor natural gas supplies. Such uses should be exempt from the fee for the same reasons that fuel uses should be exempt; that is, the petrochemical has not been employed as a feedstock to generate the more complex hazardous chemicals toward which this bill is directed.

We see no reason why this exemption should be a matter of administrative or regulatory discretion. This approach would mean that the gas industry and our customers would be faced with one or more years of uncertainty while the regulatory proceedings are completed and court challenges resolved. Furthermore, the issue of whether the taxes should or should not apply is a policy question that should be decided by the Congress.

INGAA is also concerned with the tax collection mechanism in the bill. As reported by the Environment and Public Works Committee, the "supplier" of these substances, that is, the person who produces, manufacturers, or imports the substance, would be responsible for collecting the fee. If the fee does not apply to all uses of the particular chemical, however, this approach becomes difficult, if not impossible, to administer. For example, natural gas is frequently sold to industrial users who use part of the gas as a feedstock and part as fuel. In this situation, the "supplier" would appear to be the producer of the gas, which could be either the gas company or the individual well owners, but neither the producers nor the gas company could reasonably be expected to know how much of the gas supplied to the user is subject to the fee and how much is not. In this situation, the user, not the supplier of the gas, would most easily know what quantity is subject to the tax and what quantity is exempt. Compounding the problem is the fact that predominantly natural gas from a number of different sources is commingled en route to the ultimate users. Moreover, if the supplier is responsible for collecting the fee, the question arises as to which party, the supplier or the user, would be held responsible for the accuracy

of the information. The Ways and Means Committee, when considering H.R. 7020 and H.R. 85, remedied the situation in a direct and realistic manner: when distinctions are to be made between taxable and non-taxable uses of a primary petrochemical, the tax would be paid directly by those companies or individuals actually using the petrochemical as a feedstock.

INGAA urges the Finance Committee to incorporate this approach in S. 1480. The determination as to whether a given use of methane, butane, or any of the other primary petrochemicals is subject to the tax can only be made at the consumer level. Logically, the tax should be collected at this point as well. Imposition of the tax at any other point in the chain of production or transportation would only make administration of the tax more difficult.

Finally, the tax on methane is also inequitable relative to the tax on crude oil. The fee schedule in S. 1480 provides for a tax on crude oil of 0.13 cents per barrel and a tax on methane of \$3.44 per ton which is the Btu equivalent of approximately 40 cents per barrel of oil or over 300 times greater than the tax on crude oil. The price difference thus created places natural gas at a competitive disadvantage with crude oil at a time when national energy policy is directed toward reducing crude oil imports.

In summary, Mr. Chairman, INGAA urges the Committee to exempt from the fee or tax those primary petrochemicals consumed as a fuel or used to produce a fuel. Second, we urge that the tax be applied at the point where the actual use can best be determined: the point of use. Again, Mr. Chairman, I thank the Committee for this opportunity to appear and express our views on this matter.

Senator ROTH. I am not a member of the Public Works Committee, but I understand there is some question in this area whether or not it should be included. I think they are obviously acquainted with your concern.

Mr. McPhail, I only have one brief question. First of all, I always welcome new suggestions and ideas, and I think that is the purpose of hearing witnesses.

My question to you is, Have you discussed your proposal with other companies or other groups, and is there any broad support for your approach?

Mr. MCPHAIL. I believe that we have discussed it with a number of other companies, if I can consult with my associates here, as to whether we have broad support.

VOICE. We have discussed it.

Mr. McPHAIL. And I must say that we have not received broad support.

Senator ROTH. Senator Baucus.

Senator BAUCUS. I am not on the Public Works Committee either. I am curious. To what degree have your suggestions been made to the Environment and Public Works Committee? I understand that committee has had about 11 hearings over the year. And your points, are they raised here for the first time, or are these points you have raised before that committee?

Mr. McGRATH. If you are talking to us, Senator, we have discussed them at length with the various members of the Public Works Committee and the staff, and it was our impression during the course of the hearings that corrective language was to be placed in the bill. Somewhere along the line that slipped and the language that I quote in my testimony, quoting from the report of the Public Works Committee, indicates that they intended to exempt the fuel.

Senator BAUCUS. I see. You say the tax on gas is 46 times that of the tax on crude oil on a Btu basis?

Mr. McGRATH. On oil.

Senator BAUCUS. That is on a Btu basis?

Mr. McGRATH. Yes, sir.

Senator BAUCUS. Also, Mr. McPhail, in keeping with Arco's tradition to come up with new ideas, are you at all concerned with the regulatory costs to be imposed upon IRS in administering the kind of proposal you talk about? Because obviously they will have to spend some time in determining who are the purchasers of the end use product, et cetera. That is going to be a bit difficult, I think, to administer, that is more government.

You know, we all say we don't want more government, we want less government, and so forth.

Mr. McPHAIL. I don't think that is the essence of our proposal. I think the companies now classify their sales by SIC category, the standard industrial classification category. And I believe that with the proper modification of a tax return, one could identify on the proper line the sales that fall in this SIC category, multiply it by the appropriate percentage, and identify the amount of tax that would be collected by IRS and would be paid by the companies along with wherever other payments go to IRS.

Senator BAUCUS. Could you tell me why it is that your proposal has not received wide-based support in the industry, or other people that you have consulted with? What is their objection?

Mr. HAXBY. Would you like an answer from the petroleum industry?

Senator BAUCUS. Whoever has the answer.

Mr. HAXBY. We commend Arco for innovative approaches here and, among other things, for stimulating and coming to the same conclusion we did that eventually a waste-end fee on waste generated is the proper place to put that. That is the point that Arco's proposal arrives at.

It suggests a study to eventually end up there. I believe, I may be wrong, but I first heard about the Arco proposal many months ago. And at that time we were not as close to having a direct 5001 manifest system in place as we are today. November 19 occurs. So

that we now have an administrative system on the waste-end fee, waste-end fee which probably was not there when Arco was originally conceiving their idea and came along with an excise tax on a SIC category.

It is for that reason that our industry, representing API, doesn't support the Arco proposal directly.

Mr. McPHAIL. If I could comment.

I don't believe that Arco believes in the interim that the system mechanism proposed by the API is as simple as it is claimed to be. It is a system that is related primarily, as I understand, to the volume of wastes produced and which will introduce no end of discussion and controversy as to whether it is equitable to tax a company that produces a large volume of low hazardous waste at the same rate as a company that produces a small volume of high hazardous waste.

I think it can be a complicated proposal. And we feel that in the long run, although the most equitable approach is one of taxing the waste and its degree of hazard, we recognize the impracticality of doing that quickly. And we are trying to develop and present an interim system that will not hold up the legislation but will get a workable bill that can do the job that we are trying to do.

Senator BAUCUS. Thank you.

Senator ROTH. Senator Bradley.

Senator BRADLEY. Let me say that I compliment Arco for trying to think this problem through and coming up with a suggestion. And I think it indicates the right spirit and attitude of trying to solve this very critical problem. The administration characterized it a little differently this morning.

Senator MOYNIHAN. We finally got an unambiguous statement out of the Treasury. [Laughter].

Mr. McPHAIL. I was here.

Senator BRADLEY. I suppose that you would argue strenuously that that is not the purpose behind it but, rather, the purpose that I stated, which was really to be helpful and creative.

Let me ask now, your proposal is divided up into 2-year and 4-year funds. How many firms would be taxed in your 2-year and in your 4-year funds?

Mr. McPHAIL. Well, you were not here earlier when I commented on a statement Mr. Sunley made which, if I could repeat my comments, I think would answer the question you have just addressed. It will take me just a minute to find them.

Senator BRADLEY. As far as I am concerned, I will take what you said as fine.

Mr. McPHAIL. The excise tax proposal has the advantage of being adapted to whatever groups of companies the Congress decides is appropriate because merely by establishing a cutoff point one can tax all companies with sales in excess of \$100 million, all companies with sales in excess of \$50 million. It has the flexibility of defining the companies to whom, in terms of size, who would be subject to the tax.

Senator BRADLEY. So you are leaving it up to Congress to decide which companies would pay the tax and which companies would not pay?

**Mr. MCPHAIL.** Well, a revenue cutoff of, say, \$100 million would, if I remember correctly, include the top 125 chemical companies in the United States.

**Senator BRADLEY.** And your 4-year fee, how long do you think it would take before you had a manifest system in place that you could actually use?

**Senator MOYNIHAN.** Senator, would you let me interrupt? I have been summoned to the Treasury Department for New York City. I want to say I have a most friendly relationship with the Treasury Department. Would you have the kindness to take the chair?

**Senator BRADLEY.** Yes, sir, I certainly would, and I wish you good luck.

**Mr. MCPHAIL.** The manifest system I believe will be in place within a relatively short period of time. I think the complexities of developing a fee system that properly apportions the fund to those materials that are the most hazardous, or at least in proportion to their degree of hazard.

**Senator BRADLEY.** In a short period of time. I mean the figure I have is 5 years. Do you think it would be sooner than 5 years?

**Mr. MCPHAIL.** I think it could be done sooner than 5 years.

**Senator BRADLEY.** Sooner than 2 years?

**Mr. MCPHAIL.** Probably not.

**Senator BRADLEY.** Sooner than 3 years?

**Mr. MCPHAIL.** You are pushing the lid.

**Senator BRADLEY.** Well, I mean it has to be in place in 2 years because that is when your 2-year fund expires. I think that is a legitimate question.

**Mr. MCPHAIL.** We think if a firm target is set, if a firm goal is set for the appropriate agency it can be done within a 2-year period.

**Senator BRADLEY.** And you don't think that puts a burden on firms that would export?

**Mr. MCPHAIL.** Yes, sir, it would put a burden on firms that would export but I find it difficult to determine exactly how one would avoid that problem. I think it would have the effect, though, of helping our firm's domestic companies compete with imports because the interim proposal that we have made will hit imports as well as the domestic producer.

**Senator BRADLEY.** Thank you.

I think there was a question somebody raised, Senator Roth mentioned to me, you wondered if natural gas was covered under this.

**Mr. McGRATH.** We wondered whether it was covered? No, it is covered.

**Senator BRADLEY.** Methane?

**Mr. McGRATH.** Yes, with the exception of—excluding that used to make ammonia. But as I pointed out earlier, methane is the principal constituent of natural gas and natural gas, as a fuel, would be covered under the bill unless we get an exemption for natural gas.

**Senator BRADLEY.** Senator Roth, do you have any other questions?

I would like to thank you gentlemen. Sorry that I missed the bulk of your testimony.

Our next witnesses will be a panel consisting of Mr. George Washington, Mr. Elvis Stahr, and Mr. Roy Midkiff.

Mr. Washington appears on behalf of the Virginia Seafood Council and the Virginia Watermans Association.

Mr. Stahr appears on behalf of the National Audubon Society, and he is accompanied by Mr. A. Blakeman Early, the Washington representative of the Sierra Club.

Mr. Midkiff is from Williamsburg, Va.

I would like to welcome you gentlemen to the committee.

Mr. EARLY. I would like to inquire, Mr. Henry Rodriguez was originally scheduled. Is he not here today?

Senator BRADLEY. I am told he canceled. If Mr. Rodriguez is indeed in the room and has not canceled, please come forward.

There is an empty chair at the table, and a microphone waiting.

All right, let's begin with Mr. George Washington.

Mr. Washington is not here? Is this a joke that staff has made?

All right, if Mr. Washington is not here, let's begin with Elvis Stahr and Mr. Early.

**STATEMENT OF ELVIS STAHR, NATIONAL AUDUBON SOCIETY,  
ACCOMPANIED BY A. BLAKEMAN EARLY, WASHINGTON REPRESENTATIVE, SIERRA CLUB**

Mr. STAHR. Thank you, Mr. Chairman.

I am Elvis Stahr, senior counselor and past president of the National Audubon Society. I am privileged today to present testimony on S. 1480. With me is A. Blakeman Early of the Sierra Club. But I wish to emphasize that we are submitting testimony on behalf of Congress Watch, Environmental Action, the Environmental Defense Fund, Friends of the Earth, the National Audubon Society, the National Wildlife Federation, the Natural Resources Defense Council, the Sierra Club, and the Urban Environment Conference, with a combined membership of more than 4 million Americans.

We have a prepared statement which treats the nature of the problem, the costs of the problem, the scope of the Fund, the structure of the Fund, and the impact on industry of the fee. And I appreciate the committee chairman's offer this morning to enter that into the record for your later consideration.

[Mr. Stahr's prepared statement follows:]

## STATEMENT ON BEHALF OF

CONGRESS WATCH, ENVIRONMENTAL ACTION, THE ENVIRONMENTAL  
DEFENSE FUND, FRIENDS OF THE EARTH, THE NATIONAL  
AUDUBON SOCIETY, THE NATIONAL WILDLIFE FEDERATION, THE  
NATURAL RESOURCES DEFENSE COUNCIL, SIERRA CLUB, AND  
THE URBAN ENVIRONMENTAL CONFERENCE

Mr. Chairman, Members of the Committee:

We appreciate the opportunity to appear before you on behalf of nine environmental organizations-- Congress Watch, Environmental Action, the Environmental Defense Fund, Friends of the Earth, The National Audubon Society, the National Wildlife Federation, the Natural Resources Defense Council, Sierra Club, and the Urban Environment Conference -- to present our views on the Environmental Emergency Response Act, S. 1480.<sup>1</sup>

Representing over 3.5 million members nationwide, these national environmental organizations have long taken an active interest in protection of the terrestrial and marine environment. They have testified on numerous occasions before House and Senate Committees on the problems of oil spill liability, the disposal, storage and treatment of hazardous wastes, and the Toxic Substances Control Act of 1976 ("TSCA"). In addition, these environmental organizations have actively participated in the federal and state administrative implementation of the hazardous waste regulatory program, and have challenged EPA's delays in developing the regulatory framework.<sup>2</sup>

After World War II, there was a dramatic increase in the use of modern synthetic materials. Accompanying these new materials came huge numbers of dangerous chemicals. The problems resulting from the mismanagement of these chemicals now present a grave threat to the present and future health and welfare of millions of Americans.

The Environmental Response Act (S. 1480) now before the Committee is a response to those problems. We strongly support this legislation and urge the Committee to act promptly to ensure its passage this session.

The Provisions of S. 1480 present a comprehensive program for the clean-up and control of leaking waste dumps and chemical spills. The legislation creates a six year \$4.085 billion fund that is based primarily on industry-based fees. Coupled with the fund is a strong liability system that serves to encourage prompt clean-up. The liability system also provides a fair, flexible, and non-regulatory method of correcting the poor management practices of the past. Other key provisions allow limited compensation to certain victims of selected toxic discharges. Together, these provisions function to fill the gaps in existing law, correct past problems and prevent future abuses.

#### I. The Problem of Hazardous Releases

Leaking dump sites, chemical spills, and hazardous chemical releases of all kinds present a serious health hazard to the nation.

The Environmental Protection Agency (EPA) estimates that 57 million metric tons of hazardous wastes are produced annually in the United States and that over 90 percent of it is disposed in environmentally unsound ways.<sup>3</sup> These wastes contaminate surface water and groundwater that serve as drinking water supplies, destroy fish, wildlife and vegetation, and threaten public safety.<sup>4</sup>

Old hazardous waste dumps, the result of poor past management practices, have created an enormous problem. An EPA report prepared by Fred C. Hart Associates estimates that there are between 32,254 and 50,664 sites that contain hazardous wastes.<sup>5</sup> As of July 31, 1980, after inspecting only 1,287 of these sites, EPA found that 250 required remedial work.<sup>6</sup>

The results of state hazardous waste site surveys confirm the seriousness of the problem. New York State found 852 sites, 157 of which raise "substantial

environmental and public health concerns."<sup>7</sup> In New Jersey, the Department of Environmental Protection found 248 potential hazardous waste sites.<sup>8</sup> And the State of Michigan reported that there were over 50,000 possible sources of groundwater contamination. Pollution was confirmed at 268 sites and expected at another 381.<sup>9</sup>

These pioneering states should be commended for their efforts; for there are no traditional political rewards for finding these waste sites-- only bad press reviews. Nonetheless, some states are moving to reduce the threats to their residents. This Committee has the opportunity to encourage these and other states by acting favorably on S. 1480.

Unfortunately, due to limited resources, EPA has been unable to perform extensive nationwide health studies on the health effects of these dumps. However, EPA has made limited estimates. Testifying before the Senate Health and Scientific Research Subcommittees, EPA estimated that 1.2 million Americans may be exposed to health hazards as a result of living near 214 problem dumpsites.<sup>10</sup>

Holding ponds and lagoons that contain hazardous waste also pose a severe problem. An EPA study in February 1980 revealed that there are over 12,878 such impoundments that are likely to contain hazardous substances. EPA lacked the funds to inspect all these facilities but they found that thirty percent of those visited not only lacked protective liners to prevent seepage, but worse yet, they were located above usable groundwater supplies.<sup>11</sup>

Spills of hazardous materials originating from plant sites, pipelines, and transportation accidents, have resulted in contamination of drinking

water, food products, livestock and wildlife. EPA catalogued 3,076 spills of hazardous materials over the last two years.<sup>12</sup> But because these spills were only the ones that were voluntarily reported, the actual number could be much higher. The Department of Transportation reported that between 1971 and 1978 transportation incidents alone accounted for over 78,000 hazardous spills. They resulted in 5,271 injuries and 207 fatalities.<sup>13</sup>

## II. The Cost of Hazardous Material Releases

Because there is now no centralized reporting system for recording the effects of hazardous releases, many of the figures are, of necessity, estimates based on our best knowledge of past incidents. But even these estimates demonstrate that the cost of these problems is immense.

The first estimate of the magnitude of the problem of leaking waste sites alone was a report prepared by Fred C. Hart Associates for EPA. The Hart Report estimates that there were 1,209 to 2,207 sites that pose a significant risk to human health and the environment. The costs for initial clean-up were estimated at \$3.6 million per site. The costs for a permanent remedy were estimated at \$25.9 million per site. This translates into a total cost for initial clean-up of between \$4.3 billion and \$7.3 billion. The ultimate cost for a permanent remedy for these sites would be between \$13.1 billion and \$22.1 billion.<sup>14</sup>

EPA has provided another indication of what the total price tag for these dump sites might be. In this February 1980 report of damages and threats caused by hazardous material sites, EPA listed 250 sites which involve ground water contamination, drinking water well closures, fish kills, property

damages from fires and explosions, and kidney disorders, cancer and death. Although firm cost figures are not available for all these sites, the cost of clean-up and damages for only 69 of these sites is computed by EPA to total over \$885 million.<sup>15</sup>

The costs of other well-known pollution incidents illustrate the size of the problem:

Kepona was discharged into the James River from 1966 to 1975. As a result, claims against the company total over \$20 million. The total cost of clean-up is roughly \$8 billion dollars.<sup>16</sup>

The discharge of PCBs into the Hudson by General Electric has created a problem that would cost more than \$30 million.<sup>17</sup>

Direct losses of over \$100 million resulted from the contamination of cattle feed by PBBs in Michigan.<sup>18</sup>

In Hardeman County, Tennessee, about 300,000 drums of pesticide waste were improperly disposed of by Velsicol Chemical Company. The clean-up cost estimates range from \$6 million to \$165 million. Local citizens are suing for \$2.5 billion.<sup>19</sup>

And, finally, the leaking waste dump in Love Canal has resulted in over \$12 million in lost property values and relocation, \$10 million in clean-up costs and over \$15 billion in citizen suits.<sup>20</sup>

Clearly, these figures outline the dimensions of the huge problems which we as a nation must face up to. Unfortunately we must face this problem at a time when the energy shortage and inflation are also pressing upon us. But this problem will not go away. It will definitely get worse and become more expensive to remedy in the future than it will be to act aggressively today.

The Love Canal situation provides a classic illustration of the contrast. It has been estimated that an investment of approximately \$4 million at the time Hooker was disposing of its chemicals would have prevented costs which have exceeded \$25,000,000 so far.<sup>21</sup>

### III. The Scope of S. 1480

Any discussion of the financial aspects of S. 1480 must also include a consideration of the scope of the bill as well.

We strongly support the broad scope of S. 1480 as reported out of the Committee on Environment and Public Works. We believe that the growing catalogue of hazardous material releases demonstrates the need for legislation to provide comprehensive coverage of all types of hazardous releases. This broad coverage would give EPA the ability to respond quickly to contain the problem-- regardless of the source.

The Interagency Task Force on Compensation and Liability after studying the problem concluded that existing federal programs fall far short of a comprehensive strategy for dealing with the damages caused by hazardous materials.<sup>22</sup> Current laws lack the strong legal authority to attach the broad spectrum of problems that we face. There is also no available source of funds for the expensive remedies needed to help solve hazardous chemical contamination problems. Actions by State agencies are sometimes haphazard and are hampered by the lack of funds. In many cases, States are unwilling to assume the expense of clean-up without a matching Federal commitment; in others, States have been unwilling to hold responsible major industries which are economically significant. The States often lack the technical expertise required to pursue chemical pollution lawsuits.<sup>23</sup> Coupled with the fact that

existing statutes do not provide adequate compensation for those affected by chemical contamination, it is clear that existing systems of response and compensation are not adequate to deal with the complex problem of contamination by hazardous materials.<sup>24</sup>

Until the development of S. 1480, much of the Congressional focus had centered on creating the institutional capability to clean-up the most hazardous spill and release incidents. However, little focus had been brought to bear on how victims would be compensated for the physical and economical afflictions they had suffered from hazardous chemical materials exposure. Two studies have examined how difficult it can be to recover damages from pollution incidents by means of a civil law suit at common law.<sup>25</sup> Both reviews concluded that this area of case law simply does not meet the needs of many citizens, state and local governments that have suffered from major and minor pollution incidents. One of the studies conducted by the Interagency Task Force stated: "There appear to be impediments to those remedies serving as full, adequate, and consistent compensation mechanisms for personal injury for property recovery damages sustained by a release of hazardous material."<sup>26</sup> This general conclusion has been confirmed by both the Senate Environment and Public Works Committee as well as the House Merchant Marine Committee with respect to oil spill damages.<sup>27</sup> The defendant in a civil law suit can use numerous defenses such as contributory negligence, statute of limitations, and intervening cause. In addition, the cost and length of litigation inhibits victims from initiating a law suit. These latter problems are exacerbated by the often technical nature of pollution litigation. The difficulty of demonstrating the adverse health effects caused by environmental pollution frequently results in damage awards that are limited to property damage or which only

partially cover health injuries. All these factors combine to provide little deterrence to polluters who often find that the consequences of polluting are but a minor cost of doing business.

Recently, many of the watermen who fish the James River ended three years of litigation with the Allied Chemical Corporation, accepting an out of court settlement that was "reasonably" close to their losses. However, the settlement was consummated only after the judge pressured an ending to the three year war of attrition waged by Allied's top Richmond law firm which produced 13,000 pages of pre-trial depositions and caused many would be watermen to drop out of the suit. It is clear that modifications are needed to the current common law to enable the victims of hazardous spills and releases to end their subsidization of the activities that cause such incidents.

S. 1480 provides a unique approach to the hazardous materials pollution issue by providing a mechanism through which damages to victims may, in part, be more predictably factored into the hazardous release and clean-up equation. The provisions enabled the fund to pay victims directly as well as provide funds for health studies and other technical information so rarely generated in the hazardous material exposure incidents in the past. Yet the provisions have key safeguards to ensure that the fund is not overwhelmed by victims' claims so that sufficient funds are available for preventing or containing the spread of health threatening releases. These provisions appear in the form of limits to the total amount of damages for which the fund can compensate innocent victims, as well as a limit on the types and extent of damages that any individual victim might receive. Section six provides that no more than

one-third of the total amount of funds available in the fund may be paid out to compensate victims. Also, section 6(a)(3)(A) limits claims for out of pocket medical expenses to those expenses incurred for six years following discovery of exposure from a harmful discharge or release. Six(a)(3)(B) limits claims for lost wages or personal income to 100% of the amount lost in the first year following commencement of loss and 80% in the second year following such loss.

The liability provisions of section four are similarly balanced concerning the liability of those who cause or contribute to the hazardous materials spills or releases. While the provisions impose strict, joint and several liability on the one hand, recoverable damages exclude compensation for pain and suffering, loss of consortium, and mental anguish, normally the largest portion of a damage claim at common law. Furthermore, the liability provisions only apply to damages arising from releases of the specifically identified hazardous substances in subsection 2(b)(13)(A) through (F) and not substances which meet the criteria in subparagraph (a). We have serious reservations about this provision, given the poor record EPA has had in listing substances under these provisions. Other changes were made to cut back the scope of the liability provisions. The point is that the refinements which have been made balance the need to compensate actions with the need not to make businessmen liable for all damages under all circumstances. The need to ensure that damage to victims is internalized in the cost of disposing of hazardous materials is balanced by the bill excluding the compensation of victims for longer term damages and damages arising from other hazardous material handling activities.

#### IV. The Structure of the Fund

The environmental groups strongly support a fund based primarily on industry fees. Only this type of fund can provide the guaranteed source of income necessary to provide the amount of money needed to clean-up problem sites. Without this industry-based fee, S. 1480 would be little more than an authorization bill-- Congressional permission to ask OMB and the Appropriations Committee for money. In this era of concern for the balanced budget, we do believe that it is unrealistic to expect that Congress and the Executive branch will appropriate the funds necessary to address the problem.

With a problem of this magnitude, we believe that fiscal responsibility dictates that a new funding source be used to supply the needed additional money. We believe that a fee on the present producers of hazardous materials -- not the general taxpayer -- is the most equitable way to raise the additional funds. The following arguments support our position:

1. A fee system is the closest Congress can come to teaching the community responsible for creating the problem in the first place. We dispute the position of the Chemical Manufacturerers Association that states:

"It is clearly inequitable to place the burden on today's companies, stockholders, or customers for practices of yesterday's industrial producers. The generators of today's hazardous wastes, many of whom are handling their waste in acceptable ways, must not bear the cost of past failures."<sup>28</sup>

The facts are that the majority of firms producing wastes today also produced wastes in the past. A survey conducted by the House Subcommittee on Oversight and Investigations revealed that 85 percent of the nation's 53 largest chemical companies began generating hazardous waste more than 10

years ago.<sup>29</sup>

2. The fund will pay for damages and clean-up for present and future sites -- not just the "past failures" and the "short-comings of yesterday's producers." We believe that loopholes in present laws and lack of sufficient funding for State hazardous waste programs may delay and frustrate effective federal action.

3. When faced with similar situations in the past, Congress has decided that presently operating industry should pay for the problems caused by past industry practices and financially insolvent, currently operating firms. Both the Surface Mining Control and Reclamation Act and the Black Lung Benefits Revenue Act of 1977 create industry based funds that pay for past problems.<sup>30</sup>

4. An industry based fee creates a powerful incentive for the industry to police itself, increase recycling, and reduce the generation of waste. Because the size of the fee is linked to the size of the fund and the damage incidents caused by a particular feedstock, it will be in industry's interest to minimize incidents that could cause a large draw on the fund in order to reduce their fee. This will cause industry to exercise increased care for their wastes. The fee structure in S. 1480 also specifically provides credits to industries that recycle or reduce their use of feedstocks which provides additional incentives to industry to eliminate the problem of hazardous waste at the source.

The fee system should be based on chemical feedstocks and selected inorganic chemicals as proposed in S. 1480. We believe that the feedstock approach outlined in S. 1480 presents the most workable, equitable system of assessing fees.

Because the fee is placed at the top of the production chain, the integrated nature of the chemical industry broadly and efficiently distributes the fee among all those who benefit. This also means that the consumer at the bottom of this chain is not burdened by the fee.

The feedstock fee could be quickly implemented. Fewer than 700 known large companies would be required to collect the fee. And because most of the producers of feedstocks are large companies, the impact of the fee would be minimal.

The feedstock is equitable. Some 31 of the 45 substances subject to the fee are themselves designated as hazardous or are currently proposed to be designated as hazardous. The remaining 14 substances are used to make hazardous substances.<sup>31</sup>

The environmental groups strongly support the present level of funding of \$4.085 billion over a six year period. But even this level will not be adequate to deal with the problem. The fund created by S. 1480 may not be adequate to remedy sites which are already known, much less those EPA has yet to discover.<sup>32</sup> For example, EPA is currently investigating some 5,790 sites. Based on investigations of fewer than one-fifth of these sites, EPA has determined that State or federal response actions are required at 111 sites and that such actions are needed at another 231 sites. Using EPA estimates of about \$3 million needed per site for emergency response, this would mean that over \$1 billion would be needed the first year. But, unfortunately, under the provisions of S. 1480 only \$285 million will be available from revenues and only two-thirds of that or \$190 million will be available for emergency responses; the remaining one-third is reserved for third party

damages. Clearly, at this level of funding, only 63 of the known 342 EPA problem sites could be worked on the first year. Given that EPA further estimates that there are 50,000 sites that contain hazardous wastes that have yet to be investigated, it appears that the level of funding contemplated by the structure of S. 1480 is quite low indeed.<sup>33</sup>

The strong liability provisions of S. 1480 will act as an incentive to improve the standards of care. We are hopeful that the numbers of releases of hazardous materials will diminish over time. It is important to note that recovering the cost of clean-up and damages through these provisions serves as sources of money to the fund that can be used in further clean-up actions. And although it is clear to us that the present level of funding is barely adequate to do the job, we recommend that experience gained from the operation of the fund be used to make further adjustments to the size of the fund.

#### V. The Impact of the Fee on Industry

The environmental groups concur with the analysis of the impact of the fee conducted by the U.S. EPA and the Congressional Budget Office. EPA said, and the Congressional Budget Office agreed that:

"The effect of the fees on prices and production volumes of final products is small and the fees should at most have a very small effect on GNP, the price level or unemployment."<sup>34</sup>

The chemical industry has done quite well during the last five years. Its profit rate during the years 1975-1979 averaged 7.2 percent-- 38% higher than the average rate for all manufacturing industries.<sup>35</sup> This relatively high profit rate, coupled with an equally high rate of growth seems to indicate that the fee would have little or no impact on industry. In a letter to the

Environment and Public Works Committee Chairman, Jennings Randolph, Environmental Protection Agency Administrator, Douglas Costle, said that virtually all of the costs of the fee system would be passed onto consumers of products made from the chemical subject to the fee. He said that:

"In an industry with a historic annual average of six to eight percent profits and equally high rates of growth, fees of less than two percent will, at most, produce a slight reduction in the rate of growth."<sup>36</sup>

There are additional factors that tend to soften the impact of the fee on industry. First, because the fee is not indexed to inflation but stays constant, the real dollar amount of the fee will drop as inflation continues. Because the feedstock prices will rise with inflation, this means that the fee will be a smaller and smaller percentage of the actual selling price of the feedstock. Coupled with the fact that payments to the fund can be deducted from taxes, it becomes clear that the final impact of the fee on industry will be very small indeed.

#### VI. Conclusion

The environmental groups strongly support the provision of S. 1480. We urge the Committee to act promptly to ensure its passage this session.

It is difficult to over-estimate the problem of hazardous waste sites and toxic chemical spills. The provisions of S. 1480 offer a direct response to this large and complex problem.

Only an industry-based fund can provide a reliable source of funds for the clean-up effort. Fees should be assessed on chemical feedstocks. This approval would equitably allocate the burden of the fee which at the same time ensures minimal economic impact on either industry or the consumer.

Studies demonstrate that victims under present common law have great difficulty in recovering damages. Provisions of S. 1480 would provide compensation to victims of hazardous waste releases. Yet these provisions have safeguards that ensure the fund is not overwhelmed by victim claims. The liability provisions enable both victims and the fund to ensure that those who caused or contributed to the problems pay for them. --In addition, a strong incentive is provided to prevent and contain future releases. --

This limiting balanced approach is true with many other provisions in S. 1480 providing adequate coverage while protecting the fund against excessive depletion.

Comparing the size of the problem with the size of the fund, it becomes quite apparent that the fund is not adequate to deal with the sites we already know about, much less those EPA has yet to discover. But rather than raise the level of the fund now, we recommend adjustments after a year of operation.

We urge the members of the Finance Committee to carefully consider this important piece of environmental legislation and to act quickly to ensure passage.

Thank you.

## FOOTNOTES

1. This testimony was written by Marchant Wentworth, with Environmental Action, Inc., A. Blakeman Early, Sierra Club, David Lennett, Environmental Defense Fund.
2. EDF and EA v. Steffen Plehn, et al. Civ No. 78-1715 (D.D.C. filed September 13, 1978).
3. Senate Report No. 96-848, 96th Congress. 2nd Session, 1980 (hereinafter, "Senate Report)". ap. 3.
4. ID., p. 4.
5. Fred C. Hart Associates, Preliminary Assessment of Clean up Cost for National Hazardous Waste Problems, U.S. EPA, 1979
6. Senate Report. p.5
7. Hazardous Waste Disposal Sites in New York State, New York State Department of Environmental Conservation, June, 1980.  
p. iv.
8. Hazardous Waste News. Business Publishers Inc. January 7, 1980  
p. 7
9. Hazardous Waste News, Business Publishers, Inc. January 21, 1980  
p. 15
10. "EPA: 1.2 million may be Exposed to Toxic Waste," Washington Post, June 6, 1980.
11. The National Assessment of the Ground - Water Contaminator Potential of Waste Impoundments. Lyle Silka and Françoise Brasier Presented at the Symposium on Surface Impoundments, Minneapolis, MN, at 11.
12. Senate Report, p. 6
13. Id. p. 7
14. Hart Report. p. 2
15. Damages and Threats Caused by Hazardous Material Sites. U.S. EPA February, 1980.
16. Senate Report, p. 7
17. Senate Report, p. 8

## Footnotes

Page 2

18. Id.

19. Six Case Studies of Compensation for Toxic Substances Pollution: Alabama, California, Michigan, Missouri, New Jersey, and Texas. A report for the Committee on Environmental and Public Works, U.S. Senate. Serial No. 96-13, June, 1980 p. 47.

20. Id. p. 42

21. House Representatives. 96-1016, Part 1, 96th Congress. 2d Session May 16, 1980, at 20.

22. Compensation for Victims of Water Pollution, prepared for the Committee on Public Works and Transportation, U.S. House of Representatives, Congressional Research Services, May, 1979, The Superfund Concept: Report of the Intragency, Task Force on Compensation and Liability for Releases of Hazardous Substances., Land and Natural Resources Division, U.S. Dept of Justice, June, 1979.

23. The Superfund Concept, Supra, at 24.

24. House Representatives 96-172 96th Congress, 1st Session, May 15, 1979, at 17. Senate Representatives 96-848, 96th Congress 2d Session, July 11, 1980, at 11.

25. The Superfund Concept: Report of the Interagency Task Force on Compensation and Liability for Releases of Hazardous Substances. Land and Natural Resources Division. U.S. Department of Justice, June 1979 (hereinafter "Interagency Report".) P. 4.

26. Interagency Report. p. 40

27. Senate Report. p. 16

28. Chemical Manufactures Association. Testimony before the Subcommittee on Coast Guard and Navigation of the House Committee on Merchant Marine and Fisheries. July 31, 1979.

29. Waste Disposal Site Survey. Report by the Subcommittee on Oversight and Investigations of the Committee on Interstate and Foreign Commerce. Committee print 96-IFC-33 October, 1979. p. xv.

30. See Administration proposal entitled Superfund Economics - Rational and Impacts.

31. Senate Report. p. 17.

32. Senate Report. p. 17

33. Senate Report p. 18

34. Senate Report p. 21

35. Survey of Current Business. Department of Commerce, 1979.

36. Senate Report p. 19.

Mr. STAHR. Orally I would prefer in these few minutes to emphasize yet again the overwhelming need for national legislation in this area and just to outline the significant components we believe should be included in such legislation.

Following World War II there began a dramatic increase in the use of modern synthetic materials. Accompanying this came huge numbers of dangerous chemicals. You and I both now recognize the legacy of neglect that past hazardous chemical waste practices have bequeathed to us. We have glimpses at least already of the toll of known and potential human suffering and even death that these practices can cause.

Those few States that have at great economic and political costs made beginning efforts at least to identify and defuse these chemical time bombs deserve our respect and support. Judgments of the overall scope of the problem are at best fragmentary and incomplete. What we do know can be said without emotionalism to be frightening in its implications for human health and well-being, not to mention the rest of the natural world.

Our prepared testimony provides details, most of which by now are already familiar to you.

We hope and we are working to insure that existing Federal laws such as the Resource Conservation and the Recovery Act and the Toxic Substances Control Act will help prevent additions to our present legacy of neglect, but we still have that legacy, and existing law is not adequate to prevent its growth.

At an average rate of production of 77 billion pounds of hazardous waste per year, about 1 pound per person per day of materials, some of whose toxicity is measured in thousands of 1 pound or less, we have quite a legacy to deal with.

With this history and with more intense seeking out of abandoned sites by Government agencies and concerned citizens it should be no surprise if the list of known locations with polluted ground waters, with lost property values, with moonscapes where wildlife once flourished and even with confirmed or suspected human health consequences grows with each passing week. And I haven't yet mentioned the problem of spills, an equally critical problem demanding attention by this legislation.

I did not come here, Mr. Chairman, to point fingers at culprits. I do wish to emphasize we have a serious nationwide problem on our hands and we need a national law and program to solve it. In our view the burden of the solution should be shared.

An industry whose past practices have clearly contributed to the problem should shoulder a major part of the burden. Society as a whole, whose past neglect of the problem is equally clear, also has an obligation to share in the cost of the solution.

The developing patchwork of State laws helps the States that have them, but the past and present flow of chemical wastes has not and does not respect State borders.

Certainly the full burden should not be forced upon the individual victims, who have no part in creating the problem.

The problem is complex. Some of the issues have been thorny and even novel. But the need is clear. And S. 1480 as now constituted provides a vehicle for solving much of the problem.

I know you will consider very carefully the important facts and principles set out in our prepared statement. We stand ready to discuss specific matters with you here or with your staffs, but the main message I would like to leave on behalf of all the organizations of whom I am authorized to speak is one of urgency. The time of this Congress is running out. But the solution to this problem can't be much longer delayed. That is a simple and practical fact.

Blake Early, Mr. Chairman, after the other panelists, has asked me to ask you if he could have a few minutes to straighten out some of the misinformation which he perceives as having been submitted to the committee earlier in the testimony today.

Senator BRADLEY. Thank you. Certainly. Would you like to do that in writing or have the opportunity to address the committee?

Mr. EARLY. As long as we are missing at least one panelist—  
Senator BRADLEY. You can be added as the fourth speaker.

**STATEMENT OF ROY E. MIDKIFF, WATERFRONT RESORT  
OWNER, WILLIAMSBURG, VA.**

Mr. MIDKIFF. Mr. Chairman and members of the committee: I am Roy Midkiff. I own a waterfront resort on the James River at the mouth of the Chickahominy, near Williamsburg, Va.

In 1975, Life Science Products Co. and Allied Chemical Co. were convicted of violation of Federal pollution laws by dumping kepone waste into the James River. Governor Mills E. Godwin, Jr., then decreed that there would be no fishing for consumption on the lower James and its tributaries.

Almost overnight, I saw the loss of my family's 30 years of hard work and sacrifice in our fishing-related businesses. Many other small businessmen who share the James River and its tributaries with the Allied Chemical Co. also sustained severe and often insurmountable losses.

For me, this week ends 5 years of expensive litigation with the out-of-court settlement before Federal Judge Robert Merhige in Richmond. I have requested this opportunity to make a statement for the others concerning a disaster much less publicized than the physical and ecological victims—the victims of economical losses who must be considered—the workers, watermen, packers, and various small businessmen of the seafood, tourist, and marine industries.

I would like to point out that the James River contamination, unlike other accidental spills, was a flagrant and secretively purposeful dumping. Also in this case, as in no other, the pollutant, kepone, a ant and roach, and rat poison, was, to my knowledge, produced solely by the defendants.

With the plea of nolle contendere, Allied's responsibility to the private sector of the river community lessened. Why then, when the burden of guilt is firmly established, should the avenue of liability to the individual and small businesses be so easily escaped?

Had a giant chemical company's property, resources and income been so damaged, the hue and cry would have been heard throughout the country. Would the small business community then be asked, through its taxes, to help subsidize their losses? I fear that

without a bill such as S. 1480 the answer is yes, unless we make it unprofitable and unpopular to pollute.

The financial victims have a story to tell which I feel can be most beneficial to these hearings.

In Virginia not one official of the Federal, State or local government has ever once in 5 years offered to help with the exception of Harry F. Byrd of Virginia. Had it been an equally destructive natural disaster, such as earthquake or hurricane damage, would we not then have had assistance?

In 1975 our waterfront was ringed by scull-and-crossbone-like signs. Five years later little has changed; the ban, while being more limited, is strictly enforced; the wording of the signs has changed somewhat but they remain in evidence.

In many cases of businesses on our rivers the cost of fighting a legal battle by producing family-kept books of mom-and-pop-type partnerships was physically and financially too much.

The burden of proving losses was suddenly placed on these people, and they were cast into the defensive by fancy legal footwork. Can the small businessman not remain small, or must this important factor of American life be wiped out by the giants of industry?

We respectfully request that this bill, although accepted by us as imperative as it now stands, be dated to include the third-party claims resulting from exposure prior to January 1976 and prior to enactment of the act.

I carry messages from many remaining marina owners and seafood packers who have been affected. The messages are worded differently, but the plea remains the same: Pass the Superfund bill so that this can't happen again.

Senator BRADLEY. Thank you very much, Mr. Midkiff, for your statement.

[The prepared statement of Mr. Midkiff follows:]

Sept. 11, 1980

Roy E. Midkiff  
 Rt. 1, Box 184  
 Williamsburg, Virginia 23185

I am Roy Midkiff. I own a waterfront resort on the James River at the mouth of the Chickahominy, near Williamsburg, Virginia.

In 1975 Life Science Products Company and Allied Chemical Company were convicted of violation of Federal Pollution Laws by dumping Kepone waste into the James River. Gov. Mills E. Godwin, Jr. then decreed that there would be no fishing for consumption on the lower James and its tributaries.

Almost overnight, I saw the loss of my family's thirty years of hard work and sacrifice in our fishing related businesses. Many other small business men who shared the James River and its tributaries with the Allied Chemical Company, also sustained severe and often insurmountable losses.

For me, this week ends five years of expensive litigation with the out of court settlement before Federal Judge Robert Merhige in Richmond. I have requested this opportunity to make a statement for the others concerning a disaster much less publicized that the physical and ecological victims. The victims of economical losses must be considered; the workers watermen, packers, and various small business men of the seafood, tourist, and marine industries.

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Tuesday

# Local / Regional

Daily Press

Newport News-Hampton, Va., September 9, 1980

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## Marina Owner Last To Settle Kepone Suit

By ERNIE GATES  
Staff Reporter

Five years after Kepone was discovered in the James River, Roy Medkiff is ready to settle his damage suit against Allied Chemical Co.

As the marina owner, whose business dried up with the closing of the river, is not ready to stop fighting.

Medkiff, the last holdout in a series of suits, said he has agreed to accept \$85,000 in settlement of his damage claim against Allied. Life Science Products Inc. of Hopewell manufactured the pesticide ingredient for Allied.

Medkiff estimated earlier this year his losses at the Holiday Inn Travel Park, a camp site and marina where

the Chickahominy River empties into the James, have run more than \$300,000.

"In my case and in every case I know of on the Chickahominy, the people are extremely dissatisfied (with the settlements). And yet, no marina, especially suffering the loss of the use of the river, could continue. The cost of fighting a loan grew too much," Medkiff said Monday.

The James was closed in 1975 after Kepone contamination was discovered. The pesticide ingredient has caused cancer in rats and mice. The state is now considering opening part of the river where Kepone levels in fish are below federal safety limits.

Medkiff said he agreed to the settlement Monday in a pretrial conference before Circuit Judge Robert Merhige Jr. in Richmond. His suit was scheduled to go to trial Oct. 10.

That trial will never be, but Medkiff is preparing to testify in another forum where the chemical industry, including Allied, is on trial — U.S. Congress.

Along with victims from the Love Canal development in New York, and others who have suffered from exposure to toxic wastes and chemical dumps, Medkiff will tell his tale to a Senate committee Thursday.

Congress is considering a bill to create a "superfund" from fees on the chemical industry, which would be used

to clean up hazardous waste dumps and compensate victims without long legal delays.

Love Canal is perhaps the best known, but the Environmental Protection Agency estimates as many as 30,000 abandoned waste dumps may exist in this country.

Those victims whose exposure threatens birth defects and other health problems make the most dramatic witnesses, but there is another effect less publicized, such as the economic loss when important commercial resources such as the James River are lost through contamination.

There is a human cost there, as well, in the damage to those who earn a living

from the seafood economy — watermen, packers, even the workers at marinas such as Medkiff's.

"The financial victims have a story to tell, too," he said. "That can be most beneficial in these hearings in Congress."

The superfund bill, titled the Environmental Emergency Response Act, would raise \$1.7 billion in the next three years, mostly from fees on producers of the raw materials from which toxic chemicals are made.

The fees would be divided according to the volume a company produces. Two thirds of the fund would be devoted to cleaning up existing dumps or for emergency action on new spills. The

rest would be available for payment of damages resulting from contamination.

"Not one official of the state, local, or federal government has ever, once, in five years, ever approached us to help," Medkiff said. "The burden of proving losses was suddenly put on people who just keep their books. They were cast into the defensive. It was fancy legal footwork."

When Medkiff testifies Thursday, he will carry messages from other marina owners and seafood packers affected by the Kepone contamination. Addressed to Sen. Harry Byrd, Jr., the messages are worded differently but carry the same plea: Pass the superfund bill so this can't happen again.

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Senator BRADLEY. I think Mr. Washington has arrived. We have 5 minutes for each of the witnesses. Please pull the microphone close to your mouth and make sure that it is on.

**STATEMENT OF GEORGE WASHINGTON, ON BEHALF OF THE VIRGINIA SEAFOOD COUNCIL AND THE VIRGINIA WATERMAN'S ASSOCIATION**

Mr. WASHINGTON. I am George Washington, legislative representative of the Virginia Seafood Council and special representative of the organized watermen.

Mr. Chairman and members of this committee, the \$500 million seafood industry of Virginia, comprised of 14,000 watermen, buyers, packers, and processors and marketers, greatly appreciate the opportunity to appear here today.

The protection of our Nation's waterways is, of course, of prime consideration to us. We have long felt that just such a measure as proposed here was needed. We do feel that none of this money for these purposes should come from the public treasury but rather from the offenders. If the offender is not held responsible for these acts and made to suffer a degree that causes him to prevent them in the first place, he has no incentive to do so, and we haven't gained much.

People don't drive 55 miles an hour today to save gas; most of them drive 55 to save the ticket and the associated fine.

Watermen in Virginia on several occasions have proposed legislation in the Virginia General Assembly that would require that no more than 50 percent of any fine for polluting waterways could be used for investigative and administrative purposes. Twenty-five cents would go to replenishment of the natural resource and 25 percent of such fines to redress the economic loss.

Take, for instance, the much discussed kepone situation. Its presence caused the closing of a major river in Virginia to the taking of seafood for human consumption. The estimated loss of revenue to the industry in the first year alone was \$8.3 million. The loss continues now at an estimated annual rate of \$3.5 million. Over a 5-year period since this river has been closed, that represents over \$25 million in losses to the seafood industry alone, and it still continues.

The marine trades, marinas, and catchgrounds lost approximately \$1.5 million the first year and their losses continue.

The company responsible for this was fined \$13 million and made a \$5 million settlement with the State of Virginia, a total of only \$18 million. Except for \$500,000 allocated to a special one-shot marketing program, not 1 cent of this money has been spent on cleanup or to replenish the natural environment or to redress the economic loss or to provide relief for the many people affected.

Your measure must address these serious inequities to be a fully effective and protective program.

It is not printed in my statement, but I would like to make this one statement about oil: The seafood industry considers oil, and oil in our waters, about as toxic as any other chemical, because oil kills marine life.

I would like to thank you very much for this opportunity. If you have any questions, I would be happy to answer.

Senator BRADLEY. Thank you very much, Mr. Washington.  
[The prepared statement of Mr. Washington follows:]

## STATEMENT OF

GEORGE C. WASHINGTON  
LEGISLATIVE REPRESENTATIVE  
OF THE  
VIRGINIA SEAFOOD COUNCIL

TO THE

U.S. SENATE FINANCE COMMITTEE

ON

SEPTEMBER 11, 1980

Mr. Chairman- members of the committee, the seafood industry of Virginia, comprised of the watermen, buyers, packers, processors and marketers greatly appreciate the opportunity to appear here today. The protection of our nation's waterways is of prime consideration to us.

We have long felt that just such a measure as proposed here was needed. We do feel however, that the money for these purposes should not come from the public treasury, but rather from the offenders. If the offender is not held responsible for these acts, and to a degree that causes him to prevent them in the first place, then he has no incentive to do so, and we have not gained much. People do not drive 55 to save gas - most do so because they do not want the ticket and associated fine.

Watermen of Virginia, have on several occasions, proposed legislation in the Virginia General Assembly that would require that no more than 50% of any fine for polluting waterways could be used for investigative and administrative purposes, 25% would go to replenishment of the natural resource and 25% of such fine to redress the economic loss. Take for instance, Kepone - its presence caused the closing of a major river in Virginia to the taking of seafood for human consumption. The estimated loss of revenue to the industry in the first year was \$8.3 million. The loss continues now at an estimated annual rate of \$3.5 million. Over a 5 year period that represents over \$25 million in losses to the seafood industry alone - and it continues. The marine trades, marinas and campgrounds lost approximately \$1.4 million the first year. The company responsible for this was fined \$13 million and made a \$5 million settlement with the state., a total of only \$18 million. Except for \$500 thousand dollars allocated to a special one-shot marketing program - not one cent of this money has been spent on clean-up, to replenish the natural environment, to redress the economic loss or to provide relief for the many people affected.

Your measure must address these serious inequities to be a fully protective and effective program.

Thank you very much, and if you have any questions, I will be happy to answer them.

Senator BRADLEY. And now let's hear from Mr. Early.  
Mr. EARLY. Thank you, Mr. Chairman.

**STATEMENT OF A. BLAKEMAN EARLY, WASHINGTON  
REPRESENTATIVE, THE SIERRA CLUB**

In sitting through the hearings this morning, the subject of the strict liability provisions received a considerable amount of discussion. We did not comprehensively address this issue in our testimony because we didn't think it was in the scope of the Finance Committee jurisdiction.

I would like to comment just a couple of minutes on some of the allegations with regard to some of these provisions. These provisions, the liability provision in section 4 of S. 1480, do not create open-ended liability; they were carefully crafted over many, many days of discussion during markups of the Environmental and Public Works Committee.

The liability provisions do not apply to permitted releases—those are releases that are regulated pursuant to the Federal Water Pollution Control Act and other environmental acts—as was alleged this morning; they only apply to the disposal of certain specifically identified materials, materials that by rigorous regulation have already been established as being hazardous. They specifically do not apply to materials that meet a certain criteria but which have not been previously identified.

The damages, the so-called third-party claims, are very much limited to what I would term as the basic necessities. These are out-of-pocket medical expenses, lost wages for the first 2 years, damage to natural resources when one's livelihood depends on it; very, very basic losses. Damages cannot be awarded under the strict liability system of S. 1480 for the so-called intangible losses, pain and suffering, loss of consortium, mental anguish, which are traditionally what people associate with a big ticket civil lawsuit.

In sum, the liability provisions have been carefully crafted. They represent a balance of doing something for the victim who, when he has a loss, represents a loss to the gross national product just as the loss in a lawsuit by a company.

Responding to a particular concern of Senator Durenberger about public acceptance of hazardous waste facilities and the fact there aren't adequate facilities today, I would urge the committee to preserve these liability provisions in order to enhance public acceptance of additional hazardous waste facilities.

The public is understandably at this point very paranoid about the problem of hazardous waste disposal, and if they don't feel they are going to be compensated under circumstances in which they are injured, the public resistance to new facilities is going to grow much, much larger.

Finally, Mr. Chairman, one parting comment on the issue of how much is it going to cost, just to address the inactive waste site problem:

The Chemical Manufacturers Association has said they feel the costs are much inflated. I would urge the committee to examine their materials very closely. Thus far, to my knowledge, CMA has refused to reveal the data on which their statements have been made. When the National Governors Association polled many of its

State governments, many of the responsible officials had not been contacted, to their knowledge, by CMA. This data needs to be, in our view, examined more carefully.

Thank you.

Senator BRADLEY. Thank you very much. I think that this testimony has been very helpful because you have really been on the cutting edge of this problem. I mean, you have experienced it; and I think that we should ask just a couple of questions so that we can get in the record some facts of each of your circumstances.

Let's begin with Mr. Midkiff. I would like to know how many people originally joined you in seeking damages?

Mr. MIDKIFF. There were 12 at our original meeting. With the lack of a leader to help us decide, attorneys and—

Senator BRADLEY. Could you bring the microphone closer?

Mr. MIDKIFF. With the lack of a leader, we got together finally, after a year after the initial closing of our river, and at that time, in my office in Williamsburg, I met with 12 people, 12 different facilities, different types—waterfront, restaurant, quite a few marinas and two or three netters.

Senator BRADLEY. Did all 12 stay with you through the whole process?

Mr. MIDKIFF. No, sir. Most of them went out of business. Three besides myself on the entire river, one of those was not at the meeting, so I should say two others and myself from the original meeting have finally settled. The others, either they went into bankruptcy or have left the area.

Senator BRADLEY. They went into bankruptcy because of the decline in business and the inability to handle the costs of the litigation?

Mr. MIDKIFF. Yes; especially the latter. The costs right from the beginning suggested that it would be terribly expensive.

Senator BRADLEY. Mr. Washington, do you have anything to add?

Mr. WASHINGTON. Yes; I could say we had about 547, according to our marine resources people, of working watermen who did not renew their licenses, and running into a number of them now, we find that some of them had to go on welfare and a number of other things.

These men did not have the money to prosecute through litigation; they were making livings, but they weren't making enough money to hire a lawyer, particularly over a period of time. We are talking about from the time they instituted suit to some beginning settlements, has been over 5 years.

Senator BRADLEY. Is that right, Mr. Midkiff?

Mr. MIDKIFF. Yes.

Mr. WASHINGTON. Yes, 5 years in the courts.

Senator BRADLEY. And if you hadn't settled, it would have been longer?

Mr. MIDKIFF. And I am the last. Six months ago the others dropped out, so I am the last, and it has taken me 3 or 4 months just to decide what to do from here.

Mr. WASHINGTON. Watermen can't stand 5 years without an income.

Senator BRADLEY. That is a long time to wait for the fish to come in.

Mr. WASHINGTON. The fish are there; that is the sad part of it. That is another whole story we are fighting in another hearing.

Senator BRADLEY. Let me ask Mr. Midkiff, and to the extent Mr. Washington can amplify I would appreciate it: Did you have a problem bearing the burden of proof that it was kepone as the toxic agent that had caused the damages that you claim?

Mr. MIDKIFF. Well, the problem, they said—they didn't close the river—Allied Chemical has made that statement, that they weren't responsible for closing the river, the State closed the river, which is a play on words. Kepone was a dreaded poison and they knew better about the poison than anybody; they had done studies on their product as they do with other products, and they knew this was a disaster.

But the State stepped in and closed our river, and it is true.

Senator BRADLEY. And the chemical company said they weren't liable because the State had closed the river?

Mr. MIDKIFF. That is right.

Senator BRADLEY. They would have been liable if the State had left a poisoned river flow?

Mr. MIDKIFF. Exactly. As far as Allied is concerned, the river would be open; they would not have closed it.

Senator BRADLEY. Mr. Washington?

Mr. WASHINGTON. There was never a necessity for the burden of proof of the agent, the agent being kepone. As Mr. Midkiff points out, there has been a tremendous wrangle about who is responsible for the loss of the economic income: Allied, for putting it in there, the State and EPA and FDA for closing the river. And this, again, as I mentioned, bordering on the other problem, where the toxicity levels were determined to be far too low. They used a 1,000 percent; the FDA here used a 1,000 percent safety factor, which arbitrarily just closed this particular river.

There are negotiations underway with them now to raise that toxicity level to 1.3, and at that point almost everything in this river is going to be acceptable. Nobody has determined that this chemical yet has caused a cancer or an illness in a human being.

Senator BRADLEY. Do you have anything to add, Mr. Early?

Mr. EARLY. I would like to address the latter problem to which Mr. Washington just addressed himself. We found in many circumstances—this is true in the Great Lakes as well—that consumers of marine products are in opposition to the watermen who are taking those products over what is a safe level of contamination.

The major reason for this conflict is true is because it is difficult for the watermen to obtain compensation for their losses when, in fact, a fishery is closed. Their only alternative is to light closure of the fishery.

To me, it is a very unfortunate thing that you have consumers, many of whom are members of the Sierra Club and other environmental organizations, actually working in opposition to the watermen, both of whom have been in essence damaged by a completely different entity, namely the spiller.

In addition, we have had some discussions with one of the attorneys representing some of the watermen, and Mr. Washington has mentioned some of the difficulties that have been engaged in just in establishing exactly what the damages were.

As I understand, about 13,000 pages of depositions and interrogatories have been taken in this litigation just to establish what the damages were; and that has been over a 3-year period. It was very obvious that Allied Chemical Co. was pursuing a policy of a war of attrition in order to wear out its defendants.

Mr. STAHR. Mr. Chairman, could I add a word on the burden of proof?

Senator BRADLEY. Yes.

Mr. STAHR. I think it could be said fairly in the kepone case, the James River case, the agent responsible, kepone, was pretty clearly responsible; and there wasn't much problem of burden of proof there.

But suppose in addition to all the other problems of getting compensation that you heard these witness testify about, there had been a very serious question about what the responsible toxic agent had been? Take, for example, the chemical control warehouse in New Jersey, which only last spring—finally burned up after they had gotten a great many of the worst stuff out of there, a great many tons of the worst agents out of it. They found dozens, literally dozens, of different kinds of toxic agents that had been stored there and which were deteriorating and rusting and rotting and all the rest.

Imagine the problem on a person who was injured of proving which agent did what and how much was there. Only the people who put them there could possibly have such records.

Senator BRADLEY. I want to thank all four of you for your testimony. I think it is a valuable addition to the record.

I would urge all of my colleagues to make sure they consider it in the deliberations on this bill.

Thank you very much.

Our next and final panel consists of Mr. C. Kenneth Claunch, Mr. Robert F. Mobbs, and Mr. C. D. Van Houweling.

Mr. Claunch is president of the Finish Engineering Co. in Erie, Pa.; Mr. Mobbs is a member of the Council on Occupational and Environmental Health, Massachusetts Medical Society; and Mr. Van Houweling—is he here? How do you say that?

Mr. VAN HOUWELING. Van Houweling.

Senator BRADLEY. Who isn't here? Mr. Mobbs?

**C. KENNETH CLAUNCH, PRESIDENT, FINISH ENGINEERING CO., ERIE, PA.; AND C. D. VAN HOUWELING, DIRECTOR, GOVERNMENTAL AFFAIRS, NATIONAL PORK PRODUCERS COUNCIL, A PANEL**

**STATEMENT OF C. KENNETH CLAUNCH, PRESIDENT, FINISH ENGINEERING CO., ERIE, PA.**

Mr. CLAUNCH. Thank you. You have a two-page outline of my presentation that I am not going to read, but I would like it to be entered in the record, please.

[The prepared statement of Mr. Claunch follows.]

ONE INDUSTRY ANSWER

C. Kenneth Claunch  
 Finish Engineering Company, Inc.  
 921 Greengarden Road  
 Erie, Pennsylvania 16501

Gentlemen, I understand I have just minutes, so I will get right to the point. In summary, I am here to urge action on an industry technology that will stop nearly half of our future hazardous waste horrors, such as the Love Canal and the Valley of the Drums in Kentucky, that have been experienced in the past. Further, I will urge industry involvement with the Environmental Protection Agency in finding basic solutions to hazardous waste problems. You are here to consider funding and other factors for the so-called Superfund. How many billions of dollars is one of your questions. These funds are for the cleaning up of the hazardous waste "sins of the past", but there has been little consideration of tomorrow's problems -- stopping future so-called "sins". Action appears to be mandatory on solutions to these problems, otherwise there will be many FUTURE SUPERFUNDS.

I will briefly present our small industry's technology that can LITERALLY CUT IN HALF the drums of hazardous wastes that are buried in the future. This is a very major technology that has been only nominally used to date. Wide spread use will reduce the need for the burial of hundreds of thousands of gallons of hazardous liquid waste, and therefore, save a huge number of future health problems.

Technology

The technology is a STILL for waste solvent to recover solvents for re-use. Here is an example of a contaminated solvent (Exhibit A, one quart sample). Let me point out the magnitude of these industrial solvents to the overall waste problem. This chart (Figure 1) shows the distribution of organic waste in this country. A huge portion of the liquids buried in drums is organic waste. You will note that approximately 50 percent of these wastes are industrial solvents contaminated after being used for clean-up in plant manufacturing operations. In other words, this technology deals with a very large portion of the overall problem. The Still does the following: It converts this material (Exhibit A) into reusable solvent (Exhibit B, sample jar) and about this small amount of solid material, like this (Exhibit C, small sample).

This straight forward and generally overlooked technology has recently impressed a number of organizations, such as the American Electroplaters Society, the Society of Plastic Engineers, and of considerable impact,

One Industry Answer - page 2

the Environmental Protection Agency (EPA) who concurs that it can reduce the buried waste in this country by an amount approaching 50 percent.

Further, some 20 major manufacturers in the last two years have been operating these Stills with the result of eliminating some 18,000 drums per year of hazardous waste that were previously buried. In fact, recycling the same number of drums of expensive industrial solvent which is derived from crude oil.

Action to Date

In 1976, the Resource Conservation and Recovery Act was passed. This Act (1980) basically tells people what NOT to do. There are severe penalties. Industry is in a quandry, in many cases, not knowing an alternative. An unexpectedly large number of hazardous dump sites have been found, necessitating Superfund type activities due to wastes of the past.

Action Proposed

There must be POSITIVE action to eliminate these hazardous wastes in the future. Legislation can only reduce the quantity of waste. New technologies, such as we are discussing, are needed to eliminate most hazardous wastes.

In the last few minutes you have had a mini-view of our industry's Still. This technology can eliminate nearly half of the buried wastes. There are, no doubt, other technologies that the excellence of American industry can propose. But the chemical industry is diverse, and coordinating the effort is unlikely without government involvement. What is proposed is industry involvement for POSITIVE solutions to these problems, and this will require strong motivation in industry and push by government.

SOURCES OF ORGANIC LIQUID WASTES

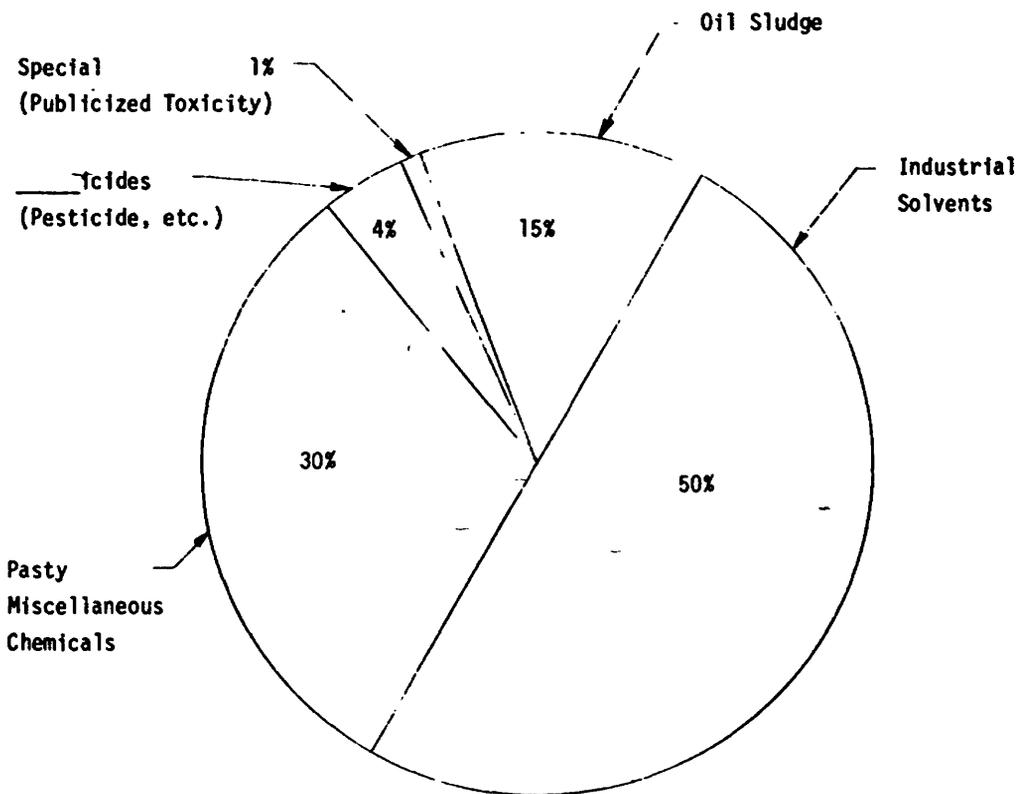


Figure 1

APPENDIX

For your information, the additional facts have been included:

1. Paper entitled: WASTE SOLVENT STILL, High ROI and Solves Hazardous Waste Disposal Problem
2. March 1980 PLANT SERVICES magazine article reprint.
3. June 1980 PLATING AND SURFACE FINISHING magazine article reprint.
4. Butler Mine Tunnel Incident fact sheet.
5. Biographical sketch on C. Kenneth Claunch.
6. CASE POINT Why Waste Still Technology?
7. Proposal to the Environmental Protection Agency entitled "Objective."

Finish Engineering Company, Inc.  
921 Greengarden Road  
Erie, Pennsylvania

### WASTE SOLVENT STILL

High ROI and Solves Hazardous Waste Disposal Problem

#### INTRODUCTION

Due to new environmental laws and the increase in crude oil prices, as a result of OPEC, the cost of all organics, including solvents, has risen dramatically in recent years. For the smaller company, this has been particularly burdensome, since it is very difficult, as is usual with a smaller company, to pass on these remarkable costs.

Referring to the table below, it is a fact that in 1973 (prior to OPEC), typical solvent, in this case acetone, cost (net) about 30¢ a gallon, composed of its purchase cost and disposal cost. The latter in those days was a credit (!). These costs have risen to the range of \$3.00 a gallon today, and it appears to be rapidly going to \$5.00 a gallon.

#### Cost of Solvent

(This Example: Acetone, \$ per Gallon)

	<u>1973</u>	<u>1976</u>	<u>1980 (Feb)</u>	<u>Projected</u>
Purchase	.35	1.35	2.31	3.15 - 4.20
Disposal	<u>(.05)</u>	<u>(.20)</u>	<u>.66</u>	<u>.66 - 2.00</u>
Net Cost	.30	1.05	2.97	3.71 - 6.20

We are, thus, approaching the day when the use of industrial (organic) solvents is analogous to the use of lobster at home - 'A thing of the past; too expensive!'

Solvent recovery processes - usually an adaptation of distillation - have been utilized for quite some time. But these processes have been for high volume treatment of contaminated solvents. Basically, these tend toward the 1,000 gallon/hour range and often involve fractional distillation.

Experience and processes for treatment of smaller volumes of solvent contamination have been lacking. With price increases and the enormous disposal responsibilities facing us, recovery of solvent, for the small volume user, needed attention. This paper outlines proven, successful experiences and processes for smaller scale (one drum per week to one drum per hour) solvent recovery systems. These processes are very economical, often having returns on investment, ROIs, in the 100 to 400 percent range.

During this presentation we will show you a way not only to save large numbers of dollars in avoiding the purchase of new solvents, but of even greater importance, a method to comply with the new environmental

laws on hazardous chemicals on which the EPA is currently issuing regulations. Solvents contaminated with paint, grease, and other miscellaneous materials are identified specifically by the EPA as "hazardous materials"\* and must be handled according to the new strict laws. The 1976 Resource Conservation and Recovery Act makes us liable for these materials cradle-to-grave on, apparently, a "strict liability" basis (i.e., if there is a violation by others, the generator is responsible 'no matter what he did right!'). What makes this situation even more unique is that there are fines (to \$25,000/day) and a personal CRIMINAL liability!

Generally, organic liquid wastes fall into four categories. One, oil sludges, represent about one-fourth of the total in this country and are not particularly noxious. There is the category generally called pasty miscellaneous organic chemicals, and these cover about one-third of organic liquid wastes. These materials are by-products from organic synthesis, still bottoms, and the like. They are usually viscous, high boilers, and often very toxic (e.g. Love Canal contained distillation sludge from pesticide manufacture). The third major category, industrial solvents, also represents about one-third-plus of the wastes. We will be talking about these throughout this presentation. The source of contaminated industrial solvents is many, many users - small companies like yourselves, and generally used for wash-up operations. Chlorinated and nonhalogenated solvents are involved. They are very expensive. Their costs are presently ranging from a rare \$2.00 to as high as \$12.00 per gallon. The fourth category of organic liquid waste is of quite well known materials. These are pesticides, rodenticides, PCBs, and other particularly noxious and/or well publicized\*\* toxic chemicals. This fourth category represents only 1 to 2 percent of the U.S. organic wastes total.

#### SOLVENT RECOVERY WITH STANDARD STILL

(Nominal rate: 4 drums/shift)

##### How it works:

This batch type solvent recovery technology is the not-new method of differential distillation combined with recently developed techniques to allow the controllable boiling and removal of valuable solvents from residues that can range in viscosity up to 10,000 CPS.

Basically the still operates by heating contaminated solvents to form vapors of pure solvents, condensing them outside the still to collect a clear, purified solvent mixture. The difficult aspect of this operation is that the residue in the still is becoming more and more viscous. The gist of the technology of this still is (1) to have instruments that can readily alert the operator when the viscosity or thickness of the residue in the still is beginning to increase. In lay

\* Federal Register, Vol. 43, No. 243, p. 58957, 250.14 (a).

\*\* Publicity often increases the perceived toxicity of a chemical, which, in essence, makes it more toxic from a regulatory standpoint!

terms, we want to continue to boil the material until the residue is about the consistency of catsup and not go as far as the consistency of peanut butter.

The viscosity instrument is quite simple and non-plugging (very, very important when dealing with such thick medias). When the material is too thick, shut-down is automatic.

It is also essential (2) to have a means of eliminating caking on the heated wall. A patent pending device that, in essence, scrapes the wall with a non-wearing, non-sparking razor-blade-like knife every five seconds is utilized. Heat transfer coefficients of over 200 Btu/hr - ft<sup>2</sup> - °F can be maintained even to viscosities of over 5,000 centipoise.

Figure 1 shows a flow diagram of the still. (A) is the boiling chamber into which the contaminated solvent is pumped. Heat is supplied from a boiler at (E) to the steam jacket at (B). The internal scraper is indicated by (D). The vapors of solvent(s) exit the unit at the top and are condensed by an air cooled or water cooled condenser (C) filling the clean solvent drum to the left. The highly reliable controls at (E) tell the operator that his viscosity is satisfactory.

In actual operation the operator does the following: Into an empty still he pumps two 55-gallon drums of contaminated solvent. He turns on the still and then can leave the area. The unit will boil and condense one drum and shut itself off. When the operator returns, he pumps in another drum of contaminated solvent and places an empty clean drum under the condenser. Again, he turns on the still and leaves the area. Typically, this will continue until 10 drums have been added and nine drums of clean solvent(s) recovered, a 90% recovery. The remaining one drum of residue is drained out the bottom of the still into a sludge drum. This sludge can be disposed of by EPA approved methods (e.g. certain land fills) or by processing it in a manner to be discussed later in this presentation.

### Economics

The return on investment from this process is often startling. If a company has JUST one drum per day of contaminated solvent, the return on investment (ROI) will be approximately 100%, a one year pay-out! It is very common that many users have ROIs of 200-400%. One user in Indiana has been operating his still for 3 years at 28 gallons/hour, 24 hours/day, 5 days/week. He processes 14,300 gallons/month with a yield of 93%. Using a minimal cost of this ketone of \$2.00+ per gallon, his savings currently amount to approximately 1/3 of a million dollars! For a low 5-figure investment!

Another example is a still at GTE-Sylvania in Tennessee. See Figure 2. This still is nearly 100% automatic, being fed from an underground tank and the clear recovered solvent flows by gravity to another underground tank -- labor input is nominal. The engineer in charge is quoted as follows:

"Our still extends the life of our acetone tremendously. With the exception of losses through process evaporation and sludge collection, we are able to use the same acetone for a minimum of six cycles. This solvent life extension has decreased our cost per gallon from \$1.45 to about 30¢ which includes our cost of operating the reclaimer.

"In addition to this bulk reclaiming operation, we are enjoying further savings by reclaiming thousands of gallons of drummed acetone and alcohol collected during prior years. By reclaiming we return it to the drum and use it over and over.

"The combination of savings, which in total exceed \$50,000 a year, the peace of mind from virtual independence from outside solvent availability, and our compliance with tough new hazardous waste disposal standards makes in-house solvent reclaiming a great addition to our operation."

#### SOLVENT RECOVERY WITH STEAM/IN SITU (IN DRUM) DISTILLATION

(Nominal Rate: one drum/shift)

##### How it works:

This process works by distilling the solvents directly out of the drum to a condenser for collection. Leaving the material in its drum is a real advantage since many drums cannot be pumped out completely (in cases, not at all). Further, if the goal is to remove all solvents (as in the case in this process), the final non-volatile material will be a rock or sand-like 'mess' - best left in a disposable drum rather than in processing equipment causing, perhaps, costly clean-up.

The distilling is done by a special method (patent pending) of steam injection safely into the contaminated liquid or sludge in the drum. As a result, the condensate is both water and solvent (in most cases the solvent is immiscible in water, therefore, easily separated. If the solvent is miscible with water -- very few are -- this process is not applicable).

The drum of material can, of course, be the viscous residue from the previously discussed (still) operation, or in the case of a very small usage, from the user's process. This is to say, if a company only has one drum per day or one drum per week, this process would be economical and recommended.

The operating sequence is as follows: The drum is placed inside a special insulated cabinet. The band steam heater (part of the cabinet) is closed around the drum. A very special (but inexpensive) steam sparger line is inserted into the drum through the smaller bung opening in the top of the drum and connected by a flexible line to the controlled steam line. The larger (2") bung opening is connected by a flexible line that goes to the condenser. By simple temperature control

the following occurs: The liquid is heated to the boiling temperature by the steam jacket, so called "dry heat." This temperature is the azeotropic boiling point of the solvent-water mixture that will exist inside the drum (due to some water condensation in the drum). For example, if the solvent was toluene (normal boiling point of 231°F) the azeotropic boiling temperature is 185°F. It will always be less than the boiling point of water, 212°F - no matter what solvent is in the drum. This is a real advantage, allowing the recovery of even high boilers, 300-400°F range, with just steam.

When at this azeotropic boiling point, the steam to the sparger is activated and the steam enters the liquid in the drum by the special sparger. Two phenomena occur: (1) part of the steam strips the solvent into vapor which exits the drum; and (2) of critical importance, the steam, if properly sparged into the liquid, will cause heat transfer into the whole mass rather than just to localize areas of the sludge causing caking and slowing of the heat transference which would nullify the entire process.

This is the gist of this technology. To explain: The contaminated solvent will start, perhaps, as fluid and become thicker and thicker until it reaches an infinite viscosity (!), i.e. it ends up as a solid. Thus, one would ask how the heat is effectively transferred to this extremely thick material towards the end of the process. The answer is that the water, condensed due to earlier heat transfer (discussed above), is the heat transfer media to the final solid contamination. In a typical, properly operated situation, there will be about 10 gallons of water in the drum at the end of the solvent stripping.

The steam and solvent vapor enter a condenser, similar to the condenser on the still discussed earlier, and condenses. A simple two-layer separation tank removes the condensed water from the condensed liquid solvent.

At the end of the operation the temperature will rapidly rise from the boiling temperature up to 212°F, the boiling point of water, indicating there is no solvent left. At this point, the steam to the sparger stops. The dry heat (jacket) continues until the water is boiled away.

After this operation, the drum is removed from the cabinet. The top of the drum is cut off. The toxic, non-volatile contaminants, often looking like rocks or sand, that remain are pulled out of the drum with the disposable steam sparger. This solid material can be disposed of by safe, legal methods, usually directly to an approved land fill.

Figure 3 shows the solid residue from this process. This is a dramatic picture, in that it represents the solid, non-volatile toxic materials that originally (before both processes described herein) were contaminated - about 800 gallons of solvent! That is, the processes yielded about 770 gallons of pure solvents and this 'rock'; good from a hazardous wastes and an economic standpoint. The disposable sparger pipe can be seen sticking out the top of this 'rock'. The bottom of the rock, you will note, conforms to the inside of a 55-gallon drum, i.e. the

bottom of the rock is 22" in diameter (to give the reader a dimensional reference).

Economics:

The economics are very similar to the still discussed above. The return on investment (ROI) ranges from 75 to 300%. Investment is just at the 5-figure range.

Labor input required is essentially nominal since the operation is automatic once the drum is put into the unit.

CONCLUSION

The 1976 Resource Conservation and Recovery Act states:

"(c) Materials - The Congress finds with respect to materials, that --

- "(1) millions of tons of recoverable material which could be used are needlessly buried each year;
- "(2) methods are available to separate usable materials from solid waste; and
- "(3) the recovery and conservation of such materials can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments."

We have revealed in this presentation high viscosity distillation processes that have the capability to recover materials just as Congress dictated above. Distillation is rarely thought of as a waste treatment process. But, in fact, it is one of the best, yielding recyclable materials (as solvents, discussed herein) or clean liquid condensates that can be incinerated without resultant toxic fly-ash-like solids in the effluent gas. Distillation energy cost is minimal, only about 2¢ to 3¢ per gallon, relative to the high value of the recovered material and/or the high value of avoiding hazardous solvents.

The specific processes discussed for industrial organics (solvents, etc.) in drum quantities allow economical recovery and, also, waste elimination for even the smallest company.

Figure 1: Flow Diagram, Standard Still

Figure 2: Photo of Still on Operation

Figure 3: Dramatic Picture Showing All the Non-Volatile,  
Toxic Contamination from 800 Gallons of Waste

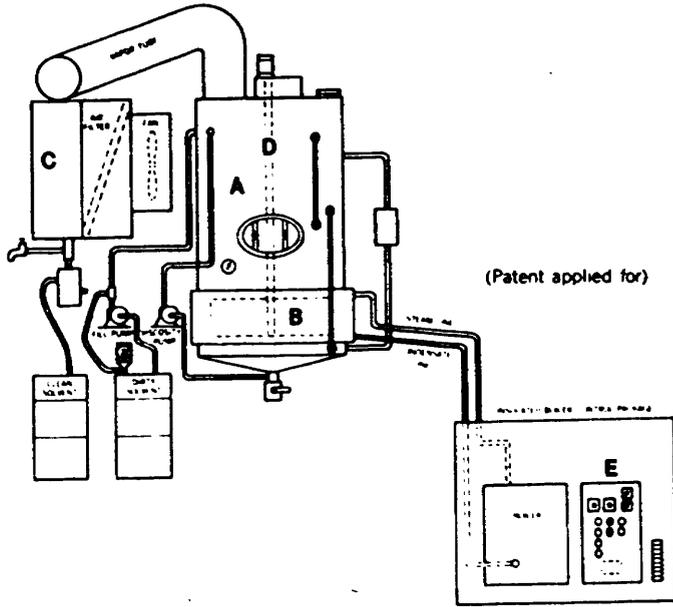


Figure 1

Diagram explains basic still operation. Dual viscosity and temperature control (E) and internal wall scraper (D) are key to the process.



## Solvent recovery saves \$50,000/yr

Also solves disposal problem

JOE D. HALL, Senior Engineer  
GTE Products Corporation  
Dyersburg, Tennessee  
PLANT SERVICES STAFF

### NEW SOLUTIONS

#### Problem

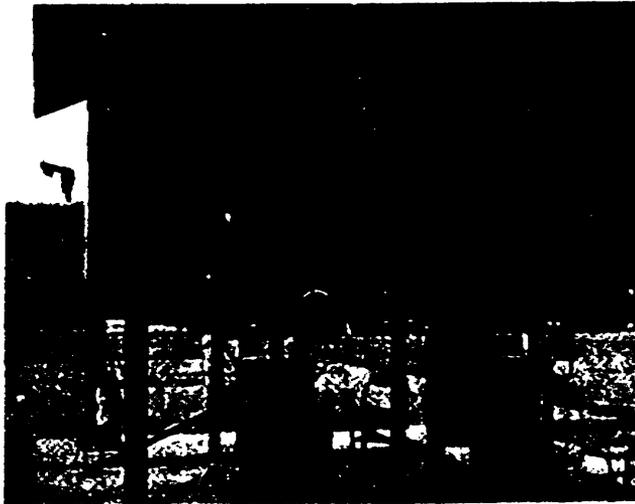
GTE Products Corporation in Dyersburg, TN, used acetone and then sold and shipped the used solvent to a licensed disposal plant. The facility uses thousands of gallons of bulk solvent per year in a cleaning operation.

Original cost of the acetone was \$1.15 per gallon in bulk. The used solvent was sold for 20¢ per gallon, resulting in a net cost of 95¢ per gallon. More recently, cost of purchased acetone in bulk has soared to \$2.05 per gallon.

#### Solution

A little over a year ago, GTE Products installed a recently designed solvent recovery system. Used solvent is pumped into the boiling chamber of the distillation unit. Heat from external, well-insulated electric heaters causes the solvent to vaporize. Condensed vapors pass to another vessel. Internal mechanical devices eliminate scale formation by a scraping action every five

Joe D. Hall, Senior Engineer at GTE Products Corporation, has been with the company for 13 years. Before that he was with the Western Company at Fort Worth, Texas. Mr. Hall is a graduate of Texas Christian University with a B.A. in chemistry and mathematics.



Solvent recovery unit in operation at GTE Products

seconds. Entire unit is closely controlled by instrumentation.

In operation, the used solvent flows from the plant to a 9000-gal underground storage tank. It is withdrawn from the tank and reclaimed at an average rate of 25 gph. The reclaimed solvent is piped to another 9000-gal underground storage tank. On demand, acetone is pumped to the cleaning system in the plant.

#### Results

GTE Products is saving at least \$50,000 per year. With the exception of

about a 10% loss through evaporation and sludge, the acetone is used over and over again. Plant is also reclaiming thousands of gallons of drummed acetone and alcohols yearly.

In addition to the substantial savings being made, the plant has the peace of mind of being practically independent of outside solvent availability. Plant is also in compliance with waste disposal standards.

(Solvent recovery system is a development of Finish Engineering, 921 Greengarden Blvd., Erie, PA 16501.)

## RECOVERY

4. You've got to be careful, conservative, and cynical in reviewing estimates for recovery equipment. There are going to be effluent streams not recovered by the equipment and there is going to be downtime. You've got to calculate downtime before you make your investment.



STEWART CLAUNCH

### RECYCLING SOLVENT

Solvent recovery is economically attractive for the small user, according to Kenneth Claunch, Finish Engineering Co., Erie, PA. With one process, for companies generating approximately one drum of spent solvent per shift, contaminated solvent is distilled directly out of the drum. This approach has the

advantages of leaving the residue in a disposable drum and circumventing costly cleanup.

Distillation is accomplished by steam injection into the material in the drum, which is placed inside an insulated cabinet. A steam sparger line is inserted into the drum and connected to a controlled steam line. Another line goes to the condenser. During heating, says Mr. Claunch, the steam and solvent vapor enter a condenser, and are separated. Afterwards, the drum is removed from the cabinet, the top of the drum is cut off, and toxic, non-volatile contaminants are removed in rock-like form from the disposable steam sparger. The solid waste shown in the photo on this page is the remains of 800 gal of solvent. About 770 lb of pure solvent was yielded.

Mr. Claunch described a second device, for larger flows (four drums per shift), that affords recovery in a still, which includes a razor-blade-like surface that scrapes the recovery chamber every 5 sec to eliminate development of a cake on the heated walls. For both systems, the recovery rate is said to be nine barrels of pure solvent for every 10 barrels processed. One user, claims Mr.

Solid residue represents toxic materials that contaminated 800 gal of solvent, from which 770 gal was purified and reused. Rock is 22 in. in diameter, conforming to the inside of a 55-gal drum. Possibly steam sparger appears at top.



Claunch, has used the latter system for 3 years and saved about \$130,000 processing 14,300 gal/month of ketone. Investment in the distillation systems is said to be in the low five-figure range.

## SOLID WASTE



Metal finishers must receive ID number for hazardous waste, EPA's Kurt Riegel reports.

Because metal finishing wastes now have been classified as hazardous, companies generating, treating, storing, or dumping must file reports with EPA, which will then verify receipt with the assignment of an identification number to keep track of hazardous-waste handlers.

Kurt Riegel, EPA's Office of Energy and Environmental Technology, spelled out the regulations during the solid-waste session of the EPA AES conference. Mr. Riegel said 350,000 industrial establishments believed to handle hazardous waste would be contacted directly by EPA for the purposes of

classification. During this contacting, a brief form must be filled out and returned by the industrial user within 90 days of promulgation of the definitions of hazardous waste, to be contained in Section 3001 of the RCRA regulations. These regulations were expected on April 30, but now the target date is May 16. Those who do not receive forms in the mail can find them in the February 26 *Federal Register* or obtain them from any of EPA's regional offices, to which the forms must be sent.

Since the conference, P&SF has learned that the following wastes have been named hazardous: (1) wastewater treatment sludges from plating operations, (2) spent plating bath solutions, (3) sludge from plating tanks, and (4) spent stripping and cleaning solutions. This information was made available by Gary Dietrich, Office of Solid Waste.

Mr. Dietrich added, "The perception we've made is that all of these are going to have sufficient amounts of pollutants to be classified as hazardous."

Generators with on-site disposal facilities must prepare an additional form, due 180 days after the May

regulations appear. This is to notify EPA that they have a disposal site, whereupon the agency will allow them to continue dumping under Interim Status Standards (ISS), to be delineated in the May publication. Though regulations on landfills are forthcoming this fall, Mr. Dietrich says it may take 5 or 6 years to write permits for disposal sites, due to the numerous applications that will have to be reviewed.

During the conference, Mr. Riegel pointed out that regulations promulgated on February 26 stipulate that generators must determine if their wastes are hazardous, prepare a manifest for shipping, and obey packaging rules of the Dept. of Transportation. If the generator within 35 days does not receive a copy of his manifest from the disposal-site authority, he must notify EPA of this failure within 45 days. This is EPA's assurance that waste is reaching a disposal site. The generator also will be required to file annual reports about his hazardous-waste activity. Transporters are responsible for retaining copies of manifests for 3 years, accepting only properly packaged wastes, and cleaning up spills.

BUTLER MINE TUNNEL INCIDENT

(Pennsylvania's 'Love Canal')

## PROBLEM

Chemicals criminally dumped in 8" hole leading to extensive mine structures beneath. 2MM gallons! Testimony from dozens of contract-waste tank truck drivers. July, 1979, 'solvent slick' in Susquehanna River, 35 miles long. \$MM already involved.

Xylenes, toluene, chlorinated hydrocarbons (excellent solvents) are the major organics present; part of the "dirty six" indicator chemicals.

Quoted (with permission)  
James W. Chester, Regional Director  
Pennsylvania Department of Environmental Resources

## SOLUTION

Xylenes, toluene, and chlorinated hydrocarbons contaminated with paint sludge, chlorobenzene, and others could EASILY have been separated to yield valuable (\$2-\$4/gal.) solvent cuts of xylenes, toluene, etc., with the still technology. That is, THE BUTLER INCIDENT WAS AVOIDABLE, TECHNICALLY AND ECONOMICALLY.

Quoted (with facts and knowledge)  
C. Kenneth Claunch, President  
Finish Engineering Company, Inc.

**FINISH ENGINEERING CO., INC.**

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**BIOGRAPHICAL SKETCH**

C. Kenneth Clauch  
 Finish Engineering Company, Inc.  
 921 Greengarden Road  
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**Academic History**

Villanova University (B.Sc. in 1955)

Received American Institute of Chemical Engineers Ziesburg Award in 1955; American Chemical Society - Philadelphia Academic Award; thesis presented at conference and published (TAPPI - Technical Association, Pulp and Paper Industry) 1956

University of Notre Dame (M.Sc. 1956)

Recipient of Reilly Fellowship

Harvard University (1979)

Advanced Business Management Program

**Industrial Experience**

Co-founder of Calsicat Company, currently Calsicat Division of Mallinckrodt Chemical Works, a major supplier of chemical catalysts. Research, development, and production of chemical catalysts, marketing and corporate management. (13 years service)

Currently President of Finish Engineering Company, supplier of solvent recovery equipment, automatic decorating equipment, and pumps and mixers. Current member of American Institute of Chemical Engineers and the Society of Plastic Engineers. Holder of five patents plus several pending. Author of a number of published articles and technical presentations at national conferences. (12 years service)



## CASE POINT

## WHY WASTE STILL TECHNOLOGY?

## ACTION BY EPA

- A. The technology is USA technically developed distillation principles, operating on full scale use by key, large USA firms, and successfully reclaiming valuable solvents, alleviating potential corporate and personal financial liabilities, and reducing dependency on foreign oil supplies.
- B. To save future lives by causing a very major reduction in toxic waste liquids going into the ground or being partially incinerated.
- C. To conserve and recover major resources, as is the purpose of RCRA and as is stated by Congress in RCRA:
- "(c) Materials - The Congress finds with respect to materials, that -
- "(1) millions of tons of recoverable material which could be used are needlessly buried each year;
- "(2) methods are available to separate usable materials from solid waste; and
- "(3) the recovery and conservation of such materials can reduce the dependence of the United States on foreign resources and reduce the deficit in its balance of payments."
- D. Fact: Waste Still technology has shown its valuable contribution to satisfying RCRA specifications. Example: 13 drums of organic waste liquid converted to 12 drums of high grade solvent with one drum of residue capable of disposal, incineration, or landfill.
- E. To overcome, in this one major incidence, the typical industry complaint that "EPA does not understand economics and causes excessive job losses."

OBJECTIVE

The establishment of an educational and communicative campaign by the EPA, via a Governmental/Industrial Advisory Committee, disseminating known, developed technology on the conversion of hazardous waste to reusable products and affecting costs and liabilities for hazardous waste disposals.

The Committee, through the auspicious of the EPA, would thereby cast the EPA in the role of advisor.

A key target of technology dissemination would center on improving use of developed distillation that has tremendous toxic waste reduction and economic benefit. Waste Solvent Still can convert contaminated solvents into clear, reusable solvents (90-95% typical) and solids or semi-solids (5-10%).

**Mr. CLAUNCH.** Mr. Chairman, I will be following an outline you see to your right. I am here on a somewhat different approach to this problem. The problem is hazardous waste, and I am approaching it from quite a different angle.

I would like to urge very strongly legislation that would motivate technical solutions, or technical answers, to stop the flow of hazardous wastes into our environment.

I am a technical person with a chemical engineering background and engineering in general.

We have talked about a superfund to clean up this country's past sins. Regulations have recently been put out in the Resource Conservation Recovery Act. As you may know, there is no resource recovery or conservation in those regulations, and little is anticipated. It tells people basically what not to do; it is somewhat similar, in my opinion, to this country's energy problem; that somebody has to get technical solutions to stopping the flow of hazardous wastes.

I am under the impression that Washington generally believes that you can legislate hazardous wastes out of existence. My technical view is that you cannot; you can reduce it, but you cannot legislate it away. The reason for that is there are many, many diverse industries involved in the development of waste materials. There are many, many ways to simply dump the material, so to speak, to cheat. The midnight dumper has been referred to.

Legislation alone will not stop hazardous waste, but technical answers will; and I am here because myself and others in our industry have seen that there apparently is little being done in what obviously is a monstrous problem.

Senator Heinz earlier mentioned a report where the hazardous waste problem is growing. The waste problem is growing not only in their awareness of dumps but also in the amount of materials going into the ground.

The way I ran into my position is as follows: Our industry has developed a new technology that I am here to mention. It is basically a still. In fact, if nothing else, I am one of the only witnesses

to bring a hazardous waste with me. It is hazardous waste from a company in New England.

Senator BRADLEY. Just keep it down there.

Mr. CLAUNCH. The material is defined as a hazardous waste. This still is something like a moonshine still. You can see this is a distribution of the sources of organic liquid waste in this country. By the way, I think these data would be desirable for earlier presentation.

You can see that the blue is oil sludge; the green is basically byproducts from organic synthesis, and the red area, which represents 50 percent of the total, is industrial solvents—solvents that industry used for cleaning up, whether it be grease, paint, oil, or what have you. It is a monstrous amount of material, industrial solvents.

The still that I refer to attacks that problem. Organic liquid wastes represent almost all of the drums of liquid going into the ground. The reason, unfortunately, is simple: The rest of the wastes are water based and dissolve in rivers, so you don't have that problem rather, we have the problem but it doesn't show up.

Our industry still basically takes this material that I exhibit and converts it in that proportion to reusable solvent—the small rock material. This example is all from one particular customer. That is what the still does.

Distillation is very simple; it was probably invented by the Greeks many years ago, but the technology has recently come to play in our industry. I attempted to present this to EPA, without being able to get anybody to listen to me. Then I got my Congressman to make me an appointment. I did, in fact, get to present it to one of the top people at EPA, and he concurred with the following: That it does represent about half of the total problem; that the process does, in fact, work; that the process could solve approaching half of the hazardous liquid chemicals going into the ground.

But he said, "I—EPA—cannot work on this type of problem. We are to regulate, not get involved in solutions."

Now, I don't go for that because I know there are lives to be saved here, and my reaction was, "Fine, I will see if I can come here and get you all to pass some legislation where they can work on it, or somebody can work on it."

My approach, or my recommendation, here, is somewhat different, because the actions to date have been, as was noted there, what shouldn't be done. There has been cleanup of the sins of the past with the superfund. There are severe penalties, financial and personal. Basically, industry is in a heck of a quandry as to what to do.

As an example, hazardous wastes can be put into approved landfills; at the same time many people at EPA will tell you there will be no approved landfills for liquid flowable hazardous waste. So they are in a quandry.

What I propose is, because of the nature of this problem, the Government is going to have to get involved. Yes, I agree with cleaning up past sins with the superfund-type activities, and I agree with regulations and manifest systems.

The Government is going to have to get involved in technical answers and solutions to this type of problem.

American industry can develop them, but the industries that form an enormous quantity of the wastes are the middle-sized and smaller industries. Government has to bring this further together.

I have further recommendations on how the Government can do this, but that is the end of the presentation.

Mr. MOBBS. I guess I just came to clarify some previous testimony that I gave on June 23, 1954, when you were in grammar school, I guess.

Senator BRADLEY. June 24, 1954?

Mr. MOBBS. Yes, sir. That was testimony on the Miller amendment to the food and drug law. And there was a Senate hearing by, I think, Labor and Public Welfare. At that time I was in medical practice in Aberdeen, N.C., a little town where two big pesticide mixing plants are located. And my niece died suddenly in convulsions, living adjacent to one of these plants. This is the year in which lindane was introduced for widespread use. And it was mixed with DDT and sulfur.

It is for cotton dust and use in other things. After her death I found lindane had been released for widespread use without anybody doing a breathing experiment on animals. And at the same time it was being released for use in vaporizing devices in restaurants and homes. It is still used somewhat for this kind of use.

The other very interesting use made of it was in the planting water of tobacco. And lindane at that time and for several years contaminated tobacco grossly.

You know lindane better today as the major chemical that is buried in Love Canal. I bring this up to say that this committee should pass strong legislation that would put the burden on industry, particularly if industry has been negligent in being careful of the public health. If they have ignored or minimized or expressed or falsified data, then I think that they should bear major responsibility for the financial care of waste dumps that have been created.

Now in 1954 I suggested that DDT, dieldrin, and lindane were carcinogenic. A professor of biochemistry, Dr. Erwin Shaguly, had used lindane to produce cellular abnormalities in tissue culture. It suggests a cancer-like change. The real interesting thing he did, he overcame this effect by bathing the tissue in an osatall, one of your B-vitamins that at that time he thought lindane interfered with.

Senator BRADLEY. Was what?

Mr. MOBBS. Well, that lindane was the antimetabolite of. Now industry has disputed this but I personally believe it true. And he is about to work on the company.

I think the interesting thing was that in 1954 at a meeting like this I suggested that cancer-causing chemicals or probably cancer-causing chemicals be kept at zero content in food and also in tobacco. I think I talked to Congressman DeLaney that night for fear that somebody would sue me or shoot me for what I said. And four years later he got that through as the DeLaney amendment but it was applied only twice to pesticides, which are the major contaminant that has occurred in food and maybe water.

The DeLaney amendment was applied on the cranberry scare in 1959. Cranberry was banned because it had a cancer-causing pesticide. And the following year \$8 million worth of milk was thrown out in the Washington/Baltimore milkshed on Food and Drug

orders. But then pressure was applied on the FDA to reinterpret the DeLaney amendment. And never since has it been applied to pesticides or herbicides or other incidental contaminants, although they have been the major substances that are carcinogenic, that have contaminated food.

Now at that meeting in 1954 somebody suggested that industry should run with what they had and that it was improbable that there would be an increase in cancer. And somebody told me to come back in 20 years. Now it is now 26 years and I have tabulated the increase in cancer that has occurred since that time by taking the incidents of cancer, the deaths from cancer per 100,000 that occurred in the year during the Second World War that DDT and Lindane were produced, and applying that rate to the population of the country that I got from the Census Bureau for each year since, and subtracting that figure from the total cancer deaths that have occurred by year.

It is perhaps of interest that more than 2 million people have died, more than could have been anticipated at the time I made that statement.

Now some will say that the deaths are due to tobacco but I include tobacco as a substance that through the years has been grossly contaminated, first with the substance that Monsanto is worried about up in a northern State, lead arsenate that they walked away from in the 1930's, was the first widely used pesticide that contaminated crops and also tobacco; and then DDT, Deldrin, Lindane, Toxafeen, and other substances up until now have always contaminated tobacco.

I feel that industry has been a little lax. And Monsanto, for example, owned that Woolven dumpsite that was on TV last night and sold it in the 1930's—

Senator BRADLEY. The what dumpsite?

Mr. MOBBS. Woolven, Mass., dumpsite. NBC, I think, had it on last night. I have a copy of a letter and a fellow editor of the Tech Review at MIT wrote to the FDC urging that we feel that Monsanto unduly tried to influence people with their ad last year on TV where they said without chemicals life itself would be impossible. This is a gross oversimplification of the effect of chemicals. And I have a copy of this letter that we sent.

I guess my time is up.

Senator BRADLEY. All right. Thank you very much.

Now Mr. Van Houweling.

#### STATEMENT OF C. D. VAN HOUWELING, DIRECTOR, GOVERNMENTAL AFFAIRS, NATIONAL PORK PRODUCERS COUNCIL

Mr. VAN HOUWELING. Mr. Chairman, I am happy to have this opportunity to present the views of our National Pork Producers Council who represent about 100,000 members, and to speak in behalf of the Nation's over 400,000 pork producers.

We would like to present our views on the general principles of establishing this fund for providing for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazard waste disposal sites. We note that the Senate Committee on Envi-

ronment and Public Works has completed an exhaustive study in their report No. 96-848, dated July 11, 1980. We doubt that any study we could undertake could match the thoroughness of their review and we therefore accept the committee's conclusion.

What I wish to do is to speak to the need for some relief for food producers, especially pork producers. Prior to my employment with the National Pork Producer's Council, I spent almost 12 years as Director of the Bureau of Veterinary Medicine of the Food and Drug Administration—FDA. As a result of that responsibility I had a great deal of firsthand experience with the accidental contamination of poultry and livestock by toxic chemicals. In fact, I presented a paper to the American Veterinary Medical Association in 1977 which briefly documented the many incidents up to that time of food animals becoming contaminated from exposures to halogenated hydrocarbons such as dieldrin, hexachlorobenzene and the biphenyls, both the polychlorinated—PCB and polybrominated biphenyls—PBB, and to other chemicals.

In that paper I outlined the PBB incident in Michigan where the companies involved had \$50 million of insurance coverage which was exhausted and there were \$200 million worth of lawsuits pending. In this and other similar incidents the effect on individual farmers and their families is absolutely catastrophic.

Approximately a year ago there was a large incident of PCB contamination of hogs in Montana and some surrounding States. In this case the PCB leaked from some electrical equipment in a meat packing plant and contaminated feed that was fed to hogs. The contaminated feed caused residues of PCB in hogs above the permissible level established by the FDA.

Large numbers of animals had to be sacrificed because they could not be utilized for food. In addition to this, the entire marketing system was disrupted for some weeks after the discovery of the problem. Before animals could be sent to slaughter, they had to be tested to determine that they did not harbor violative residues. For a period there was no market for swine in the whole area—meat packers were refusing to buy until animals were shown to be within the established tolerance.

Again the effect on individual producers was catastrophic. The producers were innocent victims of an accident they could not have avoided. Also they were pawns in the cumbersome governmental operations attempting to deal with the problem after it was recognized. I am glad to report that the Department of Agriculture is giving attention to how these emergencies can be handled better in the future.

In the paper I referred to earlier and which I'd like to have included in the record, I discussed 15 individual incidents of chemical contamination of feed which led to extensive animal deaths or to food contamination at levels that caused them to be considered hazardous to public health. In either case, individual animal owners suffer disastrous losses because if the animals become contaminated so that they are unacceptable for food use they have to be sacrificed or retained for unrealistic times to allow the animals to eliminate the residues. In some cases, as with the halogenated hydrocarbons, the elimination is so slow that it is usually economically impossible.

In addition to the 15 incidents described in the paper, I know there have been additional incidents since that time. These will continue to occur because there is no possible way to avoid all of them. It is literally impossible to test all animal feed ingredients before feeding them to animals. As a result there will be feed contamination accidents which will lead to food animal contaminations and the sacrificing of animals by individual owners who are victims of a chain of events which they cannot always avoid. They are at the end of the line and if their property has to be destroyed and sacrificed for the benefit of the public health, they should be eligible for compensation for their losses.

Because of this we are pleased that paragraphs (N) and (O) of section 6(a)(1) of the bill under consideration make it possible to compensate an agricultural producer or processor. We strongly support this provision of S. 1480 and urge its adoption.

I would be glad to also try to answer any questions if there are some.

Senator BRADLEY. Thank you, Mr. Van Houweling.

[The prepared statement of Mr. Van Houweling follows:]

## NATIONAL PORK PRODUCERS COUNCIL

STATEMENT ON S-1480

TO

SENATE FINANCE COMMITTEE

THURSDAY, SEPTEMBER 11, 1980

Submitted by:

C. D. Van Houweling, D.V.M.  
Director of Government Affairs

STATEMENT ON S-1480 TO  
SENATE FINANCE COMMITTEE

Mr. Chairman and Members of the Committee:

We are happy to have this opportunity to present the views of the National Pork Producers Council, representing almost 100,000 members and to speak in behalf of the nation's over 400,000 pork producers.

We would like to present our views on the general principles of establishing this fund for providing for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazard waste disposal sites. We note that the Senate Committee on Environment and Public Works has completed an exhaustive study in their report number 96-848, dated July 11, 1980. We doubt that any study we could undertake could match the thoroughness of their review and we therefore accept the committee's conclusion.

What I wish to do is speak to the need for some relief for food producers, especially pork producers. Prior to my employment with the National Pork Producers Council, I spent almost twelve years as Director of the Bureau of Veterinary Medicine of the Food and Drug Administration (FDA). As a result of that responsibility I had a great deal of first-hand experience with the accidental contamination of poultry and livestock by toxic chemicals. In fact, I presented a paper to the American Veterinary Medical Association in 1977 which briefly documented the many incidents up to that time of food animals becoming contaminated from exposures to halogenated hydrocarbons such as dieldrin, hexachlorobenzene and the biphenyls, both the polychlorinated (PCB) and polybrominated biphenyls (PBB), and to other chemicals. In that paper I outlined the PBB incident in Michigan where the companies involved had \$50 million of insurance coverage which was exhausted and there were \$200 million worth of lawsuits pending. In this and other similar incidents the effect on individual farmers and their families is absolutely catastrophic.

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Because of this we are pleased that paragraphs (N) and (O) of section 6 (a) (1) of the bill under consideration make it possible to compensate an agricultural producer or processor. We strongly support this provision of S-1480 and urge its adoption.

If there are any questions which I might be able to answer, I will be glad to do so.

## Role of the Food and Drug Administration Concerning Chemical Contaminants in Animal Feeds

C. D. Van Houwelingen, DVM; William B. Bixler, VMD; John R. McDowell, DVM

### SUMMARY

Chemical contamination of animal feeds and feed ingredients is of concern to the Food and Drug Administration. Contamination by industrial chemicals such as polychlorinated biphenyls and polybrominated biphenyls; heavy metals such as lead, cadmium, and mercury; and pesticides such as dieldrin and chlordane exemplify the problem in feeds and the resulting problem of tissue residues in human foods.

Although we have enjoyed the extensive economic and social benefits of these chemicals, we have not realized the extent of the risks that may be associated with them. For many of these chemicals, there is no adequate method to evaluate the risk of low-level exposure to them over a generation.

Several episodes of feed contamination by industrial chemicals and their effects are described. Much of the data was obtained from the investigational files of the Food and Drug Administration (FDA), EPA, and the US Department of Agriculture, as well as from communication with state laboratories.

### Halogenated Hydrocarbons

Halogenated hydrocarbons accumulate or "biomagnify" in body fat. Dieldrin and hexachlorobenzene (HCB) are dramatic examples; they partition in the body so that, for dieldrin, concentrations in fat are about 10 times the concentration in feed<sup>1</sup> and, for HCB, approximately 25 to 30 times the concentration in feed in growing chickens.<sup>2</sup> Broiler chickens, because of their enormous food intake, demonstrate biomagnification. At 1 day of age, a chicken eats 14% of its body weight daily; this gradually decreases until, by market age (6-7 wk), the chicken is eating 5 to 6% of its body weight daily. The range for swine feed intake is 8 to 4% and for ruminants about 2.3% of body weight, regardless of age.<sup>3</sup>

### Polychlorinated Biphenyls

An example of the danger of uncontrolled chemical contaminants is that of the halogenated hydrocarbons, chiefly polychlorinated biphenyls (PCB). When this class of chemicals was introduced in the 1930s, their toxicity was so little recognized that they were considered for use as a substitute for chicle in chewing gum. Later

INDUSTRIAL chemicals are in our environment—our air, water, food, and things we touch. Development and production of synthetic organic chemicals has increased dramatically since World War II. About 30,000 organic chemicals are controlled by the Environmental Protection Agency (EPA) under the Toxic Substances Control Act, and about 240,000 organic chemicals are listed in the National Library of Medicine's Chem-Line and Tox-Line data bases. Many of these chemicals have become essential to our standard of living, and their production contributes significantly to our national economy. They are used in medicine, clothing, transportation, communications, recreational equipment, and other industrial and consumer goods. Sales of these chemicals now exceed \$150 billion yearly and represent 6% of our Gross National Product. Almost 19 million workers are employed by the chemical and chemical-dependent industries.<sup>1</sup>

<sup>1</sup> From the Bureau of Veterinary Medicine, Food and Drug Administration, Hareville, Md. 2084.

<sup>2</sup> Presented before the Section on Regulatory Veterinary Medicine, 114th Annual AVMA Meeting, July 11-16, 1977, Atlanta, Ga.

they were used in everything from electrical transformers to carbonless copy paper, although there were few if any agricultural uses for PCBs. Millions of pounds of PCBs were produced and released into the environment before scientists fully realized their toxic and persistent nature. Fortunately, toxicology has grown more sophisticated over the years, and today, the only remaining approved use for PCBs is for heat dissipation in electrical transformers.

Despite restrictions imposed by the federal government in the early 1970s to restrict the use of PCBs to electrical equipment, PCBs already had been released into the environment, and high concentrations continue to persist in the Great Lakes and other major bodies of water in the United States.

Contamination of feed with PCBs occurred as a series of major incidents rather than as a single problem. Several of the major feed contamination incidents and their results are briefly outlined as follows:

1) The grinding of bakery products, including wrappers that contained PCBs, for use as animal feed was suspected to have caused the contamination of poultry and eggs in New York State, resulting in the loss of 146,000 chickens.

2) The PCB residues in milk occurred because PCB-containing coatings were used as sealants on the inside walls of silos containing silage to be fed to dairy cattle. The PCBs migrated to the silage, resulting in PCB-contaminated milk in 12 states.

3) In 4 states, poultry and eggs became contaminated as a result of the leakage of PCB heat-transfer fluid during the pasteurization of rendered fish meal and meat meal. Contaminated meals were used as components of poultry and livestock feeds and caused the loss of 165,000 chickens, 76,000 eggs, and large quantities of catfish, feed, and processed eggs, turkeys, and chickens.

4) Use of spent PCB transformer-fluid as a herbicide spray was suspected to have caused contamination of dairy cattle-grazing areas, thereby causing PCB residues in milk from these cattle.

#### Polybrominated Biphenyls

In the fall of 1973, polybrominated biphenyls (PBB), intended as a fire retardant, were inadvertently mixed with animal feed. There was a 7-month delay before the toxic principle that was causing severe problems in dairy herds was identified. Clinical signs included abortions, breeding problems, weak calves, severe decline in milk production, overgrown hoofs, and death.<sup>1</sup> The contaminated feed was widely distributed in Michigan, resulting in destruction of 30,000 cattle, 6,000 swine, numerous sheep and poultry, several hundred tons of feed, and several tons of dairy products. The total dollar loss has not been determined, but \$50 million of insurance has been exhausted, some \$200 million worth of lawsuits are pending, and analytical expenses have totaled over \$660,000.

A number of public health issues have resulted from this incident. Several epidemiologic investigations have disclosed numerous ill effects among the human population with the greatest exposures, chiefly farm families

that produced much of their own food. Public health authorities state that at least 25 years may have to elapse before the total effects on these families are understood fully.

The Michigan legislature has considered funding for further dairy herd depopulations. Although FDA believes that the level of PBB found as tissue residues in Michigan cattle is not a significant public health issue, the Michigan population is apparently concerned about any level of PBB in human foods. Recommendations for compensation made to the governor of Michigan range from \$10 million to over \$1 billion.

Such incidents may be almost catastrophic for animal owners. Usually, however, the animal aspects of feed toxicosis are dwarfed by the food contamination and human toxicity problems that result. Invariably, feed contamination results in contamination of milk, eggs, or meat. Food toxicologists immediately search the literature for data on the contaminant or even chemically related compounds from which to make the best possible estimates of toxicity and allowable contamination. Estimates are immediately followed by further requests for estimates of the levels of contamination in feed and resultant contamination of food. Adequate data to make these determinations are never available; thus, the literature must be searched for every relevant item of data that can serve as a basis for recommending levels that can be allowed in feed without exceeding the action level (a level at which FDA is able to take regulatory action) or temporary tolerance established for food. Some variables that complicate these recommendations include species of animal, nature of the contaminant, and propensity of the chemical to accumulate in the body and special tissues such as fat. Precise data can be generated only through costly and time-consuming feeding studies. Retrospective epizootiologic data can be somewhat useful but is usually not precise with regard to time and level of exposure.

All of these procedures were employed in attempting to deal with the PBB incident in Michigan. The FDA sponsored a carefully planned and precisely implemented study at the Ohio Agricultural Research and Development Center that has produced some valuable data on the toxicity of PBB in animals and the levels of contamination in food that result when contaminated feed is fed.<sup>1</sup>

#### Other Halogenated Hydrocarbons

**HCB**—In late December, 1972, the US Department of Agriculture discovered HCB as a tissue residue in cattle from Louisiana. (Further testing revealed HCB residues in cattle from Texas, New Mexico, and California, but these appeared to be unrelated to the Louisiana incident.) Investigation showed that an industrial plant was discharging HCB into a river; it also was dumping materials contaminated with HCB residues into a dump by the river and was discharging great amounts of HCB as a stack emission. As a direct consequence, livestock (including 20,000 cattle) in 5 counties in Louisiana had to be quarantined. Financial losses were never determined.

**Chlordane**—In September, 1973, a national feed mill

(an integrated poultry operation) voluntarily ordered the destruction of 15,000 chickens known to contain chlordane residues considerably higher than the action level. Investigation of this incident implicated a barrel of phosphoric acid added to feed fats as a stabilizer. Because the contaminated feed fat had been shipped to 3 states, eventual losses included 1.4 million chickens and 900,000 turkeys.

**Dieldrin**—In an incident involving dieldrin, painstaking investigation helped determine the source of chemical residues detected in chickens from a large, integrated broiler operation in Mississippi. The FDA field investigators took samples of all feed ingredients. They found that vegetable oil used in the feed contained up to 3.7 ppm of dieldrin, more than 10 times the limit set by EPA for feed oil ingredients. Tracing back through the processing steps, investigators discovered that samples taken from one particular broker contained from 0.54 to 33.2 ppm of dieldrin, or as much as 110 times the EPA limit. This broker had been buying oil from refineries; the oil was designated on the bills of lading as for industrial use only, but the broker was selling it without such a warning to a blender who in turn sold it to chicken feed manufacturers. These low-grade oils, called deodorizer distillates, are the dregs of the refining process. They contain all the impurities removed from the purified oils, including chlorinated hydrocarbons such as dieldrin, endrin, and DDT.

Fortunately, agriculture is emerging from the age of halogenated hydrocarbon pesticides. Because of the long biological half-life of these chemicals, and because many are potential carcinogens, the EPA has restricted the marketing of many such pesticides. The EPA has developed a program to replace them with carbamates and organophosphates, which are less persistent and consequently less of a threat to the environment.

#### Other Chemical Toxicants

Because of these recent experiences, it is evident that FDA cannot restrict its concern about chemical contamination of feeds to the halogenated hydrocarbons nor to the classic toxicologic observations. Toxicology is rapidly developing beyond the study of overt clinical toxicosis. Today, it is concerned with toxicant residues in foods as well as with teratogenicity, mutagenicity, carcinogenicity, and interference with antibody formation.

**Pentachlorophenol (PCP)**—The State of Michigan was the focal point of a heretofore poorly recognized feed toxicosis involving PCP. The most dramatic syndrome was caused by housing and feeding cattle in close confinement, with inadequate ventilation. Exposure was increased by the use of PCP-treated lumber in the construction of feed bunkers and pit silos.

Public health problems are enhanced by the presence of dioxins in much of the currently-marketed PCP. The public health implications of PCP include population exposure to dibenzodioxin and dibenzofuran contaminants through use of PCP or treated lumber, possible presence of these toxic contaminants in market milk, and their presence in meat products.

**Pesticides in Cottonseed**—On Oct 20, 1975, FDA

headquarters received notice that on September 22, the Mississippi Department of Agriculture had acquired samples of cottonseed meal from a shipment originating in Mississippi. An alert state feed inspector believed the cottonseed meal to be too dark and sampled it. An oil mill began processing the cottonseed on September 9 and finished on September 27. Analytic results disclosed numerous pesticides in the cottonseed meal. High concentrations of captan were in the cottonseed hulls, and pentachloro-nitrobenzene was in the cottonseed oil. An estimated 1,530,560 lb of cottonseed meal was processed, and 1,283,600 lb was shipped. The original bill of sale by the processing plant contained a disclaimer, "Fertilizer Use Only," but on resale, a disclaimer was not made by the broker or the salvage company. In Texas, 84,000 lb of adulterated cottonseed oil was seized, and 14 rail cars of animal feed and cottonseed products were recalled. By November 18, a complaint for an injunction charged the defendants with interstate commerce of adulterated feed ingredients. Essentially, none of this product was actually consumed by animals.

**Paraquat**—The University of Florida reported that 130 dairy cattle in a herd of 400 died of acute pesticide toxicosis after eating feed containing high concentrations of paraquat herbicide in October, 1974.

**Molybdenum**—Molybdenum is an essential element in the nutrition of livestock, but the margin of safety is narrow and is related to the levels of copper and sulfate ions in the feed. In February, 1975, a dairy received feed containing magnesium oxide, which is routinely fed to dairy cattle. In this case, the magnesium oxide had a molybdenum contamination of several thousand parts per million. The herd displayed typical signs of molybdenosis, and after 2 to 3 weeks, 95 cattle in a dairy herd of 500 died. The balance of the herd had to be destroyed because of a resulting severe mastitis.

**Endrin**—In the winter and early spring of 1975-1976, widespread spraying for control of cutworms in Oklahoma and Kansas resulted in many kills in catfish ponds. Cattle also were reported lost from direct exposure to the endrin or from eating recently sprayed forage.

**Phorate**—Ninety-six cattle of a pen of 250 exposed to the pesticide phorate died of acute toxicosis, but other cattle in different areas of the same feedlot were not exposed to the phorate. High concentrations of phorate were found in a mineral mix in the feedlot. The source of the phorate has not been determined, but sabotage was considered possible.

**Lead Oxide**—In November, 1973, a railroad transportation company diverted a railroad gondola car from food-transport use to a nonfood use as a carrier of lead oxide. The car was then returned to food-carrier service without appropriate cleaning. The car was loaded with corn gluten meal, which was delivered to a dog food company. Contamination of lead oxide in the dog food ranged from 6 to 28,000 ppm. Many of the dogs fed the contaminated feed became clinically ill, and a number of dogs died. As a consequence, a recall of the dog food was instituted.

### Control of Feed Contaminants

The poultry industry has apparently taken the lead in establishing quality control programs for purchased feed ingredients. Feed formulations for the 3½ billion broiler chickens and more than 100 million turkeys raised annually frequently utilize animal protein and high-energy fats. After experiencing several enormous losses, the poultry industry has taken steps to prevent contaminated ingredients from being incorporated into rations. The largest integrated operators have their own quality control program. In Virginia, several smaller producers have banded together to establish a laboratory facility, which began operating at an annual cost of \$60,000 a year. Member producers may submit feed ingredient samples every week for analysis.

The FDA does not have a field force of investigators to trace incidents of animal feed toxicoses. Consequently, the Bureau of Veterinary Medicine (BVM) relies upon FDA inspectors to acquire samples for feed investigations. All samples are obtained as official samples and are handled in such a way that they can be introduced as evidence in regulatory proceedings by FDA, if necessary.

The BVM and regional veterinarians, with the assistance of veterinary toxicologists and epidemiologists in Rockville and Beltsville, Md, have investigated cases of serious feed contamination. In addition, under contract with BVM, Iowa State Diagnostic Laboratory furnishes toxicologists and epidemiologists to supplement the FDA staff. This "Toxicology Ready Group" is on standby for emergency calls. In the event that a "new" chemical or toxic principle is identified, and adequate data on the chemical are not available (as in the case of PBB), the Iowa Diagnostic Laboratory also will develop toxicologic information as soon as possible. Toxicologic and feeding studies routinely are conducted at the Laboratory.

The BVM recognizes that FDA may see only a small fraction of animal intoxications. Furthermore, we cannot restrict our attention to intoxications that result from contaminated feed, but we must be interested in all animal toxicoses that may result in the contamination of human food.

The problem of feed toxicoses is of vital concern to FDA. Congress has given FDA a mandate to ensure that "food for man and other animals" is free of adulterants that could be hazardous to the health of animals and human beings. We are attempting to discharge this responsibility with limited resources.

In BVM, responsibility for animal feed safety is assigned to the Division of Animal Feeds. The function of dealing with feed contamination problems is performed mainly by the Division's Animal Feed Safety Branch.

This branch provides veterinary medical and toxicologic support in matters of feed contamination caused not only by pesticides, heavy metals, and industrial chemicals, but also by bacteria, fungi, viruses, radiation, poisonous plants, and drugs.

The BVM is currently considering the establishment of a reporting system for better communication between FDA and diagnostic laboratories around the country. Such a system might include a "hot line" between state diagnostic laboratories and FDA so that the agency will learn about feed poisoning incidents quickly. Often FDA does not hear of contamination incidents until several months after the initial impact. By that time, it is usually too late for effective evaluation of the problem.

Failure to discover a case of feed contamination quickly is caused partly by communication problems and partly by lags in scientific knowledge. In an early review, the signs may seem to resemble commonly known diseases, and appropriate officials may not be notified of the problem for some time. In addition, when unknown factors are involved, it is difficult to pinpoint the cause so that the source of the contamination can be traced.

Practitioners should not consider feed toxicoses as rare occurrences. A suspected feed-induced toxicosis should be reported at once to state authorities, the nearest FDA Regional Office, or directly to BVM. We also advise livestock producers to be on the lookout for feed contamination and to call for assistance when a case is suspected. Follow-up action can be taken only when suspected cases are reported promptly.

There is no absolute guarantee on feed safety. Industry, state agencies, and FDA all contribute to the safety program for feeds. The practicing veterinarian also is becoming more involved in feed safety programs. The cooperation of all these groups is needed to ensure greater service in the growing area of problems of livestock and poultry health.

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Senator BRADLEY. I would like to ask Mr. Claunch, you are a businessman and part of your business is this process that you have shown to us today, is that right?

Mr. CLAUNCH. Yes, sir.

Senator BRADLEY. Many industrial firms across the country have a problem of free treatment of liquid waste and ultimately much more severe restrictions. Why aren't they knocking down your door if you can take very toxic wastes and turn it into pure water?

Mr. CLAUNCH. They are.

Senator BRADLEY. They are?

Mr. CLAUNCH. Yes, sir.

Senator BRADLEY. That is good.

Mr. CLAUNCH. But our country's problem is a little bigger than—

Senator BRADLEY. Let me then follow that up. You said that the problem was when you went to EPA that they said they were in the business of regulating and not in the business of cleaning up?

Mr. CLAUNCH. That was the gist. I went to EPA and said: Here is the technology. I basically felt a moral obligation to other people—because I read about other things being done, dumps and so forth. And his answer, there were three gentlemen there, was that he concurred with everything; that they are involved with regulation; that Congress, I can't remember the exact words, but Congress, by laws, tells them they must not get involved in a specific technological area.

I argued that because there are areas they get involved in—

Senator BRADLEY. OK. Now let me ask you, you can do the job and you are being approached by large numbers of people?

Mr. CLAUNCH. Large to us, sir, which is very significant, yes, sir.

Senator BRADLEY. You are saying this is your own process?

Mr. CLAUNCH. No, it is our industry's.

Senator BRADLEY. So other firms have the same process?

Mr. CLAUNCH. Yes, sir.

Senator BRADLEY. Do you detect that the reason other firms are going to this process is cost? Would a tax incentive for pollution control equipment assist us, assist this process?

Mr. CLAUNCH. I know it is under consideration. It would assist it greatly. I detect that firms aren't rushing to this or other processes because, in my own opinion, they don't believe the hazardous waste laws are really going to become implemented in November. And I am not really sure I think so either. The law is so burdensome at this point I think there would be great difficulty. But I don't think anybody takes it seriously at this point. In fact, the customers, the companies that are dealing with us, are the more reliable, well-known type of firms that have people to study it. But in any case that is my opinion.

I don't think anybody believes there is really going to be pressure to not continue doing what they have seen in the past. I know there is going to be because I have done enough reading.

Senator BRADLEY. Well, I think you have got a very interesting product. And I would hope that we could facilitate and encourage not necessarily your product but the industry to do this.

Mr. CLAUNCH. But keep in mind there are other areas different than this that can solve this problem if Government would get involved. I can name some.

Senator BRADLEY. That provides little guidance here. Most people come to this committee and say "Government, don't get involved." I mean, what do you want the Government to do, provide tax incentives? What else?

Mr. CLAUNCH. If I take what the EPA says literally—that they can't get involved in specific solutions—then I would say, as I did earlier, that we should pass a law, legislation, amendment, what have you, to do something along the following lines: I would propose an industrial committee of technical business people to review basic, I don't mean individual little processes, but basic processes. This is one, incineration is another, I could name a couple more. That committee would have the power to allocate funds to do research and development, and stand up to promote these as solutions. You are not going to eliminate tomorrow's Love Canal just by taking care of the one that you know of. That is what I would propose: An industry committee that had the power to allocate funds, and basically the power to help EPA.

Senator BRADLEY. I would thank Mr. Mobbs and Mr. Van Houweling for the testimony.

This concludes the hearing this morning. We will reconvene tomorrow at 10 a.m. I want to tell you that I had a few questions for you that we might submit to you in writing. The majority leadership is calling me.

[Whereupon, at 3:45 p.m., the hearing adjourned, to reconvene at 10 a.m., Friday, September 12, 1980.]

## THE ENVIRONMENTAL EMERGENCY RESPONSE ACT

FRIDAY, SEPTEMBER 12, 1980

U.S. SENATE,  
COMMITTEE ON FINANCE,  
*Washington, D.C.*

The committee met pursuant to notice, at 10:05 a.m., in room 2221, Dirksen Senate Office Building, the Honorable Bill Bradley, acting chairman, presiding.

Present: Senators Bradley, Roth, Danforth, and Durenberger.

Senator BRADLEY. The committee will come to order.

This is the second day of hearings on section V of S. 1480, the Environmental Emergency Response Act.

Yesterday we heard testimony from the administration, from the chemical industry, from the oil industry, from several victims, and from other interested parties. I felt that yesterday's testimony was extremely positive in the sense of being enlightening, and I hope that today's testimony will be similar in nature, for, as we said yesterday, and I would like to just reiterate this point, we have ticking out there in this country a toxic timebomb and it is against that clock that we are racing here in the Congress this year to get a superfund bill out before we adjourn. It is absolutely essential. If there is one responsibility of Government, it is to protect public health.

This bill addresses a very clear threat to public health. In my home State of New Jersey we have had a very vivid demonstration of the dangers of toxic wastes and toxic waste dumps in the Chemical Control fire, which only reminded people that Love Canal is not alone. In fact, in my State—yesterday we had a map here that demonstrates where nontoxic sites were—New Jersey was the only State that was red, covered with red dots. New Jersey has 233 toxic waste sites.

Now, I don't happen to think that the problem is unique to New Jersey. The map yesterday showed red dots across the country. I think there will be a lot more red dots when the environmental departments of various States look more carefully and deal with this problem. That is why this is not a small matter, not a political matter, in a sense, but it is a matter of highest trust for public servants to try to address in a responsible way.

I think the committee hearing yesterday dealt with that in a responsible way. I think we all want to get a bill out. We are going to have some disagreements over the particular provisions in the bill, but I think that it is absolutely critical that we move on it this year.

(475)

I know that Senator Roth is here. I suppose that if there is another State that is red, it is Delaware. Delaware and New Jersey happen to be those two States which had a chemical industry long before, shall we say, Texas was even in the Union, although Texas is now No. 1 in the chemical industry.

So without any further comment, I would like to ask if Senator Roth wants to make a statement?

Senator ROTH. No.

Senator BRADLEY. Thank you. Let's begin with the first panel of witnesses.

Today we will have, I think, three panels that will be able to focus on this issue from different perspectives than we had yesterday. I know all of them will treat it with equal seriousness.

The first panel is Nolan W. Hancock and John Brown. Nolan Hancock is the director, citizenship-legislative department, Oil, Chemical & Atomic Workers International Union. John Brown is legislative director, International Union of Operating Engineers, and a former New Jersey resident.

I would like to welcome you both to the committee. The normal rule of the committee is that we give each of you 5 minutes to make your presentation, and then we will ask questions afterward, so that we can try to move through the very distinguished list of witnesses.

So, if you could summarize, that would be helpful to the committee.

Mr. Hancock?

**PANEL: NOLAN W. HANCOCK, DIRECTOR, CITIZENSHIP-LEGISLATIVE DEPARTMENT, OIL, CHEMICAL & ATOMIC WORKERS INTERNATIONAL UNION; AND JOHN BROWN, LEGISLATIVE DIRECTOR, INTERNATIONAL UNION OF OPERATING ENGINEERS**

**STATEMENT OF NOLAN W. HANCOCK, CITIZENSHIP-LEGISLATIVE DIRECTOR, OIL, CHEMICAL & ATOMIC WORKERS INTERNATIONAL UNION, ACCOMPANIED BY DR. FRANK COLLINS, WASHINGTON LEGISLATIVE OFFICE; AND JOHNNY VICKNAIR, SAFETY CHAIRMAN, UNION SAFETY COMMITTEE, LOCAL 4-447, DESTREHAN, LA.**

Mr. HANCOCK. Thank you, Mr. Chairman and Senators. I am accompanied today by Dr. Frank Collins, of our Washington legislative office, and by Mr. Johnny Vicknair, safety and health chairman of OCAW Local 4-447, from the Good Hope Refinery group in Good Hope, La. I will be sharing my time this morning with Mr. Vicknair.

OCAW strongly supports S. 1480 and recommends to the committee that the bill will be reported out without substantial change. The points that we want to make in this hearing are contained in our written statement.

Environmental emergencies are a growing problem because of the rapid expansion of the chemical industry. Love Canal is the result of long past dumping. Dumping of toxic materials continue on a large and unfortunately increasing scale.

This morning we have a witness who will testify about dumping, which is continuing at the present time by his employers refinery in Louisiana. Mr. Vicknair?

**STATEMENT OF JOHNNY VICKNAIR, SAFETY CHAIRMAN, UNION SAFETY COMMITTEE, LOCAL 4-447, OIL, CHEMICAL & ATOMIC WORKERS INTERNATIONAL UNION**

Mr. VICKNAIR. Thank you, Mr. Hancock.

My name is Johnny Vicknair. As you say, Good Hope Refinery is located in Good Hope, La. It is a known polluter. Most of the polluting and toxic waste dumping is done on the sly. I have personally followed Good Hope Refinery trucks to dumping sites. On or about August 15, 1980, sludge was removed from the treatment area and dumped onto some federally owned property known as the Bonnet Carre Spillway, which leads to Lake Pontchartrain. It was dumped in an area where people picnic and launch their fishing boats. There is extensive commercial fishing for crab and shrimp in the immediate area.

The sludge, taken from the bottom of the settlement pond at Good Hope Refinery, has a strong, rotten-egg odor. After observing this dumping taking place, Charles Robichaux and I notified the State department of natural resources and called for an investigation. Charles Robichaux is president of Good Hope Citizens Association, next to the Good Hope Refinery.

The analysis of this sludge done for the department of natural resources showed high concentrations of most priority pollutant metals. A copy of the report will be submitted for the record. Arsenic levels were 7 times over the recommended standard; chromium levels were 15 times over, and lead levels were 8 times over the standard.

We have also seen Good Hope dump spent catalyst at the Kenner Landfill, without running any tests to determine if it were hazardous. Kenner Landfill is supposed to receive only nontoxic dirt.

The dumping of the catalyst has been done mainly at night. The department of natural resources was also notified, and levels of lead 500 times over the standard, levels of chromium 10 times over the standard, and levels of arsenic 200 times over the recommended standard were detected in laboratory tests conducted for the State department of natural resources. Those results will also be submitted to the committee.

About 3 years ago, a supervisor at Good Hope Refinery ordered a man named Bill Crespo to release some 20,000 gallons of caustic into the swamp. He told his supervisor that people were crawfishing in this area and he was worried about the effect this chemical would have on them. But the supervisor insisted that he do what he was told. The operator notified the State and the news media. For doing this he was suspended from work at Good Hope.

Several days prior to this incident, a driver carrying a load of this spent caustic died when he was overcome by fumes while unloading this product at a hazardous waste dump. I believe that the load of caustic was from Good Hope Refinery.

Good Hope is not the only major polluter in south Louisiana, but is the one we know about and which we believe to be the worst.

Thank you for this opportunity to present my testimony.

Senator BRADLEY. Does that conclude your comments, Mr. Hancock?

Mr. HANCOCK. Yes.

Senator BRADLEY. Mr. Brown?

**STATEMENT OF JOHN BROWN, ON BEHALF OF J. C. TURNER, GENERAL PRESIDENT, INTERNATIONAL UNION OF OPERATING ENGINEERS, AFL-CIO**

Mr. BROWN. Mr. Chairman, I am here in place of J. C. Turner, general president of the Operating Engineers. He was supposed to testify this morning and he was called out of town this morning.

Our testimony includes support of the bill. But I would just like to read a part of it, rather than go through the whole 8 or 9 pages of testimony, at your request, just the beginning statement, and then maybe get into some remarks maybe as to how we feel as far as not only the bill is concerned but also what should be done.

Mr. Chairman and members of the Senate Finance Committee, let me express my appreciation for being given the opportunity to appear before you today.

My name is J. C. Turner and I am general president of the International Union of Operating Engineers, AFL-CIO, representing over 420,000 members who operate a wide variety of machines, equipment, and systems in the mining, construction, manufacturing, transportation, and public employee fields.

Our members are employed in construction work where their jurisdiction gives them the operation of all construction equipment regardless of motive power, and in industries which supply materials or service to the construction industry, such as equipment repair shops, material yards, stone quarries, gravel pits, field engineers and survey teams.

They are also employed in surface mining, dredging, oil and petrochemical industries, as well as most manufacturing industries.

Members of this international union are also employed by industrial and commercial establishments, hospitals and Federal, State, and local governments as stationary engineers and maintenance employees. Members working in this sector operate and repair a variety of equipment, such as boilers, engines, pumps, compressors, and generators to provide heat, electricity, process steam, refrigeration, air-conditioning, potable water, waste-water treatment, compressed air, and other services as required by their employer or the general public.

With our members employed in these many diverse fields, the International Union of Operating Engineers has established an excellent reputation with, and earned the respect of, employees, employers, government, and the community. It is from this aspect that we would like to thank you for the chance to speak to this committee, express our views, and offer our support for S. 1480, the "Environmental Emergency Response Act—Superfund Bill."

Our statement then continues, which has been presented to the committee, Mr. Chairman. But I think what I would like to say—I find it amazing, not only before this committee but also even my background as a trade unionist since the Second World War, that we now talk about the same need to correct our hazardous waste coming from our chemical industry, that we don't recognize that need as we did the need to do away with our outhouses. It is amazing when we talk about an industrial nation beginning to recognize, at least the Government, that an industrial nation produces industrial waste. It has been there long before, my God, Senator, the Second World War, and it picked up then; and if you look at the problems that we have had—and the Senator in his opening remarks referred to our own State of New Jersey—and I served in that State not only as an operating engineer working in a brewery, working with ammonia, CO<sub>2</sub>, you name the toxics that we had to deal with, from benzene all the way down—but I found not

only the harm they might have done, but also many times the good that they did do to keep people like myself working.

I entered as a stationary engineer, as a business agent, who had 260 plants under his jurisdiction and just about every type of industry that you could possibly have going into our own marshland, Senator, up in the State of New Jersey, and going down to areas like Burlington.

And fertilizer plays a great part in our agriculture, such as the tomatoes and green beans and the squash that we use in the area.

To say that we don't need a super fund is almost the same as saying that we did not need a highway fund; and while you might think I am talking about apples and oranges, you look at what the highway fund has done for this country.

We have produced the greatest highway system the world has ever seen, only because we recognized that a revolving fund will produce something, that there is a continuous payout of moneys either to construct something or to be liable and to take care of something.

And I think it is on this basis that we recognize the need that if we are to grow as an industrial nation, then I think both industry and labor and management have to recognize, or I should say, labor and Government, have to recognize, that there are certain protections that have to be afforded the working people and the consumer.

There is no question—you have just heard testimony about it—the horrendous accidents that might have been done by some people who are irresponsible, or maybe because there has been no other way, maybe because Government has not provided another way, for these companies to get rid of their wastes.

Surely we recognize, for God's sake, that when we have your own waste treatment facilities for human waste, is there any difference between human waste and, we will say, industrial waste, except that we didn't recognize, I think, soon enough, that we had to create something to take care of it.

And a lot of people are saying—when I say “a lot,” 57 or 58 percent of the population out there is laying the blame on the Government, Federal, State, and local, then maybe it is our backyard. And what you people are trying to do today is to say, “Yes, something has to be done.”

And I think we recognize as an international union, to protect our members and any worker and any consumer, that if we are going to grow as a nation and if we are going to have industrial waste, then we have to protect our people. But I do not say that we have to lay the blame or the causes of that situation just on one industry. I don't think, as a business agent, in fairness, that I would say all the blame has to be laid to the chemical industry; and before anybody thinks that I might be up here shilling for the chemical industry, I respectfully ask you to get into my background as a business agent, as a worker, as the secretary-treasurer of the universal AFL-CIO, and my statements made not only before State bodies, but also previous statements made before both congressional Houses.

I only speak respectfully to you, that what has to be done should be done to protect our people. But I also say if we are to continue

as a nation, as an industrial nation, then I say that in fairness to both sides of the aisle that we turn around and produce some type of a fund that will protect our people, whether it be in the cleanup area, the searching out of these sites, the workers who handle the product that might be protected in compensation, and also those who might not know about it, such as in the horrendous case of Love Canal, that brought this about.

The Senator so ably spoke on what happened in Elizabeth. My God all mighty, you can go anywhere in certain areas of New Jersey—and I traveled that State as a business agent—and see some of the horrors, and see some of the things that were done, and I don't know whether it was in those days a lack of technology or just irresponsible actions of both industry and maybe labor who knew it was going on.

And then you hear statements like were brought forth here today which say, "Yes, it is there; it is being done; but yet nothing is being done about it." And then I think it is at that point that we should lay our cards on the table and say, if there is industrial waste out there—and we are an industrial waste nation—and if we are to continue to exist, then we must do something. And I don't think this country can exist as an industrial nation or as a nation if we have to go on depending upon other nations to supply us, as we are supplied with our oil from OPEC, because we will not recognize the need of coal and gasification plants and are only getting around to that need.

If we don't recognize that need, then I think we will soon drop down as a nation, or at least a nation that can protect its citizens with the right to protection that we are entitled to; I think we will cease to exist as a world power.

And I think it is on that basis that we do recognize that both Houses are now into developing some type of legislation that is sorely needed; but I think—and I would say again—that we should look at all aspects of this legislation, and in fairness that if industry is at fault, let's lay that cross on industry's back and say, "We cleaned it up; now you have got to clean it up."

And then I say to Government, if it is necessary to have that fund and if that fund has to be supported, regardless of where that support comes from, or where that cost comes from, then that cost should be laid out to both industry and the Federal Government. Something has to be done, for God's sake, in order to survive and keep our jobs, and our people will know what the troubles are, Senator, because we know our unemployment rate probably runs higher; and we are a little bit scared, sometimes, of the Environmental Agency. There are no two ways about it.

We have seen some good acts perpetuated and the intent of Congress has been abused by regulations. One only has to look at what has happened where we have dams being constructed to produce water, and power being shut down for very small reasons—if I can be cute about it. But yes, we support your ideas, and I think we support the intent of Congress to create, you know, to protect our workers. But we also say look at the overall picture and what is good for this country, rather than trying to place the blame on this one or that one.

[The prepared statement of the preceding panel follows:]

**TESTIMONY OF JOHNNY VICKNAIR, SAFETY DIRECTOR, UNION SAFETY COMMITTEE, LOCAL 4-447, OIL, CHEMICAL & ATOMIC WORKERS INTERNATIONAL UNION, DESTREHAN, LA.**

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Thank you for this opportunity to present my testimony.

**LEVELS OF POLLUTANTS FROM GOOD HOPE REFINERY SLUDGE DUMPED IN BONNET CARRE SPILLWAY AND KENNER LANDFILL WHICH FEEDS INTO LAKE PONCHARTRAIN, COMPARED TO LOUISIANA STANDARDS**

(In parts per million)

Standards <sup>1</sup>	Settling pond sludge <sup>2</sup>	Good Hope catalyst <sup>3</sup> (2 samples)	
Arsenic—5.....	36.58	1,000.0	727.7
Chromium—5.....	78.72	51.2	33.5
Lead—5.....	44.23	2,767.9	1,132.0

<sup>1</sup> "Analytical Operating Procedures Manual," Department of Natural Resources, Office of Environmental Affairs, Hazardous Waste Management Division, Aug. 5, 1980, p. 7, (Louisiana).

<sup>2</sup> "Analytical Report Good Hope Refinery," prepared for Louisiana Department of Natural Resources by Enviro-Med Laboratories, Inc., Baton Rouge, La., Aug. 5, 1980, Table 1, "Analytical Data from Goodhope Refinery Sludge Sample."

<sup>3</sup> "Analytical Report DSI Landfill and Goodhope Refinery," prepared for Louisiana Department of Natural Resources by Enviro-Med Laboratories, May 8, 1980.

**SUMMARY OF STATEMENT BY NOLAN W. HANCOCK, CITIZENSHIP-LEGISLATIVE DIRECTOR**

The statement makes the following points:

1. Environmental emergencies are a growing problem because of the rapid expansion of the chemical industry.

2. The central purpose of S. 1480 is to internalize the costs of toxic materials dumping and spills.

3. The limited financial resources of the victims require the provision of prompt payments for out-of-pocket losses sustained, as provided by S. 1480.

4. The limited financial resources of the victims often hamper their damage suits against the perpetrators of hazardous dumping and spills. Paid legal assistance as provided by S. 1480 increases the likelihood of the victims receiving fair settlements of their damage suits.

5. The admissibility of statistical medical evidence in damage suits is required because rigorous proof of the relation between cause and effect is hard to establish even where it is nearly certain that the disease was caused by the given toxic material.

6. The original size of the Fund is unimportant as the costs to industry will ultimately be determined by the pay-outs from the fund.

7. Industry should pay the predominant contribution to the Fund because equity demands that costs should fall on the purchasers of final products rather than the taxpaying public.

8. Strict liability is fair because no damage would have been sustained by anyone, absent the dumping and spillage.

9. The same proposition holds for joint and several liability.

10. The assessment of the fees to the Fund against the manufacturers of the original chemical building blocks avoid enormous paperwork by letting ordinary market processes accomplish pass-throughs to the final toxic materials generators.

**STATEMENT OF NOLAN W. HANCOCK, CITIZENSHIP-LEGISLATIVE DIRECTOR, OIL,  
CHEMICAL & ATOMIC WORKERS INTERNATIONAL UNION**

The Oil, Chemical and Atomic Workers International Union is vitally concerned with the objectives of S. 1480, the Environmental Emergency Response bill. Our membership works in the middle of some of the problem industries: petroleum, chemical and mining OCAW is well known for its long fight to reduce exposure of workers to toxic exposures on the job.

Besides workplace exposures, our members are vitally concerned with the dumping and spills of toxic materials. Most of these workers live in the industrial areas surrounding their workplaces where many of the spills take place and where many of the toxic waste dumps are located.

OCAW strongly supports S. 1480 and recommends to this Committee that the bill be reported out without substantial change.

That the passage of this Act is sorely needed is graphically illustrated by the difficulties of both the Federal and New York State Governments responding to the environmental emergency of Love Canal. The weaknesses of the existing legislation is also shown by the plight of the Love Canal victims, the so-called third parties, in obtaining redress for their losses.

Love Canal is the story of an old abandoned dump. Since the time that this dump was started, the manufacture of toxic chemicals and their inevitable waste by-products has more than quadrupled. The chemical industry continues to grow at an accelerating pace. It is clear that the nation will be confronted by many more crises like Love Canal and that environmental emergencies will multiply unless remedial steps are taken.

Love Canal presents us with a new kind of situation, one on which the legal responsibilities of the polluters under tort law are unclear. To the polluters, the consequences of toxic materials dumping and spills are external costs not appearing on the company books. These external costs are borne by the rest of society, including particularly the individual victims.

To internalize the costs of dumping and spills adds not one cent to the value of the products of the manufacturer. The internalization of presently external costs will be strongly resisted by the industry as adding to product costs without direct economic return.

What emerges is that the prices of many market commodities do not represent the total cost (internal plus external) of production. In effect, the public (the taxpayers and the victims) is subsidizing the production of toxic materials and toxic wastes. That is to say, the market price of materials, such as polychlorobiphenyls (PCB), does not include such externalized costs as cleaning up the Hudson River.

The internalization of the presently externalized costs of toxic substances will have two desirable effects. First, the market price will bear the true costs of production without public subsidy. Secondly and even more importantly, the internalization of environmental costs will provide manufacturers with a strong incentive to minimize careless dumping and spills of toxic materials. At the present

time, the manufacturers are getting a free ride on the public with respect to these environmental costs. The arguments of the Chemical Manufacturers Association (CMA) and other industry voices against S. 1480 add up to an attempt to continue their favorable situation as long as possible.

To the affected individuals, the so-called third parties, the provisions of S. 1480 are significant steps forward. The legal situation, of the victims, in all practical respects parallels that of OCAW in representing workers in occupational and environmental health matters.

We are up against the very considerable technical and financial resources of large companies. These give them a large advantage at every point in legal proceedings. The companies have technical personnel with full knowledge of the identity and toxicological properties of the substances to which the workers are exposed. The union has no such full knowledge. To develop the necessary expertise about the science and technology of the problem in order to properly represent the workers often requires outside help that our slender financial resources make it difficult to obtain. Generally we must rely on our own overworked technical staff members inhouse. The same inequality of financial resources obtained when we are confronted by a long succession of judicial or quasi-judicial processes. Under these conditions we can afford to carry only the most important cases to the final conclusion.

The individuals affected by an environmental emergency are in a worse situation than the workers represented by OCAW. They are generally people of modest means and without technical or legal expertise. It is next to impossible for them to obtain an adequate hearing in the lowest court with little hope of appealing adverse decisions.

S. 1480 takes two important steps toward remedying this inequity.

First, the Fund can pay promptly and directly to the victims out-of-pocket medical expenses and lost wages with some limitations without resort to the Courts. This means that the victim can be paid when the money is needed instead of receiving Court awards years later (if by chance the victim is successful).

The second is that the Fund can assist the individual to recover more complete damages in a torts court. Particularly important is that the fund will pay the expenses of expert witnesses whose testimony is often essential to the case. Needless to say, the employment of expert witnesses and high-priced legal counsel is normally far beyond the means of most victims of environmental emergencies.

One of the major difficulties encountered by OCAW is representing workers in health and safety actions is the requirement of proof of an immediate and direct connection between exposures to toxic materials and the worker's disease. Industrial diseases often develop years after the exposure. A given disease may have a complex etiology and be caused by any one of a number of factors. Unequivocal proof of a direct relation between cause and effect is often simply not possible. However, statistical medical evidence may indicate that there is a high probability that the disease has been caused by the exposure to a given toxic material.

The Courts are beginning to accept the statistical presumption of cause in a number of areas, including workers' compensation. Section 4(c) of S. 1480 takes an important step forward in specifically authorizing the admission of statistical medical and scientific studies as evidence in Court liability cases. Without this provision, the Court could bar the admission of any statistical presumptive evidence. Without admissible statistical evidence a toxic materials dumper can evade responsibility even though there is a dramatic increase in environmental disease in the community surrounding the dump.

The size of the Fund, \$4,085 billion over six years (less pay-outs) deserves some comment. It has been argued that this constitutes an enormous tax on the chemical industry and that the amount collected is too large. It turns out however that the amount initially collected by the Fund is not too important. The Fund is actually only a revolving fund.

The final levels of the fees collected will be adjusted so that the fees collected in future years will just balance the estimated pay-outs from the Fund to cover costs of environmental emergency responses (less damages collected by the Fund) plus the costs of third party assistance. The chemical industry can minimize the fees collected by handling dumping in ways which will minimize environmental harm and to reduce the number of accidental spills through better technology.

The breakdown of the contributions to the fund is 87.5 percent in fees from the chemical industry and 12.5 percent in appropriations from the Government from general tax revenues. This apportionment of costs is in some question. The question boils down to how much the buyers of the products of the industry should pay as against the taxpaying public. This is a question of ethical values rather than strict economics.

In principle, the external costs of any industry should be completely internalized so that the customers of the industry would pay full costs without any invisible subsidy by the public. On this basis, it can be urged that the full costs of the Fund should be borne by the chemical industry.

The public does derive some minimum benefit from the Fund in the assurance that environmental emergencies will be more speedily cleaned up and the assurance that the victims of the environmental emergencies will more readily obtain compensation for the harm done to them. The provision of one-eighth funding by the public appears to be a generous contribution for this assurance.

The principle of strict liability for the consequences of toxic materials dumping and spills, as provided by S. 1480, is extremely important. Toxic materials dumping and spillages which harm the surrounding community are generally the results of careless acts. However, negligence is often difficult to prove and this can bar the victim's recovery of damages in a Court of law. In addition, harm to the community can occur without overt negligence if the state of scientific knowledge has not developed to the point of identifying the toxic properties of the material at the time of dumping or spillage.

The question involved in strict liability is this: Who should pay for the damages, the public and innocent victims or the persons who created the toxic exposure in quest of profits?

No advantage has accrued to the public and the victims from the manufacture of the toxic materials, except in the most general and indirect way. The advantage to the manufacturing company has been direct and real. Except for the acts of the company, whether negligent or not, no harm would have been sustained by anyone. In the choice of whom is to pay for the damage, it seems clear that in fairness the company should be 100 percent liable.

The same considerations apply to the question of joint and several liability as provided in S. 1480. Here in the case of common dumping, by several companies some of the perpetrators may be no longer in existence or they may be insolvent. The question of equity is again who should pay for the damage, the public and the victims or the remaining perpetrators who can be successfully sued? Again it is clear that the public and the victims are both completely innocent of causing the harm and that the damages should be paid in full by the companies whose acts contributed to the environmental harm rather than to put the costs on to the public and the victims.

It is noted that the fees to establish the Fund are derived from the manufacturers of just 46 basic building blocks that are the origin of all manufacturing of hazardous products and wastes, rather than being levied directly on the generators of the toxic substances. The purpose of this procedure is to reduce the bureaucracy and the paper work. There are fewer than 1000 manufacturers of the basic building blocks and more than 260,000 generators of toxic substances, much more than this if subcontractors are also counted.

The administrative advantages of the procedure assessing the few manufacturers of the original building block of the toxic products and wastes. The fees are passed through to the manufacturers of the final products by ordinary market processes. This requires no additional burden of paperwork by industry. The incentives to avoid careless dumping and spillages come, not through the passed-through fees which are low and uniform, but through the greater accountability under S. 1480 in damage suits for environmental harms committed.

In conclusion, OCAW strongly supports S. 1480 as an effective measure addressing the serious problems of environmental emergencies created by toxic materials dumping and spillage.

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**SUPPLEMENTAL STATEMENT BY NOLAN W. HANCOCK, CITIZENSHIP- LEGISLATIVE  
DIRECTOR, OIL, CHEMICAL & ATOMIC WORKERS INTERNATIONAL UNION**

On Friday the 12th of September we gave our oral testimony in favor of S. 1480. I was assisted by Dr. Frank Collins, OCAW Consultant, and Johnny Vicknair, Union Safety Director at Good Hope Refinery in Good Hope, Louisiana. Mr. Vicknair is an active member of OCAW Local 4-447. We thought that a detailed exposition of the problems that our members and citizens of Good Hope have faced in trying to clean up Good Hope Refinery would serve as a valuable illustration of the extent of the problems of hazardous waste disposal, the need for more vigorous controls of hazardous waste generation and disposal, and of the need for a "superfund" to ensure that old waste dumps are cleaned up and new dumps are properly controlled.

OCAW is the largest union in the petrochemical industry. Of our 180,000 active members, 90,000 are chemical and allied workers and 60,000 oil refinery workers.

Our union has been in the forefront of struggles to pass and implement the Occupational Safety and Health Act of 1970.

The following testimony will demonstrate that there is a tremendous reservoir of concern about the problems of hazardous waste in our union. Good Hope is not the only refinery or chemical plant in the country which illegally dumps hazardous waste but we believe it is typical of the industry as a whole. The reason for presenting extended testimony about the problems at Good Hope is that members of OCAW Local 4-447 have engaged in a protracted struggle, in alliance with community groups, to stop Good Hope from fouling the swamps and bayous and lakes and rivers of the lovely State of Louisiana. Our union members hunt and fish in the swamps, they eat the crabs, crayfish and shrimp for which the New Orleans area is justly renowned. Their relatives, friends and neighbors work in the expanding tourist and fishing industries of the area which are being ruined by petrochemical air and water pollution.

As the largest union in the industry we believe it is the duty of the industry to properly handle their waste. We know the technological capability exists to carry out this mission.

In our discussion of the Good Hope case we will draw on evidence from a variety of sources: testimony from public hearings, newspaper articles, and letters from people and organizations whose existence is threatened by Good Hope Refinery. We feel that Good Hope and similar plants have already laid the groundwork for a new and more serious Love Canal, a new Minimata in the lower Mississippi basin.

Dr. Robert H. Harris, in his pioneering report on water quality in the lower Mississippi Valley ("The Implication of Cancer-Causing Substances in Mississippi River Water", Environmental Defense Fund, 1974) pointed out that over a million people draw their drinking water from the lower Mississippi and its tributaries. His study suggested that there was "a significant relationship between cancer mortality . . . and drinking water obtained from the Mississippi River".

If anything, the situation is worse today. The hazardous wastes from 150 major petrochemical plants from St. Francisville, 80 miles downriver to the Gulf refinery below New Orleans infiltrate the lower Mississippi. The recent spill of 12.5 tons of pentachlorophenol or PCP into the Mississippi River shipping channel contaminated more than 400 square miles of rich fishing waters in the Mississippi River estuary. ("NASA Probe Led to N.O. Water Report", Lake Charles American Press, August 4, 1980.) Our experience with Good Hope is only a microcosm of a much larger problem in southern Louisiana, the nation, and throughout the industrialized world. (Baton Rouge Enterprise, July 31, 1980, "Waste Dumping Endangers Baton Rouge Drinking Water".)

Our supplemental testimony will concentrate on the illegal and uncontrolled dumping of toxic wastes, but we must emphasize that it is impossible to separate "water pollution", "air pollution" and "hazardous waste" problems into neatly defined packages.

As far as the public authorities are concerned, Good Hope effluents containing high levels of arsenic, lead, and zinc are not a problem because effluent limitations imposed on Good Hope Refinery by the Water Pollution Control Division of the Louisiana Department of Natural Resources do not test for those substances (see Table A, p. 12). When that same arsenic, lead, and zinc sank to the bottom of the Good Hope settling pond, incorporated itself into the bottom sludge, was dredged up, loaded onto a truck, and dumped next to a picnic-boat launch area at Bonnet Carre spillway, it was still not a problem of concern to the public authorities. It only became a "public" problem when Johnny Vicknair and Charles Robichaux saw the dumping take place (see Vicknair oral testimony of Sept. 12), took pictures of it (Exhibit 1) and called an inspector from the Division of Hazardous Wastes of the Department of Natural Resources. The Division of Hazardous Wastes had laboratory tests run on the sludge which showed 37 parts per million (ppm) of arsenic, 44 ppm of lead, and 136 ppm of zinc (Exhibit 2). Good Hope is pumping millions of gallons of effluent contaminated with heavy metals into the swamps, but we would not have found that out if we had limited our definition of the problem to one of "water pollution".

Similarly, when a "reversal" occurs and several tons of spent catalyst get blown out the Good Hope Refinery stacks and dusts the Village of Good Hope Refinery stacks and dusts the Village of Good Hope with chemical snow, it is considered an "air pollution" problem. Apparently no state agency analyzed the spent catalyst as an "air pollution" problem. When the spent catalyst is "scattered about" the Kenner landfill (supposed to be limited to non-toxic wastes) and "inhaled by dump-site workers, truckers, and every passing motorist", it became a "hazardous waste" problem (Exhibit 3, p. 2). Laboratory analysis showed that the waste (including

spent catalyst) contained 1000 ppm of arsenic, 51 ppm of chromium, and up to 2767 ppm of lead. These levels are, respectively, 200, 10, and 557 times the standard.

Our testimony will be organized into the following sections:

A. A Short Pollution History of Good Hope Refinery (with an aside on working conditions).

B. The EPA and Good Hope—A Record of Total Inaction.

C. The Louisiana Department of Natural Resources: Granting Good Hope Refinery a License to Pollute.

D. The Dumping of Hazardous Wastes.

E. Good Hope and Intimidation: a Problem of Moral Pollution?

All our assertions will be meticulously documented, in order to leave no doubt in the Committee's mind as to the seriousness of the problems created by Good Hope Refinery.

#### A. POLLUTION HISTORY OF GOOD HOPE REFINERY

Exhibit 4 by Ned Gauthreaux, President of Local 4-447 of the Oil, Chemical and Atomic Workers Union, offers a short history of the activities of Good Hope refinery against the environment and people both inside and outside the plant since 1974. The record by Ned Gauthreaux constituted the written part of his testimony before a June 5, 1980 EPA hearing on whether or not to renew a waste water discharge permit for Good Hope refinery. His testimony concentrates on water pollution, non-compliance, with documentation requirements for hazardous waste disposal (the "manifest" system) instituted by the Resource Conservation and Recovery Act (RCRA) of 1976 noise pollution, occupational health and safety (Exhibit 5). Throughout the available documentary record, compiled mostly from sparse and inadequate government inspection and citizen complaint reports, there runs the same thread of corporate disregard for health, lives, and property by the Good Hope Refinery.

#### B. THE EPA AND GOOD HOPE—A RECORD OF TOTAL INACTION

At the Hahnville, Louisiana, hearing of June 5, 1980, 14 people testified against renewing a discharge permit for Good Hope Refinery, and 3 people testified in favor: Sam LeBlanc and Michael Crow, lawyers with the law firm of Adams & Reese, New Orleans, representing Good Hope refineries, and Ralph Waters, Vice President of URS, environmental consultants for Good Hope. The remaining witnesses constituted a cross-section of local public opinion: Ned Gauthreaux, a chemical worker and president of OCAW Local 4-447, and amalgamated local with 1,800 members; Johnny Vicknair, a refinery worker and Union Safety Director at Good Hope; Charles Robichaux, a former refinery worker, a resident of the town of Good Hope, and President of the Concerned Citizens of Good Hope; Mrs. Charles Robichaux, a resident of Good Hope; Lynn Himel, a laboratory employee at Good Hope; Mr. Lionel Himel, a Good Hope resident; Mr. Rene Elfer, a former employee of Good Hope and a steward of OCAW Local 4-447; Mr. Charles Andrews, a resident of Good Hope; Mr. Kenneth Loque, a lab technician at Good Hope refinery; Mr. Byron St. Pe, a worker at Good Hope; Mr. Teryl Schexnayder, a Good Hope worker; Mr. M. L. Cambre, President of the St. Charles Environmental Council; and Mr. Cornell Tramon Tanna, Jr., a birdwatcher and hiker who lives in Metairie, a suburb of New Orleans. (See the transcript of the oral testimony, pp 30-53, EPA hearing regarding the Good Hope refinery effluent permit, Hahnville, LA, June 5, 1980.) The testimony is self-explanatory. What is remarkable is that people working for Good Hope refinery would testify against granting a discharge permit at the risk of on-the-job harassment or dismissal. Perhaps the testimony of Mr. Kenneth Loque is representative of the workers' point of view: "I have got a family; I have got a wife and three kids and I am dependent upon my salary at Good Hope refinery to make a living. But I will say this: I had rather give it up, if Good Hope refinery cannot be a good employer and good neighbor to the citizens of the community. I want my little boy to be able to hunt and fish just like I did."

Mrs. Charles Robichaux testified: "I am the mother of eight children. I have to watch frequent nose bleeds from my children, headaches and everything else. . . ." (brings in a sample from a drainage ditch twenty feet from a residence home, which smelled like the sample Johnny Vicknair showed the Committee on Friday the 12th of Sept.) "I have something here that I would like for you all to smell that came from a drainage ditch 20 feet from a home, where 5 children are sick from it. . . . would you like to smell it? . . . because we all might die. I can truly tell you this is causing our oldest citizens and our children to become ill. We would like to know why, that we as human beings, have to suffer like this. . . . You have laws. You protect the rabbits, you protect the deer, you protect the endangered species, but doggone it, we are human beings, our lives have to be protected."

Predictably the lawyers blamed the environmental violations on factors external to Good Hope management such as sabotage and the extensive use of "sour" crude as a feedstock. Mr. John Stanley, president and owner of Good Hope refinery, was present but declined an invitation by one of the witnesses to testify in his own behalf. Predictably, Good Hope's environmental consultant sketched out the company's plans for bigger and better waste water treatment plants in the near future, claiming that compliance was just around the corner.

The EPA response to the near-unanimous criticism of Good Hope refinery by the witnesses has been total silence. Several telephone calls to the Region 6 office in Dallas have been unable to elicit any kind of EPA action or even promises to think about taking some action against Good Hope, such as withdrawing the discharge permit. No one in the office, including Tripper Cronkite, an EPA attorney present at the Hahnville hearing, seemed to know how EPA would go about withdrawing or refusing to renew the discharge permit.

The inaction of the U.S. EPA Dallas office deserves Congressional investigation. The branch office of EPA responded to one letter written by M. L. Cambre, President of St. Charles Environmental Council but three subsequent letters went unanswered. EPA appears to be completely uninterested in cleaning up the situation at Good Hope refinery (Exhibit 6).

#### C. THE LOUISIANA DEPARTMENT OF NATURAL RESOURCES: GRANTING GOOD HOPE A LICENSE TO POLLUTE

In late June 1980 the Louisiana Attorney General's office and Good Hope refinery entered into an agreement which fined Good Hope an unprecedented \$250,000 "as a result of violations of the environmental laws of the State of Louisiana" up to and including Dec. 31, 1979. The agreement specified that Good Hope refinery pay the fine over 10 months at \$25,000 a month to acquit itself of all claims against it by the State of Louisiana up to that point. This is supposed to be the largest fine ever levied against a company in the Southeast over environmental violations. According to the settlement agreement Good Hope is supposed to pay \$100 for each violation of the parameters specified in the agreement. Monitoring was supposed to be accomplished by the company itself—a situation equivalent to asking motorists to turn themselves in to the police when they exceed the speed limit.

An oddity of this agreement is that the copy of the Settlement Agreement at the Department of Natural Resources' Water Pollution Control Division is not a signed copy, so we are not sure on what date the agreement was signed or indeed if the copy in the Department files is the genuine document. For all we know there could be another document somewhere which constitutes the real signed agreement.

The Settlement Agreement contains a passage in which Good Hope "denies that it is or has been in violation of any valid environmental regulations" (p. 3, Settlement Agreement) and that, if in fact, it was or had been in violation, such violations were caused "by the actions of third parties not controlled by it" such as "the weather, acts of God, labor strikes, or sabotage". Under the "Settlement Agreement" the State of Louisiana "does expressly release and forever discharge Good Hope Refineries, Inc. from any and all claims or damages arising out of or in any way connected with violations of the environmental laws of the State of Louisiana . . . for violation occurring on or before Dec. 31, 1979." This raises the question whether or not other parties besides the State of Louisiana are precluded from suing for damages.

What has been the effect of the Settlement Agreement on Good Hope as a polluter? Has the level of pollution been cut back?

A partial answer is provided by the daily effluent test results for the period from June 29 through July 31, 1980 (Exhibit 7). These results showed 58 violations of the "Settlement Agreement" and Good Hope paid a fine of \$5,800 in addition to the \$25,000 monthly fine payable under the Agreement.

The issue is complicated by the fact that the company provided itself with several loopholes with the Agreement or in fact simply neglected to comply with certain provisions.

*Loophole No. 1: No monitoring is done on weekends.*—Though Good Hope is required to meet "daily average" and "daily maximum" parameters under the Settlement Agreement (see Settlement Agreement, "interim Limitations and Monitoring Requirements", 3 tables covering the periods June 29-Sept. 30, 1980; Oct. 1-Dec. 31, 1980; and Jan. 1-Mar. 31, 1980). The test results reported for the period June 29-July 31, 1980, covered only 5 days a week, ignoring the weekends. It is reasonable to assume that there would be weekend effluents to be measured since the refinery runs 7 days a week, and that the unmeasured effluents could be dirtier than the effluents that are monitored.

*Loophole No. 2: Monitoring does not report "daily average" results as required.*—The "test results" report violations of the "daily maximum" permit limits only and

does not include the "daily average" results. Thus there is no way of knowing what the total outflow of pollutants is for each of the 12 parameters measured. Since sampling occurred for only 20 of the 33 days of the period under consideration, beginning June 29 and ending July 31, and since "daily average" figures were not included, Good Hope in effect reported on only 240 of the legally required 788 parameters for those 33 days.

By simple extrapolation, it is likely that if Good Hope had reported on the weekends and had also reported figures for "daily average" as well as "daily maximum" concentrations, the number of violated parameters could have exceeded 150. The extra fines assessed (at \$100 per violated parameter) might then have been over \$15,000 instead of a mere \$5,800.

*Loophole No. 3: Heavy metals are not monitored.*—Another loophole not immediately obvious in the Settlement Agreement is the fact that the effluent parameters do not cover heavy metals, with the exception of chromates and hexachromates. Lead and arsenic, both recognized hazardous heavy metals, are present in the sludge of the settling ponds at levels many times over the standards of the State Department of Natural Resources' Hazardous Wastes Management Division's "Analytical Operating Procedures Manual" as Mr. Vicknair pointed out in his oral testimony of Sept. 12. As a result, it is impossible to know what many of the long-term effects of effluent discharge into the surrounding swamps are likely to be regarding the quantity and quality of the fish, shrimp, crawfish, crabs, and human life in the bayous and lakes and rivers of the area. The one certain conclusion to be drawn is that the effect will not be positive.

*Loophole No. 4: Fines do not reflect the severity of the violation.*—A final loophole in the Settlement Agreement is the fact that the fine per violated parameter does not depend on the extent of the violation. In the 2nd week of July, for example, according to the reports (Exhibit 6) parameters for "daily maximum" concentrations under the Settlements Agreement were exceeded by as much as 6 times; sulfide limits were 12 times the limit, and total suspended solids and chemical oxygen demand were 2 to 3 times the recommended limit. The effect is the same as if a person doing 20 miles per hour in a 15 mph zone were fined the same amount as a person driving 150 miles per hour.

Despite the mildness of the Settlement Agreement in disciplining Good Hope, the company was already applying for a revision of the wastewater discharge permit. Whether the application for a revised discharge permit occurred before or after the Settlement Agreement is impossible to determine using the available documents, because as we pointed out before, the copy of the Settlement Agreement in the files of the Water Pollution Control Division of the Louisiana Department of Natural Resources is not a signed copy.

According to Exhibit 8, the company intends to increase the permitted discharge parameters when the company moves its effluent waste discharge in from near Bayou LaBranche to the Mississippi.

Table A compares the effluent pollutant limitations now in effect with the values that would be allowed under the new permit applied for by Good Hope refinery on June 17, 1980.

TABLE A.—A COMPARISON OF EFFLUENT LIMITATIONS NOW IN EFFECT AND APPLIED FOR BY GOOD HOPE REFINERY

Parameter	Daily average lbs./day		Daily maximum lbs./day	
	In effect <sup>1</sup>	Applied for <sup>2</sup>	In effect <sup>1</sup>	Applied for <sup>2</sup>
BOD <sup>3</sup> .....	245	1776	540	3,199
TSS <sup>4</sup> .....	415	1421	725	2,228
COD <sup>5</sup> .....	3,575	12,411	7,600	23,918
Oil and grease.....	173	517	325	970
Phenol.....	1.8	11.5	3.5	23.6
Ammonia.....	120	958	180	2,108
Sulfides.....	1.4	9.3	2.9	20.8
Chromium.....	4.8	28.1	8.6	48.0
Hexavalent chromium.....	0.30	1.79	0.5	3.8

<sup>1</sup> From "Authorization to Discharge Under the National Pollutant Discharge Elimination System (NPDES)," Permit No. LA0052051, June 23, 1978.

<sup>2</sup> Exhibit 8.

<sup>3</sup> Biological oxygen demand.

<sup>4</sup> Total suspended solids.

<sup>5</sup> Chemical oxygen demand.

Note.—If the new permit applied for by Good Hope Refinery is allowed by the State of Louisiana, legally sanctioned levels in the effluent will be increased 5 to 10 times.

Good Hope refinery is now failing to comply with presently established limits to toxic substance discharges. They apply for a new permit establishing new and higher limits which they may be able to meet. If the State grants the new permit, it will be tantamount to the State changing the regulations to accommodate the Good Hope refinery, in effect condoning the present practices of the company.

There does not seem to be any recourse for the citizens of Louisiana. The pollution limits are raised. If they are not met, the company pays a few thousands of dollars in fines. This may be cheaper than cleaning up the wastes, encouraging the company to go on polluting.

#### THE DUMPING OF HAZARDOUS WASTES WITHOUT A VISIBLE SOLUTION

The average water table of the lower Mississippi basin is about 18 inches below the surface, so that anything that is watersoluble is guaranteed to end up sooner or later in Lake Pontchartrain, the Mississippi River, and ultimately in the Gulf of Mexico. As a result, burying or spreading any hazardous waste will sooner or later poison the surrounding water. This is one reason why most New Orleans area cemeteries "bury" people in crypts above the ground. Clearly the same applies to hazardous wastes.

In this section we would like to recount a few incidents about hazardous wastes and to present some conclusions about the present effectiveness of governmental and private entities to control the problem, based on some Good Hope refinery examples. What the examples demonstrate is that Good Hope management displays a contempt for environmental regulations governing hazardous waste. It also shows that they are quite prepared to defame and discipline those who protest its policies, particularly if they are Good Hope employees. For example:

Item No. 1—On April 21, 1978 Billy Crespo, 2201 3rd St., Kenner, LA 70062, (Phone: 504/721-1233), a worker at Good Hope, was told to open a valve and release 20,000 gallons of very toxic "spent caustic" into the ground near the Mississippi River because the company "didn't have enough money" (they said) to truck the waste to a waste disposal facility, Crespo was fired when he refused to dump the waste a second time and called a newspaper and governmental inspection agency in protest. Action by OCAW Local 4-447 later enabled him to get his job back.

Exhibit 9 gives two newspaper clippings which describe Crespo's problems with Good Hope management. I could not find out the dates of the clippings, but the are in late April or early May, 1978. One of the clippings is from the New Orleans Times-Picayune, the other from other local newspapers published in late April or early May, 1978.

Item No. 2—Good Hope has been dumping waste, mainly spent catalyst, at the Kenner Landfill. Inspector L. M. Lasserre from the Division of Hazardous Wastes of the Department of Natural Resources, inspected the waste on Feb. 2, 1980. Exhibit 10 is a copy of his inspection report. The analysis of the sludge at the Kenner landfill submitted to the Department of Natural Resources by Enviro-Med Laboratories of Baton Rouge showed "high concentrations of most of the priority pollutant heavy metals" (Exhibit 11). The Kenner landfill is supposed to receive only non-hazardous waste. Exhibit 12 contains a newspaper account of the illegal dumping.

On May 16, 1980 the Office of Environmental Affairs of the Department of Natural Resources addressed a letter to Good Hope refinery requesting that the spent catalyst from Good Hope refinery no longer be dumped at the Kenner landfill as it was toxic and might cause "serious or irreversible damage to human health at the present DSI landfill at Kenner. Good Hope refinery was ordered to cease and desist from dumping catalyst and to clean up the catalyst it had dumped within ten working days and to submit manifests recording satisfactory disposal. (Exhibit 3). The second part of this same notification letter complained that Good Hope had discarded a truckload of laboratory sample bottles at the Arcola Sanitary Landfill in Tangipahoa Parish; had discarded asbestos piping and insulation, painting wastes, and cooling water blowdown.

Item No. 3—On or about August 14 or 15, 1980, Johnny Vicknair and George Robichaux followed a truck from Good Hope refinery to where it had been loaded with refinery sludge from the Good Hope settling pond. Robichaux and Vicknair followed the truck to where it dumped its load onto some property owned by the Army Corps of Engineers on the Bonnet Carre spillway leading into Lake Pontchartrain, in a boat launching area where people picnic and fish. The sludge had a strong rotten egg odor. After taking pictures of the dumping (Exhibit 1), the two men notified the Division of Hazardous Waste Management of the Louisiana Natural Resources Commission, which collected a sample for analysis (see Exhibit 2 for

the results). The analysis showed "high concentrations" of "most priority pollutant metals", with chromium levels 15 times over the recommended standard, lead levels 8 times over the standard, and arsenic levels 7 times over the recommended standard. It is likely that the dumping observed by Vicknair and Robichaux was not the only dumping conducted by Good Hope. It is also likely that some of the poisonous heavy metals they dumped will end up in people who ate crab, shrimp, and fish from Lake Pontchartrain, the Mississippi, or the Gulf, or drank water from the Mississippi River.

Why are the hazardous waste control programs so weak? Clearly they are designed to fail; clearly industry has too much influence in setting them up. David Dodson, writing this summer in the Baton Rouge Enterprise (Exhibit 13), pointed out that the Louisiana Department of Natural Resources, supposed to watch over industrial waste disposal, has only 5 inspectors to check for violations at the thousands of dumps and legally registered hazardous waste disposal sites. According to an article in the Baton Rouge Enterprise (Exhibit 14), operating permits had been granted to only 2 of 180 estimated producers, handlers, and disposers of hazardous waste, and only half of the 35 positions allocated by the state to the environmental affairs office have been filled.

In conclusion, Good Hope refinery has been selected as the subject of this testimony because OCAW has a great deal of information about its environmental abuse. Good Hope refinery, however, is but one example among many plants that could have been chosen to illustrate this testimony.

The public has a great deal of concern about the issues addressed by S. 1480. The testimony given by Johnny Vicknair on September 12, 1980 has attracted nationwide attention. The news story in the New Orleans Times-Picayune (Exhibit 15) is an example of this interest.

OCAW considers that hazardous waste dumping and spill is, in effect, a "ticking time bomb" as has been previously observed by others. It is essential that S. 1480 be legislated into law during this session of Congress.

Exhibit 1

Photographs of Sludge Dumping at Bonnet Carre Spillway  
(Taken by Johnny Vicknair, August 14 or 15, 1980)



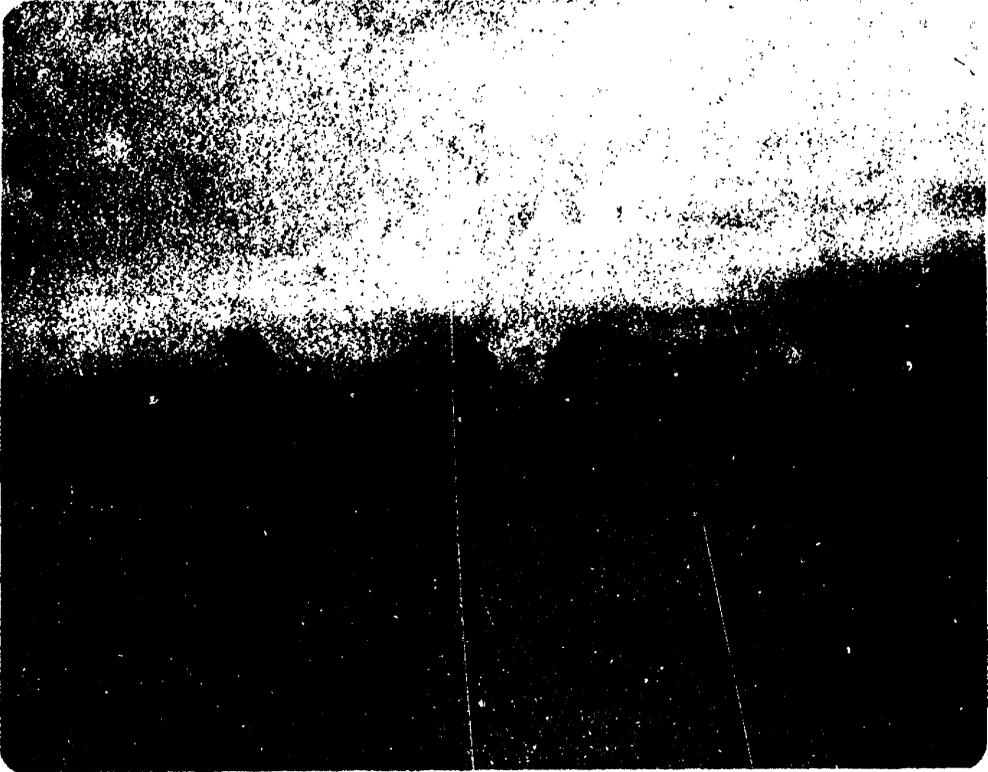
A

Truck dumping Good Hope settling pond sludge near boat launch and picnic area. Look carefully at the truck bed--Good Hope first loads a little light-colored river sand in the bottom so the dark brown sticky sludge won't stick to the bed, or perhaps to partially conceal the fact that it is dumping sludge.



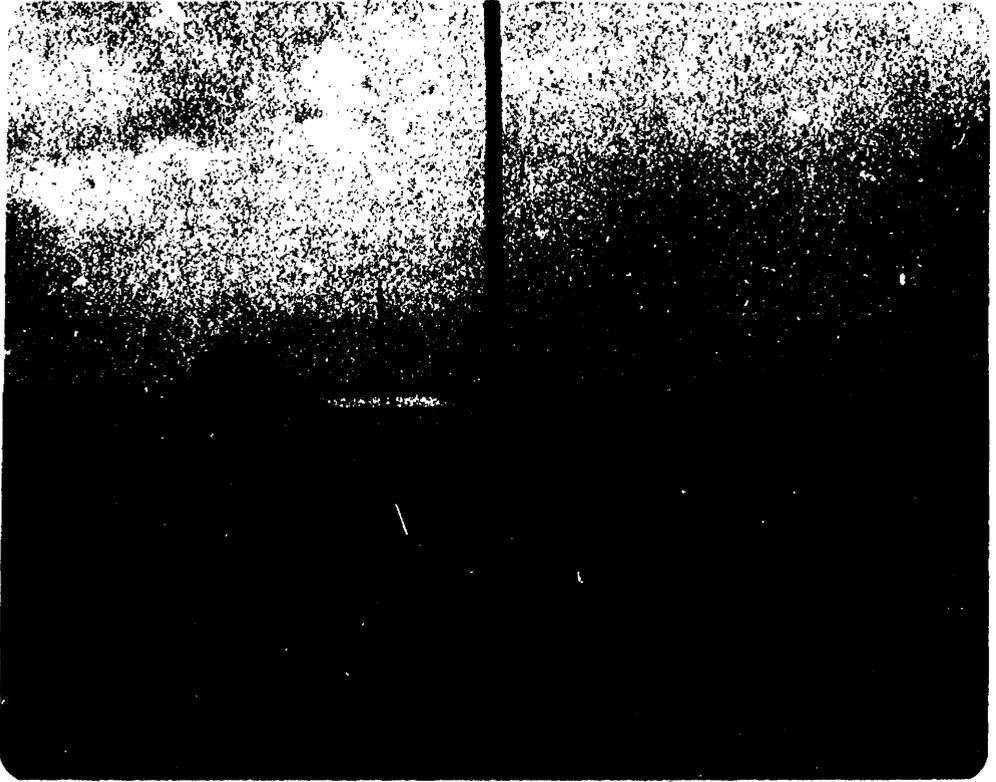
B

Truck driving away after dumping sludge.  
Note ugly appearance of sludge.



C

Picnic area and public boat launch. If you look carefully at center of picture you can see dump truck with red and white cab which was in snapshot B.



D

Army Corps of Engineers office as seen behind sludge dump Aug. 14 or 15, 1980, about a mile from Bonnet Carre Spillway boat launch and picnic area pictured in snapshots A-C. This site is about 2 city blocks from the river on the south.

Exhibit 2

ANALYTICAL REPORT  
GOODHOPE REFINERY

To

Mr. Frank H. Ashby  
Secretary

Louisiana Department of Natural Resources

September 5, 1980

By

ENVIRO-MED LABORATORIES, INC.

Baton Rouge, LA 70806

Ruston, LA 71270

## ABSTRACT

Most priority pollutant metals were detected in high concentrations from the sludge sample analyzed. Three volatile organics were also detected from the sample.

## RESULTS AND DISCUSSION

Analysis of the sludge sample from Good Hope Refinery indicated high concentration of several of the priority pollutant metals.

The only metal of the 15 not detected was mercury. Zinc was detected in the highest concentration (136.029 ppm) followed by chromium and antimony Table I.

Three (3) volatile organics were detected (Table I) from the sample. Ethylbenzene had the highest concentration (3.5 ppm) of the three detected. No other volatiles were detected.

TABLE 1 ANALYTICAL DATA FROM  
GOODHOPE REFINERY SLUDGE SAMPLE

Parameter (ppm)	Site GoodHope Refinery
<u>Antimony</u>	<u>62.71</u>
<u>Arsenic</u>	<u>36.58</u>
<u>Beryllium</u>	<u>1.167</u>
<u>Cadmium</u>	<u>0.740</u>
Chromium	78.716
Copper	28.409
<u>Lead</u>	<u>44.25</u>
Mercury	<0.002
Nickel	48.077
<u>Selenium</u>	<u>48.00</u>
Silver	1.866
<u>Thallium</u>	<u>3.75</u>
Zinc	136.029
Benzene	0.6
Ethylbenzene	3.5
Toluene	2.8

FRANK A. ELVIN, JR.  
SPECIAL AGENTDEPARTMENT OF NATURAL RESOURCES  
OFFICE OF ENVIRONMENTAL AFFAIRSB. JIM PORTER  
ASSISTANT SPECIAL AGENT

May 16, 1980

CERTIFIED MAIL - RETURN RECEIPT REQUESTED (5605238)

Good Hope Refinery  
P. O. Drawer 537  
Good Hope, La. 70079

Gentlemen:

Re: Good Hope Refinery ID Waste Streams No. GD-316-10; and an unidentified laboratory waste. Notice of Violation: Act No. 449 R.S. 30:1137 (A) and (B). Specifically: Transporting and Disposing of a hazardous waste (spent catalyst) to a non-secure disposal site; and failure to declare a hazardous waste (laboratory sample bottles and contents) on the Notification form.

## I. On the Matter of Spent Catalyst.

This Department received Good Hope Refinery's Notification form on 11/1/79, upon which waste stream 316 10 was listed as 1 under "Degree of Care." On 1/30/80, Mr. Thomas Keyse's correspondence to Mr. Frank Elvin changed the Degree of Care of the spent catalyst to 2, therefore, automatically requiring your company to dispose of this material in an approved Class I, hazardous waste facility.

On February 21, 1980, representatives of this agency personally called on Mr. Elvin and explained that waste streams listed under this Degree of Care (2) could no longer be disposed of at the DSI sanitary landfill in Kenner which was the disposal facility currently being used by Good Hope Refinery.

This Department has not changed its policy in regard to your waste stream #316-10 and regards the spent catalyst as toxic due to inherent heavy metal concentrations. We are aware of your consultants' (URS) correspondence of April 15, 1980 which lists several metallic components as non-hazardous, after testing by Extraction Procedure 40 CFR Part 250 Subpart A(250.13d). Since you have attempted to deregulate this waste by following federal test procedures, your attention is hereby directed to the attached page 143, of EPA's most current waste regulation guidelines, in which EPA specifically states that "the Extraction Procedure fails to take into account such factors as concentration of toxicants, and the quantity of such wastes generated which could have a bearing on the hazardousness of the material disposed."

This Department further believes that the inherent high concentrations of these metals (see the attached Departmental laboratory report by Enviro-Med Labs), and the lack of management demonstrated by the negligent manner of disposal by Good Hope, may cause serious or irreversible damage to human health at the present DSI landfill. Our investigators have frequently observed that this fine particulate material, which averages 80 microns in size, is scattered about the dumpsite, used as roadbed filler, easily becomes airborne or fugitive, and is consequently inhaled by dumpsite workers, truckers, and every motorist passing within the vicinity of the dumpsite on Highway 61 at Kenner, La.

Since Good Hope Refinery has not considered the probability of airborne pollution by this waste, and under the guidelines of Louisiana's Environmental Affairs Act, Act 449, R.S. 30:1072, Good Hope Refinery is hereby ordered to cease disposal of this waste stream in any manner, other than that provided for hazardous wastes. Good Hope Refinery is also hereby ordered to retrieve all of the catalytic fines previously dumped at the DSI landfill in Kenner and properly dispose of same at an approved hazardous waste disposal site, within ten (10) working days of receipt of this order. Manifests recording this disposal, shall be forwarded to this office promptly, and Good Hope Refinery will notify this agency when clean-up is complete, so that investigators may determine if all contaminants have been removed.

## II. On the Matter of Waste Laboratory Sample Bottles.

On or about May 8, 1980, a truckload of laboratory sample bottles with identifying labels from Good Hope Refinery were discarded at the Arcola Sanitary Landfill in Tangipahoa parish. Some of these bottles were intact and the liquid contents are being completely analyzed by this Department, however, preliminary tests indicate that the contents are hazardous under Category III A.1, Ignitability, relative to Louisiana's rules and regulations governing hazardous wastes.

Since Mr. Frank Elvin neglected to list laboratory wastes on the Notification form of 11/1/79, Good Hope Refinery has therefore violated the rules specific to the Notification procedure, and again concerning the improper disposal of hazardous wastes.

This Department must consequently order that Good Hope seriously review the Notification as submitted and prepare an addendum listing all refinery hazardous wastes not heretofore previously declared. Your attention is also referred to the omission from this form of 11/1/79 of:

1. Discarded asbestos piping and vessel insulation.
2. Cooling water blowdown.
3. Painting wastes such as containers, rags, or solvents.
4. Condensation or precipitation that is in contact with stored products such as leaded gasoline, etc.

Good Hope Refinery must take immediate steps to resolve both problems previously discussed above, and you are reminded that continued negligence relative to these obligations to the State of Louisiana will result in legal actions by this agency against your firm.

Sincerely,

*B. Jim Porter*  
B. JIM PORTER

Assistant Secretary  
Office of Environmental Affairs

LML:jcp

Exhibit 4

## *Oil, Chemical and Atomic Workers International Union*



ST. ROSE LOCAL NO. 4447  
PHONE: 784-7271

P. O. BOX 206  
BESTREHAN, LA. 70047

### REPORT ON ENVIRONMENTAL HAZARDS AT GOOD HOPE REFINERY: TESTIMONY AGAINST RENEWAL OF THE EFFLUENT PERMIT, June 5, 1980, ST. CHARLES PARISH, HAHNVILLE, LA.

Good Hope refinery in Good Hope, Louisiana is one of the most polluting refineries in the State of Louisiana, according to officials at the Attorney General's office and at the Department of Natural Resources. The problems, particularly in the area of water pollution, are compounded by the fact that the refinery discharges waste into essentially stagnant swamp water rather than into the relatively fast-moving Mississippi. As a result, environmental authorities have required higher effluent discharge standards for Good Hope than for other nearby refineries and chemical plants.

#### WATER POLLUTION:

Good Hope has a consistent record of disregarding environmental standards for water, air, and noise pollution. The record, on file at the Department of Natural Resources and at the state Attorney General's office, begins in July 24, 1974, when Good Hope first applied for a permit with the Louisiana Stream Control Commission to discharge polluted water. Despite Good Hope's pious homilies: "Good Hope Refineries recognizes its responsibility to the State and to the Community to provide for a safe environment"--- it is clear from the record that this was never the intention of Good Hope's management. On Oct. 25, 1974 the Stream Control Commission approved Good Hope's discharge permit, and already by May 8, 1975 the Commission was complaining that the refinery had yet to submit required reports on the water quality of its discharges. A letter from field biologist T. L. Bradley (Sept. 30, 1975) reported that the refinery was discharging water with a temperature of 149°F rather than the 95°F required by the standard; that there was a high amount of hydrogen sulfide in the water; and a large amount of both floating and emulsified oil in the refinery discharge. In addition several local people had complained about the odor of the water in the area, particularly after heavy rains, covering the lawns of some local residents with oil.

Despite the fact that the company claims it cannot comply with demands of state water pollution regulations, it was expanding its production from a 30,000 barrel/yr. operation to 75,000 barrels, with plans for future expansion. In a letter to the Louisiana Stream Control Commission, dated March 31, 1977, the company begged off from complying with the water pollution laws because it had entered into Chapter XI Reorganization proceedings under the U. S. Bankruptcy Act. To this day the lawyer handling the lawsuit against Good Hope for the Attorney General's office doubts that the State will be able to make its charges stick and force Good Hope to clean up because of Title XI proceedings. Four years after the first complaint by the Stream Control Commission that Good Hope was failing to live up its obligations to control water pollution, the situation appeared to be getting worse rather than better, partly because of failure to install control equipment, and partly because the company was investing in

productive capacity faster than it was keeping up with the new pollution caused by the increase in production. A letter from Ronald L. Smith, a biologist with the Division of Water Pollution Control of the Louisiana Wildlife and Fisheries Commission reads like a broken record:

"On March 6, 1979, I visited the Good Hope Refinery and observed the effluent coming from their facility. Effluent water quality seems to be much worse than my last visit to the area. Strong odors of sulfides and phenols are emanating from the water and the color is very black with oil sheans present. Ditch banks of the ditches leading to Airline Highway (located outside of Good Hope premises) are coated with oil and dead vegetation. Numerous locations in these ditches have logs partially obstructing flow which have accumulated oil and grease several inches thick upstream."

"Citizens in the area are very upset and discouraged with the situation there and complained to me that something should be done to stop this problem....In addition I will provide you with photographs of the current situation for your consideration."

According to our members who work at the New Hope refinery, a number of other individuals and groups have complained about the water pollution, including:

1. Charles Robichaux, resident of Good Hope and President of the Coalition of Citizens of Good Hope. Mr. Robichaux has been keeping extensive records on air, noise, and water pollution of all kinds coming from the refinery, and actually sent a large packet into 60 Minutes. He also has a series of photographs of various pollution incidents at the refinery. I haven't seen his file.
2. H. L. Cambre of the St. Charles Environmental Council, 402 Marino, Norco, LA 70079, has written more than one protest letter to the Environmental Protection Agency (EPA) over fires, waste oil, and pirate dumping of caustic wastes into the canals and bayous near Good Hope. Also president of Bonnet Carrie Hunt Club.
3. A number of our members have witnessed dumping of Good Hope's caustic wastes, and one who was ordered to do it was fired when he told the news media about it. Local landowners, hunters, and fisherman have complained that there are fewer fish and game in the area, and that many of the animals trapped in the area in the last 5 years have evidence of skin disease and damaged fur.
4. Before the discharge permit for Good Hope Refinery expired on March 31, 1980, 200 people from New Sarpy in St. Charles Parish signed a petition against renewing the permit. Our members feel that many more signatures could have been collected if more time had been available.

NON-COMPLIANCE WITH WASTE DOCUMENTATION AS REQUIRED UNDER THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976

An examination of thousands of waste manifests at the Department of Natural Resources in Baton Rouge disclosed that Good Hope Refinery had not submitted a single waste manifest (an official document describing the identity and amounts of hazardous wastes) since the requirement became mandatory on Jan. 1, 1980. So there is no way to keep track of Good Hope's hazardous wastes as required under the RCRA law of 1976. If the law had been complied with, Good Hope should have mailed a copy of the waste manifest to the Department of Natural Resources, leaving copies with waste transporters and with the hazardous waste disposal facility. For all the public knows, all these hazardous wastes are being dumped into the river or the swamps, as of mid-April 1980.

NOISE POLLUTION

On Oct. 25, 1979 the Office of Health Services and Environmental Quality of the Department of Health and Human Resources submitted a report on noise in the vicinity of the Good Hope Refinery to H. Glen Kent, staff attorney of the Department of Justice of the State of Louisiana. Naturally the continuous noise was worst nearest the refinery. Good Hope has installed about 40 "temporary" air compressors. Right next to the compressors, near a steam leak, a noise reading of 114 decibels on the A scale (dBA) was recorded. Near the closest houses the readings were between 68 and 74 dBA, except when trucks were passing by or train whistles were blowing. Inside the enclosed porch of one house the level was down to "only" 58 dBA. According to the inspector, the "temporary" compressors would remain in place at least 6 months. These high levels of exposure to noise will guarantee that a certain number of people have their hearing permanently damaged and will make them prone to increased heart disease and other stress-related diseases.

OCCUPATIONAL HEALTH AND SAFETY PROBLEMS

Good Hope Refinery's lack of respect for the life and property of its neighbors and those affected by air and water pollution is not confined to the public. As the enclosed report by Sharon Itaya, MD shows, there is an extremely high accident rate at Good Hope. In 1978 there were 59 lost-time accidents (in which at least a day of work was missed by the injured party), which resulted in about 800 lost workdays. This total doesn't include the number of accidents which were too minor to result in time away from work. Most of these injuries were from burns or eye injuries. Workers at Good Hope are under permanent pressure just to stay alive and well on the job.

Inspection data from the Occupational Safety and Health Administration show that a number of workers were exposed to a level of benzene in 1979 several times the mandatory level of 10 parts per million, averaged over an 8 hour day. Whether any of the exposed workers, all of whom are in their 20s and 30s, have begun to show signs of leukemia or other diseases associated with exposure to benzene is unknown to the Union at the present time, as the refinery medical contractor has refused to let Dr. Itaya see the results of company-sponsored medical screening.

Incredibly high levels of noise have been recorded in the workplace, of between 92 to 98 decibels averaged over an 8-hour day. The company was supposed to abate those levels by February 1980, but no evidence of an attempt to comply has been forthcoming. The level of noise some workers are exposed to guarantees that 10 to 15 percent of them will become totally deaf if they continue to work for the rest of their working life under such conditions.

RECOMMENDATIONS OF LOCAL 4-447 OF THE OIL, CHEMICAL AND ATOMIC WORKERS INTERNATIONAL UNION

At the present time there are about 160 hourly workers operating the Good Hope Refinery, and about 400 construction workers building a whole new refinery within the refinery. We, the 160 members of OCAW are afraid for our lives and for the lives of our children, our spouses and neighbors. In most cases unions take the position that the most important thing is to keep the plant running, to preserve

our jobs, our livelihood, our way of live. But Good Hope Refinery is so dangerous, so uncontrolled, that we, the members of OCAW Local 4-447 would rather see the discharge permit denied and the refinery shut down forever than to see it continue to poison this community. For workers and citizens of the area Good Hope has become the principle obstacle to a civilized life-style, and we believe that if Good Hope and its greedy owner Jack Stanley find it impossible to obey the laws of the land they had better shut up shop.

The situation has gone far beyond the physical poisoning of the environment and the workplace. We are now witnessing a series of threat to the moral environment. Rumors generated by management have it that anyone working at Good Hope who wants to testify at public hearings, to exercise their right guaranteed by the Constitution and the laws of the land to protest the outrageous and poisoning of the area surrounding Good Hope will be fired or disciplined in some unspecified way. If it is at all necessary, we would like to call Mr. Stanley's attention to Section 507(a) of Public Law 92-500, the Federal Water Pollution Control Act, under whose auspices this evening's hearing is being held. This section states, in part, that "no person shall fire or in any other discriminatory manner against any employee by reason of the fact that such employee...has filed...any proceedings resulting from the administration or enforcement of the provisions of this Act."

On May 21 Good Hope sent an official memorandum to all its employees signed by the manager of industrial relations. In demanding the "cooperation and loyalty of all its employees" Mr. Deutsch stated in writing that "Any actions or statements made by employees against the Company's interests which expose the Company to public contempt and/or ridicule or damages its business reputation or interferes with its ability to expand and grow shall be considered as disloyalty." If people can't criticize their boss in public, in a public forum, if they have to operate in an atmosphere of threats and fear and intimidation, what is the meaning of freedom in America? What does it mean at Good Hope Refinery? Must people give up their constitutionally guaranteed freedoms in order to earn a living? These are no idle threats that Good Hope is brandishing at its employees. Rane Elfer, a no. 1 operator at Good Hope, was terminated on May 30th after writing a letter which was published in the Times-Picayune rebutting false statements by Good Hope about alleged sabotage of company facilities. Johnny Vicknair, union safety and health chairman at Good Hope, has been threatened with losing his job on several occasions, because of his intense activities in health and safety.

We sincerely hope that Good Hope will change its ways, but so far we haven't seen much. So until further evidence of compliance with the laws of the land and simple good citizenship, we recommend that the discharge permit be denied.

*Ned Gauthreaux*  
 Ned Gauthreaux, President  
 Local 4-447, Oil, Chemical and  
 Atomic Workers International Union

Exhibit 5

Report by Sharon Itaya, M.D.

REPORT ON HEALTH HAZARDS  
AT GOODHOPE REFINERY

Goodhope refinery in New Orleans employs approximately 120 men with an average age of 27-28 years. The workforce is all male, and about 7-8% Black.

In 1978, Health and Safety Chairman, John Vicknair, became concerned with health hazards at Goodhope and called for an OSHA inspection. Specifically, Mr. Vicknair noted problems with benzene and noise exposures. Mr. Stanley, company manager, agreed to abatement of the problems if the federal regulatory agency was not called in. The OSHA complaint was withdrawn; it was reinstated shortly thereafter when no changes in the working conditions was forthcoming. The OSHA complaint was first filed in 1978; at the beginning of 1979, the company claimed that it would not be able to maintain its insurance policy and would be shutdown if the OSHA inspectors cited the company. The complaint was withdrawn in February of 1979, but was resubmitted in March 1979. In the meantime, the company got a "high-risk" policy from Lloyd's of London.

## PROBLEMS AT GOODHOPE

1. Safety

Goodhope refinery has had problems with safety in the past. In 1977, there were 40 lost time injuries reported, with 249 lost work days from occupational injuries. In 1978, there were 59 lost-time injuries or illnesses, with about 6400 lost manhours. Most of these reported injuries were from burns or eye injuries; there were also reports of workers developing respiratory problems from chemical exposures. The fire and explosion hazards continue to exist, according to Mr. Vicknair and supported by the evidence from the reported injuries. OSHA cited the company in the past on a number of safety procedural citations after a sewer explosion.

2. Health

A. Benzene: From the OSHA inspection in 1979, it was discovered that workers are being exposed to benzene levels as high as 73 and 55 ppm., well in excess of even the ceiling levels of the current benzene standard. Mr. Vicknair, in conjunction with the company engineers, designed a quench pot system to decrease the amount of benzene released to the air; however, no measurements have been taken after the institution of this system to guarantee that the benzene overexposures have been abated. OSHA cited the company on 21 counts following that inspection, including many citations for poor practices handling benzene. Shortly thereafter, the company instituted a medical surveillance program for 47 workers with benzene exposures. The company does not have its own medical capability; it subcontracted the work to an outside lab,

West Paine Labs of Baton Rouge. This lab ran urine, blood, and audiometric tests on the workers. In February 1980, Mr. Vicknair had all 47 workers sign medical release authorization forms for the release of this medical information to a Union doctor, Dr. Sharon Itaya, for review. None of the workers tested were told the results of their tests. To date, none of the tests have been released to Dr. Itaya as authorized.

B. Noise: The EPA monitored for noise levels outside the gates of Goodhope in the past because of neighborhood complaints; levels of up to 114 db. were found. In its investigation, OSHA measured noise exposures of 92-98 db., time-weighted average over an 8 hour workday. The company was cited for these levels and was given an abatement date of 2/80. To date, no action to reduce the noise levels has been forthcoming. Goodhope appealed the OSHA citations but neglected to appropriately post the appeal notices and the subsequent hearing notices; because of this, the contest of the citations was thrown out.

C. Other exposures: Last year, two people were overcome by hydrogen sulfide fumes; one worker reportedly has lung problems which have been attributed by his physician to occupational exposure to sulfur dioxide. Neighbors to the refinery complain of nausea and nosebleeds from exposures to sulfurous fumes.

There are also extensive exposures to catalyst dust and to organic lead.

#### RECOMMENDATIONS:

1. If conditions in the workplace have not changed from what they were during the OSHA citations, OSHA should be called back in for another inspection.

2. The International Union, in conjunction with the local leaders, Mr. Gail Simmons, Mr. Carey Simoneaux, Mr. John Vicknair, and the local representatives, Mr. Jim Roan and Mr. Jim Bergeron, will be seeking remedies for the practice of the company of withholding medical information on the workforce.

3. We will also be working in conjunction with community and environmental groups to guarantee the health and safety of the surrounding community as well as that of the workers in the plant.

Sharon Itaya, M.D.

April 1980

ST. CHARLES ENVIRONMENTAL COUNCIL

Exhibit C

402 Marino

Moro, La. 70079

January 8, 1979

Mr. Howard G. Bergman  
Director, Enforcement Division (6AE)  
Environmental Protection Agency  
Region VI  
1201 Elm Street  
Dallas, Texas 75270

Dear Mr. Bergman,

In May of last year, I wrote a letter to your agency opposing a NPDES Permit #LA0052051 by Good Hope Refineries, Inc., because we were not satisfied with the past performances of this company. Six months have elapsed since the permit was issued and conditions have gotten worse. After receiving several complaints about water quality, I personally traced pollution coming from the plants out-fall canal into drainage canals & wetlands in the area. We believe from our observations that the water conditions with visible traces of oil far exceeds permit effluent limitations. We have also had reports of caustic released into drainage canals. Our fear is that these pollutants will soon reach Lake Pontchartrain and cause harm to this valuable lake.

We would also like to report that chemical wastes are being disposed of in landfills in wetlands on the East bank of our Parish North of US 61. Conditions of these landfills have gotten serious in our Parish and action must be taken soon to protect these wetlands and also to protect the water quality of Lake Pontchartrain. Some old landfills are already advertised as commercial sites. We feel there are dangers involved in developing these landfills as was the Love Canal site in New York. We also feel that there is not enough monitoring & supervision of these landfills to adequately protect people let alone fish & wildlife. We ask your assistance in these matters.

1 encl.

Yours truly,



M.L. Cambre, President

United States  
Environmental Protection  
Agency

Region 6  
1201 East Street  
Dallas TX 75270

Arkansas, Louisiana,  
Oklahoma, Texas,  
New Mexico



JAN 25 1979

Mr. M. L. Cambre  
President  
St. Charles Environmental Council  
402 Marino  
Norco, Louisiana 70029

Re: Good Hope Refineries, Inc.  
NPDES Permit No. LA0052051

Dear Mr. Cambre:

As you know in June 1978 the Environmental Protection Agency issued a permit to Good Hope Refineries, Inc. which establishes federal control over the discharge of pollutants from that facility. A copy of which is attached for your information.

It is our policy to work closely with state agencies on water pollution matters in order to most efficiently utilize our resources and to avoid duplication of effort. We have therefore discussed the matter with the Louisiana Stream Control Commission and the State Attorney General's office. It is our understanding that the Louisiana Stream Control Commission referred this case to the State Attorney General last August and will be taking appropriate follow up action on this problem.

Pertaining to your concern for the dumping of chemical wastes into local landfills, the information supplied in your letter and subsequent conversation with Dave Olschewsky of our staff, is being investigated further. We anticipate that a representative of E.P.A. will conduct an inspection to gather facts. As the situation develops and a decision is made, we will inform you.

Your concern for the environment is greatly appreciated. Should you have any further questions along these matters please contact either Mark Potts or Dave Olschewsky at the above address or at (214) 767-2755.

Sincerely,

James E. Stiebing, Chief  
Engineering & Evaluation Branch (6AEE)

Enclosure

cc: Louisiana Stream Control Commission

La Attorney General Office - New Orleans  
Attention Mr. Dick Troy

ST. CHARLES ENVIRONMENTAL COUNCIL  
402 Marine  
Merce, La. 70079

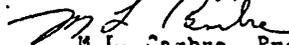
March 23, 1980

Ms. Diana Dutton  
Environmental Protection Agency  
Region 6  
1201 Elm Street  
Dallas, Texas 75270  
Dear Ms Dutton,

Re: Permit LA 00 520 51

We are requesting that your agency conduct a public hearing before re-issuing permit #LA 00 520 51 to Good Hope Refineries. We opposed the original permit application because we felt that based on their past performance that they would not comply with the terms of the permit. This has proved to be the case and your records on Good Hope Refinery show that they are not complying. I reviewed an administrative order by your agency on their violations and it was extensive. We feel that continued violations will have an effect on wetlands in the area, such as Bayou La Branche and have an adverse effect on Lake Pentchartrais. We feel that a public hearing in our Parish will allow the public to bring pressure to bear on Good Hope Refineries that will make them comply with the conditions of the permit. They have not shown a willingness to be a good neighbor and have alienated a lot of the community against them by their actions. Industry has responsibilities to residents of areas adjacent to their operations to operate in a safe & clean manner. There are many problems associated with Good Hope Refineries. We feel that action is needed and we request your agency to call a public hearing on this permit and take immediate steps against Good Hope Refineries.

Yours truly,

  
M.L. Canbro, President

ST. CHARLES ENVIRONMENTAL COUNCIL  
402 Marino  
Noreo, La. 70079

PNY-15-78  
Fontaine

May 13, 1988

Ms. Carol Young  
Environmental Protection Agency  
Permits Branch (6AEP) Region VI  
First Int'l Bldg., 1201 Elm St.  
Dallas, Texas 75270

Re: Permit La8852051  
Good Hope Refineries, Inc.  
Post Office Drawer 537  
Good Hope, La. 70079

Dear Ms Young,

We are not at all satisfied with the way the applicant operates this facility. Their past and present record indicates very little if any treatment of wastes prior to discharging into canals and Bayous in the area. Waste oil is very evident in the swamps adjacent to the refinery. A major fire occurred in the area when this waste oil caught fire. Recently an employee went to the news media for refusing an order to release caustic into adjacent swamps and drainage canals. We strongly recommend that your agency investigate this site before approval of any NPDES authorization.

Bayou LaBranch, is protected as a scenic stream under an act passed by the Louisiana Legislature. While the Bayou may be classified for secondary contact recreation, it empties into Lake Poutchartrain which is classified for primary contact recreation. We hope that your agency looks carefully into this matter.

Yours truly,

*M.L. Cambre*  
M.L. Cambre, President

RECEIVED

MAY 17 1978

6AEP

*Good-*

*W. P. Crabb*

ST. CHARLES ENVIRONMENTAL COUNCIL  
402 Marilee  
Norco, La. 70079

June 5, 1980

Environmental Protection Agency  
Public Hearing - Good Hope Refineries NDPS Permit  
Baton Rouge, La.

Gentlemen:

We have been trying for several years to get Good Hope Refineries to comply with existing laws and live within the guidelines of the NDPS permit. We opposed the issuance of the original permit, LA 00202 in May of 1978 because we were not satisfied with the discharges from Good Hope Refinery. On Wednesday of this week, I again checked the canals & ditches in and around Good Hope Refinery and found them to be in deplorable condition and. I walked the Island canal from US 51 to the ICRR and found the canal completely devoid of aquatic life. I then followed the canal along the RR track to the rear of the Good Hope property to be sure of the source of pollution. This canal is also in deplorable condition. It would seem that the main source of pollution is from Good Hope Refineries. Recent data that I have seen seems to be in violation of the permit on numerous occasions. I have a picture taken from US 61 where the island canal crosses under the highway and empties into the airline canal then into Bayou La Branche and into Lake Ponchartraine. This canal shows signs of being badly polluted with oil and other substances/ The picture shows that the water lilies that are normally very green at this time of the year are yellow. I picked some of these lilies and found this water to be in great quantity below the lilies at this point. I have brought these for your information. I also took water samples that I would ask you to analyze. It is a composite sample taken from six several points around the area,

Recently, I attended a meeting that shows that federal & state agencies are interested in the wetlands of our area as well as preserving water quality. Lake Ponchartraine is an important fishery resource for commercial as well as recreational uses. We must make sure that laws are obeyed if we are to protect these valuable resources. We ask that your agency issues that when permits are issued, they carry with them responsibilities as well as regulations that must be complied with.

*John Truby*  
M. L. Rouse, President

Exhibit 7**URS**

AN INTERNATIONAL PROFESSIONAL SERVICES ORGANIZATION

**URS COMPANY**  
 (Formerly URS-Forrest and Colton, Inc.)  
 3501 NORTH CAUSEWAY BOULEVARD  
 METAIRIE, LOUISIANA 70002  
 TEL. (504) 837-6326

NEW YORK  
 SAN FRANCISCO  
 WASHINGTON D.C.  
 DALLAS  
 SEATTLE  
 DENVER  
 KANSAS CITY  
 HONOLULU  
 AUSTIN  
 NEW ORLEANS  
 SAN MATEO  
 CHICAGO  
 BUFFALO  
 MONTREAL  
 GERMANY  
 UNITED KINGDOM

August 14, 1980

Mr. Mo Garcia  
 Louisiana Department of Natural Resources  
 Office of Environmental Affairs  
 Division of Water Pollution Control  
 P. O. Box 44066  
 Baton Rouge, Louisiana 70804

Dear Mr. Garcia:

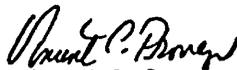
Subject: Good Hope Refineries, Inc.  
 Good Hope Refinery Effluent Monitoring Results  
 URS Job No. 450-11-93

On behalf of Good Hope Refineries, Inc., we are submitting daily effluent test results for the period June 29, 1980 through July 31, 1980. During this period there were 58 parameter violations recorded. Permit violations are noted on the test result forms. In accordance with Good Hope's agreement with the State, payment of \$5,800 is required.

Good Hope has wired the State \$5,800 along with their regularly scheduled \$25,000 installment payment. Due to a misunderstanding, Good Hope was under the impression the \$25,000 installment payment was due along with the violations payment by the 15th of the month. We have advised Good Hope that installment payments are due by the 1st of the month, while violation payments are due by the 15th of the month.

Sincerely,

URS COMPANY



Vincent C. Provenza, P.E.  
 Manager, New Orleans Division

VCP:jk

LOUISIANA DEPARTMENT OF NATURAL RESOURCES  
OFFICE OF ENVIRONMENTAL AFFAIRS

FROM: GOOD HOPE REFINERIES, INC.  
GOOD HOPE REFINERY

SUBJECT: TEST RESULTS FOR WEEK ENDING

7/5/80 JUL 15 1980

ON EFFLUENT (001)

DATE	PERMIT LIMITS DAILY MAX.	6-29	6-30	7-1	7-2	7-3	7-4	7-5
Flow - MGD	N/A	2.1	1.7	1.0	2.0	2.0	1.5	1.7
pH (Continuous)	MIN. 6	6.9	6.8	6.8	6.6	7.0	6.8	6.8
	MAX. 9	7.3	7.1	7.2	7.3	7.6	7.5	7.2
BOD <sub>5</sub> - lbs./day (5 wk. comp.)	1310	1,050	880	719	782	701		
TSS - lbs./day (5 wk. comp.)	912	1,208	1,217	649	902	434		
COD - lbs./day (5 wk. comp.)	9801	7,805	5,941	4,715	8,075	6,379		
OIL & GREASE lbs./day (5 wk. GRAB)	398	173	22	51	96	17		
PHENOL - lbs./day (5 wk. comp.)	9.6	4.9	2.2	1.6	3.3	4.7		
AMMONIA as N lbs./day (5 wk. comp.)	857	683	625	334	1,009	852		
TOTAL Cr - lbs./day (3 wk. comp.)	19.5	3.5	/	0.8	/	/		
HEX Cr - lbs./day (3 wk. comp.)	1.6	/	/	.16	.16	/		
ZINC - mg/l (3 wk. comp.)	1	0.04	/	0.06	/	/		
SULFIDE - lbs./day (5 wk. GRAB)	8.4	7.0	4.9	2.1	5.8	3.3		
TES: pH on 24 hr. Effluent Comp.		6.7	7.1	6.9	6.7	7.6	7.2	7.2

LOUISIANA DEPARTMENT OF NATURAL RESOURCES  
OFFICE OF ENVIRONMENTAL AFFAIRS

FROM: GOOD HOPE REFINERIES, INC.  
GOOD HOPE REFINERY

JUL 21 1980

SUBJECT: TEST RESULTS FOR WEEK ENDING

7/2/80

ON EFFLUENT (001)

	PERMIT LIMITS DAILY MAX.	7-6	7-7	7-8	7-9	7-10	7-11	7-12
Flow - MGD	N/A	1.5	2.1	2.1	.50	2.9	0.0	2.2
pH (Continuous)	MIN. 6	7.3	7.2	7.7	7.8	Power	out at	
	MAX. 9	6.5	6.5	6.5	7.2	sample	shed	
BOD <sub>5</sub> - lbs./day (5 wk. comp.)	1310	295	359	590	117	438		
TSS - lbs./day (5 wk. comp.)	912	799	889	616	202	960		
COD - lbs./day (5 wk. comp.)	9801	7,208	7,011	6,864	1,638	6,912		
OIL & GREASE lbs./day (5 wk. GRAB)	398	42	24	98	21	146		
PHENOL - lbs./day (5 wk. comp.)	9.6	3.4	<u>12.0</u>	<u>39</u>	1.7	3.1		
AMMONIA as N lbs./day (5 wk. comp.)	857	586	393	273	176	<u>984</u>		
TOTAL Cr - lbs./day (3 wk. comp.)	19.5	.62		1.2		1.2		
HEX Cr - lbs./day (3 wk. comp.)	1.6	.12	.17	.17	.04	.24		
ZINC - mg/l (3 wk. comp.)	1	.20		.06		.05		
SULFIDE - lbs./day (5 wk. GRAB)	8.4	3.6	2.1	2.1	.36	3.8		
NOTES: pH on 24 hr. Effluent Comp.		7.1	7.2	7.1	7.8	7.6		

TEST RESULTS FOR WEEK ENDING 7/19/80 ON EFFLUENT (001)

DATE	PERMIT LIMITS DAILY MAX.	7/13	7/14	7/15	7/16	7/17	7/18
Flow - MGD	N/A	2.9	3.31	4.32	3.4	2.5	3.0
pH (Continuous)	MIN. 6	power	out at	sample	6.5	6.7	6.7
	MAX. 9	shed			7.2	7.0	7.4
BOD <sub>5</sub> - lbs./day (5/wk. comp.)	1310	<u>10,388</u>	<u>7659</u>	<u>6894</u>	812	781	
TSS - lbs./day (5 wk. comp.)	912	<u>2646</u>	<u>2678</u>	<u>3351</u>	<u>1426</u>	<u>1055</u>	
COD - lbs./day (5 wk. comp.)	9801	<u>33,908</u>	<u>25,756</u>	<u>25,941</u>	<u>10,146</u>	5,850	
OTL & GREASE lbs./day (5 wk. GRAB)	398	<u>414</u>	386	<u>576</u>	248	133	
PHENOL - lbs./day (5 wk. comp.)	9.6	<u>47</u>	<u>11</u>	8.0	7.5	7.0	
AMMONIA as N lbs./day (5 wk. comp.)	857	<u>1250</u>	773	<u>1153</u>	705	443	
TOTAL Cr - lbs./day (3 wk. comp.)	19.5	12.3		<u>23.8</u>		8.6	
HEX Cr - lbs./day (3 wk. comp.)	1.6	.25	.28	.36	.29	0.21	
ZINC - mg/l (3 wk. comp.)	1	.15		.14		0.1	
SULFIDE - lbs./day (5 wk. GRAB)	8.4	<u>78</u>	<u>52</u>	<u>115</u>	<u>37</u>	<u>21</u>	

NOTES:

LOUISIANA DEPARTMENT OF NATURAL RESOURCES  
OFFICE OF ENVIRONMENTAL AFFAIRS

FROM: GOOD HOPE REFINERIES, INC.  
GOOD HOPE REFINERY

SUBJECT: TEST RESULTS FOR WEEK ENDING 7/26/80 ON EFFLUENT (001)

	PERMIT LIMITS DAILY MAX.	7/20	7/21	7/22	7/23	7/24	7/25	7/26
Flow - MGD	N/A	3.0	2.8	2.8	2.4	2.7	2.3	2.0
pH (Continuous)	MIN. 6	6.8	6.8	6.8	6.6	6.8	6.8	6.6
	MAX. 9	7.3	7.3	7.0	7.2	7.2	7.2	7.0
BOD <sub>5</sub> - lbs./day (5 wk. comp.)	1310	575	482	1,121	1,134	<u>1,450</u>		
TSS - lbs./day (5 wk. comp.)	912	<u>1,500</u>	<u>1,832</u>	<u>1,356</u>	<u>1,672</u>	<u>2,408</u>		
COD - lbs./day (5 wk. comp.)	9801	7,030	4,863	5,890	6,129	9,076		
OIL & GREASE lbs./day (5 wk. GRAB)	398	113	138	116	223	87		
PHENOL - lbs./day (5 wk. comp.)	9.6	3.0	2.6	2.4	2.2	7.0		
AMMONIA as N lbs./day (5 wk. comp.)	857	456	374	416	338	764		
TOTAL Cr - lbs./day (3 wk. comp.)	19.5	2.5		4.1		3.9		
HEX Cr - lbs./day (3 wk. comp.)	1.6	.25	.24	.24	.20	.22		
ZINC - mg/l (3 wk. comp.)	1	.08		.18		.16		
SULFIDE - lbs./day (5 wk. GRAB)	8.4	<u>42</u>	<u>16</u>	8.2	7.8	<u>17.0</u>		
NOTES: pH on 24 Hr. Effluent Comp.		6.7	7.3	6.8	6.5	7.2	6.8	6.6

RECEIVED  
AUG 3 1980  
URS COMPANY

ACT: TEST RESULTS FOR MILK LINDING 8/2/80 ON EFFLUENT (001)

DATE	PERMIT LIMITS DAILY MAX.	7/27	7/28	7/29	7/30	7/31	8/1	8/2
Flow - MGD	N/A	1.87	1.83	1.15	.53	2.0		
pH (Continuous)	MIN. 6 MAX. 9	sampling equipment damaged by construction						
BOD <sub>5</sub> - lbs./day (5 wk. comp.)	1310	13104	3192	2448	211	2150		
TSS - lbs./day (5 wk. comp.)	912	889	1368	1219	258	1411		
COD - lbs./day (5 wk. comp.)	9801	26,442	12,342	9,984	2,024	22,176		
OIL & GREASE lbs./day (5 wk. GRAB)	398	147	166	74	28	22		
PHENOL - lbs./day (5 wk. comp.)	9.6	5.1	4.5	4.3	2.1	5.9		
AMMONIA as N lbs./day (5 wk. comp.)	857	1326	1110	739	114	890		
TOTAL Cr - lbs./day (3 wk. comp.)	19.5			1.2		1.3		
HEX Cr - lbs./day (3 wk. comp.)	1.6	0.16	.15	.10	.04	.17		
ZINC - mg/l (3 wk. comp.)	1			.79		.03		
SULFIDE - lbs./day (5 wk. GRAB)	8.4	14.6	14.1	9.6	2.2	28.6		

NOTES:

*h/c. violations in reporting etc.  
over limits*



INTRODUCTION

Good Hope Refineries, Inc. requests a modification to its existing wastewater discharge permit. The modification will incorporate both a proposed expansion program and a relocation of the wastewater effluent discharge point. The proposed expansion includes a staged construction program, with completion dates scheduled for January 1, 1981 and March 31, 1981, and will result in an increase in both wastewater flows and effluent limits. The effluent limits applicable to the expanded refinery are based on EPA BPT (best practicable control technology) guidelines and are listed below.

Parameter	Pounds/Day*		mg/l*	
	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.
BOD	1167.7 (1775.9)	2104.0 (3198.6)	65 (92)	117 (166)
TSS	934.4 (1420.9)	1464.7 (2227.6)	52 (74)	81 (116)
COD	8165.2 (12410.6)	15737.1 (23918.1)	453 (646)	874 (1245)
Oil & Grease	340.3 (517.20)	638.0 (969.7)	19 (27)	35 (50)
Phenolic Compounds	7.52 (11.50)	15.45 (23.64)	0.42 (0.60)	0.86 (1.23)
NH <sub>3</sub> as N	626.5 (958.2)	1378.4 (2108.1)	35 (50)	77 (110)
Sulfides	6.06 (9.26)	13.57 (20.76)	0.34 (0.48)	0.75 (1.08)
Chromium (Total)	18.38 (28.11)	31.33 (47.91)	1.02 (1.46)	1.74 (2.49)
Chromium (VI)	1.17 (1.79)	2.51 (3.83)	0.06 (0.09)	0.14 (0.20)

\* The specified limits correspond to operational capacities as of January 1, 1981. The effluent limits corresponding to the operational capacity as of March 31, 1981 are indicated in parentheses.

Concurrent with the proposed expansion, the Refinery proposes to relocate the effluent from the wastewater treatment plant from the water quality limited swamps to the Mississippi River at Mile 125.0.

Exhibit 9

## Dumping of Wastes Told by Oil Worker

GOOD HOPE (UPI) — A worker for an oil refinery Wednesday said he has dumped 20,000 gallons of caustic chemicals into the waters leading to Back Water Swamp, something he feels could damage the area's crawfish population.

Bob Crespo, 21, said he has discharged the treated chemicals near the Mississippi River since last Friday, when the company stopped disposing of its liquid wastes by truck.

Ted Christianson, an assistant at the Good Hope plant, said the chemicals were completely harmless.

There is no harm to the environment,"

Christianson said. "This is not considered a pollutant. Our discharge permit allows us to discharge as much as four million gallons a day."

The oil refinery, which has come under fire by the Louisiana Stream Control Commission for violation of another discharge permit, is located about five miles upstream from Back Water Swamp, which is a thriving area for crawfish.

Bob LeFleur, a spokesman for the commission, said Crespo's complaint would be discussed at the panel's next meeting.

"We are checking into this complaint," LeFleur said.

## Refinery Officials Deny Pollution at Good Hope

By ANDREW S. DUET JR.

(Times-Picayune Upriver Bureau)

GOOD HOPE, La. — Officials of Good Hope Refinery Wednesday denied charges by an employee that the facility is discharging large amounts of caustic soda into backwaters near the plant.

Bob LeFleur, secretary of the Louisiana Stream Control Commission said an investigation will begin as soon as possible on allegations the company failed to comply with a permit from the commission. He said action will be taken against the refinery for failure to maintain an implementation schedule for a separate discharge permit.

Bill Crespo, a plant employee, said Friday under orders he released a large amount of caustic and was ordered to do the same job Wednesday when he refused and protested to his supervisor.

"You can walk to the discharge area behind the plant and see dead birds and animals along with a stench and green scum in the water," Crespo said. "People hunt and fish in the area and it makes me want to cry to see what is going into the water."

Ted Christianson, assistant plant manager, said the refinery was in compliance with all state and federal water control requirements and currently

holds a legal discharge permit for backwater discharge of treated effluent.

Christianson said the average discharge of the treated caustic was about 50 gallons per day and posed no danger to area residents. He said that the plant was constantly monitoring the discharge and complaints arose from a lack of understanding of new procedures for the treatment of the effluent.

"We're not trying to slip anything through the back door," said Christianson. "The plant is meeting all legal requirements and we are conducting a controlled release of discharge and are using constant monitoring to protect the public."

Exhibit 10

Log No. 55  
District 11DEPARTMENT OF NATURAL RESOURCES  
HAZARDOUS WASTE REGULATION  
CITIZENS' COMPLAINT RECORD

## Complaint Received:

BY: L. M. Lasserre

TIME: \_\_\_\_\_

DATE: 2/20/80

## Location Directions:

Disposal Service, Inc., Hwy. 61  
(Airline) Across from BA Lumber Co  
Kenner, St. Charles Parish
ASSIGNED TO: L. M. Lasserre

REMARKS: \_\_\_\_\_

COMPLAINANT: Willie Fontenot, Attorney General's Office.ADDRESS: \_\_\_\_\_ PARISH: \_\_\_\_\_ PHONE: 925-4120COMPLAINT SOURCEGenerating Firm Good Hope RefineriesWaste Transport Company Sciogneaux Trucking Co., Good Hope (764-6566 Ext. 242)Waste Disposal Site Disposal Service, Inc., 7110 Mistletoe St., Metairie, La. 70003

Other \_\_\_\_\_

Address \_\_\_\_\_ Telephone \_\_\_\_\_

Other Agencies Previously Contacted \_\_\_\_\_

NATURE OF COMPLAINTSludges are being dumped in sanitary landfill.

## INVESTIGATORS PRELIMINARY COMPLAINT ASSESSMENT AND SITE DESCRIPTION

(Use sketches if necessary)

(Refer to another Agency if applicable \_\_\_\_\_)

and person notified)

Visited this site on 2/21/80. The gray dust resembles cement kiln dust and is being dumped on the entrance roadway near the Airline entrance, to the rear of the dump property. It's composition is not known at this time. Oily or black sludges have been dumped intermittently throughout the landfilled area, and are bulldozed or spread with any excavated, or "mucked" soils that are being hauled to the area. The darkly stained "mucked" soils are sometimes the only evidence that sludges have been dumped within the landfill. Slides were taken of some fresh sludge piles, however, Chemical or refinery odors are also persistent to the stained landfilled materials. Approximately 40 miscellaneous empty chemical or product barrels were photographed at one site on the landfill.

Exhibit 11

ANALYTICAL REPORT DSI LANDFILL  
AND GOODHOPE REFINERY  
DEPARTMENT OF NATURAL RESOURCES

To

Mr. Bill Hughes

Department of Natural Resources

May 8, 1980

By:

ENVIRO-MED LABORATORIES, INC.

1012 S. Acadian Thruway  
Baton Rouge, LA 70806

414 W. California  
Ruston, LA 71270

# Enviro-Med Laboratories, Inc.

414 W. CALIFORNIA - BUSTON, LOUISIANA 71270 - 318-255-0060  
 1012 S. ACADIAN THRUWAY - BATON ROUGE, LOUISIANA 70806 - 504-343-4314

ROY J. HARDING  
 Chairman of the Board  
 DR. ROBERT W. FLORENNOY  
 President and  
 Chief Executive Officer

DR. RAYMOND D. GIKMANY, Vice President  
 DR. JOHN T. GOORLEY, Vice President  
 KENNETH J. BAUGHMAN, Manager, Baton Rouge Office

May 8, 1980

Mr. Bill Hughes  
 Chief, Enforcement Division  
 Hazardous Waste Division  
 Department of Natural Resources  
 P. O. Box 44596  
 Baton Rouge, LA 70804

Dear Mr. Hughes:

Four samples were brought to Enviro-Med Laboratories, Inc. by the Department of Natural Resources personnel for metals analysis on March 13, 1980. These samples were from the DSI landfill and Goodhope Refinery.

These samples were treated in two different ways before analysis. First, they were digested using the Interim Method for the analysis of Elemental Priority Pollutants in Sludge (EMSL - Cincinnati, December, 1978). Using this digestion procedure, then analyzing the sample gives an indication of the metals that are in the sample. Second, the Leachate Test outlined in the December 18, 1978, Federal Register was performed and analysis of the leachate indicated the leaching effect of metals through the soil.

Analysis of the digested samples indicated a high concentration of most of the priority pollutant heavy metals as compared to very low concentration detected in the leachate.

This seems to indicate the metals are there but are not leaching at a very rapid rate.

Included in this report are the data sheets from both types of sample preparation and a copy of the sample preparation procedures.

If you have further questions, please contact us.

Sincerely, -

*Raymond Germany*  
Raymond Germany  
Vice President

nwk

Enclosures



6/5/80

# Waste citations issued

Exhibit 12

By BOB ANDERSON  
Advocate Staff Writer

Thomas Scrap Metal in Scotlandville has been issued a notice of violation for allegedly giving hazardous waste to a local man to use as fill on private property near Baker.

Meanwhile, DNR has issued a similar citation to Good Hope Refinery in Good Hope for dumping hazardous waste at a sanitary landfill. The waste, which contains arsenic and lead, was then being used as fill on the site's roads where it becomes airborne and is breathed by motorists on Airline Highway in Kenner, DNR said.

Both companies were ordered to clean up the wastes.

The notices of violation were two of four issued by the Department of Natural Resources to firms last month in connection with alleged industrial pollution.

In the notice to Thomas, DNR says it had previously rejected a request by Thomas to dispose of waste ash in a sanitary landfill because the ash is hazardous.

The notice says W.K. Dunbar contacted DNR and said Thomas had placed two dump truck loads of the ash on his property near Greenwood Park in Baker as fill, assuring him the wastes "were innocuous and could cause no environmental damage."

DNR said the waste is "liable to cause fires through retained heat from processing," and also is toxic because it contains high concentrations of cadmium, chromium and zinc.

Bill Thomas, president of the scrap metal company, said the material was removed from the Dunbar property earlier this week.

He said "it's not as bad as what they tell you," and added that the company is having its own analysis done.

In the Good Hope case, wastes containing as much as 1,000 parts per million of arsenic and 2,764 ppm of lead were being dumped at DNR sanitary landfill north of Kenner rather than at a hazardous waste site, according to DNR.

Sciencaux Trucking Co. of Reserve was cited for transportation of these wastes without notifying DNR it was handling hazardous wastes.

The fourth citation went to Gulf Coast Galvanizing in Gonzales, which allegedly has been discharging acidic and metallic waste sludges into the Bayou Narcisse drainage system without a permit.

# ENTERPRISE

THE COMMUNITY NEWSPAPER OF BATON ROUGE

JULY 31-AUGUST 6, 1980

## Despite Assurances

# Hazardous Wastes Flowing As State Officials Move Slowly

By DAVID DODSON

Despite new laws and assurances from top officials that something would get done, the state is only very slowly, perhaps even reluctantly, addressing the problems posed by hazardous industrial waste.

The Louisiana Department of Natural Resources, which is supposed to be the watchdog over industrial waste disposal, has assigned only five inspectors to check for violations at the thousands of waste sites identified in the state so far, and has not referred a single case on an active site for investigation and possible prosecution by the attorney general's office.

Out of the estimated 180 producers, handlers and disposers of hazardous wastes supposed to be licensed by the state, only two operating permits have been processed so far. Another 90 are sitting on desks in the department's environmental affairs office, according to Jim Porter, head of that office.

Of the remainder, most are "on schedule" for processing, Porter said, although he could not say how many operators haven't yet notified the state that they're in business.

Only about half of the 35 positions allocated by the state to the environmental affairs office have been filled, Porter said. The federal government estimates the state would need 70 employees in the air quality section alone "just to bring the program up to date," an EPA official in Washington said this week.

But the department apparently has no intention of asking for more personnel. And when Assistant Deputy Secretary Jim Hutchison testified before the Natural Resources

Committee two years ago about consolidation of all the state's environmental programs into one office, he even suggested a reduction in the total number of employees as a means of saving money on the overall program.

At the time, Hutchison went so far

## Of 180 Waste Producers and Disposers, Only 2, Have Permits

as to say the committee should not recommend adding any additional lawyers to the attorney general's environmental protection section, since the department "couldn't possibly refer any cases to the AG for another two years."

The department further rocked state environmentalists last week by granting a contract to Ned Cole's Research Associates Inc. to search out and identify the estimated 10,000 or

more dump sites in the state by car rather than the accepted EPA method of aerial detection.

Cole, whose accepted bid of \$227,000 was \$4,810 more than the aerial survey and \$14,600 more than the lowest bidder, also holds a big chunk of another \$830,000 contract for developing the state's hazardous waste program and has participated in three other projects for DNR.

Dr. Jack Hill, a civil engineer at LSU who helped develop one of the other plans, said he was disappointed the department chose to give Cole the money to make a "windshield survey," but added he was "not about to let this thing drop."

Hill said he would seek alternative funding sources to finance an aerial survey of the state.

"There's no way to make an accurate count of all the pits, ponds and lagoons by riding around in a car," Hill said. "From here to Slidell is one big pine."

*Continued on Page 9*

## WASTE

*Continued from Page 1*

tree. The only way to find a lot of those sites would be from the air."

The aerial approach has another advantage, he said, in that it "freezes" the state at the time the photographs are taken. Comparison with photographs from subsequent flyovers would give the department an instant record of how many new sites had been opened and how many old ones had been filled in or altered.

"The Department of Natural Resources is not developing any long-term plans to deal with hazardous wastes. They're taking a short-in-the-dark approach," he said.

Porter agreed that the state is "just fighting fires" with its current level of staffing, but said the most important thing now is not to jump in and start filing reports on violations, but rather "to get permits to all the operators."

The only cases referred for action to the attorney general's office have been made on 14 abandoned waste sites.

"No, we have not referred any issues other than those abandoned sites," Porter said. "There's a lot of talk about violations, but the big thing is to get the operators permitted right now."

Porter admitted there "probably are several violations" being committed by companies other than the 180 on DNR's punch list of producers, handlers and disposers. "We have another list of about 500 different types of industry we have questions about," he said. "But those 180 handle about 90 percent of the hazardous wastes."

Some environmentalists expressed concern last week that even if DNR gets all the operator permits processed, it doesn't mean the department will do anything meaningful in the areas of environmental protection.

"Take the case of Rollins Environmental Services," one environmentalist who works for the state said. "The department has not even asked Rollins for information about what's going in those pits (in North Baton Rouge) or what they've been putting in those pits all these years. As far as I can tell, some of those pits were never lined with anything."

Porter said the department was told by Rollins that it had a list of all dumpings at the site since operations began, but DNR has so far not asked to see it. A Rollins spokesman said Tuesday Porter could see the list but not the general public. "It's highly confidential," he said.

"We know that what goes in those pits is hazardous. That's not the question," Porter said. "We're not so concerned with what goes in them as what's migrating out of them."

Porter was somewhat red-faced a few weeks ago after telling the Environmental Control Commission that only three railroad tank cars full of hazardous wastes had been dumped at the Rollins site. A subsequent check by his department put the number of tank cars at 13, and a source close to an investigation of several dump sites said the actual number may be as high as 30.

But Porter said he was not particularly concerned about the tank cars.

"We had people out there to observe some of the tank cars going in," he said. "That material could have been dumped directly into one of the ponds. Instead the tank cars were topped off with sludge before the cars were put in the concrete-lined pits. I think all that steel and concrete should provide an extra measure of protection."

Porter also said he was not aware that heavy-duty electrical transformers (containing polychlorinated biphenyls, PCBs) or the

herbicides 2,4D and 2,4,5T had been dumped at the site. In combination, the herbicides make up the controversial Agent Orange. After checking, Porter said the transformers and barrels of herbicide had been incinerated on the Rollins site at some time in the past.

Another source at the state level said both the transformers and the herbicides had been buried rather than incinerated.

A Rollins spokesman said Tuesday that without even checking company records, he could say with certainty that 2,4,D and 2,4,5,T had never been dumped at the site.

"I know those herbicides haven't been dumped," he said, "and the transformers were decontaminated, not incinerated. You rinse out the transformer with a solvent. The solvent is incinerated and then the transformer is buried."

Another engineer at LSU said DNR's record as a watchdog leaves something to be desired. "The midnight dumping still occurs. Injection wells are washing out after heavy rains. Ponds near the river are leaching right through the levees whenever the water gets high. There are supposed to be fences and signs around all the dump sites. They're just not there."

July 31, 1980

# Waste Dumping Endangers BR Drinking Water

By DAVID DODSON

A truck pulls out of one of the large industrial plants in north Baton Rouge and crawls up Highway 19 to the Mississippi state line. It's taking a load of hazardous petrochemical sludge to a dump site near Centerville.

It reaches its destination and belches a cargo of black slime into a pit on top of a hill. Part of Louisiana's hazardous waste problem has just been exported to another state, never to return. Maybe.

An investigator from the Louisiana attorney general's environmental section visits the site. What he finds is a thick, black sheen of goo oozing out of the pit and running off into a nearby stream, the headwaters of Thompson's Creek. A strong chemical odor rises up from the ground.

The investigator talks to a local farmer. He says it is not unusual for barrels full of the sticky, black waste to fall from the trucks and cover the roadside.

Worst of all, some of the sickening stuff could be finding its way, slowly but surely, into the underground aquifer system from which Baton Rouge pumps 53 million gallons of drinking water each day.

Frightening as it may sound, that scenario is played out daily in hazardous waste dumps, not only in Mississippi, but in a number of other places much closer to home.

The prospect of hazardous wastes contaminating Baton Rouge's remarkably pure water is immediate enough that the Capital Area Groundwater Conservation Commission has already taken steps to prevent it.

By vote of commission members, Director Alcee N. Turcan Jr. petitioned the Environmental Protection Agency recently to declare the city's underground aquifer the "sole or primary source of drinking water," extending it at least some protection from surface pollution.

If EPA grants the request, which will take at least two years, any federally-financed or -assisted projects in the area will have to pass close scrutiny as to "any activities that might contaminate the aquifer," Turcan said.

The label won't do anything about protecting the water supply from hazardous wastes dumped by private enterprises, Turcan admitted, "but it will highlight the sensitivity of the aquifer as our sole source of drinking water and it will emphasize the necessity of protecting it from contamination."

The implications of hazardous wastes contaminating the nine layers of sand deep beneath the surface are staggering. "Once an aquifer system is contaminated, it's finished," Turcan said. "You can't clean it up." The only alternative source of drinking water is the Mississippi River.

The crystal clear water Baton Rouge pumps from the sands beneath the city falls as rain on an area which takes in roughly all the Florida parishes and extends northward about 30 miles into southern Mississippi.

Wastes from any one of the dump sites in that area—which employ three or more feet of "impermeable" clay to retard the migration of chemicals—could conceivably find their way into our water.

"One thing you've got to remember is that there's no such thing as impermeable clay. Even concrete isn't impermeable," Turcan said. There's no way to predict when or if the wastes would ever reach the aquifer, he said, but it has already happened elsewhere.

In Mount Holly, New Jersey, scientists found harmful organic chemicals in drinking waterwells. Tests at nearby Burnt Fly Bog, a hazardous waste dump showed oil, grease, tar and PCBs (polychlor-

# WATER

*Continued from Page 1*

inated biphenyls, known to cause cancer in man) in the wells. Another drinking water aquifer in New Jersey was contaminated with epoxy resins, vinylene, tylen and naphthalene.

The story in parts of California was much the same. Wells in the San Joaquin Valley, in Lathrop and Riverside, produced water containing heavy metals and both TCE (trichloroethylene) and DBCP (dibromochloropropane).

Three different well systems near Niagara Falls in the vicinity of the Love Canal dump site have been shut down due to contamination, an EPA report notes. Still other areas reported sulfuric acid sludge, solvents,

pesticides, inorganic chemicals and heavy metals in the water.

"I don't want to scare anybody into thinking we have contamination (in our drinking water)," Turcan said, "but I don't want the contamination, either."

"Prevention is the best cure," said Robert Mason of EPA's hazardous waste site control branch. Only better methods of waste disposal will protect the two-thirds of the country which gets its drinking water from underground aquifers.

But prevention costs a lot of money.

"When you're in an economy like ours, there's great competitive pressure. You dispose of wastes as cheaply as you can. If you're spending a lot of money on disposing wastes properly and your competitor is dumping his on the side of the road, he can put you out of business," he said.

The answer, Mason believes, is for government "to develop the proper incentives. It has to make landfilling prohibitively expensive. That's already happening."

It should also mandate, Mason said, that industry include the cost of waste disposal in its overall operating expenses. "And then, of course, some methods may grow more cost-effective as time goes on—things like incineration, recycling, land farming and deep well injection."

Up until recently, there were no laws or regulations governing industrial waste disposal. Even now, the companies who produce the hazardous materials say they are not liable for whatever damages those products might cause once the disposal truck leaves their gates.

For his part, Turcan does not seem interested in laying blame.

"All I'm saying is, let's don't go to sleep yet," he said. "Let's take some action now to ensure we don't become another California or New Jersey."

Exhibit 15

New Orleans Times-Picayune  
(Front Page Story)  
by Mary R. Heffron

**POLLUTED SLUDGE DUMPED INTO SPILLWAY, WITNESS SAYS**

Good Hope Refinery has dumped sludge contaminated with heavy metals in the Bonnet Carre Spillway, a Destrehan man told a Senate Finance Committee hearing in Washington D. C. Friday.

But refinery spokesmen in New Orleans, in response to the testimony, denied the sludge was contaminated and said the dumping was part of a major expansion of the refinery water treatment system that had been approved by the Louisiana Department of Natural Resources. They said the fill was requested by the Army Corps of Engineers.

And they said the man who testified before the committee, Johnny Vicknair, is a disgruntled Good Hope Refinery employee who was suspended after a kerosene bomb incident during the recent strike at the plant:

There are apparent discrepancies in what federal and state officials say Good Hope told them about where the sludge came from. Good Hope said the sludge is from an enlargement of its water purification settlement pond aimed at curbing pollution from the refinery. The Corps of Engineers, however, say Good Hope reported the sludge was dredged from a reservoir used for fire fighting and that the sludge is river sediment.

Vicknair, safety director of Local 4-447 of the Oil, Chemical and Atomic Workers International Union, told the committee that on Aug. 15 he followed a Good Hope truck to the spillway, which carries Mississippi River flood waters into Lake Pontchartrain, and witnessed the dumping in an area populated with fisherman and picnickers.

An analysis of the sludge showed high concentrations of arsenic, chromium, and lead, he said.

Vicknair told the Senate Finance Committee, which was hearing testimony from proponents of a government "superfund" to begin cleanup of toxic chemical wastes, that the company continues to dump despite being fined because "it's cheaper to pay the fine than it is to buy the chemicals and install the treatment facilities."

"I worked there, and I don't want to see him (the refinery) closed," said Vicknair. "But if he can't clean up his act, he should be shut down." Vicknair brought with him a plastic jug of effluent water from the refinery and offered Senator Bill Bradley, D. N. J., the acting committee chairman, a whiff. Bradley was visibly repulsed by the odor.

Two spokesmen with the Department of Natural Resources' Hazardous Waste Management Division, contacted a few hours after Vicknair's statements in Washington, at first said the agency had not yet received results of the spillway sludge samples taken last month.

But reached by telephone at his Baton Rouge home, the division's Frank Dautrirel later said a member of Vicknair's union had reviewed files in the agency's office Thursday and might have come across results of the Good Hope samples, though Dautrirel said he had not seen the results.

Sam A. LeBlanc II, a lawyer who is a spokesman for Good Hope Refinery, said the refinery's testing of the sludge was incomplete, but the preliminary results show it's mud and clay. Charles Robichaux, president of the Good Hope Citizens Association, said he first contacted the Department of Natural Resources when he noticed trucks leaving the refinery with the sludge. Robichaux said he also witnessed dumping in the spillway. Vicknair told the Senate Finance Committee that Robichaux could verify his testimony.

LeBlanc and Good Hope spokeswoman Rosemary James both said that the Department of Natural Resources and the Army Corps of Engineers were aware of the August sludge dumping in the spillway, which is about 30 miles upriver from New Orleans.

LeBlanc said the sludge resulted from dredging of a Good Hope settlement pond that was being enlarged to increase its water purification capacity in connection with a separate agreement with the Department of Natural Resources.

The refinery last month paid the state \$5,800 for 58 separate violations of water pollution standards- violations the company said should stop when modifications to its anti-pollution equipment are completed Oct. 1. In addition, Good Hope is making \$25,000 monthly installment payments to the state as a result of a \$250,000 settlement in connection with a separate water pollution case.

LeBlanc said enlarging the settlement pond was one of the ongoing modifications required by the state to abate pollution and that the department agreed to the violations of its rules- and the payments- during the modifications.

"The Corps of Engineers had asked for fill," LeBlanc said. "They wanted this, They knew what it was, and they thanked us for it."

Bruce Sossaman of the Corps of Engineers said Good Hope told the Corps the sludge was from the enlargement of a Good Hope fire-fighting reservoir that was required by the refinery's insurer.

"We were told it was done for insurance purposes and they had to enlarge the reservoir and that an analysis had been run and it (sludge) was composed of river sediment."

"We're going to have to do some further checking and see that analysis...or run our own analysis" of the sludge, Sossaman said.

St. Charles Parish President Kevin Friloux said when he checked on this dumping, "I was told by Good Hope and had it confirmed by the Corps of Engineers that the Corps of Engineers had requested it."

The sludge was used for landfill around the Corps' spillway office and along the south edge of the spillway, Sossaman said.

TESTIMONY OF J. C. TURNER, GENERAL PRESIDENT, INTERNATIONAL UNION OF  
OPERATING ENGINEERS, AFL-CIO

Mr. Chairman and members of the Senate Finance Committee, let me express my appreciation for being given the opportunity to appear before you today.

My name is J. C. Turner and I am General President of the International Union of Operating Engineers, AFL-CIO, representing over 420,000 members who operate a wide variety of machines, equipment and systems in the mining, construction, manufacturing, transportation and public employee fields. Our members are employed in construction work where their jurisdiction gives them the operation of all construction equipment regardless of motive power, and in industries which supply materials or service to the construction industry; such as, equipment repair shops, material yards, stone quarries, gravel pits, field engineers and survey teams. They are also employed in surface mining, dredging, oil and petro-chemical industries, as well as most manufacturing industries. Members of this International Union are also employed by industrial and commercial establishments, hospitals, and federal, state and local governments as stationary engineers and maintenance employees. Members working in this sector operate and repair a variety of equipment such as boilers, engines, pumps, compressors and generators to provide heat, electricity, process steam, refrigeration, air conditioning, potable water, waste water treatment, compressed air and other services as required by their employer or the general public.

With our members employed in these many diverse fields, the International Union of Operating Engineers has established an excellent reputation with, and earned the respect of, employees, employers, government and the community. It is from this aspect that we would like to thank you for the chance to speak to this Committee, express our views, and offer our support for S. 1480, the Environmental Emergency Response Act (Superfund Bill).

For the past few years, Congress, organized labor and the press have worked diligently to alert and inform the public regarding the urgent problems our Nation faces from hazardous chemical contaminants and pollutants. We are now much more aware of the consequences we face from the disposal of hazardous chemicals in the environment; such as, the risk of contamination of our ground waters, which supply 96 percent of the drinking water for our country's rural areas and 40 percent of the irrigation water. We are also aware that 90 percent of the residents of the State of Michigan have carried body burdens of PBB, which is a chemical fire retardant. We have seen the James River and its abundance of marine life suffer massive contamination from the chemical kepone, as well as the much-publicized fate of the residents of the Love Canal area. No region of the country has been found to be free of at least one serious incident of long-term damage attributable to airborne toxics. As the list of known sites needing cleanup grows and we begin to catalogue the grim statistics of toxic poison damage, we will see whether the damage has been done to our air, to our surface water or to our ground water; and what the losses have been to our Nation, our economy and environment, and most importantly, what injuries have been suffered by our people.

The sources of these toxic materials include industrial accidents, intentional releases through smokestacks and discharge pipes, and seeps from abandoned dumps. We must realize that the American people will not, and should not, stand by while their environment is being destroyed.

In a recent ABC-Harris poll, a majority of Americans indicated that the dumping of toxic chemicals is a "very serious problem" facing the country today. Eighty-six percent of our citizens believe that we should "give this problem of toxic chemical dumps and spills a very high priority for federal action." The most startling response to this poll is that while only 23 percent of the people polled blamed the chemical companies which have dumped toxic wastes for the problems we are now facing, 51 percent blamed either the federal, state or local governments for not enforcing safety standards and for allowing improper chemical dumping practices to continue.

The International Union of Operating Engineers, which has long been a pioneer in the field of safety, is especially proud of our history of trying to provide a safe working and living environment for Americans. We have brought our safety message to the lunch boxes and tailgates of our workers. We stress safety at community gatherings, union meetings, and conferences and workshops around the country. We know that our members and their families, as well as all Americans, support a clean environment and a safe workplace. The American public has made its choice clear—the desire to leave for its children a clean, healthy and safe environment; not a country dotted with hidden chemical dumping grounds to be unearthed by future generations.

What we would like to discuss with you now is the job that needs to be done, when can it be accomplished, how much will it cost, and finally, how will we do it.

#### THE JOB THAT NEEDS TO BE DONE

There are about 50,000 different chemicals manufactured in the United States, however, only a relatively small number of these chemicals have been designated by the federal government as hazardous under one or more of the federal regulatory statutes, such as the Clean Air Act and the Clean Water Act. These designated chemicals are the only ones which would be affected by the Superfund Bill.

Recently, the Justice Department went to court to seek an injunction to stop twelve chemical and oil companies from unloading any further chemical wastes into two dumps that the government believes pose an imminent danger to the public health and the environment. Previously, suits had been filed against the operators of the dump sites, however, this is the first time the government has been able to collect sufficient evidence to include in the suit the companies that were actually generating the wastes. Unless the Superfund Bill is passed, the federal government will have to take each individual dump site case to court separately in order to stop harmful dumping and establish corrective action.

We all know about the horror stories of Love Canal, however, what we do not know is how many more "Love Canals" are buried in our backyards, perhaps at this moment seeping countless dangerous chemicals into our neighborhoods. Conservative estimates are that there are hundreds of these abandoned chemical dumps around the country, while other estimates suggest that perhaps there are thousands. Even one Love Canal is one too many. If the Superfund Bill is passed, we will have the money on hand to begin cleanup immediately—as soon as a waste disposal site is found to be hazardous, or in the event of an oil or chemical spill which needs to be cleaned up. Without this funding, it sometimes takes many years of litigation by citizens or the federal government to force cleanup of an extremely dangerous and hazardous site.

In order for the Superfund to be the most effective, the International Union of Operating Engineers suggests that the Bill must also protect the workers who initially mine or extract the basic elements used to produce these hazardous substances, as well as the workers engaged in the production and handling of such substances. In this way, the known hazardous chemical products can be tracked from the initial mining process all the way through the production, use and disposal cycles.

#### WHEN CAN IT BE ACCOMPLISHED, HOW MUCH WILL IT COST

No one can know how long it will take to rid our country of the accumulated wastes of many years, however, the sooner we begin the cleanup process, the sooner our country will once again be safe and healthy. The first step is the passage of the Environmental Emergency Response Act, which would create a Fund which would reach \$1.7 billion after 3 years. Two-thirds of that amount would be used to cover governmental costs of emergency action and long-term remedy of hazardous substances in the environment, while one-third of the Fund would be available for third party damages resulting from contamination incidents. It is estimated that \$800 million could be raised annually, \$100 million of that amount to come from federal appropriations, \$700 million to come from industrial fees.

The Fund would collect 75 percent of its monies in the form of fees levied on oil, inorganic and petrochemical raw materials, which are the building blocks of most poisonous chemicals and hazardous wastes, with the remaining 25 percent to be appropriated by the federal government. The Fund could be phased in over a three year period, starting with industry contributions of \$250 million in the first year, \$525 million in the second year, and \$700 million in the third year. The total number of companies expected to participate in the Fund would be nearly 1000. The fees would be imposed early in the industrial and commercial chain of production, so that costs could be passed along evenly to all industrial sectors which produce or use hazardous substances or wastes. In an effort to make the fees fair, the actual rates could be based on production volumes. After the first three years, the rates could be periodically adjusted by the public rule making process to raise the money necessary to meet Fund needs.

#### HOW WILL WE DO IT

As I mentioned, the passage of the Superfund Bill will be the first and most important step we can take towards making our Nation and its citizens free from the effects of hazardous chemical spills and leaks. Specifically, the Fund would cover three types of payments—removal, remedy and losses, resulting from a hazardous substances release, regardless of whether it was a spill or a disposal site

leak, a release from a permitted facility or as a result of using a pesticide. Removal would cover emergency actions, including temporary water supplies and housing relocation. Remedy would cover longer term cleanup of the hazardous substance and the stopping of further contamination. The remedy provision would also cover permanent relocation expenses and alternate water supplies. Losses covered would include: out-of-pocket medical expenses; compensation for lost wages; 90 percent of the costs of removal and remedy (states would pay 10 percent); capital loss or income loss incurred due to the destruction of agricultural products, fish or seafood, or natural resources; and costs of expert witness fees, health studies, and diagnostic examinations.

#### CONCLUSIONS

We have let past mistakes go uncorrected long enough. We can no longer put off until tomorrow what must be done today. We can not wait for future generations of Americans to clean up the chemical catastrophes that were made in our generation. The International Union of Operating Engineers think the time for positive action on the problem of hazardous substances is now; the American people think the time for action is now; and I think that this Congress should act now—by saying "No" to future Love Canal fiascos, and saying "Yes" to the Environmental Emergency Response Act.

Again, I would like to thank the members of this Committee for the opportunity to speak to you today and express the views of the International Union of Operating Engineers.

Senator BRADLEY. Thank you for your testimony. Senator Roth.

Senator ROTH. I, too, would like to thank you for your helpful testimony. And I would say that I think you have painted the picture very well. I for one believe that we need a super fund bill. I think we need it now. I don't think we can delay the cleanup.

I also think we can accomplish it in a way that will meet the needs and not hurt the industry or jobs within that industry. And I think that should be our goal. I am very hopeful that we can get something out before we recess. And I think it important that we do it even though we are coming back apparently immediately afterward.

I have no questions except to thank you for your help and testimony.

Senator BRADLEY. Senator Danforth.

Senator DANFORTH. No questions. Thank you, Mr. Chairman.

Senator BRADLEY. I would like to ask just a few questions. Yesterday we had very enlightening testimony I thought. You do represent the chemical workers, is that correct?

Mr. HANCOCK. That is correct.

Senator BRADLEY. And atomic workers and oil workers?

Mr. HANCOCK. Yes.

Senator BRADLEY. And you have stated today you strongly support S. 1480.

Mr. HANCOCK. Yes.

Senator BRADLEY. Yesterday the chemical industry strongly opposed S. 1480, and yet it is your membership that is actually in numbers much more exposed to this than anyone else in the country?

Mr. HANCOCK. That is correct.

Senator BRADLEY. Now, why do you think there is that difference and why do you support this?

Mr. HANCOCK. We believe that the super fund bill under S. 1480 sets up the correct procedure for handling the finances for cleaning up the dumping situations across the country. We believe that it is going to take the type of bill that is outlined in S. 1480 rather than the one that the chemical companies support.

We have a difference of opinion there. I would like to have Mr. Collins also respond.

Mr. COLLINS. Yes.

Senator BRADLEY. Would you identify yourself for the record.

Mr. COLLINS. Dr. Frank Collins, OCAW consultant. We have a close identification with the problems. In general the people who reported yesterday are corporate officers not in contact with the wastes. Our people work in the plants handling the materials. Their families often live in the immediate vicinity of the dumps.

And, therefore, the members and their families are directly involved not just moneywise but in terms of actual exposure to the sort of chemicals and wastes that are found in this bottle, which you are invited to take a whiff of, which the State of Louisiana had analyzed and found that the metals in here are many times the allowed levels that are allowed to be dumped.

That is why this union, with as close identification with the chemical industry as it has, supports S. 1480.

Senator BRADLEY. To your knowledge has any one of your members ever instituted a suit against any entity or individual to recover for damages due to toxic wastes?

Mr. COLLINS. We have somewhere like 180,000 members. It is a large union. And I would not be able to state positively that somebody—Dr. Berman would like to fill in on that. Dr. Berman.

Mr. BERMAN. My name is Dan Berman and I work in the OCAW health and safety department. Now in Tyler, Tex., for example, we had about 150 members working in an asbestos plant where they took the asbestos and they just dumped it in an open dump.

And scores of those people sued Pittsburgh Corning, and they sued the Government for not informing them about the dangers of asbestos and they sued, and they sued the asbestos industry's association in Johns Manville. So, we are very involved in those suits around the asbestos issue.

Senator BRADLEY. What has been the experience of those suits?

Mr. BERMAN. We won the suit. It was about a \$16 million judgment. And we have many, many compensation cases to open the chemical.

Senator BRADLEY. How long did the suit take until you were awarded the compensation?

Mr. BERMAN. Years. I do not know exactly how long. I would say 4 years. But it was only possible to sue because we could not sue, actually we could not sue Pittsburgh. We did not win the suit against Pittsburgh Corning, which was the employer, because our people worked for Pittsburgh Corning and all they could get was workers' compensation, but we could sue third parties.

Mr. BROWN. In your own home State you will find there have been suits incurred by workers around the Johns Manville plants in Summerset County in that lower end going toward Trenton. We have had numerous complaints over the years, even then when I was the secretary/treasurer where we spoke before the State legislature on the many problems with the asbestos workers.

And, of course, the petrochemical industry—and the reason I started out in my testimony was because of the involvement of the operating engineers. As I stated, even in our own home State we

are involved in not only chemical plants but just about every type of industry you would want.

I think there is no question about Elizabeth and the people that would have to live within that region and would have to go on with the fumes. The abuse was there. I don't think anybody can deny it.

Senator BRADLEY. Let me ask each of you a question, and try to be brief in your answer. This bill, S. 1480, is financed seven-eighths by the chemical industry and one-eighth by the taxpayer. Do you think that is the proper apportionment of financial responsibility?

Mr. COLLINS. I will answer that question. There are several parties involved here. There is the public as a whole, there is the innocent victims, and there are the perpetrators of the dumping of the waste that caused the difficulty in the first place.

If there was no dumping, there would be no suits, no damage. The bill apportions in the original fund seven-eighths of the contributions to the fund from the chemical industry, one-eighth is provided by the taxpayers, meaning the rest of the people of the United States.

The bill is a light fee on the whole chemical industry beginning with the building blocks from which the toxic chemicals are made. The bill goes further, and it seeks to internalize the costs by having the people who actually do the dumping pay the costs.

At the present time, without the bill, the costs fall on the taxpayers, the general taxpayers who must pay to clean up the toxic dumps. And we have seen at Love Canal the difficulties that are involved in the legal situation, of seeking to place the blame on the responsible parties.

Hooker Chemical was very hard to get hooked to pay the expenses of their own acts taking place many years before. What will happen in the absence of this legislation is that time and time again the taxpayers and the innocent victims will wind up paying the costs in terms of money and in terms of their health.

Mr. VICKNAIR. Mr. Chairman, if I might, one thing I would like to mention to you is that I brought this sample of water all the way from Louisiana and I would appreciate if you would smell it, if a couple of you or all Senators would take a nice little smell. This is supposed to be refined water. This is the effluent water leaving the plant.

Good Hope Refineries, last month there was a settlement for litigation during the last 6 years, from 1974 to 1980, in which Good Hope Refinery was in violation with the State and the Federal EPA. He was operating under a chapter 11 bankruptcy. He made a settlement for \$260,000 for 6 years of polluting.

They issued him a temporary permit. They also raised the limitations to where he could more easily meet them, OK? Last month that same water that you are looking at there, he was fined on 58 different violations, OK? That is 58 different violations that he was fined on.

Senator DURENBERGER. I can smell it over here.

Mr. VICKNAIR. If me or you get caught reckless driving or driving while intoxicated, or whatever and we end up with 58 violations in one month, you know as well as I do we would not get a license again.

Senator BRADLEY. You would be in jail.

**Mr. VICKNAIR.** The point is he is still operating right now. He has never been issued his permanent permit yet. He is still under temporary. And the citizens as well as the union at some point has been involved in trying to control this. We are not asking to shut the plant down.

But this man has to be made to comply. They are charging him \$100 right now presently on each violation; \$5,800 is a small fine to pay per month to pollute. It is cheaper to pollute than what it is to add the chemicals and do the treating facilities that you need to do to this water before turning it loose. You come out cheaper in the long run by polluting.

And somewhere along the line, that is why we believe in this bill to be set up is because that is going to insure and encourage these companies that the time for all this toxic waste and everything has to stop and we got to start cleaning up this place because sooner or later we are all going to just vanish from the face of the Earth.

The water table down there for one thing is 18 inches below the ground. This stuff is not going to go away. It will always be there.

**Mr. BROWN.** Senator, isn't this the basic problem that we found not only as far as toxic waste but even with OSHA; that it is cheaper to violate the law than do something about it and maybe put in the facilities that we need?

Here is a living example of paying a fine day in and day out, and maybe at the end, because the product itself is well worth it, that it is a hell of a lot cheaper to pollute the atmosphere or the waters than to actually construct something and put something together and handle the waste treatments that are coming out of that plant.

I think this is why we support this congressional intent of the super fund.

**Senator BRADLEY.** I want to thank the panel for their testimony. Senator Durenberger.

**Senator DURENBERGER.** No questions.

**Senator BRADLEY.** I appreciate your taking the time. Your testimony is very valuable. And it will be in the record as it was presented as well as your full statements.

**Mr. BERMAN.** Enter that into the record.

**Senator BRADLEY.** Do you want to take this?

**Mr. VICKNAIR.** We will dispose of it I guess because I hate to pollute your nice environment out here.

**Mr. HANCOCK.** You did ask the question about anyone suing the companies. We do have a newspaper article with a September 9 date. I will leave that with you.

**Senator BRADLEY.** Thank you.

Our next panel consists of George Watson, president, the Ferro Alloys Association; John Wright, executive vice President, St. Joe Minerals Corp., and president, St. Joe Lead Co.; R. M. Cooperman, executive director, Independent Zinc Alloyers Association; and Dennis Brendel, vice president, environmental affairs safety, Bunker Hill Co.

I would like to welcome you to the committee. The normal procedure is for each of you to be given 5 minutes to make your statement or to summarize your statement if it is longer than that. And then the committee will probe with questions. So, let's begin with Mr. Watson.

**STATEMENTS OF GEORGE WATSON, PRESIDENT, THE FERRO ALLOYS ASSOCIATION; JOHN A. WRIGHT, EXECUTIVE VICE PRESIDENT, ST. JOE MINERALS CORP., AND PRESIDENT ST. JOE LEAD CO.; DENNIS F. BRENDDEL, VICE PRESIDENT, ENVIRONMENTAL AFFAIRS-SAFETY, BUNKER HILL CO.; AND GARY E. WELCH; ALVAN SAGE; AL GATE; AND EDWIN STEEGER; A PANEL**

**STATEMENT OF GEORGE WATSON, ACCOMPANIED BY AL GATE, VICE PRESIDENT, GENERAL MANAGER, GLOBE METALLURGICAL DIVISION, INTERLAKE, INC.**

Mr. WATSON. Thank you, Mr. Chairman.

I am George Watson, president of the Ferro Alloys Association. I have with me Mr. Gate, vice president of Interlake, and general manager of their Globe Metallurgical Division. It is particularly important to note that he has been in the chromium and ferrochrome business for the last 40 years and is knowledgeable on chromium and all the problems associated with it.

We are here neither to advocate nor to contest S. 1480, but rather to address the taxing portion of that bill which contains inequities that should be the concern of this committee. We have submitted to the committee a complete statement on the chromite and superfund legislation which we ask to be put into the record.

Senator BRADLEY. Without objection, it will be placed in the record.

Mr. WATSON. Thank you.

The proposed legislation would impose a fee on chromite, a naturally occurring mineral that is used principally for the production of ferrochrome. Ferrochrome, whether produced by our industry or imported directly, largely from the Republic of South Africa, is used in the production of alloy steels, stainless steels, and superalloys.

In fact, they cannot be made without it. Chromite is also used by the refractory and chemical industries. Since the metallurgical use of chromite is not hazardous, a superfund fee on that use of chromite is completely unjustified and would cause substantial harm to the import-beset ferrochrome and specialty steel industries.

Chromite, a natural occurring mineral in itself, is not hazardous nor is ferrochrome produced from chromite. Nor are any of the wastes associated with ferrochrome production as such wastes pose no hazard to drinking water supplies.

Ferrochromium is converted to stainless and specialty steels containing up to 35 percent chromium, which are considered so clean that, for example, they are the materials from which we produce surgical instruments and prosthetic devices implanted within human bodies, that we plant within our jaws and bodies. And chromium is what gives them resistance to corrosion and makes them compatible with our flesh and bone.

The only type of chromium which is hazardous is the hexavalent form. This form does not occur naturally and is not found in chromite. The hexavalent form is only created in significant quantities when chromite is chemically transformed by special processes at very high temperatures by the chemical industry.

The taxing of the raw material, chromite, is furthermore a discriminatory action since the product, ferrochrome, is not taxed.

This will cause increased imports of ferrochrome which already have captured over 50 percent of the market.

In recent years these import pressures have reduced the domestic industry from 10 to 4 plants. Imports of the major ferrochrome product, high carbon ferrochrome, in the first 6 months of this year are almost equal to domestic consumption (Imp. 169,430—Cons. 173,684 tons.)

This, coupled with the effect of the current recession, has resulted in the enforced shutdown of two of the existing four plants and curtailed operation in the other two. This has resulted in the layoff of approximately 75 percent of the work force. We feel a tax on ferrochrome would exacerbate an already bad situation.

A simple, straightforward, and fair solution to this problem, and a solution that will not jeopardize environmental programs nor weaken the intent of the act, is to amend the act by inserting after the word "chromite" wherever it appears the phrase, "\*\*\* excluding that portion used to make ferrochrome \*\*\*."

This amendment will support the needs of an important industry and help assure the continuing domestic production of a metal essential to our economy and national security.

[The prepared statement of George A. Watson follows:]

STATEMENT BY GEORGE A. WATSON, PRESIDENT, THE FERROALLOYS ASSOCIATION

We are here neither to advocate nor to contest S. 1480, but rather to address the taxing portion of that bill which contains inequities that should be the concern of this Committee. We have submitted to the Committee a complete statement on "Chromite and Superfund Legislation" which we ask to be put into the record.

The proposed legislation would impose a fee on chromite, a naturally occurring mineral that is used principally for the production of ferrochrome. Ferrochrome, whether produced by our industry or imported directly—largely from the Republic of South Africa—is used in the production of alloy steels, stainless steels and superalloys. Chromite is also used by the refractory and chemical industries. Since the metallurgical use of chromite is not hazardous, a Superfund fee on that use of chromite is completely unjustified and would cause substantial harm to the import-beset ferrochrome and specialty steel industries.

Chromite, in itself, is not hazardous nor is ferrochrome produced from chromite. Nor are any of the wastes associated with ferrochrome production as such wastes pose no hazard to drinking water supplies. Ferrochromium is converted to stainless and specialty steels containing up to 35 percent chromium, which are considered so "clean" that, for example, they are the materials from which we produce surgical instruments and prosthetic devices implanted within human bodies for medical purposes.

The only type of chromium which is hazardous is the hexavalent form. This form does not occur naturally, and is not found in chromite. The hexavalent form is only created in significant quantities when chromite is chemically transformed by special processes at very high temperatures by the chemical industry.

The taxing of the raw material, chromite is, furthermore, a discriminatory action since the product, ferrochrome, is not taxed. This will cause increased imports of ferrochrome which already have captured over fifty percent of the market. In recent years, these import pressures have reduced the domestic industry from ten to four plants. Imports of the major ferrochrome product—high-carbon ferrochrome—in the first six months of this year are almost equal to domestic consumption (Imp. 169,430—Cons. 173,684 Tons). This coupled with the effect of the current recession, has resulted in the enforced shut-down of two of the existing four plants and curtailed operation in the other two. This has resulted in the layoff of approximately 75 percent of the work force.

A simple, straightforward and fair solution to this problem—and a solution that will not jeopardize environmental programs nor weaken the intent of the Act, is to amend the Act by inserting after the word, "chromite", wherever it appears, the phrase, "... excluding that portion used to make ferrochrome, ..."

This amendment will support the needs of an important industry and help assure the continuing domestic production of a metal essential to our economy and national security.

#### CHROMITE AND SUPERFUND LEGISLATION

The "Superfund" legislation presently before the Congress would impose the special Superfund fee on the substance "chromite" in all its forms and whatever its uses. Chromite is a raw material used by the metallurgical, refractory and chemical industries and obtained entirely from foreign sources. The use of chromite by the metallurgical industry is for the production of ferrochrome--an essential ingredient for stainless steel and superalloy production. Since this metallurgical use of chromite is not hazardous, a Superfund fee on that use of chromite both is completely unjustified and would cause substantial harm to the import-beset ferrochrome and specialty steel industries.

Both the House and Senate bills have included various substances on their "Superfund list" because those substances are deemed to meet specific criteria of hazardousness. Attachment 1, "Chromium--Saint or Sinner," explains in detail what chromite is and how it is processed and used. As that document makes clear, chromite itself is not hazardous either directly or indirectly under any of those criteria.

The only form in which chromium is hazardous under these legislative criteria is in the hexavalent stage, which is only created in significant quantity when chromite is chemically transformed by special processes and at very high temperatures by the chemical industry. When used metallurgically, chromite is simply not hazardous, either itself or in combination with other materials with which it comes into contact; and, further, the metallurgical processing of chromite does not result in either hazardous products or hazardous wastes. In its metallurgical form, it is incorporated in stainless and specialty steels, which are not only not toxic but which are considered so "clean" that, for example, they are the material from which we produce surgical instruments and prosthetic devices implanted within human bodies for medical purposes.

The reasons why metallurgically-employed chromite should not be included in the Superfund legislation are explained in detail in the Ferroalloys Association paper of August 27, 1979, submitted to EPA (Attachment 2). As Attachment 1 demonstrates, EPA's much-delayed response of June 5, 1980 (Attachment 3) does not at all rebut this conclusion. The plain fact is that no public purpose is served by including metallurgical chromite (that is, chromite used to make ferrochrome) in this legislation.

On the contrary, that inclusion is harmful in a number of ways. It unfairly taxes a substance. Likewise, it inaccurately labels the substance "hazardous"--imposing on it a stigma that is both presently harmful and can be expected to subject the substance to many pointless and unfair burdens in the future.

Further, that inclusion will cause substantial economic harm to both the U.S. ferrochrome and specialty steel industries, each of which has been beset by import competition to the degree that the specialty steel industry recently has been and the high carbon ferrochrome industry currently is the recipient of Escape Clause import relief order by the President. Indeed, even with that relief, imports devastating the beleaguered U.S. high carbon ferrochrome industry are currently greater than U.S. production and are currently capturing some 90 percent of reported U.S. consumption, with the balance going into swollen inventories. (Documents pertaining to the President's order of Escape Clause relief for the high carbon Ferrochrome industry, the major grade of ferrochrome, are Attachment 4.) Imposing significant additional costs of these two essential American industries to which their vigorous foreign competitors are not subject is certainly not in the public interest (and can be expected to deal a crippling blow to an emerging, but fragile export trade in these products).

The only solution to this problem is one that eliminates this pointless inclusion of a non-hazardous use of a substance in the bill. Fortunately, that solution is straightforward and simple: to amend the legislation by inserting after the word "chromite" the phrase "excluding that portion used to make ferrochrome."

#### ATTACHMENT 1

##### CHROMIUM--SAINT OR SINNER

Is chromium harmful to our health and well-being? Should chromium be stigmatized as "hazardous" in all its forms, including chromite which occurs abundantly as an important natural resource? The answer, as the following paragraphs will show, is clearly "no."

Chromium is the 24th element in the periodic table that in pure form is a silvery white, hard metal, slightly lighter than iron, melts at 3300°F and is found in nature as a complex oxide called chromite. Its principal use is as an alloy with iron, nickel and/or cobalt in stainless steels and superalloys which could not be made without chromium.

The mineral chromite is the only commercial source of chromium and is found in nature in various compositional forms, in which the  $\text{Cr}_2\text{O}_3$  content of chromite may vary from 15 to 64 percent. Commercial ores range from 27 to 55 percent  $\text{Cr}_2\text{O}_3$ . World resources total about 36 billion tons of commercial grade ore with over 90 percent of it located in the Republic of South Africa and Zimbabwe. The United States possesses only small marginal deposits that are too low grade to mine under present conditions.

All the chromium in chromite exists in the trivalent ( $\text{Cr}^{3+}$ ) state that can only be changed to the metallic state ( $\text{Cr}^0$ ) by reduction processes or to the hexavalent state ( $\text{Cr}^{6+}$ ) by applying strong oxidizing agents at high temperatures to produce dichromates and chromates. The chemical industry use for chromite is about 20 percent of the total usage with another 20 percent for refractories and 60 percent for metallurgical applications.

Chromite, as it occurs naturally, is not hazardous in any form, nor is it hazardous if spilled or otherwise disseminated, nor does it increase the hazard potential of other substances. The only hazardous form of chromium is the hexavalent state produced by chemical processes from chromite. The refractory and metallurgical processes employing chromite as the basic raw material do not generate more than trace amounts of the toxic hexavalent form of chromium in any step of the processes nor in any wastes associated with the processes. Only those forms of chromium associated with the chemical industry represent a real hazard.

#### *Metallurgical uses of chromite*

Chromite is the basic raw material for the production of various grades of ferrochrome and ferrochrome silicon used, in turn, by the steel and foundry industries to produce alloyed irons and steels, stainless steels and superalloys. These materials containing chromium find wide use in industry, in consumer products, in food processing and in health and medical care products because of the particular benefits derived from the use of chromium.

Chromium is added to irons and steels in small amounts—up to 2 percent—to increase strength and hardenability such as in the new high strength low alloy steels, in gear and shafting steels and in high strength iron castings. In somewhat larger concentration—up to 5 percent—chromium imparts wear and heat resistance in such products as bearings for autos and grates for coal fired equipment. In even greater concentrations—from 10 to 35 percent—chromium is unique in providing corrosion and oxidation resistance over a wide temperature range to irons and steels and also to superalloys containing little if any iron. There is no known substitute for chromium in these alloys and no substitutes for these materials in their many important uses in our country.

Stainless steels and superalloys are essential for electric power generation, especially nuclear power, for refineries to process petroleum and for chemical plants producing a wide range of essential products. Jet engines for aircraft cannot be built without chromium containing stainless steels and superalloys. New and rapidly expanding technologies, such as pollution control, coal gasification, synfuel, geothermal energy and water purification demand the use of stainless steels for their success. Further, stainless steel with the properties which chromium imparts to it is essential for dairies and milk delivery systems, food processing plants, public kitchens, medical, surgical and dental equipment and instruments and prosthetic devices to replace and rebuild teeth and bones. Likewise, for our military establishment, metallurgical chromium is essential in materials for space, for nuclear weapons, jet turbine engines, armor plate, etc.; and, without chromium we could not defend our country nor afford to engage in conflict with a country equipped with chromium bearing products. In short, without metallurgical chromium, life as we know it today would not exist.

#### *The safety of the metallurgical use of chromite*

Chromium from chromite is hazardous only when it is transformed from the trivalent form in which it is found in chromite in nature to the hexavalent forms. This transformation can only occur chemically by reaction with strong oxidizing agents at the high temperatures associated with red heat. This transformation occurs when the chemical industry processes chromite into various chemical products commonly produced by that industry. (In fact, the two major chemicals so produced which contain hexavalent chromium, sodium dichromate and potassium dichromate, are themselves expressly included in the Superfund legislation.) By

contrast, only traces of hexavalent chromium have ever been found in the metallurgical use of chromite, either in the production of ferrochrome from chromite or in the use of ferrochrome by the steel maker.

High carbon ferrochrome (the dominant grade of ferrochrome) is made from chromite by carbon reduction in a submerged-arc furnace wherein chromite and a reducing agent (carbon) are continuously fed into the furnace around and between the electrodes. Waste products from ferrochrome production are slags from the reduction process and dusts or sludges from the cleaning devices that remove the dust from the gases (largely CO<sub>2</sub>) emitted from the furnace. Slags are a vitrified material frequently sold for road ballast. Ferrochrome is used in the production of iron and steel either by adding it directly to ladles of molten iron or steel or by adding it to the metallic charge of materials to the iron or steel making furnaces. In these iron and steel making processes over 90 percent of the chromium added is alloyed into the iron or steel with most of the lost material found in the slags formed by the processes.

When the Ferroalloys Association objected to the inclusion of chromite used in the production of ferrochrome in the Superfund legislation, EPA's reply (Attachment 3) made only three specific responses to the assertion that metallurgically-used chromite is not hazardous. Two of these (in the first two paragraphs on page 2 of the response) apply only to the chemical industry's use of chromite, and these cannot support the inclusion of metallurgically-used chromite in the legislation.

The third (at the bottom of the first page of the response) asserted that "the presence of mineral acids and oxidizing agents in disposal sites may result in the ready transformation" of metallic and trivalent chromium into hexavalent chromium. This is chemically inaccurate since hexavalent chromium can only be formed at high temperatures and under industrial-type conditions which simply do not occur at these disposal sites. Thus, directly contrary to EPA's assertion, the application of acids and oxidizing agents to ferrochrome dusts and sludges at disposal sites cannot result in any creation of hexavalent chromium—whether these acids and oxidizing agents occur naturally in the soil, in rain or in ground water or result from the application of man-made substances such as sulphuric acid.

In view of the foregoing scientific facts, there is no reason to include chromite when used to produce ferrochrome in the Superfund legislation.

## ATTACHMENT 2

### PROPOSED FEES TO ESTABLISH A "SUPERFUND" SHOULD NOT BE APPLIED ON CHROMITE AND CHROMIUM

The Ferroalloys Association, representing all the domestic producers of chromium metal and chromium ferroalloys,<sup>1</sup> is deeply concerned that proposed legislation creating a "Superfund" would impose an unfair and unwarranted cost on its member companies, their customers—the specialty steel industry—and the general public. This legislation would impose fees on various oil, petrochemical and inorganic chemical feed stocks to provide a system of response, liability and compensation for releases of hazardous substances and hazardous wastes.

Section 606(f)(3)(A) of the Administration's bills S. 1341 and H.R. 4566 specifically names chromium and chromite as hazardous materials subject to a fee of \$2 per ton of chromium. We state unequivocally that chromium as a metal—either pure or in alloyed form—and chromite—the naturally occurring mineral—are not hazardous in such forms. In fact, surgical tools, human body bone replacements and certain dentures contain considerable amounts of chromium because chromium imparts resistance to chemical and organic attack and is not toxic to animal or human organism. Furthermore, they do not increase the hazard potential of other materials nor are they hazardous if spilled. We support these statements in the following discussion.

Chromite is a naturally occurring mineral that is not considered toxic nor hazardous, and is widely distributed throughout the world frequently occurring in deposits so massive that if hazardous to any degree, would make vast areas of the earth uninhabitable. The major use for the mineral chromite is for electrometallurgical production of ferrochromium, ferrosilicon chromium and chromium metal—materials not considered toxic or hazardous. Chromite is used also for the production of refractory materials for metallurgical furnaces and for the manufacture of chromium chemicals used as pigments, dyes, tanning materials and chromium plating.

Chromite, the mineral, always occurs with chromium in the trivalent state (Cr<sup>+3</sup>). The metallurgical products produced from chromite contain Cr in the metallic and

<sup>1</sup> See attachment I for information on ferroalloys and the Association.

"Zero" valence state ( $\text{Cr}^0$ ) in products such as ferrochromium, ferrosilicon chromium or chromium metal. The toxic or hazardous forms of chromium occur when chromium is changed by a chemical process to the hexavalent state ( $\text{Cr}^{+6}$ ) in products such as chromic oxide, sodium dichromate and potassium dichromate.

A fee on chromite or chromium in the metallic state would be contrary to the intent of the proposed legislation to impose a fee on producers or shippers of hazardous materials. Such a fee would also put a severe economic penalty on the users of chromite for the production of primary metallic chromium products, and, when and if passed on to the consumers of these products—the specialty steel industry in particular—would cause an unwarranted cost increase that could not be reflected in their prices because imports of such steels would not be assessed the fee.

Inasmuch as the case for the exemption of chromite and chromium in metallic state rests on the toxicity question, the following direct quote from "Chromium" published by the National Academy of Sciences, Chapter 7, "Effects of Chromium Compounds on Human Health" is relevant.

"Chromium as a metal is biologically inert and does not produce toxic or other harmful effects in man or laboratory animals."

"The chief health problems associated with chromium are related to hexavalent chromium compounds, which are irritant and corrosive and may be absorbed by ingestion, through the skin and by inhalation."

Results from animal tests of chromium effects are summarized in Chapter 8 of the same book.

"Thus, the systemic toxic effect of chromium on animals depends on the valence of the chromium. Trivalent chromium ( $\text{Cr}^{+3}$ ) is poorly absorbed and has a low degree of toxicity. Hexavalent chromium ( $\text{Cr}^{+6}$ ) is irritating and corrosive to the mucous membranes, is absorbed more readily and is highly toxic when introduced systemically."

The Bureau of Mines, Department of the Interior, on page 11 in its report "Chromium 1977" offers the following statement on toxicity.

"Chromium has been found in all plants in extremely small quantities, except those growing in soils formed from ferromagnesian rocks. Data obtained through 1972 suggests that chromium is essential to plant growth and point to possible areas of chromium deficiency.

On the other hand, there is some evidence that high concentrations of chromium may be responsible for poor plant growth in certain areas, and addition of chromium as a trace element to the soils in deficient areas has proved beneficial to some plants' growth.

Chromium is reported to be one of the least toxic of trace metals for man; however, it has been stated to be potentially carcinogenic to animals under man-induced dietary conditions. The major concern with chromium in animal and human health is a deficiency rather than excess. Chromium's biologic effects depends on the compound in which it is present. Trivalent chromium is neither irritating nor corrosive. All known biologic interactions of chromium chemicals result in reduction to the trivalent form. There are no known toxic symptoms as a consequence of excessive dietary intake of chromium nor harmful effects from the chromium in ambient air. The known harmful effects from the chromium in ambient air. The known harmful effects of chromium in man are attributable principally to the hexavalent form."

Further references on this subject are included in the attached bibliography noted as Attachment II.

Chromium in the metallic state, whether as a chromium ferroalloy or metal (from 30 to 100 percent Cr) or as an element in stainless steels and superalloys, is not toxic or hazardous. To declare chromium as toxic or hazardous when in the metallic form flies in the face of massive evidence to the contrary. There is nothing in the medical literature to indict chromium metal in any way and much to support its value for the tools and artifacts used in medical applications.

For these reasons, it is evident that if inorganic feed stock materials are selected for "Superfund" fee assessment, the list should not include naturally occurring chromite or the metallic derivatives from chromite, such as ferrochrome, ferrosilicon chrome, chromium metal or other products containing metallic chromium such as stainless steel and superalloys. Specifically, only those quantities of chromium in chemical compounds involving hexavalent chromium should be assessed the fee.

We suggest that the word chromite be eliminated from the bills and the reference made to read "and the equivalent weight of chromium in chromic acid, sodium dichromate, and potassium dichromate or any other chromium compound with chromium in the hexavalent state ( $\text{Cr}^{+6}$ )."

Enclosures.

## ATTACHMENT I

## CHROMIUM FERROALLOYS AND METAL

Ferroalloys are metallic alloys of iron and one or more other elements usually metals such as chromium, silicon and manganese. They are used almost entirely to introduce the desired alloying element, such as chromium, into steel and iron during the production process. Chromium ferroalloys are necessary for the production of stainless steels and superalloys because chromium imparts resistance to corrosion and high-temperatures in such important materials. Chromium also increases the strength, hardenability and resistance to abrasion in many other steels and iron castings.

Chromium metal produced by aluminothermic or electrolytic processes contains over 99 percent chromium and is used largely in the production of nickel and cobalt base superalloys wherein chromium imparts resistance to high temperatures and oxidation.

## THE FERROALLOYS ASSOCIATION

Formed in 1971, The Ferroalloys Association represents all the domestic producers of chromium, manganese and silicon ferroalloys and engages in all lawful activities to promote the general welfare of the member producers. The following listing of companies and plants producing chromium ferroalloys and metal fully support the purpose of this communication:

*Company and plant*

Chromium Mining & Smelting Corp., Woodstock, Tenn.  
 Interlake, Inc., Beverly, Ohio.  
 Macalloy, Inc. Charleston, S.C.  
 SKW Alloys Inc., Calvert City, Ky. and Niagara Falls, N.Y.  
 Satralloy, Inc., Steubenville, Ohio.  
 Shieldalloy Corp., Newfield, N.J.  
 Union Carbide Corp., Alloy, W. Va. and Marietta, Ohio.

## ATTACHMENT II

## BIBLIOGRAPHY FOR TOXICOLOGY OF CHROMIUM COMPOUNDS

- American Conference of Governmental Industrial Hygienists, "Documentation of the Threshold Limit Values for Substances in Workroom Air," 3rd Edition, 1971.  
 Browning, E., "Toxicity of Industrial Metals," 2nd Edition, Appleton-Century-Crofts, 1969.  
 Elkins, H. B., "The Chemistry of Industrial Toxicology," 2nd Edition, John Wiley and Sons, Inc.  
 Hamilton, A. and Hardy, H. L., "Industrial Toxicology," 3rd Edition, Publishing Sciences Group, Inc., 1974.  
 National Academy of Sciences, "Chromium," Medical and Biologic Effects of Environmental Pollutants Series, 1974.  
 National Institute for Occupational Safety and Health, "Criteria for a Recommended Standard . . . Occupational Exposure to Chromium (VI)," U.S. Department of Health, Education, and Welfare, 1975.  
 Sittig, M., "Toxic Metals Pollution Control and Worker Protection," Noyes Data Corporation, 1976.  
 Udy, M. J., "Chromium—Vol. I—Chemistry of Chromium and Its Compounds," ACS Monograph Series, Reinhold Publishing Corp., 1956.  
 U.S. EPA, "Quality Criteria for Water," July, 1976.

## ATTACHMENT 3

U.S. ENVIRONMENTAL PROTECTION AGENCY,  
 Washington, D.C., June 5, 1980.

Mr. GEORGE A. WATSON,  
 President, The Ferroalloys Association,  
 Washington, D.C.

DEAR MR. WATSON: I am responding to the concerns you have raised about the applicability and effects of the Administration's proposed Superfund legislation on the ferroalloys industry. Specifically, you have questioned the basis for designating chromite and chromium for fee collection, and the ability of the ferroalloys industries to pass the fee on by increasing prices. We have taken these concerns into

account in preparing a document entitled the "Superfund Fee System As It Affects the Metal Smelting and Refining Industry", a copy of which is enclosed.

Your first concern appears to result from a misunderstanding of the basis for fee collection under the proposed legislation. The designation of these materials for fee collection in the Administration's proposal was not based upon a finding that the materials themselves are hazardous. Rather, it was based upon a finding that these materials are the precursors to a large number of substances which satisfy the following criteria: (1) a number of materials derived from chromium and chromite are inherently hazardous to public health and the environment; (2) a number of materials derived from chromium and chromite are hazardous if spilled; (3) the transformation of chromite and chromium into intermediates and products results in the generation of hazardous wastes; (4) some forms are capable of increasing the hazard potential of other materials; and (5) the materials are produced in nationally significant quantities. In addition, your statement that chromium, chromite and certain ferroalloys are not hazardous under neutral conditions does not invalidate our finding. The presence of mineral acids and oxidizing agents in disposal sites may result in the ready transformation of  $\text{Cr}^0$  and  $\text{Cr}^{+3}$  to  $\text{Cr}^{+6}$ .<sup>1 2 3</sup>

The EPA National Interim Primary Drinking Water Standard is presently based on total chromium. The National Academy of Sciences study recommended that EPA consider setting the chromium limit in terms of hexavalent chromium.<sup>1</sup> Even if EPA were to carry out this recommendation, chromium and chromite would still satisfy our designation criteria because many hexavalent intermediates and products are produced from these materials and the waste streams resulting from chromite and chromium transformation processes frequently contain chromium in the hexavalent form.

You also state that these materials do not increase the hazard potential of other materials. While we agree with this statement, please note that designation criteria 4 says "some forms are capable of increasing the hazard potential of other materials." Such forms include chromic acid, dichromates, halochromates, and peroxychromates. Some of these are commercially produced, others may be formed as byproducts or wastes in manufacturing processes or upon reaction with other chemicals in disposal sites.

Your second concern relates to the economic impact of imposing fees on chromite. You state that a fee "would cause an unwarranted cost increase that could not be reflected in their prices because imports of such steels would not be assessed the fee." The principle reason for designating multiple forms of an element of concern was to address competitive effects. Thus chromium and sodium and potassium dichromate are listed in addition to their precursor, chromite, because they are imported in significant amounts. While a provision of the Administration's proposed bill prevents double payment, importers of designated raw materials must pay the same fee as domestic producers. With respect to the designated materials themselves, there would be not adverse economic effects because all producers would pay the fee and could pass it along in the form of higher prices. For domestic producers of intermediate and final products, there would be adverse economic effects since imported intermediate and final products, such as ferroalloys, would not be subject to fee collection.

The fees are limited in the bills to 2% of list price or \$5/ton, whichever is less, so that the adverse economic impacts of the worst case, where the fees cannot be passed on, are extremely limited.

EPA designated intermediate forms of elements if they satisfied a minimum of 3 of the 4 criteria, and were imported in large amounts. Since ferroalloys were judged only to meet 2 of the criteria, they were not designated.

If you are aware of any forms of chromium which satisfy the necessary number of criteria and are imported in significant amounts, please let us know, so that we might review them. We would also welcome any comments you might have on our draft metal smelting and refining paper.

I hope this has addressed each of your concerns. If you have any questions please contact me or Marc Tipermas of my staff at 755-9680.

Sincerely,

SWEP T. DAVIS,  
Associate Assistant Administrator.

Enclosure.

<sup>1</sup> "Drinking Water and Health, Part 1," National Academy of Sciences, 1978, pg. V-44, 49.

<sup>2</sup> "Advanced Inorganic Chemistry," Cotton and Wilkenson, 1962, p. 682.

<sup>3</sup> "A Case Study of Hazardous Wastes in Class I Landfills," EPA Office of Research and Development, June 1978, see especially pg. 15 and table II.

## ATTACHMENT 4

OFFICE OF THE WHITE HOUSE PRESS SECRETARY

THE WHITE HOUSE, November 2, 1978.

Memorandum for the special representative for trade negotiations.

Subject: Determination under section 202(a) of the Trade Act; high carbon ferrochromium.

Pursuant to Section 202(b)(1) of the Trade Act of 1974 (P.L. 93-618, 88 Stat. 1978), I have determined the action I will take with respect to the report of the United States International Trade Commission (USITC) dated September 6, 1978, concerning the results of its investigation, as requested by the House Ways and Means Committee, of the domestic industry producing ferrochromium, containing over 3 percent by weight of carbon, provided for in Item 607.31 of the Tariff Schedules of the United States.

After considering all relevant aspects of the case, including those set forth in Section 202(c) of the Trade Act of 1974, I have determined to provide import relief for the domestic industry. Relief should be granted in the form of an increased tariff of 4 cents on any high carbon ferrochromium entering the United States at less than a value of 38 percent per pound for the following reasons:

1. The domestic industry is currently operating at unprofitable levels. Even the most competitive domestic firm (which supplies over half of all domestic production) is operating with substantial losses due to the price and volume of import competition this year.

2. Other importing countries have protected their producers. The European Community has established minimum prices for high carbon ferrochromium imports. The Japanese market does not appear to be fully open. The U.S. industry thus bears virtually all of the burden of adjustment during the current period of world overcapacity (the U.S., Japan, and EC constitute 90 percent of the free world high carbon ferrochrome market).

3. The additional duty on HCF would raise sufficiently the U.S. import price, minimizing the likelihood that the EC minimum import price and Japan's duty paid import price would divert HCF exports to the United States. This would provide the principal domestic producer with the opportunity to operate at a reasonable rate of return.

4. The recommended relief would not be inflationary. Market prices would be restored to levels assuring a fair return after imports have unduly depressed prices. This determination is to be published in the Federal Register.

JIMMY CARTER.

TEMPORARY DUTY INCREASE ON THE IMPORTATION INTO THE UNITED STATES OF CERTAIN HIGH-CARBON FERROCHROMIUM BY THE PRESIDENT OF THE UNITED STATES OF AMERICA

## A PROCLAMATION

1. Pursuant to section 201(d)(1) of the Trade Act of 1974 (the Trade Act) (19 U.S.C. 2251(d)(1)), the United States International Trade Commission (USITC) on September 5, 1978, reported to the President (USITC Report 201-35) the results of its investigation under section 201(b)(1) of the Trade Act (19 U.S.C. 2251(b)(1)). The USITC determined that ferrochromium, containing over 3 percent by weight of carbon, provided for in item 607.31 of the Tariff Schedules of the United States (TSUS) (19 U.S.C. 1202) is being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic industry producing an article like or directly competitive with the imported article. The USITC recommended the imposition of tariff increases on the column 1 rate of 30 percent ad valorem in the first year declining to 20 percent ad valorem in the fifth year of relief.

2. On November 2, 1978, pursuant to section 202(b)(1) of the Trade Act (19 U.S.C. 2252(b)(1)), and after taking into account the considerations specified in section 202(c) of the Trade Act (19 U.S.C. 2252(c)), I determined to remedy the injury found to exist by the USITC through the proclamation of a temporary duty increase different from that recommended by the USITC. In accordance with section 203(b)(1) of the Trade Act (19 U.S.C. 2253(b)(1)), I transmitted a report to the Congress setting forth my determination and intention to proclaim a temporary duty increase and stating the reasons why my decision differed from the action recommended by the USITC.

3. Section 203(e)(1) of the Trade Act (19 U.S.C. 2253(e)(1)) requires that import relief be proclaimed and take effect within 15 days after the import relief determination date.

4. Pursuant to section 203(a)(1) of the Trade Act (19 U.S.C. 2253(a)(1)), I am providing import relief through the temporary increase of import duty on ferrochromium, containing over 3 percent by weight of carbon, valued less than 38 cents per pound, as hereinafter proclaimed.

Now, therefore, I, Jimmy Carter, President of the United States of America, acting under the authority vested in me by the Constitution and the statutes of the United States, including General Headnote 4 of the TSUS (19 U.S.C. 1202), sections 203 and 604 of the Trade Act (19 U.S.C. 2253 and 2483), and in accordance with Articles I and XIX of the General Agreement on Tariffs and Trade (GATT) (61 Stat. (pt. 5) A 12 and 61 Stat. (pt. 5) A 58: 8 UST (pt. 2) 1786), do proclaim that—

(1) Part I of Schedule XX to the GATT is modified to conform to the actions taken in the Annex to this proclamation.

(2) Subpart A, part 2 of the Appendix to the TSUS is modified as set forth in the Annex to this proclamation.

(2) Subpart A, part 2 of the Appendix to the TSUS is modified as set forth in the Annex to this proclamation.

(3) This proclamation shall be effective as to those articles entered, or withdrawn from warehouse, for consumption on or after November 17, 1978, and before the close of November 16, 1981, unless the period of its effectiveness is earlier expressly modified or terminated.

In witness whereof, I have hereunto set my hand this fifteenth day of November, in the year of our Lord nineteen hundred seventy-eight, and of the Independence of the United States of America the two hundred and third.

JIMMY CARTER.

#### ANNEX

Subpart A, part 2 of the Appendix to the TSUS is modified by inserting in numerical sequence the following new provision:

Item	Articles	Rates of duty		Effective period
		1	2	
923.18.....	Ferrochromium, containing over 3 percent by weight of carbon, valued less than 38 cents per pound, provided for in item 607.31.	4.625 cents per pound on chromium content.	4.625 cents per pound on chromium content.	On or before Nov. 15, 1981.

Senator BRADLEY. Thank you. Thank you, Mr. Watson.  
Now Mr. John A. Wright.

#### STATEMENT OF JOHN A. WRIGHT

Mr. WRIGHT. Thank you, Mr. Chairman.

I am the chief operating officer for St. Joe for its lead, zinc, and iron ore operations, which are located primarily in the States of New York, Pennsylvania, and Missouri.

In concept St. Joe does endorse legislation for cleanup of inactive and abandoned hazardous waste disposal sites that do pose a clear threat to human health. We do not believe there are any sound environmental reasons for inclusion of zinc, zinc oxide, or lead in the list of inorganic chemicals subject to Superfund taxation.

St. Joe is concerned with several provisions of this Senate bill. Specifically, it appears to us that the Superfund will be financed by fees on certain commodities produced by a relatively small number of companies. The fund itself supposedly will be used to pay for cleanup and damages resulting from the releases of all substances

designated as hazardous under the bill, without regard to whether the companies paying for the Superfund produce the particular hazardous substance which caused the identified problem.

Finally, we are concerned with provisions of the Senate bill which would allow Superfund fees to be reduced in the case of recycled materials.

Zinc and lead are essential metals of modern society. Fees imposed by the Superfund legislation would, in essence, place new taxes on certain segments of these industries. Given the extremely low risk associated with zinc and lead production and related waste, and the extremely high recovery and recycling ratio obtained by the lead industry, such a new tax on lead or zinc metal would be inequitable, unfair, and does not appropriately belong at any Superfund legislation.

In addition to the numerous environmental reasons, as articulated in our written comments, for excluding zinc from the purview of Senate bill 1480, we believe that an equally important consideration is the present status of the domestic zinc industry. Briefly, 10 years ago the United States produced over 1 million tons of zinc metal a year. Today it produces half that amount.

Eleven domestic zinc smelters have been closed since 1969, many of them justifiable due to environmental considerations.

Last year our own company had to shut down its plant outside Pittsburgh, Pa., laying off permanently 1,800 employees.

Only 1 of these plants, of the 11 plants that shut down, was replaced by a modern plant.

A decade ago this country was dependent on foreign sources for only 20 percent of its zinc metal needs. It is now 50 percent dependent.

At this time I would like to offer several important observations based upon St. Joe's experience in respect to our industry's ability to pass extraordinary costs through to customers.

Proponents of Superfund legislation assert that it will have virtually no adverse impact on domestic producers because associated costs can be passed on. Such statements indicate a serious and naive lack of understanding of three basic facts.

Zinc and lead are internationally traded commodities. U.S. producers do not unilaterally determine prices for these materials, but rather prices are determined by worldwide supply and demand. Given this international status, it is almost certain that U.S. producers will not be able to pass on Superfund costs to the consumers.

The United States imposes fewer restrictions and lower tariffs on imports than virtually any other industrialized nation. In periods of declining worldwide demand, excess foreign production of zinc and lead, much of which is subsidized for export by foreign countries, flows into the U.S. market, forcing price reductions, inventory buildups and production cutbacks by U.S. producers.

The current version of Senate bill 1480 seeks to require that suppliers of inorganic raw materials collect a fee on behalf of the fund. The language totally ignores the mechanics necessary to accomplish this task. As time goes on the fund no doubt will begin to recognize the financial burdens of specific industries.

Suppliers assessing the fee would find a new bureaucratic maze of certificates and other exemptions to the seemingly simple job of fee collection.

The bill also assumes fee collection expenses will be borne by the individual suppliers, which is hard to bear.

In conclusion, I will note that St. Joe has prepared written testimony setting forth in greater detail our concerns in respect to this bill. But I urge that this committee seriously reconsider Senate bill 1480 and not create an impossible burden for American industry.

[The prepared statement of John A. Wright follows:]

STATEMENT OF JOHN A. WRIGHT, PRESIDENT OF ST. JOE LEAD CO., AND EXECUTIVE VICE PRESIDENT OF ST. JOE MINERALS CORP.

SUMMARY OF MAJOR POINTS

I. St. Joe supports the concept of Superfund but believes it should be limited to inactive and abandoned sites.

II. St. Joe is concerned that a small number of companies will finance the Fund but the Fund will pay for damages without regard to whether the companies paying for the fund bear any responsibility for or produce any of the substances causing the damages.

III. St. Joe believes zinc, zinc oxide and lead should be exempted from the Superfund fees.

A. Risks associated with zinc and lead production wastes are extremely low.

B. Zinc and zinc oxide are not inherently toxic.

C. All aspects of zinc and lead industry are already subject to stringent environmental and health and safety regulations.

D. U.S. zinc industry is severely depressed with prices well below 1975 recession levels and not much above 1977 levels when the entire U.S. zinc industry incurred a before-tax loss.

E. Demand for lead is declining and prices have dropped 31 percent in the last ten months. The U.S. lead industry also faces severe EPA and OSHA regulations which threaten to close down a large part of the industry.

IV. St. Joe is concerned that lead and zinc producers will not be able to pass on Superfund costs to consumers.

A. Lead and zinc are internationally traded and prices are determined by worldwide supply and demand factors—not by U.S. producers.

B. U.S. lead and zinc producers compete directly in the U.S. market with foreign producers and could be forced to absorb Superfund fees in order to remain competitive with foreign producers, many of whom are heavily subsidized.

C. Imports always exert considerable pressure on U.S. lead and zinc prices and in periods of declining demand, such as now, that pressure intensifies.

V. St. Joe believes that there are numerous problems created by the recycling provisions and recommends further study.

A. There are no studies to support reduced Superfund fees for recycled materials.

B. Significant recycling is already occurring in the case of a few inorganic materials and further government subsidies are unnecessary and inappropriate.

C. Importers could claim materials are recycled and escape the Superfund fees.

D. Congress would be delegating its taxing authority to the Treasury Department.

VI. St. Joe supports provisions allowing reduced fees for sulfuric acid produced solely as a result of pollution controls.

A. Although included in the recycling section, incorrectly we believe, this provision should be retained elsewhere in the bill if the Committee decides to delete the recycling provisions.

B. St. Joe already sells sulfuric acid at \$10/ton loss and imposition of Superfund fees would increase that loss.

VII. St. Joe believes that companies paying the Superfund fees will also incur significant paperwork costs over and above the payment of the fees.

STATEMENT

Mr. Chairman, Gentlemen, Good morning. My name is John A. Wright. I am President of St. Joe Lead Company and Executive Vice President of St. Joe Minerals Corporation. Here with me today are Gary E. Welch, Director of Environmental Planning for St. Joe Minerals Corporation, and Alvan H. Sage, Vice President-

Planning, St. Joe Lead Company. We are here today to testify in respect of Senate Bill 1480, the Environmental Emergency Response Act.

I should like to note that, in concept, St. Joe does endorse legislation to provide authorization for cleanup of inactive and abandoned hazardous waste disposal sites that do pose a clear threat to human health. We are concerned, however, in respect of certain provisions of S. 1480 and appreciate this opportunity to articulate these concerns. Specifically, St. Joe believes that zinc, zinc oxide and lead do not pose significant and substantial environmental risks of the type that is to be addressed by S. 1480 and therefore should be excluded from the list of inorganic raw materials under Section 5(d)4 of the proposed legislation. Additionally, we are concerned with provisions in S. 1480 which would allow Superfund fees to be reduced in the case of recycled materials. Lastly, by way of a general comment, it would appear to us that Superfund will be financed by fees on certain commodities produced by a relatively small number of companies while the fund itself will be used to pay for cleanup and damages resulting from releases of any substance designated hazardous under the bill without regard to whether the companies paying for the Superfund produce the particular hazardous substance which has caused the problem or are in any way responsible for that problem.

By way of background, St. Joe Minerals Corporation is a diversified natural resources company with mining and metallurgical facilities located in various states. Principal products from St. Joe's operations include lead, zinc, coal, oil and gas, and iron ore pellets.

To properly place in perspective St. Joe's interest in S. 1480, I would like, at this time, to briefly describe St. Joe's position in the zinc and lead industries. During 1978 and prior to closure of St. Joe's zinc smelter at Monaca, Pennsylvania, approximately 335,000 short tons of zinc were produced from mines active in the United States. Of this total, St. Joe's mines in upper New York State produced approximately 75,000 short tons. During this same year, 1978, St. Joe produced at its zinc smelter in Monaca, Pennsylvania, approximately 164,000 tons of zinc equivalent as zinc metal, zinc oxide and zinc dust. During 1978 United States production was approximately 33 percent. In terms of consumption, during 1978 domestic consumption of slab zinc amounted to approximately 1,158,000 tons. St. Joe supply to this consumption amounted to approximately 15 percent. In respect of lead, during 1978 St. Joe mined and smelted approximately 230,000 tons of lead. This total is approximately 38 percent of domestic mine lead production and approximately 15 percent of domestic consumption of refined lead which, during 1978, amounted to approximately 1,579,000 tons.

As noted above, in November, 1979, St. Joe, faced with depressed zinc prices, accelerating feed costs, and excessive environmental expenditures, announced the shutdown of its Monaca, Pennsylvania, zinc smelter. Further, in April 1980 the corporation announced the deferral until 1982 of plans concerning a possible new smelter. That decision was largely attributable to the continued depression of the world zinc industry. Recently, however, the discovery of a high-grade zinc deposit in northern New York State will permit St. Joe to reactivate a portion of its zinc smelting operations—up to about 25 percent of the former capacity. Reactivation of the Monaca smelter will provide a market for most of the currently planned output of St. Joe's zinc mines, will facilitate the economic disposition of zinc bearing materials remaining in the plant from previous operations and will allow St. Joe to pursue its commitment to seek a long-term position as a zinc producer.

Having been in the zinc business from 1930 through 1979, having gone through the traumatic experience of closing, for economic reasons, a producing zinc facility and, now, seeking to reenter the zinc market, has provided St. Joe with an unusual perspective regarding the industry and the nature of its problems. We would like to share some of our experience with this committee focusing in particular on how a Superfund fee could aggravate already serious, industry-wide economic problems.

By way of background, St. Joe and total domestic mine and smelter lead and zinc production and consumption including production from secondary sources are shown in Exhibit A attached to this statement. Using the production statistics just cited and assuming that the fee schedule proposed in S. 1480 had applied during 1978, St. Joe would have been liable for payments to the Superfund amounting to approximately one and a half million dollars at the established fee rate of \$2.66 per short ton up to a maximum of approximately four million dollars assuming the higher \$10 per short ton fee would apply. Because these fees are not insignificant and because St. Joe feels there is an absence of sound reasons for including zinc, zinc oxide and lead, we believe these commodities should be exempted from taxation under Superfund legislation. Our reasoning follows.

Zinc is not inherently a toxic element. Zinc is instead a biological trace element essential for humans, animals, and plants. The essentiality of zinc for microorgan-

isms was first shown as early as 1869. Forty years later, approximately 1910, zinc was shown to be essential for plants. Since 1910, zinc's essentiality has been shown for animals and zinc deficiency was first documented as occurring in man during the early 1960's. Recently considerable data has been developed indicating that zinc is involved as a necessary co-factor in the operation of at least 50 enzyme systems. New discoveries on the beneficial role of zinc in human health and disease is proceeding at a rapid and accelerating pace. A paper articulating the toxicology of zinc prepared by Dr. Donald Lynam, Manager of Environmental Health, of the International Lead Zinc Research Organization, is appended to this statement as Exhibit B. St. Joe believes, based upon information as summarized by Dr. Lynam, that zinc cannot be shown to be toxic to man or animal and therefore should not be included in the list of substances to be taxed under S. 1480.

St. Joe recognizes that the concern of S. 1480 is not limited to the toxic nature of specific chemicals or commodities but includes the ultimate disposition of wastes associated with the production of the named commodities. Recognizing our time limitations here we will not go into detail in respect of zinc production and its associated waste streams. We will note, however, that in respect of zinc production residues, EPA, in its listing of "hazardous wastes" under Title C of the Resource Conservation and Recovery Act, was only able to identify three zinc production wastes as potentially hazardous:

- a. Sludge from treatment of process waste waters and/or acid plant blowdown.
- b. Electrolytic anode slimes/sludges, and
- c. Cadmium plant leach residue.

In respect of two of these "wastes," we would note that they are not wastes but rather process residuals which contain valuable metals (gold, silver, copper, lead). Accordingly, these are materials which are sold for retreatment to recover these values. In respect of the third "waste," we would note that this is a waste of recent origin (created by EPA regulations) and is or will be managed in EPA RCRA-permitted disposal facilities.

We have been informed that EPA has detected zinc at unknown concentrations and in the presence of unspecified other substances at a number of hazardous waste disposal sites where, EPA says, damages (mainly natural resources) have occurred. As an example, EPA reportedly refers to a site in New Hanover County, North Carolina, where a particularly destructive release has occurred and where the zinc present in the site has made the groundwater unfit for human consumption.

There is a reference to this site in a recent Congressional Research Service (CRS) study. We feel this Committee should be aware of the pertinent language from the CRS study concerning this site:

"The Flemington landfill ... in New Hanover County, North Carolina ... has accepted municipal as well as industrial wastes since 1972 ..."

"Waste material disposed of ... has leached into the groundwater ... and has contaminated the aquifer to such an extent that the water ... has been rendered hazardous for human consumption ..."

"The following chemical have been detected in the residential wells at levels sufficient to affect adversely human health and the environment: tetrachloroethylene, benzene, vinyl chloride, trichloroethylene and 1,2-dichloroethane, all carcinogens, as well as methylene chloride and lead. In addition, the presence of chlorides, dichlorophenol, chlorobenzene, iron, manganese, phenol and zinc, have rendered the water unfit for human consumption due to extreme bad taste or odor."

Reference: ("Resource Losses from Surface Water, Groundwater, and Atmospheric Contamination: A Catalog," prepared by the Congressional Research Service in March 1980 for the Committee on Environment and Public Works, U.S. Senate).

To characterize zinc as that substance rendering groundwater near the New Hanover County Flemington landfill "unfit for human consumption" when faced with the confirmed presence of several known or suspect carcinogens and the confirmed presence of substances—dichlorophenol, phenol and iron—known to far more acutely affect odor and taste than does zinc hardly seems to us to represent a fair and unbiased appraisal. Certainly based upon information as summarized in the CRS report, we would be reluctant to conclude that zinc present in the groundwater at the Flemington landfill constitutes an "especially destructive release." Rather, based upon information available at present, we would wonder if the Flemington incident even superficially supports imposition of a Superfund fee on zinc.

Based upon the foregoing we feel there is no sound environmental reason for singling out zinc as a commodity to be taxed under S. 1480. For these same reasons we feel there is even less reason to include zinc oxide on the Superfund list. Here we would note that, at present, zinc oxide is produced primarily by the so-called "French" zinc oxide production process. French zinc oxide (60 percent of 1979 U.S. zinc oxide production) is produced by distillation and subsequent oxidation of pri-

mary zinc metal. Since the starting point for French zinc oxide production is virgin zinc metal, there are few associated residues and, perhaps more important, no residues which are not reprocessed for zinc recovery. I would also note that zinc oxide is an important pharmaceutical commodity. Given that the French zinc oxide is no different than the toxicology of zinc we fail to find significant environmental justification for inclusion of zinc oxide as a commodity to be taxed under S. 1480.

While there are sound environmental reasons for excluding zinc and zinc oxide from the purview of S. 1480, we believe an equally important consideration is the present status of the domestic zinc industry. Zinc is a modern metal, vital to our nation's welfare as evidenced by the government's own stockpile target of approximately 1.5 million tons. Zinc's main uses are in galvanizing (to protect steel from corrosion), die casting (where usage has been declining as a result of decreased usage in automobiles), and as an alloy for brass production. In terms of production tonnage, zinc is the fourth most important metal ranking behind steel, aluminum and copper. The following is a brief review of what has happened in the domestic zinc industry in the last decade:

(a) Ten years ago the United States produced over 1 million tons of zinc metal a year. It now produces just half that amount, about 500,000 tons a year.

(b) Eleven domestic zinc smelters have been closed since 1969. Only one of these was replaced by a modern plant and only one new plant has been opened since 1969. In 1969 this country had 14 zinc smelters. As of August 1980, it had 6 (including the partial reactivation of St. Joe's Monaca facility in late 1980).

(c) In the last nine months the closure of two zinc smelters has resulted in the loss of approximately 43 percent of this country's zinc metal production capacity. Additionally, about 2,200 jobs have been lost and a further drain on the nation's trade balance has occurred amounting to approximately 150 million dollars a year.

(d) During the last decade overseas zinc metal production has increased by about 25 percent as new smelters mainly in Europe and Japan have been constructed.

(e) Foreign production of zinc ores has also increased in the same time period by approximately 18 percent while U.S. production had declined approximately 15 percent.

(f) A decade ago this country was dependent on foreign sources for 20 to 25 percent of its zinc metal. It is now 50 percent dependent.

(g) The price of zinc metal is currently 35½ to 37½ cents per pound. During 1975, a recession year, the price was 39 cents per pound.

(h) Today's zinc metal price is about the same as in 1977 (35 cents per pound). In 1977 U.S. zinc producers collectively suffered a before-tax loss despite a 20-percent increase in consumption over 1975 levels.

At this time I would like to offer several important observations based upon St. Joe's experience in respect of our industry's ability to pass extraordinary costs through to consumers. Proponents of Superfund legislation have asserted that it will have virtually no adverse impact on domestic producers who must pay the fees because, they say, the costs can be passed on to consumers. Such statements indicate a serious lack of understanding of two very basic facts.

First, many of the inorganic raw materials on which a fee would be imposed under Superfund legislation are internationally traded commodities. This means that U.S. producers do not unilaterally determine prices for these materials, rather they are determined by worldwide supply and demand factors. It is, therefore, not at all certain that U.S. producers of internationally traded inorganic materials will be able to pass on Superfund costs to the consumers. What is certain is this: If Superfund legislation imposes costs on U.S. producers that are not equally imposed on foreign importers to the U.S., then an economic advantage for foreign producers will inevitably result.

Second, it is no secret that the U.S. imposes fewer restrictions and lower tariffs on imports than virtually any other industrialized nation. In periods of declining worldwide demand, therefore, excess foreign production, much of which is subsidized for export, flows into the U.S. market, forcing price reductions, inventory buildups and production cutbacks by U.S. producers attempting to retain their market share. In these circumstances, which are not at all unusual, the costs imposed on domestic producers by the Superfund legislation could mean the difference between a profit and a loss.

One final observation in respect of zinc. The current version of S. 1480 seeks to require that suppliers of inorganic raw materials collect a fee on behalf of the Fund. In the case of zinc, this language totally ignores the realities of the marketplace and the mechanics necessary to accomplish this task. Suppliers assessing the fee will no doubt find a new bureaucratic maze of certificates and other exceptions to the seemingly simple job of fee collection. The bill also assumes fee collection expenses, which we believe will prove to be costly, will be borne by the individual suppliers. I

am reminded of the motor fuel tax bureaucracy which in some states has grown so large that administrative expenses are barely covered by the tax. The frail financial condition of the domestic zinc industry makes the burden of fee collection a further serious consideration.

Right now the United States does not have the zinc mining or smelting capacity required to meet current or anticipated future domestic zinc demands. Despite the inherent dangers of relying on foreign metal production, the United States continues to export its zinc industry. In 1970 legislation was enacted, entitled the Mining and Minerals Policy Act of 1970. The stated objective being "to foster and encourage private enterprise in . . . the development of economically sound and stable domestic mining, minerals, metal and mineral reclamation industries . . ." In the face of this very noble declaration the government has proceeded to adopt legislation which has had catastrophic impacts on the domestic zinc industry. S. 1480 would impose a cost that would be more than another straw on the camel's back. For environmental and economic reasons, we do not feel this cost is justified.

In respect of lead we would note that it is an essential metal of modern society. Some of lead's many uses include battery manufacture, cable sheathing, solder, type metal, piping, ammunition and anti-knock gasoline compounds. Lead in most of its applications is easily recovered and reclaimed. In fact, the U.S. lead industry exhibits the highest ratio of reclaimed (secondary) to virgin (primary) production of any of the common nonferrous metals.

#### RATIO OF SECONDARY TO PRIMARY PRODUCTION—1979

(In thousands of short tons)

Metal	Lead	Copper	Zinc	Aluminum
Primary production.....	638	1,892	562	5,023
Secondary production.....	879	551	33	1,595
Total.....	1,517	2,443	595	6,618
Percent of total from secondary.....	57.9	22.6	5.6	24.1

Source: American Bureau of Metal Statistics non-ferrous metal data 1979.

The fees to be imposed under Superfund legislation would, in essence, place a new tax on certain segments of the lead industry. Given the extremely high recovery and recirculation ratio attained by the lead industry and the low degree of risk associated with lead production related waste products, such a new tax on lead metal would be inequitable, inherently unfair and does not appropriately belong in any Superfund legislation.

The production of primary refined lead follows the general sequence: mining, milling, smelting and refining. Associated lead values contained in materials and products for these operations would be (approximately): mined or—5 percent; concentrates from milling—75 percent; bullion from smelting—98 percent; and refined lead—99.99 + percent. Associated waste products are: mill (concentrator) tails—less than 0.2 percent lead and smelter slag—3 percent lead. Lead concentrator tailings and smelter slags are inert, innocuous materials and there have never been any demonstrated hazard to human health or the environment associated with handling and disposal of these materials.

Again we note the concern of S. 1480 to include the ultimate disposition of wastes associated with the production of named commodities. Here again we refer to EPA's own listing of hazardous wastes under RCRA where we find listed for lead production only two such wastes:

(a) Surface impoundment solids contained in and dredged from surface impoundments at primary lead smelting facilities, and

(b) Emission control dust/sludge from secondary lead smelting.

Both of these materials, because of contained lead values, are, to the best of St. Joe's knowledge, 100 percent recirculated within the associated production operation.

Turning now to the status of the domestic lead industry. Lead is a vital material, as evidenced by the Government's current stockpile target of 1,100,000 tons.

In general terms, the lead metal market recovered from the 1975 recession and demand was very strong in 1977-78. However, demand began to weaken in 1979.

Specifically:

(a) U.S. lead shipments have fallen precipitously in the last year.

(b) In June, 1980, stocks at U.S. plants were five times higher than in 1977 (a very good year) and exceeded 1975 recession year levels.

(c) U.S. lead prices have dropped by 31 percent in the last ten months from a high of 61 cents per pound in October 1979, to 42 cents per pound today.

(d) Most forecasters predict a continued decline in demand for lead products. If forecasts are correct, there will be even greater pressure to further lower lead metal prices.

(e) Thus far the lead industry's environmental expenditures have been moderate, but EPA recently promulgated an ambient air lead standard which the industry lacks the technology to meet. Similarly, OSHA has promulgated unrealistic and extremely costly in-plant lead standards. Combined, the EPA and OSHA lead standards threaten to close down a large part of the American lead industry.

The arguments raised in respect of the zinc industry's inability to pass through extraordinary costs and the impact of the fee collection provisions of S. 1480 also apply to lead. Again, the bill ignores the reality of the marketplace and the mechanics of accomplishing the fee collection task.

Lead mining and smelting industry materials are generally characterized by large volumes and low toxicity. Waste products associated with the lead industry are fully regulated under existing federal (Clean Air Act, Clean Water Act, Resource Conservation and Recovery Act, Mine Safety and Health Act, and Occupational Safety and Health Act) and state laws.

Because the lead industry is already fully regulated, because lead metal recovery is already high and for other reasons as listed above, it would be inappropriate to levy a fee on lead under any Superfund legislation.

Turning now to St. Joe's third concern in respect of proposed S. 1480.

Section 5(f) provides that the Superfund fees may be reduced or eliminated in order to provide an economic incentive for recycling. We strongly urge that the Finance Committee delete this section and instead provide for a study to determine whether Superfund fees should be used for this purpose. This is the position taken by the Ways and Means Committee when it considered a similar provision in H.R. 7020. There are a number of reasons why this issue should be studied further.

First, a February 1979, Treasury Department Study (Federal Tax Policy and Recycling of Solid Waste Materials) provides little in the way of support for additional recycling incentives. In the Executive Summary, Treasury concluded:

"... the benefits from additional recycling do not justify a Federal subsidy if the objective is to promote the best use of all scarce resources, including labor, capital, and the natural endowment."

"... altering market signals by Federal subsidies to promote recycling would cause more social costs to be incurred in additional recycling than the costs saved through reduced virgin materials consumption and reduced waste disposal."

Second, Section 8002(j) of the Solid Waste Disposal Act called for the establishment of the Resource Conservation Committee (RCC) to perform an in-depth study of recycling. In its July 1979 final report to the President, the RCC unanimously recommended against the adoption of any new recycling subsidies. Specifically, the RCC report states:

"Although the Committee found that subsidies could be effective in promoting resource conservation, it does not recommend subsidies at this time, primarily because of the costs involved."

"Subsidies also disrupt normal market operations and in some cases may encourage levels of recycling that could cost more to subsidize than they return in benefits."

Third, significant recycling is already occurring in the case of a number of inorganic materials subject to the Superfund fee. For example, recycled lead accounts for well over 50 percent of total U.S. lead production; recycled antimony, over 60 percent of U.S. production; and recycled nickel, about 53 percent of U.S. production. Clearly, sufficient market incentives for recycling already exist, and any further incentives would be unnecessary and inappropriate. In fact, in the case of lead, St. Joe estimates that almost all lead which can be physically recovered (primarily from batteries) is being recovered and recycled. Additional Superfund "incentives" are unlikely to result in more lead being recovered but would create a significant disparity in the U.S. market between primary and recycled lead producers.

Fourth, Section 5(f) could be interpreted as permitting Superfund fees to be reduced on imported inorganic materials derived from recycled materials. The problem arises from the wording of the Section which would provide to "suppliers" an economic incentive for recycling. "Suppliers" is defined to include importers, as well as domestic producers. In many cases, it is virtually impossible to distinguish between inorganic raw materials derived from recycled materials as opposed to those derived from virgin materials. To escape payment of a Superfund fee, it can be assumed that importers would claim that the inorganic raw materials being

imported care derived from recycled materials. Verification of such a claim would be impossible. The reduction or elimination of fees on imported inorganic raw materials on the unverifiable grounds that they are derived from recycled materials would further erode the ability of U.S. producers to remain competitive with foreign producers, many of whom receive substantial subsidies from their governments, and risk even greater dependence on unreliable foreign suppliers for our mineral needs.

Fifth, if additional recycling incentives are to be adopted, despite Treasury and RCC recommendations to the contrary, then those incentives should apply to all recyclable commodities, not just to those few covered by Superfund legislation.

Sixth, by allowing Treasury to adjust Superfunds, fees, Congress is delegating its taxing authority.

Lastly, any scheme to use the Superfund fees to encourage recycling should be based on a thorough study of the specific commodities affected. For example, are there physical limitations to recycling? Will the "incentive" provided result in greater recycling? Will the marketplace bear additional production of a given commodity? Does the marketplace already provide sufficient incentives to recycling?

In sum, recycling is a very complex issue, and the studies performed to date recommend further study of the issue before any new incentives are adopted. We urge this Committee to delete Section 5(f) and provide for a study along the lines of that recommended by the Ways and Means Committee.

Although we have serious concerns with several specific provisions of S. 1480, there are embodied in the bill certain principles which we feel should logically be incorporated in any Superfund legislation. Specifically:

(a) Section 5(f) of the bill provides that sulfuric acid produced from air pollution control facilities may not be subject to any fees. Assessing a Superfund fee on air pollution control related sulfuric acid production would be a considerable deterrent to anyone considering this as an alternative to increased capture of otherwise emitted sulfur dioxide. St. Joe's own experience would indicate that costs associated with production of sulfuric acid from our Herculaneum, Mo. lead smelter exceed the acid selling price by up to \$10 for every ton of acid produced.

(b) Section 5(e) of the bill provides that after three years the Secretary of the Treasury may review fund expenditures and adjust fees to better reflect actual experience. In principle St. Joe would endorse this periodic adjustment. We would note, however, that in our opinion the first readjustment should not occur for 5 rather than 3 years and that the review and possible adjustment should be mandatory (shall) not discretionary (may).

In conclusion we would thank the Committee for this opportunity to present our views in respect of S. 1480.

#### EXHIBIT A

### U.S. ZINC AND LEAD METAL STATISTICS

[in thousands of short tons]

	Lead		Zinc	
	1978	1979	1978	1979
Production.....	1,473	1,520	500	593
Primary.....	626	641	487	579
Secondary.....	847	879	13	14
Imports.....	248	213	681	581
Reported consumption.....	1,579	1,497	1,158	1,103
Mine production.....	589	586	334	291
St. Joe metal production.....	240	224	119	143
St. Joe mine production.....	245	244	45	28

Source: American Bureau of Metal Statistics.

#### REVIEW OF ZINC TOXICITY BY DONALD R. LYNAM, PH. D., MANAGER, ENVIRONMENTAL HEALTH, INTERNATIONAL LEAD ZINC RESEARCH ORGANIZATION, INC.

##### SUMMARY

Zinc is an essential trace element for humans, animals and plants. The essentiality of zinc for micro-organisms was first shown in 1869. Forty years later, zinc was shown to be essential for plants. Since then its essentiality has been shown for animals, and zinc deficiency was first suspected to occur in man in 1961. Data

indicate that zinc may be involved as a necessary cofactor in at least 50 enzymes. New discoveries on the beneficial role of zinc in human health and disease is proceeding at a rapid pace.

Concern about zinc in human metabolism is not related to excessive human exposure but to zinc deficiencies. The National Academy of Sciences Food Nutrition Board has recommended minimum dietary allowances of 3-5 mg/day for infants, 10 mg/day for children, 15 mg/day for adolescents and adults, 20 mg/day for pregnant women and 25 mg/day for lactating women.

Limitations for zinc in drinking water are based on esthetics such as taste and appearance rather than toxicity. Zinc is a substance of very low toxicity. It appears unlikely that long term or chronic ingestion of excessive zinc in humans is associated with adverse health effects.

#### INTRODUCTION

Zinc is estimated to compose 0.004 percent of the earth's crust, at a concentration of 70 ppm. It is used in a number of ways to produce useful products, including rubber tires, motor oils, lubricants, die-casting alloys, galvanizing, brass products, paint pigments, plastics, pharmaceuticals, algicides, mildewcides, ceramics, batteries, television tubes, fluorescent lamps, and nutritive supplements.

New discoveries of the beneficial role of zinc in human health and disease is proceeding at a rapid pace. Zinc is an essential element for human metabolism and is found in every human tissue and tissue fluid. The major concern relating to zinc toxicity is not an excess of zinc but a zinc deficiency. The Food and Nutrition Board of the National Academy of Sciences has recommended a minimum dietary allowance for zinc for adults of 15 mg/day. In addition to the human need, animals and plants require sufficient amounts of zinc.

This review of zinc relies on other reviews including:

1. "Zinc," by the Subcommittee on Zinc, Committee of Medical and Biologic Effects of Environmental Pollutants, National Academy of Sciences, National Research Council, 1979. This comprehensive and up-to-date review includes 1,826 references.

2. "Zinc—Biochemistry, Physiology, Toxicology, and Pathology" by Professor Bert Valle, Harvard Medical School. Prepared for International Lead Zinc Research Organization, Inc., 1968. This comprehensive literature contains approximately 1,300 references.

3. "Zinc Metabolism: Current Aspects in Health and Disease," Proceedings of a Symposium, November 11-12, 1976, Fort Lauderdale, Florida, Edited by G. J. Brewer and Ananda S. Prasad. A. R. Liss, Inc. Publisher. This book contains 21 original papers plus discussion and 499 references.

4. "Trace Elements in Human Health and Disease: Zinc and Copper," Volume 1, Edited by Ananda S. Prasad and D. Oberleas, July, 1976, Academic Press. This book contains 22 papers on zinc.

#### *Zinc in human health*

*A. Biologically essential.*—The role of zinc in health and disease is an exciting area involving new discoveries at a rapid pace. Zinc is a biologically essential element found in every human tissue and tissue fluid. The biological essentiality of zinc was first demonstrated for micro-organisms in 1869 by Raulin but that it played a role in human health was not suspected. Of the trace transition elements, the concentration of zinc in the body is second only to iron. Muscle and bone contain approximately 90 percent of the total body zinc, but the highest concentration is found in endocrine glands, particularly the gonadal system and in sensory receptors, notably the retina of the eyes.

Without zinc, protein synthesis does not proceed normally, and cell division appears to be abnormal.

*B. Zinc deficiency in humans.*—Zinc deficiency in humans is commonly associated with abnormalities in systems in which rapid cell division occurs; therefore, growth retardation, hypogonadism, and abnormalities of the gastrointestinal tract are common ailments. Zinc also appears to be particularly important for growth and development in utero and in early life.

It is now recognized that zinc deficiency occurs particularly in people who derive much of their protein from plant sources. Prasad is credited with initiating the knowledge of zinc in health and disease in human beings in 1961 when he suggested that a dwarfed, anemic, and hypogonadal young Iranian villager of 23 years of age might be zinc deficient in 1961. Halsted and Prasad studied 11 individuals in Iran during 1961 and reported the results. Prasad, upon leaving Iran, found many patients with the same syndrome among farmers from the Nile Delta in Egypt. He and his associates were able to study extensively a considerable number of dwarfs and found biochemical and metabolic evidence of zinc deficiency. Treatment with

zinc resulted in dramatic increases in growth and sexual maturation. The cause of the zinc deficiency was explained by the fact that the binding of zinc, making it unavailable, took place both from the high concentration of phytate in the major food staple of unleavened bread and the high level of fiber in the villagers diets. Since very little animal protein was consumed, the daily intake of available zinc was severely limited.

A rather recent report of apparent zinc deficiency in middle-class children from Denver indicates that the problem of zinc deficiency is more widespread than had been assumed. The observations by Hambidge revealed that some middle and upper income children with poor growth have low hair concentrations of zinc. Taste acuity of some of the children was also impaired. When given zinc, the children demonstrated improved taste, appetite and growth. A retrospective assessment of the diets suggested that the causes of the apparent zinc deficiency were poor eating habits. The consumption of meat was small and milk was the major source of animal protein.

In another study, 49 percent of children selected for short stature in a group of Project Head Start children had low zinc levels in hair.

Sandstead in a report on "Zinc Nutrition in the United States," states that: "If the estimate of the usual dietary availability of zinc is accurate, the findings suggest that some infants, pregnant women, teenage and college women, institutionalized individuals and some living on low income diets have a marginal to deficient intake of zinc. It seems reasonable to presume that some of these people may be adversely affected by their marginal zinc status, especially if they experience unusual stress as may occur with disease or trauma."

In addition to growth retardation, hypogonadism, and distorted taste and smell, zinc deficiency seems to be related to poor wound healing, the infant skin disorder called acrodermatitis enteropathica (AE), sickle cell disease, and perhaps rheumatoid arthritis.

Studies on the role of zinc in accelerating wound healing have produced conflicting results. However, the Subcommittee on Zinc of the National Academy of Sciences concludes: "These results suggest that zinc aids wound healing in zinc-deficient states, but not in states where zinc is adequate."

In 1973, decreased levels of serum zinc were noted in an infant with acrodermatitis enteropathica (AE), and after oral treatment with zinc sulfate a complete remission of these severe symptoms occurred. AE may begin as what seems to be a diaper rash but the rash thickens, spreads to the legs, face and other parts of the body. Gastrointestinal manifestations include severe, often chronic diarrhea, malabsorption, steatorrhea and lactose intolerance. The dramatic alleviation of this condition with oral zinc sulfate has been confirmed by other studies and today, zinc has become the treatment of choice for AE.

Prasad and colleagues have reported that zinc deficiency was a complicating factor in patients with sickle cell disease. Brewer has reported beneficial effects from the use of pharmacological doses of zinc in the treatment of sickle cell anemia.

Simkin has presented results of a study indicating that zinc has a beneficial effect for persons with rheumatoid arthritis: However, additional investigations are needed to confirm or refute this finding.

*C. Recommended dietary allowance for zinc.*—The Food and Nutrition Board of the National Academy of Sciences included zinc in the list of recommended dietary allowances (RDA) for humans in 1974. The recommended daily dietary allowances are as follows:

- Infants (1 year of age)—3-5 mg zinc.
- Children (1-10 years of age)—10 mg zinc.
- Adolescents and adults—15 mg zinc.
- Pregnant—20 mg zinc.
- Lactating—25 mg zinc.

At least one study has shown that supplementing an infant milk formula with zinc increased the growth of male infants by age 6 months. Zinc requirements for pregnancy and lactation have not been extensively studied. However, the possibility of zinc deficiency occurring in human pregnancy has been of particular concern because zinc deficiency in rats has been shown to cause congenital malformations.

Seafoods in general and shell fish (especially oysters) and crustacea contain particularly large amounts of zinc. One serving of oysters will more than provide the adult daily zinc requirement. Other foods which contain high amounts of zinc are roasts, steak, liver, and gelatin, as well as bread, cereals, peas, beans, lentils and rice.

#### *Toxicity of zinc*

*A. Humans—acute toxicity.*—Zinc is a substance of very low toxicity. Zinc toxicosis may occur only when very high doses overwhelm the homeostatic mechanisms

controlling zinc uptake and excretion. Reports suggest that 500 mg to 1 g or more of zinc may be ingested on a daily basis with no adverse effects. Ten or more grams taken as an oral dose may produce gastrointestinal distress including nausea, vomiting and diarrhea. Zinc salts act as gastrointestinal irritants and although the illness is acute, it is transitory. These observations of acute toxicity have not been rigorously studied under controlled conditions nor confirmed experimentally.

*b. Humans—chronic toxicity.*—Chronic zinc toxicosis in humans is even less well documented than is acute toxicosis. The National Academy of Sciences Subcommittee on Zinc states "Whether long term or chronic ingestion of excessive zinc in humans is associated with adverse health effects is debatable."

#### *Zinc in plants*

*A. Terrestrial plants.*—Zinc is becoming increasingly important as a crop nutrient throughout the world. Zinc was proved essential to plant life in 1926. Because of the small amounts of zinc needed by crops, zinc is classified as a micronutrient. In the United States, zinc deficiency of one or more crops occurs in more than 40 states. Zinc deficiency is now the most common micronutrient deficiency in the U.S. The use of zinc fertilizer to improve crop growth is now well established.

The National Academy of Sciences Subcommittee explains that "although it is possible for zinc toxicity to be a problem to plants, zinc deficiency in plants is far more likely than toxicosis."

For additional reading, the publication "Zinc in Crop Nutrition" published by the International Lead Zinc Research Organization, Inc. and Zinc Institute, Inc., is recommended.

*B. Aquatic plants.*—Trace amounts of zinc are also essential for the development and normal growth of aquatic plants. Aquatic plants can accumulate more zinc by absorption that metabolic activity requires. Zinc concentrations in plants vary seasonally and the variability is probably due to differences in availability and content of zinc in water as well as growth rate, nutrients, and water temperature. Excessive levels of zinc can cause toxicosis in aquatic plants.

#### *Zinc in animals*

Zinc's presence in the diet of animals is essential, and must be supplied almost continuously. Insufficient zinc in the animal diet results in decreased food intake and retardation of growth. Zinc deficiency in mammals was not recognized until 1955 when the disease was seen in pigs and was called parakeratosis, indicating changes in the skin and lining of the gullet. Zinc supplements to the diet induce prompt recovery. Most animals tend to tolerate zinc in diet up to 1,000 ppm without adverse effects, provided that adequate amounts of copper and iron are available.

#### *Drinking water standards for zinc*

Standards for drinking water quality for zinc are not based on toxicity but are based primarily on esthetics such as taste and appearance. The drinking water standard adopted by EPA and the World Health Organization is 5 mg zinc per liter of water (mg/l). Zinc may be tasted in water (bitter or astringent taste) only when it reaches levels in excess of the drinking water standard. At 30–40 mg/l the water becomes cloudy and at 40 mg/l a metallic taste is imparted. The concentration range at which zinc in water acts as an emetic is 675–2280 mg/l. The fact that zinc salts in very high doses causes the acute, but transitory gastrointestinal irritation prevents more severe systemic effects from occurring.

The levels at which zinc is found in drinking water are not considered to be detrimental to human health. In an EPA nationwide survey of water quality in 1962, none of the 591 samples exceeded 4 mg/l.

#### *Air quality levels*

There are no known ambient air quality standard for zinc for the general population for any country. The levels of zinc in the ambient air in the U.S., as recorded by the National Air Sampling Network, are generally less than 1 microgram of zinc/cubic meter of air ( $\mu\text{g}/\text{m}^3$ ).

For occupational exposures, the present OSHA Standard for zinc oxide fume is 5  $\text{mg}/\text{m}^3$ . This level prevents the occurrence of the transitory, fully reversible condition referred to as metal fume fever and also called "zinc shakes," "spelter shakes," or "brass chills." Zinc dust is treated only as an inert nuisance dust by OSHA with an accompanying limit of 15  $\text{mg}/\text{m}^3$ . The standard for zinc chloride fume, the only other zinc compound for which OSHA has a limit, is 1  $\text{mg}/\text{m}^3$ .

#### COMMERCIAL USES OF SOME SPECIFIC ZINC COMPOUNDS

Zinc dust—paints.

Zinc oxide—paint pigments, pharmaceuticals, photoconductivity, rubber tires.

Zinc sulfate—flotation reagent, rayon hardener, micronutrient.  
 Zinc chloride—flux for galvanizing baths, wood preservative, dry cell batteries, disinfectant, printing mordant, and aid for mercerizing cotton.  
 Zinc sulfide—paint pigments, phosphor in TV tubes and fluorescent lamps.  
 Zinc chromate—wood preservative, algicide, paint primer on metal surfaces.  
 Zinc carbonate—animal nutritive supplement.  
 Zinc borates—fire retardants and insecticides.  
 Zinc acetate—astrigent and antiseptic, glaze for porcelain.  
 Zinc silicate—phosphor in TV screens.  
 Zinc fluosilicate—laundry sour, concrete hardener, and wood preservative.  
 Zinc cyanide—electroplating baths and medical purposes.  
 Zinc nitrate—mordant in dyeing.  
 Zinc phosphate—dental cements.  
 Zinc phosphide—rat and mouse poisons.  
 Zinc permanganate—antiseptic and astrigent.  
 Zinc peroxide—deodorant, astrigent, and antiseptic.

Senator BRADLEY. Thank you very much, Mr. Wright.  
 We will now hear from Mr. R. M. Cooperman.

#### STATEMENT OF R. M. COOPERMAN

Mr. COOPERMAN. Thank you, Mr. Chairman.

I will read an extract of my statement and ask the statement be placed in the record.

I am executive director of the Independent Zinc Alloyers Association, with offices at 900 17th Street NW., Washington, D.C., 20006.

Independent zinc alloyers process the highest grade of slab zinc, special high grade, into several zinc alloys which are sold to the castings and forgings market. Zinc alloy is used in automobiles, trucks, marine motors, computers, plumbing products, electrical equipment, and thousands of consumer products.

Slab zinc is the first metal form of zinc resulting from smelting zinc ores or concentrates.

Independent zinc alloyers are small businesses, and for the most part family founded and family owned. There are approximately 25-30 zinc alloyers in the United States who process between 250,000 and 300,000 tons of slab zinc each year. Because U.S. production companies can provide only 45 percent of the zinc required each year in the United States, independent alloyers must buy almost all of their zinc from foreign sources.

The Independent Zinc Alloyers Association represents 70 percent to 75 percent of the Nation's production capacity of zinc alloy sold on the domestic market.

The production of zinc alloy is a capital intensive business and the greatest part of the alloyers' cost is special high grade slab zinc. Slab zinc is traded on world markets and so the alloyers can be subjected to wide swings in the price of their chief raw material.

Because domestic producers also make and sell zinc alloy in the U.S. market and generally can do so at a smaller margin than the alloyers, the zinc alloyers must be competitive in their price with the U.S. producers who have their own raw material readily at hand.

Consequently, independent alloyers operate at a narrow margin that can be affected by even a small increase in taxes, or imposition of a fee, on imported metal. The fee proposed either will be passed on to independent alloyers or in some cases paid directly where independent alloyers are importers of record.

Because of the intense competition, not only among alloyers but between alloyers and producers, increased costs of any consequence cannot be passed through to our customers.

Furthermore, the zinc alloy industry, which has lost over 40 percent of its market to competing materials over the last 6 years, may not survive the consequences of being labeled, unfairly, a hazardous material. Some alloyers are in the process of spending hundreds of thousands of dollars to find new applications for zinc alloys to expand the market for slab zinc.

The Senate may feel that the initial proposed fee is of small consequence on a per-ton basis. However, there are additional factors of quite large consequence. Slab zinc, the only form of zinc used by independent alloyers and subject to the proposed fee is not listed anywhere as a hazardous or toxic material.

While certain zinc compounds are cited in section 311 of the Clean Water Act with respect to marine spills, "Zinc and compounds" are cited as priority toxic pollutants in section 307(A) of the Clean Water Act. The listing of zinc here does not per se label zinc as toxic.

EPA, in adopting limitations upon effluents involving zinc must look at the zinc content of effluents on an industry-by-industry basis before adopting effluent restrictions for zinc or zinc bearing substances.

Under the Resource Conservation and Recovery Act, EPA clearly classified two forms of waste from primary production of zinc and three zinc compounds of zinc as hazardous. None of these occur in the zinc alloy process.

Furthermore, under the Safe Drinking Water Act, the primary drinking water standards intended by Congress for the protection of public health do not include zinc. Secondary drinking water guidelines designed to protect the esthetics of drinking water, for example, odor, taste, et cetera, are not mandatory, and here zinc is included with iron, sulphates, chlorides, and others.

Zinc, incidentally carries a much higher acceptable level in these standards than does iron. We feel this is strong evidence that Congress in earlier deliberations on environmental legislation did not consider all zinc toxic, and that S. 1480 labels all zinc hazardous without the careful consideration given to this metal in earlier legislation.

There are several economic consequences from this. For example, one executive of a member company has pointed out to me the following possible consequences of including slab zinc as a hazardous material.

Workers at his plant can require hazardous pay for handling slab zinc; drivers of his trucks can demand hazardous pay for transporting slab zinc or zinc alloys; the costly marketing program of his company to improve technology and to develop new applications of zinc, which has been predicated in part on the fact that a zinc alloy is a nonhazardous, nonpolluting material, can be destroyed with the consequence that efforts to improve the circumstances of a seriously disabled industry will be lost.

Mr. Chairman, I have here some examples of the promotion of that marketing program. I would like to ask they be included in the record.

**Senator BRADLEY. They will.**  
**[The information referred to follows:]**

#### EXHIBITS TO TESTIMONY

##### ENERGY SAVING, POLLUTION-FREE BENEFITS

Fast, pollution-free, low energy melting makes ZA materials preferred by foundrymen. ZA alloys are cast at relatively low temperatures (850-1100°F) and, therefore, require less energy to melt. Heat treating costs can be saved because ZA materials obtain maximum strength in the as-cast condition and stress relief annealing is not required.

There are no melting fumes and smoky fluxing and degassing practices are not required. Melting and handling of ZA alloys is virtually pollution free.

Alloy Zn-11Al is a general-purpose alloy with the best combination of castability and mechanical properties. Tensile strength (sand cast) is 40,000 to 45,000 psi and can be about 25 percent higher when the alloy is cast in permanent molds. Hardness is competitive with the conventional casting metals. These alloys offer excellent fluidity for thin-walled castings, they are pollution-free during melting and pouring, and they melt at lower temperatures, thus requiring less energy and increasing the life of crucibles.

##### THE ATTRACTION

The original zinc-aluminum alloy developed for sand casting and general foundry use was introduced in the later 1960s as ILZRO-12 by the International Lead Zinc Research Organization. Aluminum content was 12 percent, which was subsequently reduced to approximately 11 percent to improve impact properties.

This alloy has been used in the U.S. and Canada for a variety of castings. While the alloy proved that a market for zinc foundry alloys existed, the 11 percent-Al alloy was competing against established alloy systems in which several alloys were offered, each having specific properties or characteristics designed to meet various engineering requirements. Needed were additional grades to form a similar family of zinc-based alloys that, as a group, could offer different combinations of properties. Today, after several years of development and market research, three zinc foundry alloys are available to supply a broad spectrum of casting requirements.

Energy savings associated with the zinc foundry alloys provide substantial benefits which permit these materials to challenge the economics of conventional foundry alloys. Gravity casting of zinc requires only about one-fourth the energy needed for iron, about one-half that for bronze, and about three-fourths that for aluminum.

The zinc alloys are clean to work with in the foundry because they require no secondary operations at the melt furnace such as fluxing or degassing. (Aluminum, for example, requires degassing to eliminate porosity in the cast parts.) Zinc produces no fumes since its vaporization point is about 1600° F.

**Mr. COOPERMAN.** We believe we understand S. 1480, and the logic behind it, to redress truly grievous wrongs to the environment done over the years. We ask that the Senate Finance Committee in its wisdom accomplish its purpose without sweeping in a segment of industry that is not and has not been involved in generating toxic or hazardous waste through either the use of a raw material, slab zinc, or the production of its product, zinc alloy.

We request respectfully that this committee exclude slab zinc from the requirement of a contribution to the hazardous substance response fund.

Thank you.

**[The prepared statement of Richard M. Cooperman follows:]**

**STATEMENT OF RICHARD M. COOPERMAN, EXECUTIVE DIRECTOR, INDEPENDENT ZINC ALLOYERS ASSOCIATION, INC.**

##### SUMMARY OF PRINCIPAL POINTS

Independent zinc alloyers are family-founded and family-owned small businesses. The 30 independent zinc alloyers in the United States process between 250,000 and 300,000 tons of slab zinc each year.

Independent zinc alloyers must buy most of their slab zinc from foreign sources since U.S. producers can supply only 40 percent of domestic slab zinc needs.

Independent alloyers compete intensively amongst themselves and with U.S. zinc producers who also make and sell alloy.

Slab zinc is 85 percent of the cost of zinc alloy for independent alloyers and narrow margins prohibit pass-along of any cost increment.

Slab zinc is the generic form of zinc produced from smelting ores and concentrates.

Slab zinc is not named as a hazardous or toxic waste.

Production of zinc alloy does not result in toxic or hazardous waste.

The zinc alloy industry has lost over 40 percent of its market in the last six years.

Costly marketing programs, predicated partly on the nonpolluting qualities of zinc alloy, will be destroyed and hundreds of thousands of dollars in market expansion efforts lost.

Prayer: Exclude slab zinc from the requirement of a contribution to the Fund.

#### STATEMENT

My name is Richard M. Cooperman. I am Executive Director of the Independent Zinc Alloyers Association, with offices at 900 17th Street, N.W., Washington, D.C., 20006.

Independent zinc alloyers process the highest grade of slab zinc, Special High Grade, into several zinc alloys which are sold to the castings and forgings market. Zinc alloy is used in automobiles, trucks, marine motors, computers, plumbing products, electrical equipment, and thousands of consumer products.

Slab zinc is the first metal form of zinc resulting from smelting zinc ores or concentrates.

Independent zinc alloyers are small businesses, and for the most part family founded and family owned. There are approximately 25 to 30 zinc alloyers in the United States who process between 250,000 and 300,000 tons of slab zinc each year. Because U.S. production companies can provide only 45 percent of the zinc required each year in the United States, independent alloyers must buy almost all of their zinc from foreign sources.

The Independent Zinc Alloyers Association represents 70 to 75 percent of the nation's production capacity of zinc alloy sold on the domestic market.

The production of zinc alloy is a capital intensive business and the greatest part of the alloyers' cost is special high grade slab zinc. Slab zinc is traded on world markets and so the alloyers can be subjected to wide swings in the price of their chief raw material. Because domestic producers also make and sell zinc alloy in the U.S. market and generally can do so at a smaller margin than the alloyers, the zinc alloyers must be competitive in their price with the U.S. producers who have their own raw material readily at hand. Consequently, independent alloyers operate at a narrow margin that can be affected by even a small increase in taxes (or imposition of a fee) on imported metal. The fee proposed either will be passed on to independent alloyers or in some cases paid directly where independent alloyers are importers of record.

Because of the intense competition, not only amongst alloyers but between alloyers and producers, increased costs of any consequence cannot be passed through to our customers.

Furthermore, the zinc alloy industry, which has lost over 40 percent of its market to competing materials over the last six years may not survive the consequences of being labeled unfailingly a hazardous material. Some alloyers are in the process of spending hundreds of thousands of dollars to find new applications for zinc alloys to expand the market for slab zinc.

The Senate may feel that the initial proposed fee is of small consequence on a per ton basis. However, there are additional factors of quite large consequence. Slab zinc, the only form of zinc subject to the proposed fee used by independent alloyers, is not listed anywhere as a hazardous or toxic material.

While certain zinc compounds are cited in Section 311 of the Clean Water Act with respect to marine spills, "Zinc and compounds" are cited as priority toxic pollutants in Section 307(a) of the Clean Water Act. The listing of zinc here does not per se label zinc as toxic. EPA, in adopting limitations upon effluents involving zinc must look at the zinc content of effluents on an industry-by-industry basis before adopting effluent restrictions.

Under the Resource Conservation and Recovery Act, EPA clearly classified two forms of waste from primary production of zinc and three zinc compounds of zinc as hazardous. None of these occur in the zinc alloying process.

Furthermore, under the Safe Drinking Water Act, the primary drinking water standards intended by Congress for the protection of public health do not include

zinc. Secondary drinking water guidelines designed to protect the aesthetics of drinking water, e.g., odor, taste, etc., are not mandatory, and here zinc is included with iron, sulphates, chlorides, and others. (Zinc, incidentally carries a much higher acceptable level in these standards than does iron). We feel this is strong evidence that Congress in earlier deliberations on environmental legislation did not consider all zinc toxic, and that S. 1480 labels all zinc hazardous without the careful consideration given to this metal in earlier legislation.

There are severe economic consequences from this.

For example, one executive of a member company has pointed out to be the following possible consequences of including slab zinc as a hazardous material:

Workers at his plant can require hazardous pay for handling slab zinc;

Drivers of his trucks can demand hazardous pay for transporting slab zinc or zinc alloys;

The costly marketing program of his company to improve technology and to develop new applications of zinc, which has been predicated in part on the fact that a zinc alloy is a nonhazardous, nonpolluting material, can be destroyed, with the consequence that efforts to improve the circumstances of a seriously disabled industry will be lost.

It is not possible at this time to calculate what these additional costs might become.

Let me reiterate, we believe we understand S. 1480 and the logic behind it to redress truly grievous wrongs to the environment done over many years. We do not dispute this logic. We do ask that the Senate Finance Committee in its wisdom accomplish its purpose without sweeping in a segment of an industry that is not and has not been involved in generating toxic or hazardous waste through either the use of a raw material, slab zinc, or the production of its product, zinc alloy.

We request respectfully that this Committee exclude Slab Zinc from the requirement of a contribution to the Hazardous Substance Response Fund.

Senator BRADLEY. Thank you.

We will now hear from Dr. Dennis F. Brendel, vice president of environmental affairs-safety, Bunker Hill Co., Kellogg, Idaho. Welcome.

#### STATEMENT OF DENNIS F. BRENDEL

Mr. BRENDEL. Thank you, sir.

I am the vice president of environmental affairs and safety for the Bunker Hill Co. in Kellogg, Idaho. We are a subsidiary of Gulf Resources and Chemical Corp. of Houston, Tex. Bunker Hill produces 18 percent of the Nation's primary lead and refined zinc. The company would be materially harmed and the Nation's supply of these materials would be adversely affected if this legislation is passed.

While I support the intended goal of S. 1480 to clean up hazardous waste spills and abandoned waste sites, I am opposed to the present bill.

The inclusion of lead and zinc on the list of materials to be taxed is a prime example of materials which make little contribution to the problem of hazardous waste spills or abandoned waste dumps and is being taxed heavily to provide a fund to correct problems caused by others.

At present all emissions and discharges from Bunker Hill's facilities are regulated by the EPA under the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, and in addition we are also regulated by the Mine Safety and Health Act, the Occupational Safety and Health Act, all of which are placing enormous financial burdens on the company.

On June 2, 1980, the Environmental Protection Agency published a short report on the economic impact of the super fund on the copper, lead and zinc industry. This report stated: "The super fund

tax would impose little adverse impact on the lead and zinc industry." This is simply not true for several reasons.

First, EPA's analysis makes no mention of the fact that Bunker Hill and other lead and zinc producers have been struggling to meet capital expenditures demanded by numerous existing EPA and OSHA regulations.

For example, from 1973 to 1979 the Bunker Hill spent 51 percent of its available capital on pollution control equipment.

Second, EPA's analysis seriously underestimated the impact on companies such as Bunker Hill. The analysis indicated that had the fund been in existence in 1979, Bunker Hill would have paid 13.4 percent of its net earnings into the fund, assuming a net earning of \$14 million.

The fact is that Bunker Hill would have had to have paid 24 percent of its net earnings into the super fund from an actual net earnings of \$7.8 million. This is on top of the 51 percent that we are already expending toward pollution control equipment.

In poor economic years such as 1977 and 1978, the company would not have been able to pay the super fund tax from net earnings. There were no net earnings. Those were loss years.

When one examines all the present laws and regulations on the books regulating the lead and zinc industry you quickly come to the conclusion that eventually they add up to a serious threat to a company's survival.

EPA also fails to note that the lead and zinc industry is seriously depressed and has suffered serious economic decline. For example, as pointed out by St. Joe Minerals, 10 years ago the United States produced 1 million tons of zinc metal a year. Today it is a half a million tons, while imports at the same time have risen from a quarter million tons to nearly 600,000 tons.

In 1969 this country had 14 zinc refineries, and today there are only four or five.

Another concern is, wouldn't companies such as Bunker Hill be able to pass forward the costs of the super fund on to consumers or would they be able to pass the costs of super fund backwards to the mines? The answer to both is no, for Bunker Hill operates in the international market and is unable to pass these costs forward if it intends to remain competitive with the rest of the industry.

And it is unable to purchase concentrate for its smelting of ores. It would be unable to pass these costs backwards, for the mines would not wish to sell their ores to the company at those costs.

In short, EPA's economic analysis seriously underestimated the impact of super fund on the lead and zinc industry, and Bunker Hill in particular.

In Bunker Hill's opinion the super fund raises other substantial questions; some being constitutional. Senate bill 1480 delegates to the Secretary of the Treasury, in consultation with the EPA Administrator, the authority to set taxes. The constitution says the Congress has the power to levy and collect taxes.

At this point we do not believe that Congress should attempt to delegate this authority, that if Bunker Hill can be assessed a tax in some years of a half a million dollars and in other years up to \$3 million, we think this is a very large variance for a company to be able to determine what its bill might be in the following years.

We are also concerned about the recycling of raw materials. When materials are imported to the United States, it is virtually impossible to determine whether they are primary materials, newly produced materials, or they are recycled materials.

We feel that importers would evade the tax by simply sending their recycled materials to this company. And in the United States on the domestic production we see no reason why recycled material would be exempted from the tax where primary production would pay the full brunt of the tax burden.

I thank you very much, Mr. Chairman, for the opportunity to present this statement.

[The prepared statement of Dennis F. Brendel follows:]

STATEMENT OF DR. DENNIS F. BRENDDEL, VICE PRESIDENT, THE BUNKER HILL CO.

SUMMARY OF THE PRINCIPAL POINTS

1. Lead and zinc should not be on the list of materials subject to the superfund tax.
2. Because the tax rate is high and is based on production, not ability to pay, the superfund tax would have a severe adverse effect on companies such as Bunker Hill and would be harmful to U.S. lead and zinc production.
3. The superfund tax raises substantial constitutional questions.
4. The tort liability provisions of the bill are excessively harsh and punitive.
5. No tax distinction should be drawn between primary and recycled lead production.

STATEMENT

My Name is Dr. Dennis F. Brendel. I am Vice President, Environmental and Safety, of The Bunker Hill Company, Kellogg, Idaho. Bunker Hill, a wholly owned subsidiary of Gulf Resources and Chemical Corporation, produces 18 percent of the Nation's primary lead and refined zinc. These materials are subject to the tax proposed by Section 5(d)(4) of S. 1480 to create a Federal fund to clean up hazardous spills and abandoned waste dumps. Bunker Hill would be materially harmed and the Nation's supply of these important materials would be adversely affected if this legislation becomes law. While Bunker Hill supports a Federal effort to clean up hazardous sills and abandoned waste sites, it is opposed to the present bill for the following reasons.

*I. Lead and zinc do not belong on the list of materials of be taxed*

S. 1480 selects a group of materials that are said to be the "building blocks" for hazardous wastes and then imposes a tax on the sale of these materials to create a fund for cleaning up hazardous spills and abandoned waste dumps (S. Rept. No. 96-848, p. 19). Such an approach to the clean-up problem is highly inequitable and, contrary to the claims of the bill's supporters, does not impose fees solely on those responsible for spills and improper dumping.

The inclusion of lead and zinc on the list of materials to be taxed is a prime instance in which materials that make no significant contribution to the ills that S. 1480 is aimed at, and that are produced by companies that have not been shown to be guilty of any significant spills or improper dumping, are being taxed heavily to build up a fund to correct problems caused by others, many if not most of whom will pay no tax.

As I have stated, lead and zinc do not contribute to the two areas of principal concern of S. 1480, spills of hazardous materials and abandoned waste dumps. For example, lead and zinc ores, mined from the ground, arrive at the smelter site in an insoluble form. During the smelting process, all emissions and discharges or disposal of wastes are completely regulated by EPA under the Clean Air Act, the Clean Water Act and the Resource Conservation and Recovery Act. Bunker Hill's processed metals leave the smelter site in the form of bars. In the case of lead, for example, the metal is delivered principally to battery plants. The lead in most batteries is eventually recycled by secondary lead smelters, whose wastes are also subject to strict EPA controls. Hence, lead is not a contributor to the hazardous spill problems addressed by S. 1480 and does not contribute materially to the problem posed by abandoned waste dumps. And while the report of the Environment and Public Works Committee accompanying S. 1480 is replete with references to spilling

and dumping problems caused by chemicals, nothing in that report implicates lead—or zinc—as contributors to such problems.

Moreover, lead and zinc are not feedstocks for the organic chemical industry. Lead and zinc are not components of PCBs, dioxins, or other highly toxic chemicals mentioned throughout the Committee report. Lead and zinc are not carcinogens. There is, in short, no justification for imposing a tax on lead and zinc production to remedy what is overwhelmingly a chemical industry problem.

The Committee report asserts that the superfund tax is equitable, and notes that "[t]axpayers too often are asked to remedy problems they do not help create" (p. 19). This is precisely why lead and zinc should not be included in the superfund tax. A tax on lead and zinc production to finance the clean up of hazardous chemicals is inequitable and arbitrary and should not be approved by the Finance Committee.

## *II. The proposed tax would have a severe and adverse impact on domestic lead and zinc production*

The premise of the tax proposed by S. 1480 seems to be that producers would merely pass the tax through as an increased cost, and thus the end users of hazardous substances would rightfully be the ultimate contributors to the clean up fund. For the lead and zinc industry, there is no reason to believe that such a cost pass-through would be possible. One reason why this is so is that lead and zinc are internationally traded commodities whose prices are determined by international supply and demand factors.

Indeed, on June 2, 1980, EPA issued a short report entitled "Impact of the Proposed Superfund Fee System Upon Earnings and Cash Position: Copper, Lead, Zinc, and Chlorine" which shows on its face that the domestic lead and zinc industry would be adversely affected by the proposed tax. Thus, while asserting its belief that at some date in the future the costs of superfund could be passed forward to consumers, EPA conceded that at present "metal producers may not be able to pass the costs on to consumers because capacity is fixed and the price is determined by the level of demand" (p. 2). The inability to pass costs through is of critical concern, for the superfund tax is based on production, not ability to pay, and companies such as Bunker Hill that are large producers but do not earn large profits will be seriously damaged by the tax. Indeed, EPA's report acknowledges that "it is possible that a marginal mine or smelter could close prematurely as a result of the fee," that in some years "some companies would not have been able to pay the fees out of cash generated from their operations," and that the possibility of shutdowns "cannot be ruled out" (pp. 2, 3, and 4).

Moreover, EPA's economic analysis contains serious omissions and errors. First, it makes no mention of the fact that Bunker Hill and other lead and zinc producers have been struggling to meet the capital expenditures demanded by numerous existing EPA and OSHA regulations. For example, in the period from 1973 to 1979, Bunker Hill allocated nearly \$20 million, or 51 percent, of its available capital to installation of EPA required pollution control equipment. The domestic lead and zinc industry is already adversely affected by costs imposed by a host of Federal regulations, and an additional environmental tax would only further erode the industry's economic position.

Second, the analysis seriously underestimates the impact on individual lead and zinc producers by relying on financial data taken from 10-K reports filed by parent corporations. In most cases, including Bunker Hill's, the parent corporations are widely diversified, with individual lead and zinc subsidiaries functioning on a profit-center basis. The analysis should have examined only the economics of the lead and zinc segments of the parent corporations' overall business.

Third, the data used to evaluate the impact of the superfund tax on Bunker Hill is simply incorrect. The analysis indicated that if the tax had been in effect in 1979, Bunker Hill would have paid 13.4 percent of its net earnings into the fund, assuming \$14 million as Bunker Hill's 1979 after-tax earnings. The fact is, however, that \$14 million was the company's before tax earnings. Its actual 1979 after-tax earnings amounted to just \$7.8 million, and thus Bunker Hill's contribution would have been fully 24 percent of net earnings had the tax been in effect in 1979. In bad economic years such as 1977 and 1978, the Company would not have been able to pay the superfund tax from net earnings. Hence, superfund would obviously constitute a very serious threat to the Company's survival.

Fourth, EPA fails to note that the American lead and zinc industry is severely depressed and has suffered serious economic decline in recent years. For example, ten years ago the United States produced over one million tons of zinc metal while it now produces only half that amount. Conversely, foreign slab zinc imports more than doubled in that period, increasing from 270,000 tons in 1970 to 580,000 tons in 1979. In 1969, this country had 14 zinc smelters, and the alarming fact is that today only six of those 14 are still in business.

In short, the economic analysis seriously underestimates the impact of the superfund tax on the continued viability of the domestic lead and zinc industry. This Committee should require a complete and independent economic analysis prior to taking action on this bill.

### *III. The superfund tax raises substantial constitutional questions*

Section 5(d)(4) of the bill establishes the tax rate beginning in fiscal year 1981 for all listed materials, including lead and zinc. Section 5(c)(2), however, delegates to the Secretary of the Treasury, in consultation with the Administrator of EPA, the authority to set the tax in subsequent years. This provision raises substantial constitutional questions concerning the Federal taxing power.

By Article I, Section 8, clause 1 of the Constitution, it is Congress that has the "Power to lay and collect Taxes." In *National Cable Television Ass'n v. United States*, 415 U.S. 336, 340 (1974), the Supreme Court invalidated a "fee" system imposed by the FCC, finding that under the Constitution "[t]axation is a legislative function and Congress . . . is the sole organ for levying taxes." The delegation of authority to the Treasury Department to establish the level of the superfund tax after 1981 involves fundamental Constitutional issues, and should be carefully reviewed by this Committee.

### *IV. The bill proposes an excessively punitive new Federal tort law for toxic substances which should be rejected by the committee*

S. 1480 would not only impose an extremely harsh tax, but also contains language that drastically modifies existing tort law in a way that results in punishing companies even when they are not at fault. The legislation declares that the manufacture, use and transport of certain hazardous substances are ultra-hazardous activities, and makes the manufacturer, user and transporter of such substances strictly liable in tort for any damage that might result from an accident involving those substances.

I am fully aware that the law already deems certain activities to be ultra-hazardous and in certain areas imposes strict liability in tort. However, this has not come about suddenly through legislation, but instead has developed over many years in an evolutionary manner.

No urgent reasons have been shown for the radical change in tort law that S. 1480 would bring about, and such a change, like the superfund tax itself, would be damaging to companies such as Bunker Hill that are not large profit earners and are not in a position to pay for damage they did not cause. Moreover, subjecting such companies to strict liability in tort could in fact favor the creation of monopolies if the potential liability proves so great that a company would not be able to insure against it or could obtain insurance only at an excessively high premium rate. The result could be that only the largest corporations could stay in the business of manufacturing the list of substances contained in the legislation.

If, however, Congress is bent on punishing industry by passing a law such as this one it should be careful to make the effective date some years in the future so that both manufacturers and their insurers would have a chance to develop plans covering such exposure.

Let me add two further points.

First, I am surprised that Congress would create a new Federal cause of action at a time when Congress is looking for ways to relieve the congestion in the Federal courts.

Second, while the tort law portion of this legislation contains provisions for contribution against joint tort-feasors, nothing is said concerning defenses available to them. For example, in some states contributory negligence is a defense to strict liability, and there is no reason why such a defense should not be made available in the present legislation.

### *V. There should be no difference in the tax rate for primary and secondary lead production*

Section 5(f) of S. 1480 authorizes the Treasury Department to reduce the tax on recycled raw materials in order to provide suppliers an economic incentive for recycling and reuse. While a tax advantage to encourage recycling may be a worthwhile policy for some materials, there is no justification for a tax distinction between the primary and secondary production of lead.

The fact is that the secondary production of lead, principally from the recycling of batteries, presently accounts for well over half of all U.S. lead production. The economic incentives for lead recycling are already well established, and a tax-based disparity between prices of primary and secondary lead is inappropriate.

Moreover, inasmuch as recycled lead is indistinguishable from the virgin material, a lower tax on recycled lead would lead to abuses in the area of imports. The

U.S. is a net importer of lead, and while the bill would subject imports to the superfund tax there would be no practical way to verify claims that imported lead has been recycled and thus should be taxed at the lower rate. The result would be a further competitive disadvantage for domestic primary lead production, with no improvement in recycling which is already at maximum levels.

In conclusion, I thank you for the opportunity to appear before the Committee to present Bunker Hill's views concerning the proposed superfund legislation.

**Senator BRADLEY.** Thank you very much, Mr. Brendel, for your testimony. And I think we have covered all four of the gentlemen who wanted to testify.

Senator Danforth?

Senator Durenberger?

No questions?

I just have one question. I suppose it goes to the question of zinc. And maybe you can help me out. I do not understand the basis for the assertion that zinc is not a hazardous substance.

Let me just read several reasons why. Zinc and many zinc compounds are already designated hazardous substances under five existing Federal laws. Zinc itself was found toxic by Congress in 1977 in amendments to the Clean Water Act. Zinc has been found in 27 waste sites where damages have occurred and is suspected in another 22 sites.

Refining of zinc ores generated 262,000 tons of hazardous wastes containing lead, arsenic, cadmium and zinc in 1977 alone. And this is just part of the reason that zinc is presently included.

Now maybe there is new evidence that I do not know about. And that is why I would like you to place in the record now for the committee's consideration any evidence that you have that would counter the facts that were just read.

**Mr. WRIGHT.** Mr. Chairman, I have with me today Mr. Gary Welch, director of environmental control for St. Joe. I would like him to address your question.

**Mr. WELCH.** Thank you, Mr. Chairman.

If you have a copy of St. Joe's written testimony, you will find described one of the incidents that you referred to where zinc has allegedly been found in a hazardous waste disposal site. This is found on page 6 of our written comments.

I think it important to note that apparently the source of that information was a report by the Congressional Research Service, and I think it particularly enlightening to read the language of what the Senate report actually said.

It said in describing the Flemington land fill in New Hanover County, N.C., that:

The following chemicals have been detected in residential wells at levels sufficient to affect adversely human health and the environment: tetrachloroethylene; benzene; vinyl chloride; trichloroethylene and 1-2, dichloroethane, all carcinogens, as well as methylene chloride and lead.

In addition, the presence of chlorides, dichlorophenol, chlorobenzene, iron, manganese, phenol and zinc, have rendered the water unfit for human consumption due to extreme bad taste or odor.

The number of substances I referred to there I think you can well recognize—

**Senator BRADLEY.** Most of which I don't know.

**Mr. WELCH.** Well, certain of them are confirmed carcinogens, certain of them are suspect carcinogens. Phenols impart considerable odor and taste to water. Zinc imparts taste to water in concen-

trations above 40 milligrams per liter, more than eight times the drinking water standard.

Now to implicate zinc as being the problem here in this location we think is extending the matter a little bit too far. We are trying to track down the source documents for other incidents—

Senator BRADLEY. That are listed in the record?

Mr. WELCH. That is correct.

Senator BRADLEY. You say this is one of the 27 waste sites that I mentioned?

Mr. WELCH. That is correct.

Senator BRADLEY. And that the evidence is less than conclusive that zinc is the sole cause?

Mr. WELCH. We think so.

Senator BRADLEY. Well, I would tend to agree with you on this particular example. There is no doubt about that.

Fine. Could you possibly explain the reason why zinc is included as a hazardous substance in the five Federal laws?

Mr. WELCH. Yes, there are certain zinc compounds, notably zinc peroxide, zinc ammonium nitrate, which are corrosive and powerful oxidizers. The zinc peroxide behaves very much like the peroxide that you buy in the drug store to cleanse wounds. And that is very much what it is used for.

It and other zinc substances first appeared in the DOT regulations, which is one of the five laws that you would be referring to, as a hazardous substance, for the reason of its corrosivity and the fact that it should not be combined with other things or other chemicals or elements in which it could act as an oxidizer, possibly creating an explosive hazard.

Senator BRADLEY. So you don't disagree that some zinc and zinc compounds are toxic?

Mr. WELCH. I would disagree on zinc. There are some zinc compounds—

Senator BRADLEY. Zinc compounds?

Mr. WELCH. Zinc compounds.

Senator BRADLEY. Is zinc included as toxic then?

Mr. WELCH. Zinc itself is not.

Senator BRADLEY. Is not? It is not included in any of the five laws?

Mr. WELCH. Under Section 311 of the Clean Water Act it is identified as "zinc and zinc compounds."

Senator BRADLEY. OK. Well, I do not have any more questions for the panel. I think that your testimony has been very helpful. Would you like to add anything, Mr. Cooperman?

Mr. COOPERMAN. May I, please?

Senator BRADLEY. Sure. Certainly.

Mr. COOPERMAN. It may be an oversimplification, but the last reference that my colleagues from St. Joe have made is really the heart of the problem. The listing of zinc as such in the Clean Water Act undergoes some variation. EPA, in adopting limitations upon effluents involving zinc, must look at the zinc contents and effluents of it on an industry-by-industry basis.

Before they adopt the effluent restrictions they are looking at the metallic compounds.

The thrust of our testimony as independent zinc alloyers is that zinc, the generic form after the ore, is slab zinc, and as such it is not listed as a hazardous or toxic waste. That is the material with which we must deal. And nothing that we produce in zinc alloy is either hazardous or toxic, and is nowhere named such.

And it is the reason why we have asked that slab zinc, which is the chunk of metal that you would recognize after the ore and concentrate stage, be exempted from the fund.

I think it may be a semantic problem and a bit of an oversimplification, but slab zinc itself as used in alloying, and as used in galvanizing, has no reference in any of the acts, EPA or the DOT act, as either hazardous or toxic.

Senator BRADLEY. So you are requesting that we eliminate zinc and—

Mr. WRIGHT. Zinc oxide and lead.

Senator BRADLEY. Lead and zinc oxide? If we did eliminate those items, then there would be an increased tax on other inorganic chemicals.

Mr. WRIGHT. That is right. But, Mr. Chairman, you are sort of halfway pregnant already because a lot of metals have already been excluded from the act.

Senator BRADLEY. I cannot understand you.

Mr. WRIGHT. A lot of metals have already been taken off the list, such as copper and, I believe, two of the other nonferrous metals. What we object to really is the shotgun approach to the periodic table—

Senator BRADLEY. I am sorry but I do not understand you.

Mr. WRIGHT. The shotgun approach. And to do this thing right, and I acknowledge a need for it, it should be looked at from the standpoint of what really produces the toxic waste. And the slab zinc or the zinc oxide, the lead and metal or copper or any other metal is not solely used in the production of toxic wastes. It is a very small part of the total industry. And the total industry should not be taxed in total for it.

Senator BRADLEY. Do you know of any—and I am not a chemist here, so this might be a very elementary question—but do you know of any copper compound that is toxic?

Mr. WELCH. In general most metals, iron, zinc, lead, copper, cadmium, would be toxic to certain things at certain doses. How one differentiates on chemical species when you find the zinc in water, as an example, you really cannot do that. The zinc is there or the copper is there or the iron is there.

You may also find sulfates there, chlorides—

Senator BRADLEY. The reason I asked the question is if you do not put it on the feedstock level, but rather place the fee on each hazardous chemical product or waste, the argument then is that instead of having 46 substances you have multiplied the number of products that would be liable for a fee by a dramatic proportion and necessitated an enormously complicated administrative mechanism that the super fund would have to follow.

I think you have made some interesting points, however. So my question on copper is, you stated that copper was exempted, and my question was, well, does that mean that downstream copper does not combine to produce a toxic substance whereas zinc down-

stream does combine to produce a toxic substance? And that is the thrust behind my question.

Mr. WELCH. I do not think that is correct. There is obviously toxic compounds of anything. If you combine anything with arsenic, you have a toxic compound. There are certainly copper arsenates, there are zinc arsenates and there are other arsenates. And any of them are going to be toxic. They are going to be toxic because of the arsenic, not necessarily because of the zinc or the copper or the lead.

Senator BRADLEY. Thank you very much for your testimony. I think it has been helpful. We will, I am sure, consider it.

Our next witness list is actually a panel, but we have had a request from the one Governor who is going to testify, that he be allowed to make his presentation alone and then be joined by other members of the panel for their presentations and questions.

So as a Senatorial and gubernatorial courtesy, we will grant that request of the Governor of Missouri, Joe Teasdale. Welcome to the committee. Please feel free to make your presentation and then you will be joined for presentations by other important attorneys, general and environmental protection people from other States.

**STATEMENT OF HON. JOSEPH TEASDALE, GOVERNOR, STATE OF MISSOURI, ON BEHALF OF THE NATIONAL GOVERNORS' ASSOCIATION**

Governor TEASDALE. Thank you, Mr. Chairman and gentlemen.

I appear on behalf of the National Governors' Association. And I speak as the Governor of Missouri. I will try to summarize a subject that is not conducive to summarization or generalization.

It is my judgment that the question of the public health dangers from hazardous waste is a national problem. I am sure you are hearing testimony from many regions of the Nation. Missouri, for example, in the center of our country, is one of the largest chemical-producing States in America.

For example, each year in our State approximately 1.2 to 1.4 million tons of hazardous wastes are produced. In 1977 when I was in my first year as Governor, the Department of Natural Resources and I put together a piece of legislation which, happily, passed that year. However, it did not become effective until July of this year.

In effect, without going into all the provisions in that bill, Missouri moved ahead in preventing future problems of hazardous wastes. We can now regulate hazardous waste and we can now conduct public hearings before permits are granted for hazardous waste sites.

I am here today to talk chiefly about a problem that is mushrooming in Missouri. In October 1979 about 60 known hazardous waste sites were presented to the State by the EPA. We divided up the list and we studied those sites.

In the last few months, we have received daily reports of newly discovered dump sites from a toll free telephone hotline which we have established in Missouri. These new sites are not located in any one region of our State but have been discovered through our State.

For example, I have personally been to Aurora in southwest Missouri where dioxin, one of the most deadly chemicals produce, has been found.

The other day I was in St. Louis County where hundreds of barrels of chemicals have been found which are feared to contain another potentially cancer-causing chemical known as PCB's. I think, Senator, you, from Jefferson County, know that area.

We also have a number of hazardous waste sites at Morse Mill in Jefferson County at which we fear cancer-causing chemicals have been dumped.

But yesterday, to go back to the freshest recollection I have, right next to a creek, in St. Louis County, there were dumped—and we still do not know precisely how many—but at least 100 or more barrels of cancer-causing materials. These materials could, if left unattended, could end up contaminating that creek. That creek feeds a stream, a stream, which feeds a river from which millions of Missourians in the St. Louis County area take their water supply.

That is just one case. We have 95 or 96 known hazardous waste sites right now in Missouri. Many of them, perhaps most of them, are likely to contain some harmful toxic chemical. The public health ramifications need not be dramatized here.

The point is that Missouri needs the money, provided by the hazardous waster superfund. Missouri needs the ability to quickly clean up these sites. We do not have that money.

I called a special session of the Missouri General Assembly. I made the judgment about 2 or 3 months ago, before it had even mushroomed to the great proportions I am now describing, I was in Macon, Mo., in northcentral and northeastern Missouri and the people there are up in arms about a proposed hazardous waste disposal site there for hazardous waste. Near Kirksville in north-central or northeast Missouri the people are up in arms about the same problem.

It is the same all over our State. The people are afraid. They are up in arms. Rightfully so.

The other day for dramatic effect, a number of people came to the rotunda in our capitol and gave me 50,000 new petitions, urging the banning of the burial of any toxic chemicals or hazardous wastes in any part of our State.

They presented the petitions in a baby's coffin, symbolizing the fear of people around our State.

I am not exaggerating. The problem has mushroomed. In my judgment public confidence does not exist in the Government's ability to prevent public health hazards caused by this situation.

So I wholeheartedly support the superfund concept. I was told that one site in Missouri, known to contain dangerous, hazardous wastes. It up would cost an astronomical amount to clean up. I believe it was \$100 million for one site.

In the bill I proposed in the special session I am asking for a tax on industry that would only produce \$2 million. That is just enough to take care of the sites we know pose the most serious problem.

I could go on and on, but I can tell you as Governor of a Midwestern State that the problem is real, dangerous, in the minds

of the public very frightening. In Missouri, with our hazardous waste law, we are ahead of many States. Our special session is right now working on legislation to provide more community input, and taxes on the industry. I think that will be a productive session.

But I am worried about the 95 sites and the sites that we are going to discover every day which contain poisonous dangerous chemicals. We do not have the means to clean them up. We want to clean them up. And the Superfund legislation is exactly what I think this Nation needs.

And I know, speaking again for our State, that we need it very much. We are again a major producer of chemicals in Missouri.

But speaking again for the National Governors' Conference, I want to also add my judgment that it certainly is a national problem. And with that, I say I appreciate the chance to be here to speak on behalf of the Governors, but in particular speaking as a Governor of a state in the Midwest that I think has a very severe problem and needs immediate attention.

[The prepared statement of the Honorable Joseph P. Teasdale follows:]

**STATEMENT OF JOSEPH P. TEASDALE, GOVERNOR OF THE STATE OF MISSOURI**

As Governor of Missouri and on behalf of the National Governors' Association, I welcome this opportunity to share with you Missouri's experience with hazardous wastes and our critical need for federal assistance in cleaning up abandoned and uncontrolled hazardous waste sites and spills. These hearings are timely in that Missouri is now in the midst of a Special Session of the legislature which I called to consider proposals to strengthen our Hazardous Waste Management Law. I think our law is a good one, but the people of Missouri are demanding an even better one. At the same time we have painfully discovered that the state's resources are inadequate to deal with the accumulated mistakes of the past.

Public awareness increased dramatically in Missouri during 1971 when waste oil containing dioxin was spread on the surface of three (3) show horse arenas and one farm for dust control. Numerous animal deaths and several cases of human illness triggered lengthy state and federal investigations which finally determined that the dioxin was a waste byproduct resulting from the manufacture of hexachlorophene.

A study in 1975 and 1976 concluded that approximately one million metric tons of hazardous waste were produced each year in Missouri. Current studies show that the total is between 1.2 and 1.4 million tons. In 1977 the Missouri General Assembly passed a Hazardous Waste Management Law modeled on the Resource Conservation and Recovery Act's concept of tracking hazardous waste from generation to disposal. The law became effective this year and we are now in the process of registering generators and transporters of hazardous waste. As in most states, the most difficult part of implementing our law will be finding suitable locations for hazardous waste disposal.

Presently, we are working on the management of existing and future wastes. Increased public awareness has led to almost daily reports of other abandoned or uncontrolled sites. (I would refer you to "Hazardous Waste Emergencies in Missouri: Report to the Governor September 1980" Appendices I and II.)

These sites were discovered prior to our beginning a formal search operation. The list of sites which we must check out has already exceeded our response capabilities. I am fearful that within the next few months we will discover thousands of tons of hazardous waste scattered throughout the Missouri countryside. These sites will require detailed laboratory analysis, processing and clean-up. The citizens of Missouri are afraid. Afraid of finding poisonous wastes such as dioxin and PCB's in their streams and water supplies.

A few examples of typical sites will give you an idea of the magnitude of our problem:

(1) In 1977 the Missouri Department of Natural Resources took action to close the Conservation Chemical Company site in Kansas City (No. 25 on list and map). Monitoring by the EPA indicates that organic chemical contamination of the groundwater has occurred. The clean-up cost could easily exceed two million dollars (\$2,000,000).

(2) In early fall of 1979 a disgruntled former employee of (Syntex) Corporation in Verona, Missouri, informed the EPA of the existence of a burial site in remote Barry County. This site supposedly contained waste material contaminated with dioxin. An investigation by the Missouri DNR and the EPA confirmed the presence of one hundred and fifty (150) drums of waste material contaminated with dioxin. Because of the highly toxic nature of dioxin, extreme safety measures had to be employed.

Approximately one million dollars (\$1,000,000) has already been spent in partially opening the site and verifying the presence of dioxin. The estimated cost of complete clean-up is an additional four million dollars (\$4,000,000).

(3) Potentially one of the most expensive clean-up jobs could be the Westlake Landfill in St. Louis County. Prior to 1974, this landfill accepted a large variety of sludge and liquid industrial waste. This old landfill is possibly contaminating the groundwater in the Missouri River floodplain. It is estimated that at least one hundred thousand dollars (\$100,000) is needed to conduct a thorough groundwater study to determine whether contamination has occurred or is occurring. The cost of cleaning up the site is unknown but estimates have ranged from ten to one hundred million dollars (\$10-\$100 million).

The number of spills reported in Missouri involving hazardous materials has risen from seventy-one (71) in 1971 to six hundred and forty-eight (648) during 1978. The most publicized incident occurred in January of 1979, when dioxin contaminated chemicals were spilled in Sturgeon. The clean-up is still not completed and residents of the area have filed lawsuits totaling eight hundred million dollars (\$800 million).

It is clear that a massive emergency response and clean-up effort is essential and the costs threaten to overwhelm the state's available resources. I am here to personally request a state-federal partnership to solve this problem. A problem which is clearly national in both its scope and consequences.

I support the basic concepts of S. 1480 including a "Superfund" supported by production fees levied on the basic petrochemical, raw materials and crude oils used in the manufacture of the most hazardous substances. I agree that the states should bear some financial responsibility for clean-up of spills and hazardous waste sites but I feel that the state's share should be no more than ten percent (10%).

We are moving to strengthen our response and clean-up efforts, but the examples which I cited above clearly indicate that the extensive nature of the problem exceeds our ability to deal with it exclusively our own. I also support the comprehensive approach of S. 1480 which includes the clean-up of waste sites and spills and provides compensation to proven victims for medical expenses, crop damage and other harms incurred.

The magnitude and pervasive nature of the problem fully justifies the four point one billion dollar (\$4.1 billion) fund proposed in S. 1480. Anything less will be insufficient to protect the public health. It is difficult to estimate the total cost but in Missouri alone, clean-up costs could be several hundred million dollars. Compensation for damage could require a similar amount.

I urge you to act favorably on S.1480 as soon as possible. The grave problems we now face are the results of thirty (30) years of national neglect. We can no longer plead ignorance of the massive public health consequences of this prolonged neglect.

As President Franklin Roosevelt said in another time of crisis, "Governments can err . . . but divine justice weighs the sins of the cold-blooded and the sins of the warm-hearted on different scales. Better the occasional faults of a government that lives in a spirit of charity than the consistent omissions of a government frozen in the ice of its own indifference."

**Senator BRADLEY.** Thank you very much, Governor. You heard the bell. In the Finance Committee that means time is up.

**Governor TEASDALE.** I didn't know what the bell meant.

**Senator BRADLEY.** So we would like to hold questions until we have had the testimony of the rest of the panel. So would you please remain at the table.

I would like to welcome to the committee Jerry Fitzgerald English, the commissioner of the Department of Environmental Protection in New Jersey; Alexander Grannis, vice chairman, Committee on Environment and Natural Resources and assemblyman from the State of New York; John Degnan, attorney general of New Jersey; and Ruth Kretschmer, supervisor, Du Page County, Ill.

I would like to welcome all of you to the committee. I think we can learn something from the experience each of you has had. Certainly in New Jersey we have had in operation a minifund—it is not a super fund—for several years.

Let's begin with the testimony of Ms. English. I understand that you have provided for the committee visual aids here, which I will pass down to my colleagues.

**PANEL: JERRY FITZGERALD ENGLISH, COMMISSIONER, NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION; ALEXANDER GRANNIS, VICE CHAIRMAN, COMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES AND ASSEMBLYMAN FROM THE STATE OF NEW YORK; RUTH KRETSCHMER, SUPERVISOR, DU PAGE COUNTY, ILL.; AND JOHN DEGNAN, ATTORNEY GENERAL OF NEW JERSEY, ON BEHALF OF THE NATIONAL ASSOCIATION OF ATTORNEYS GENERAL**

#### **STATEMENT OF JERRY FITZGERALD ENGLISH**

**Ms. ENGLISH.** Thank you, Mr. Chairman.

I would like to offer these photographs, which probably will tell the story as dramatically as any of the testimony you are going to hear from any of us today about those of us who are in fact administering a cleanup fund. And so, therefore, I thank the committee for this opportunity to address you.

New Jersey was the first State in the Union to pass a spill fund compensation fund. And so we have been operating under it and amending it since 1977.

In January of this year we realized we had to expand our mandate beyond the active, ongoing chemical discharges to cover cleaning up hazardous waste sites throughout the State that were orphaned or abandoned prior to the effective date of the act in 1977. This funding for the cleanup of abandoned sites is, however, limited or capped.

By our statute the Department may spend only \$3 million per year and \$1.5 million on any one dumpsite.

Significantly, the Department's brief experience in cleaning up abandoned chemical dumps demonstrates the vast magnitude of this problem. And while our recovery teams have expeditiously cleaned up approximately 18 sites throughout the State, removing between 3 and 4 million gallons of liquid chemicals and 43 million pounds of hazardous solids, major dumpsites remain essentially untouched because of our own act's arbitrary and willfully low spending cap.

Contrary to certain representations that I have heard repeatedly in the public debate on the Superfund, New Jersey's experience conclusively demonstrates that environmentally hazardous and not unique or uncommon dump sites will cost \$5 to \$10 million per site to clean up.

The infamous Elizabeth Fired Chemical Controlled situation which, as I am certain all of you will recall, took the opportunity to blow up on the eve of Earth Day, which did make a point, in any event our estimates at this point will be that that site will cost \$11 million and up by the time we finally plant a tree there.

I want to go on to talk to you, however, because I think you should hear the case histories of those other sites that I have yet to

deal with, and that obviously the funds that are going to take to clean them up will dwarf the present funding level of our State's fund or I submit of any State's fund.

First I want to talk to you about a place called Burnt Fly Bog, and that is located in Monmouth County in our State. That dumpsite has dispoiled at least 15 contiguous acres of once pristine wetlands. Four leaking lagoons on site are filled with waste solvents contaminated with PCB's, heavy metals, and other toxic organic chemicals.

So far more than 155 gallon drums containing unknown chemicals have been located at the bog dump.

The location is particularly noteworthy, but I submit will be more and more the type found and that the Governor has testified to because the sites at the head waters of a potable water aquifer capable of producing 1 trillion gallons of drinking water for residents of New Jersey. The cost of cleaning up this site is even beyond our present capability to estimate.

A second multimillion dollar cleanup is confronting my Department in Logan Township. And there are pictures that I have given to you of that site. The depths of that lagoon are anywhere from 50 to 100 feet. It contains upward of 15 million gallons of waste control contaminated, organic chemicals, heavy metals, PCB's; posing an imminent danger to irreplaceable national resources.

Both a major ground aquifer and a Delaware River estuary are threatened by a failure of the lagoon dike, which could break at any time.

And lastly, I bring to your attention, in a place close top the Pine Lands, and you also deal with that in terms of your appropriations, it is 21 miles of Monmouth and Ocean Counties, five of which of these sites are situated in the Township of Plumstead, and that will become another name famous in the literature of this unhappy legacy. It is a sleepy pastural looking place. And our investigation has determined that one company disposed of its chemical wastes at these dumps for over 27 years, between 1945 and 1971.

They dumped in streams and buried drums in farmlands chemicals already in the ground water used as the sole drinking source by this entire region of the State. They include tiulene, benzine, and methylene chloride; all highly toxic and potentially carcinogenic.

The costs again we have to estimate but at this point it is \$7 million and going up. It is almost impossible to talk about what the costs of decontaminating the ground water will be, if in fact it is as badly off as we think it is.

I have talked about three sites in New Jersey. I have 200 to go.

In summary then on this point, I think it clear that while we have the personnel in our Department, highly trained and professional, we have as a matter of fact I think some contractors from St. Louis, we have the expertise to do something about this. We are doing it.

But we understand the costs, and they are prohibitive we submit by any one subnational jurisdiction.

I understand, and if I might comment in advance, Mr. Chairman, about testimony that you have heard yesterday from distinguished representatives of the chemical industry from our State, who have

worked with our State by the way very cooperatively, and I am hopeful they will continue to assist the Federal Government in the way they have assisted us, but nonetheless you should be aware of the fact that the New Jersey spill compensation tax is not on feedstock.

It is on the 300 elements that have already been discussed by EPA, and that is the way they are set forth, as contrary to the method which was testified to.

I also understand there was some discussion about waste-end approaches to financing. And we submit that those again are not the proper way of doing it. Beginning at the beginning with the generators and following through with the manifest system is a system that we have tested, found to be capable of audit, and is, I submit to you, a Federal sample that you should use because we have used it and it works.

Moving on—

Senator BRADLEY. We have had two bells now.

Ms. ENGLISH. Two bells?

Senator BRADLEY. I am sure we will get time for questions to follow up and give you an opportunity to make all of the points, as well as you can submit a full statement for the record.

[The prepared statement of Jerry Fitzgerald English follows:]

## TRANSCRIPT OF ORAL TESTIMONY

COMMISSIONER JERRY FITZGERALD ENGLISH

SENATE FINANCE COMMITTEE HEARINGS ON S. 1480 "SUPERFUND"

SEPTEMBER 12, 1980

Mr. Chairman, as you know, my Department has been administering a State Spill Fund since April 1977. This was the first such state statute passed in the nation. In January of 1980 the Spill Compensation Act was amended to expand DEP's mandate beyond the active, ongoing chemical discharges to cover cleaning up hazardous waste sites throughout the State that were "orphaned" or "abandoned prior to the effective date of the Act in 1977. This funding for cleanup of abandoned sites is, however, limited or capped by our statute; the Department may only spend \$3 million in any given year and \$1.5 million on any one dump site per year.

Significantly, the Department's brief experience in cleaning up abandoned chemical dumps, demonstrates the vast magnitude of this problem. While the DEP's recovery teams have expeditiously cleaned up approximately 18 sites throughout the State removing between 3 and 4 million gallons of liquid chemicals and 43 million pounds of hazardous solids, major dump sites remain essentially untouched because of the Act's arbitrary and woefully low spending caps. Contrary to certain representations I have heard repeatedly in the public debate on the Superfund issue, New Jersey's experience conclusively demonstrates that environmentally hazardous (not unique or uncommon) dump sites will cost 5 to 10 million dollars to clean up. The infamous Chemical Control situation has been just about cleaned up at a cost to the Fund of over \$11 million. That is for 60,000 barrels on a 3 acre site. Let me share with you just three other, less infamous, examples from my State which exemplify these staggering cleanup costs that dwarf the State's present funding capabilities and demonstrate the need for a federal role for all states.

First, the dump situated in what is called the Burnt Fly Bog is so extensive that it has despoiled as least 15 contiguous acres of once pristine wetlands. Four leaking lagoons on site are filled with waste solvents contaminated with PCBs, heavy metals and other toxic organic materials. So far, more than 100 55-gallon drums containing unknown chemicals have been located at the Bog dump. The location of the Burnt Fly Bog site is particularly noteworthy since it sits at the headwaters of a potable water aquifer capable of producing a trillion gallons of drinking water for the residents of New Jersey. The cost of cleaning up the site is beyond our present capability to estimate.

A second multi-million dollar cleanup is confronting my Department in Logan Township, where a waste lagoon having depths estimated at anywhere from 50 to 100 feet, contains upwards of 15 million gallons of waste petroleum contaminated with organic chemicals, heavy metals and PCB's posing an imminent hazard to irreplaceable natural resources. Both a major groundwater aquifer and the Delaware River estuary are threatened by a failure of the lagoon dike, which could occur at any time.

Lastly, I will bring to your attention the seven separate dump sites recently discovered across 21 miles of Monmouth and Ocean counties, five of which are situated in the township of Plumstead--a sleepy pastoral looking place. Our investigation has determined that one company disposed of its chemical wastes at these dumps for over twenty-seven years, between 1945 and 1971. They dumped in streams or buried drums in farm lands. Chemicals already in the groundwater used as the sole drinking water source by this entire region of the State, include Toulene, Benzene and Methelyne Chloride, all highly toxic and potentially carcinogenic. Removal of the buried drums and contaminated soils at the several dump sites will undoubtedly exceed 7 million dollars before decontamination of groundwater is even begun on a large scale basis. The groundwater decontamination costs are impossible to estimate.

That's three--I've 200 to go.

In summary, then, on this point it is clear that while New Jersey DEP has the personnel, contractors and expertise to defuse these ticking time bombs, the prohibitive high cost of undertaking cleanup will prevent adequate protection of the public health and safety, unless Superfund with adequate funding levels is enacted this year. For your information, our experience indicates that the \$1 million per site cleanup estimate given to you by the Chemical Manufacturers Association is at best grossly unrealistic. The EPA estimate of a \$4 million average is closer to our own experience and causes us to strongly support the \$4.1 billion level of this fund as a sensible Congressional reaction to the realities of cleanup costs.

I understand there has been some testimony from Chris Hansen of the New Jersey Chemical Industry Council regarding our State tax system. You should be aware that our tax is not a feedstock tax, but a tax on some 300 specific substances classified as hazardous by EPA. (It is true that we have been discussing a waste-end tax, but only because the current scheme, suggested by the Industry, is generating a fraction of the revenue projected by Industry.) We have a manifest system which we are concerned might be disrupted by such a tax. We are certain the Federal manifest envisioned by RCRA would not be capable of meshing with such a tax for at least 5 years. It is unrealistic to base a tax on an untried administrative system. Indeed, such a tax may serve to provide an incentive to avoid the manifest program. This is one of our major concerns with this proposal.

I will note for the Committee that the New Jersey program also covers spills of oil and hazardous substances. We receive about 2000 reports of spills each year, 600 of which are handled directly by our 100-person spill response group.

New Jersey has testified on numerous occasions that Federal Superfund legislation must not pre-empt effective State programs. New Jersey's Spill Compensation and Control Act is an effective means of providing an effective source of funding for cleanup activities at contaminated sites. Federal Superfund must not disrupt State programs which are in place and provide a level of protection and a means of financing timely response to hazardous waste situations. Federal Superfund legislation must be designed to work with and supplement effective State programs at the same time that it provides relief to citizens of states which have no statutes on the books to deal with abandoned hazardous waste dumpsites.

Under our State program, I can commit substantial financial resources within hours of the discovery of a hazardous waste problem, thereby providing the maximum protection of public health and safety. Any preemption scheme which results in a less timely and efficient response does not have my support and certainly does not merit yours. I have not seen a preemption proposal which I can support. In sum, our State has not waited on this critical issue--we passed a statute, in concert with the chemical industry--we have been in the business of cleanup and know that it is a problem that expertise, technology and funding can solve.

REMARKS BY  
JERRY FITZGERALD ENGLISH, COMMISSIONER  
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BEFORE THE SENATE FINANCE COMMITTEE  
ON S. 1480, ENVIRONMENTAL EMERGENCY RESPONSE ACT  
"SUPERFUND"  
SEPTEMBER 12, 1980

Summary

- Congress must pass a Superfund law this session. The effort should not be allowed to fail in the search for a bill that will completely satisfy all competing interest groups. State funds are not adequate to the needs of dealing with abandoned hazardous waste sites and chemical dumping incidents. Furthermore, State legislatures are holding back on funding adequate State remedial laws because they are anticipating Superfund, and because they prefer not to burden taxpayers or local industry out of fear of harming the State's competitive economic position.
- A less than "ideal" Superfund law is better than none. It is preferable for Congress to pass such a law and amend it later than to let another session slip by.
- New Jersey supports S. 1480 as reported out by the Committee on Environment and Public Works. The dilution of victim compensation, while regrettable, is acceptable on the basis of the need to secure passage of a Superfund bill, and the need to emphasize availability of the Fund monies for the vital tasks of cleanup and remedial work that can prevent future damages.
- The New Jersey Department of Environmental Protection's experience in cleaning up hazardous waste disposal sites suggests very high costs in this endeavor. In a drum-dump type of situation, these can run \$50 to \$150 per 55-gallon drum, and up to \$650 per barrel if each must be analyzed for unknown contents. The cleanup of burial sites and contaminated aquifers is in its technological infancy, and costs of this type of work can only be estimated until Superfund is passed and the country begins accumulating experience dealing with hazardous waste sites. There is, however, hope that cleanup costs will come down as a market for cleanup expertise and technology develops - another good argument for passing Superfund now.
- The fee system that would be established under Section 5 of S. 1480 is a reasonable solution to the tricky problem of setting up a revenue mechanism for supporting the Superfund. It is not a perfect solution, but the search for an illusory absolute equity should not be allowed to thwart passage of Superfund this year.

- It is difficult to predict in advance what levels of fee collection, on which chemicals, will most accurately balance revenues collected from a particular industry segment with the claims against the Superfund attributable to that segment. The drafters of Section 5 have sensibly written into the bill feedback mechanisms that will result in adjustment of fees to reflect claims experience. Our experience in New Jersey, described in a separate submission to the Committee which details the mechanism of the tax that supports our Spill Compensation Fund, indicates that fee revenues are likely to differ from projections. It makes sense to resolve disputes over equity in the fee system after collection experience indicates what actual revenues will be.
- New Jersey supports the basic principle of the funding formula in S. 1480, which would place 7/8ths of the cost on the industries principally responsible for the creation of hazardous substances. The Department of Environmental Protection believes this is fair, because the generating industries were in the past essentially uncaring about the effects of their wastes. There is also Congressional precedent, in the Abandoned Mine Reclamation Fund set up under the Surface Mining Control and Reclamation Act of 1976 (P.L. 95-87).
- The Department of Environmental Protection opposes preemption of state laws and programs by a federal Superfund law. States that have existing spill and hazardous substance incident response programs will need some source of funds to maintain their independent response capabilities, even if most cleanup costs are eventually paid for by Superfund. This is especially important in the initial years after passage of Superfund. There will be inevitable "shakeout" problems in gearing up the federal program; it would be very unwise to preempt functioning state laws until Congress is certain that the replacement is functioning adequately. If Congress wishes to avoid double taxation on hazardous substances, one possible solution is a deduction from the federal Superfund tax for taxes paid to a State spill compensation fund.

REMARKS BY JERRY FITZGERALD ENGLISH, COMMISSIONER  
NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BEFORE THE  
SENATE FINANCE COMMITTEE ON S-1480  
ENVIRONMENTAL EMERGENCY RESPONSE ACT --"SUPERFUND"  
SEPTEMBER 12, 1980

Chairman Long, members of the Committee, my name is Jerry Fitzgerald English, and I am Commissioner of the New Jersey Department of Environmental Protection. I appreciate the opportunity to present the Department's views on one of the most important pieces of legislation before the Congress - the Superfund bill, which is before you in the form of Senate Bill 1480.

I don't know how much can be added to the voluminous testimony already accumulated by the Senate and House as to the need for Superfund. The problems and the need are well known, even if exact costs of dealing with chemical spills, hazardous waste disposal sites are not. What I want to impress upon you first is the sense of urgency we feel in the States as the election season draws near and the clock starts to run out on the 96th Congress. We have seen this legislation, or its forerunners, die in every Congress since 1975. We don't want to see it die again. We need the money for cleanup, perhaps more badly than ever before. It isn't necessarily that there are more dumps, more leaking impoundments, more buried drums than ever before. Rather, our instruments are more sensitive, our analyses more sophisticated, and so we are now able to detect pollution in places where it would have gone undetected previously. Having been brought to an awareness of the dumping problem by incidents like Love Canal, Chemical Control, the Valley of the Drums and countless smaller cases, we have become much more aggressive in our efforts to locate and appraise the dangers posed by neglected hazardous waste disposal sites. And the public, which perceives itself as practically besieged by an invisible host of subtle poisons, silently working their way into the water supply and the environment, is increasingly adamant that government do something about the situation. But state legislatures, under pressure to respond to this demand, face not only the absolute constraints of tight budgets in a time of economic trouble - they also must consider the adverse effects on the State's competitive economic position should they attempt to "go it alone" on funding hazardous waste cleanups, which were created through interstate commerce in many instances.

The very pendency of the Superfund legislation itself acts as a retardant on independent State action. "Why," asks the prudent state legislator, "should we tax our own citizens or industries, perhaps undercutting our economic position, if Congress is going to take care of the whole problem, and probably preempt

the States as well?" The result, predictably, is stopgap legislation, partial measures, perhaps no action at all. The nation does not need another two years of this. And, I say that as the representative of a State which probably has the most comprehensive program for responding to oil spills, chemical spills and discharges from hazardous waste and toxic chemical disposal sites. Under our Spill Compensation and Control Act, which has been in effect since April of 1977, we have been responding to and cleaning up oil spills and chemical spill incidents for over three years. Last year Governor Byrne and the NJ Legislature amended that act giving the Department of Environmental Protection enhanced powers to intervene at dangerous sites, such as Chemical Control, that represent a significant potential for serious contamination of the environment. We were also given the authority to use the State Spill Compensation Fund for remedial work or cleanup at abandoned hazardous waste disposal sites, which is to say, places where hazardous substances were disposed of before April 1977, the effective date of the original Spill statute. In this, however, the legislature elected to tread carefully. We are limited to spending no more than \$3 million per year on these so-called "ancient" sites, no more than \$1.5 million per year per site. I have to tell you that, as we sit here today, we have already committed virtually every penny of the \$3 million available to us for FY 1981, and there are still other sites waiting in line. With regard to sites of more recent vintage - like Chemical Control - the law establishes no similar fixed limits. However, the cleanup at Chemical Control, which has already cost the State Spill Compensation Fund almost \$10 million before the site is finally decontaminated. Between that and other incur costs roughly equivalent to the present balance in the Fund, damage claims - to say nothing of the effect of unanticipated spill incidents - means that we are rapidly approaching a situation which, under our law, will require escalation of the tax on oil and chemicals that supports the Spill Compensation Fund, in order to prevent the Fund's depletion.

One of the best aspects of Superfund is that it spreads the revenue base to a great number of industries and puts no one state at a competitive disadvantage. Furthermore, it will provide for the establishment of national priorities in the cleanup of sites and allow monies to be channeled to where they are needed most, first, irrespective of state boundaries.

So I urge you to pass a Superfund law this session, so that all the work that has gone into the bills will not be lost. We may not get a perfect bill, one that will resolve all the multitude of issues that swirl around any piece of legislation as complicated as this. Our experience with our own Spill legislation suggests

that any law you pass will need correction and fine-tuning as problems develop and are perceived. But Congress can take care of them in future sessions; it is vital to get law on the books now.

My meaning will, I think, become more clear in the remainder of my remarks, in which I will concentrate on the two matters in which I understand this committee has the most interest: the revenue-raising system and the preemption of State laws and programs.

We support S-1480 as reported out by the Committee on Environment and Public Works. We recognize it as the product of perhaps inevitable compromises, for the bill started its legislative history with a promise of full and complete compensation for every person damaged or injured by a release of hazardous substances, and it is now something less than that. The justification for these compromises is perfectly clear: if the Superfund is saddled with too many compensation claims on behalf of people who have sustained damage to their health or property, there may not be sufficient money to pay for the cleanup and other remedial efforts that will prevent future harm. The Committee should be clear on the meaning of these compromises. Every category of injury left outside the coverage of the Superfund scheme represents victims who are left to their remedies against the persons responsible for their exposure to harmful substances. Those remedies are uncertain and elusive at best, even with the plaintiff-assisting presumptions and evidentiary rules set out in Section 4(c) of S-1480. Those provisions will be of little help where the liable party cannot be identified or has gone out of business.

The dilution of victim-compensation provisions in this legislation can be accepted on the basis of the need to secure passage of the bill, in order to provide funds for necessary cleanup work. But the issue of victim compensation will remain for future Congresses.

The bill represents one aspect, but perhaps the most critical, of a question as old as the industrial revolution, the great unspoken issue of any ongoing national debate over the risks and benefits of industries that generate hazardous substances, in particular, the synthetic chemicals industry: is it fair, is it just, that some individuals bear the burden of injuries caused by industries whose benefits are generally shared? Do the benefits generated by those industries justify the burdens they place on others? Increasingly, with respect to exposure to harmful chemicals, the answer we hear from the public is, "not me. Don't expect me to tolerate noxious fumes, carcinogens in my drinking water, strange chemicals in my food." The questions of the proper allocation of risks and benefits associated with chemical wastes and chemical products are frustrating ones. The numbers of chemicals are large; there are still many things about chemical exposure that are not well understood by science; our economic system has become heavily dependent on synthetics; and technology is ever-changing. One hardly knows at times whether to sink into despair or to be optimistic.

On the one hand, we have glimpsed the beginnings of what could be a truly frightening situation: the pervasive destruction of groundwater supplies by the myriad of abandoned dump sites dotting the landscape. On the other hand, there is cause for hope: recently, for example, there has come news of a method for destroying PCB's, previously thought to be virtually indestructible except by expensive high-temperature incineration.

The uncertainty factor is one of the reasons why the passage of Superfund legislation should not await the development of better estimates of the cost of cleaning up the nation's abandoned waste sites. Experience suggests the information can only be developed by actually doing cleanup work. Our experience at Chemical Control and other sites indicates that in a drum-dump type of situation cleanup costs run between \$50 and \$150 per barrel - and up to \$650 for barrels containing unknown materials which must be analyzed for their contents. But we would not have known this without actually getting into the cleanup business and developing the background in it. We still do not know what kinds of costs we will face in undertaking remedial action or cleanup at sites where wastes have been buried or allowed to percolate deep into the ground. The technology, the training of personnel, and the development of equipment and facilities for defusing these toxic timebombs are still in their infancy - yet another reason for passing a Superfund bill: we have to start funnelling money into site cleanup and remedial work in order to attract private investment into research and development necessary in the long run to bring the cost of cleanup down. You will recall, for example, the Fred Hart Associates study commissioned by EPA last year which concluded it might take thirty to fifty billion dollars to render permanently safe the then-identified toxic dumping sites. That is a formidable price tag, to say the least, even if spread out over a number of years. We can but hope that the cost will come down as we better learn how to deal with these sites.

In a similar vein, I would like to suggest that passage of S-1480 not be unduly delayed while you attempt to smooth out all the kinks in the fee mechanisms. From our reading of the present draft, the authors of Section 5 have taken extraordinary pains to try to develop a fee system that will fairly distribute the costs of the Superfund scheme and yet be reasonably easy to administer. That system would impose a fee on the suppliers of 46 basic chemical raw materials from which most other chemicals, including those designated as toxic or hazardous, are made. By placing the fee at the head end of the manufacturing process, the drafters hope to spread the cost most evenly among those who manufacture and use chemical products and to minimize anti-competitive effects. It is not a perfect system. One of the most cogent criticisms we have heard levelled at it, for example, is that it allows to go completely untaxed certain industries that generate hazardous wastes in the course of processing initially innocuous materials - principally the minerals extracting and processing industries, such as coal and

steel. My response to such criticisms is to suggest the addition of a fee on hazardous waste, but that Congress should not lose so much time hammering it out as miss passing Superfund this year.

The drafters themselves are obviously aware that the fee mechanism will need refinement, and to that end they have designed in not one but several feedback mechanisms intended to bring fee collections into rough balance with claims experience. Under paragraph 5(c)(2)(A) the Secretary of the Treasury is authorized to modify the fee schedule annually, and under subsection 5(e) he is commanded to make those adjustments so as to achieve taxation proportional to claims experience both as among the three classes of materials taxed (primarily petrochemicals, inorganic raw materials, and crude oil) and among each of the individual materials taxed. There are provisions for reducing the fee or dropping it altogether on substances that do not figure in compensable incidents [Sec. 5(e)(2)(A) and (B)], and for excluding from taxation industrial categories whose products or wastes do not figure in hazardous substance releases [5(e)(2)(C)]. There are incentives for recycling, reclamation and pollution control [5(f)(1)2]. And, finally, EPA and the Secretary of the Treasury are directed to report back to Congress after four years with relevant statistical information and recommendations for making the fee system even more equitable.

This strikes me as an eminently reasonable approach, especially since there are likely to be a few unexpected developments when the federal government starts collecting the fees. Let me give you an illustration drawn from our experience under New Jersey's Spill Compensation and Control Act.

We have in New Jersey a tax or fee on petroleum products and other hazardous substances, which supports the Spill Compensation Fund. The Fund is my Department's source of money when we are required under the law to clean up spills of oil, hazardous chemicals or wastes, and, to the extent of the \$3 million per year authorized by the legislature, abandoned hazardous waste disposal sites. The Fund also compensates third party claimants for damages sustained as a result of oil or hazardous substance discharges.

The Spill Compensation and Control Tax is described in considerable detail in a briefing document prepared by my staff which I am submitting to the Committee separately. These are the essentials:

As it initially became effective on April 1, 1977, the Spill Tax was levied at the rate of one cent per barrel (or barrel equivalent, for non-liquids) on transfers of "hazardous substances" between so-called "major facilities" and/or vessels. "Hazardous substances" as defined in our law included petroleum and petroleum products, as well as the almost 300 chemicals on the list of hazardous substances designated by EPA under Section 311 of the Clean Water Act. The legislature made a deliberate decision to limit the class of taxpaying facilities to only the more substantial refineries and chemical plants; "major facility" was defined in terms of storage capacity in excess of 400,000 gallons.

In this form, the tax brought in revenues of about \$6.4 million per year. It soon became apparent that there was a basic inequity in the way the Spill Act functioned, however, with respect to the relationship between taxpayers and claims. Most of the revenue, an estimated 90 percent, was being raised from the transfer of oil. Most of the payouts from the Fund, on the other hand, were on account of spills of toxic chemicals. The oil industry complained that this was unfair, and the leaders of the chemical industry in New Jersey pretty much had to agree with them. In 1979, in response to widespread public concern about chemical dumping problems such as those at Love Canal and at Chemical Control in Elizabeth, NJ, legislation was introduced to amend the Spill Compensation and Control Act so as to allow the Department of Environmental Protection increased flexibility in responding to such incidents. This bill was also used as the vehicle for amendments intended to redress the perceived imbalance between the oil and chemical industries' respective contributions. The "major facility" threshold for chemical facilities was reduced to 50,000 gallons storage capacity; for chemicals, a taxable transfer became any movement into or out of a major facility, whether or not another major facility or a vessel was involved; and the rate of tax was changed to the greater of one cent per barrel or 0.4 percent of fair market value.

On the basis of the sketchy data available, our Treasury Department estimated these changes would bring in about \$6 million a year in addition to the half million or so contributed by the chemical industry under the original tax formula. Chemical industry leaders, on the other hand, projected tax revenues far in excess of that amount, and were so concerned about it that they successfully lobbied for an amendment to the bill that placed a cap of \$7 million per year on the amount of tax revenue that can be collected on account of hazardous chemical transfers. The amended tax scheme went into effect on April 1, 1980, and as it turns out, initial returns from April, May and June indicate the new formula is bringing in only about half of what was anticipated by us, or somewhere between \$3 million and \$4 million per year. Nor was that the only unexpected fallout from the Spill Act overhaul. The amendments also expanded the definition of "hazardous substances" so as to include EPA's list of toxic pollutants under Section 307 of the Clean Water Act. Among the substances on that list were several precious or semi-precious metals, including silver and copper. It soon developed that this would cause the Spill Tax to fall with unanticipated, and unintended, harshness on certain industries engaged in reclaiming these metals from wastes. A further amendment of the Spill Act, signed into law last month, was needed to prevent that unwanted result.

The point of this discourse is simply to suggest that in establishing a novel fee system like the one proposed in S-1480 the Congress is likely to create some unforeseen and unwanted consequences, but these can be corrected by subsequent legislation. The main thing is to get a bill enacted; it can be modified later in the light of experience. Revenue projections are likely to be off; the figures obtained from actual collections are far more reliable.

Finally, to those who would like to see this legislation bog down in an extended argument over what is and is not a "fair" system of taxation to support the Superfund, let me reply that no mathematically fair system (even if it could be administered) is really possible. There is an argument which holds that it is unfair to tax an industry, or some segment of industry, in order to pay for spills or environmental damage caused by the actions of others. But taken to its logical conclusion, this would mean not enacting a Superfund law at all, since every discharger or releaser of a hazardous substance or waste should be responsible for the costs and damages created. The reality is that the liable party cannot always be found, or made to pay - hence the need for Superfund, which is in the nature of an insurance program. It bears remembering that no tax and no insurance scheme is ever really fair, in the sense that everyone gets out of it in exact proportion to what they put in. Most taxes are "unfair" in that sense: childless people pay taxes to support schools; gambling taxes support senior citizens; and revenues from alcohol and tobacco are used for just about anything. Similarly, insurance schemes of necessity involve arbitrary classifications that are "unfair" to some: drivers in big cities pay high car insurance rates even though individually they may be good drivers. What is to be avoided is gross inequity - a situation where grossly disparate taxes are levied on taxpayers whom most people would judge to be in similar circumstances - but only that; of necessity, tax systems contain somewhat arbitrary classifications, and you will have done your job if you set up a fee system that is roughly equitable. The feedback mechanism in S-1480 afford a good hope of achieving that.

There is, however, one basic philosophic argument about the Superfund fee system which I would like to address before moving on to the subject of preemption. That is the question of whether it is fair to tax the industrial operators of today to pay for cleaning up disposal sites that were created in years past. It is our position that it is. For one thing, the industries that will be called upon to pay the Superfund fees are dominated by corporations that were not created yesterday. We have found their names on drums of chemicals in burial sites 15, 20 and 30 years old: and if they were not the companies that actually buried the materials, often as not, they were the ones that made them. We may not be able

to hold them individually liable in legal actions, because of the passage of time, because the law may have sanctioned improper disposal, or because the connection between manufacturer and disposer was simply too tenuous. But through the Superfund fee the chemical industry can be held collectively responsible, as it should be. Society as a whole may have behaved irresponsibly and without foresight in its waste disposal practices, but with respect to hazardous waste and in particular, toxic chemicals, if there was anyone who should have warned us it was the manufacturing chemists. They, after all, worked with these materials day after day; knew, even years ago, that many were at least acutely toxic and should not be part of anyone's water supply. An entire industry chose to look the other way.

An important principle is at stake here. Industries must be made to understand that just because a harmful activity is not prescribed by explicit statutes they are somehow justified in proceeding with that activity and will be perpetually insulated from blame or cost. Actually, the common law has long served to make just this point, as one can readily observe by tracing the development of products liability case law and statutes. But the intractable aspects of the toxic and hazardous waste problem - the massive damages, the long latency period of groundwater pollution and disease emergency, the ubiquitousness of chemicals in our economy - make it ill-suited to resolution by the processes of the common law. So we look to Congress.

There is legislative precedent for taxing the chemical industry to pay for the disposal "sins of the past." In the Surface Mining Control and Reclamation Act of 1976 (PL 95-87) Congress placed a tax on strip-mined coal to pay for the restoration of abandoned mining areas. In the legislative history of the act it is stated that "The burden of paying for reclamation is rightfully assessed against the coal industry. The bill (H.R. 2) adopts the principle that the coal industry, and by extension the consumers of coal, must bear the responsibility for supporting special rehabilitation programs to recover and reclaim areas which have been severely impacted in the past by coal mining operations."

I turn, at last, to the subject of preemption of State laws and programs. This is a matter that has deeply concerned us since the introduction of the earliest "Superfund" bills. I am aware that the present draft of S-1480 is explicitly non-preemptive, but the amendments placed on the table by Senator Gravel and Senator Magnuson, intended to add oil spill coverage to S-1480, do contain preemption language.

Preemption by a federal Superfund law has always caused us severe misgivings. We opposed it three years ago and we oppose it now. My Department presently includes a staff who have responsibility for managing a spill and hazardous waste site cleanup program that will spend anywhere from \$10 million to \$20 million in the coming year.

I'm very proud of my staff, and the program we have built in New Jersey has been instrumental in preventing disasters, large and small. It fills a critical need. Congress should not dismantle a working, effective program so vital to the protection of public health unless it is sure of replacing it with something better.

Of course, it does not appear - so far at least - that it is the intention in any of the Superfund bills (S-1480, and HR 85 and HR 702) to force the States completely out of the response and cleanup business. S-1480, in particular, contemplates delegation of administration of certain functions to States with "approved programs." The mechanisms for accomplishing this would be contracts with states in conformity with the revised National Contingency Plan for the Removal of Oil and

Hazardous Substances. This assumes some level of state funding to establish the capability to execute the contract and a state's ability to meet the 10% matching requirement for cleanup costs.

In any discussion of preemption it is important to point out that the language is critical; some ways of drafting it are much worse than others. The formula used in Sen. Magnuson's amendment, which is virtually the same as that in the House oil-spill bill, H.R. 85, prohibits the creation of duplicative funds "the purpose of which is to pay compensation for any loss which may be compensated under this title." The effect of this kind of language we have termed "swiss-cheese preemption," because it would shoot holes in State laws only to the extent incidents or damages are compensable under the federal law, leaving the rest intact. For example, under Sen. Magnuson's amendment as well as H.R. 85 the kinds of discharges covered are oil spills into surface waters. New Jersey's law has broader geographic coverage; it includes spills into groundwater, and so to that extent it would remain effective even after enactment of the federal law.

Even that kind of preemption troubles us, mainly because we foresee difficulties of administration and coordination arising over "grey-area" questions concerning what things are, or are not, covered under the federal law. However, the language in Senator Gravel's amendment threatens far worse: by precluding States from collecting "fees upon oil for purposes of financing activities related to the cleanup of discharges and the payment of damages caused by discharges" [emphasis added] the Gravel amendment could prevent the States from filling gaps beyond the coverage of the federal law. Above all, Congress should not take away protections already built into state laws and replace them with nothing!

We are talking so far about preemption provisions in oil-spill liability proposals, but the arguments would be much the same concerning hazardous substances.

In previous testimony before Congressional committees New Jersey has advanced the proposition of "preemption by atrophy rather than operation of law." That is, given the establishment of an effective, well-functioning Superfund under federal auspices the individual states can be expected to reduce or eliminate their own state fund laws or to modify them so as to mesh with the federal system. The state funds would tend to be utilized only when actually needed. This makes good sense: why should any state want to impose economic burdens on its own taxpayers if federal compensation schemes are sufficient? If, on the other hand, they are not, or if a state wants to give greater protection to its citizens, should it be denied that right?

The "preemption by atrophy" concept also raises a related issue regarding preemption: phasing. If Congress' ultimate judgment is to preempt the States in some fashion, you must take care not to

do it before the federal program is well established and operating smoothly. As with any new program, there is bound to be a shake-out period while the agencies charged with administering the law write regulations, staff up and develop procedures. Unexpected problems in the law will generally emerge within the first year after it takes effect, and these may call for legislative modification. Nor can you dismiss the possibility of a legal challenge to the law or to regulations adopted under the law that would bring the program to a screeching halt. Virtually every major regulation adopted by the Environmental Protection Agency has been the subject of a lawsuit; there is no reason to suppose the Superfund law would be different. The very same interest groups who urge you now to preempt the States will be the ones suing tomorrow. To preempt the States until all such matters are settled risks stripping people now adequately protected by state laws of those protections before you can be sure of an adequate substitute. At the very least, then, the effective date of any preemption provision should be deferred until two or three years after enactment.

There is, of course, merit in some of the arguments advanced by the proponents of preemption. One of the best is that it is unfair for an industry to be taxed twice to pay for cleaning up spills or hazardous substance sites, once by federal government and once by the state. I believe this could be simply taken care of by allowing a deduction on the federal tax for spill compensation-type taxes paid to a state. The IRS already does it with the income tax, and it should be simple to administer. If there is concern that the states would try to siphon off too much revenue that would otherwise go to the Superfund, then a limit can be imposed on state collections. But you don't need to prohibit state compensation funds entirely.

This concludes my prepared testimony. I thank you for the opportunity to present our views, and welcome your questions.

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NEW JERSEY'S SPILL COMPENSATION  
AND CONTROL TAX

Prepared By Staff of the  
N.J. Dept. of Environmental  
Protection  
Revised to September 5, 1980

New Jersey's Spill Compensation and Control Act, originally enacted<sup>1</sup> in 1977, is a comprehensive statute covering discharges of oil and chemicals into surface and ground waters, and onto land. With the passage of a recent amendment<sup>2</sup> signed into law on January 23, 1980, the Spill Act underwent a significant expansion of coverage to include abandoned hazardous waste disposal sites and certain other "ancient" source discharges that pre-dated the original act; also, the Department of Environmental Protection's powers to act against "threatened" discharges - e.g., abandoned drums - were clarified. The Spill Act imposes strict liability upon dischargers, not only for cleanup and removal costs, but also for third party economic damages. The New Jersey Spill Compensation Fund, established under the Act, is available to pay for cleanup costs incurred by the Department of Environmental Protection (DEP) and to compensate third party economic damages resulting from discharges, in cases where the liable dischargers cannot be identified or made to pay.<sup>3</sup>

The major revenue source for the New Jersey Spill Compensation Fund ("the Fund") is the Spill Compensation and Control Tax ("Spill Tax") authorized by Section 9 of the Spill Act, N.J.S.A. 58:10-23.11h. In the original enactment this tax was levied at the rate of 1¢ per barrel (or barrel equivalent) of "hazardous substances" transferred to a so-called "major facility" and/or a vessel.<sup>4</sup> "Hazardous substances" refers to a list of substances designated by DEP, after public hearing; it includes petroleum and petroleum products, as well as a number of chemical elements and compounds (currently numbering about 400), and is supposed to be "consistent to the maximum extent possible" with the list of hazardous substances adopted by U.S. EPA under Section 311 of the Clean Water Act.<sup>5</sup>

Under the original law, a "transfer" was defined as onloading or offloading:

- (a) between major facilities and vessels, or vice versa; or
- (b) from vessel to vessel; or
- (c) from major facility to major facility.<sup>6</sup>

Tax at the rate of 1¢ per barrel was levied on all such transfers except where a substance had been previously taxed. Thus, if crude oil transferred from a tanker to a refinery had incurred Spill Tax, tax would not be levied on a barrel of gasoline made from that crude when transferred from the refinery to another "major facility". Transfers to non-major facilities were not taxed at all.

A "major facility" was defined in the original law as virtually any facility used to refine, produce, store, hold, transfer, process or transport hazardous substances, and having total storage capacity of 400,000 gallons or more. The legislature's purposes in limiting the class of taxpaying facilities to relatively large ones were both political and pragmatic: the legislature wanted to avoid subjecting small businesses, especially gas stations, to the burdens that come with "major facility" status; and for ease of administration wanted to limit the number of taxpaying facilities to a relative few. Economically, this was regarded as an equitable arrangement since the major facilities would pass the impact of the tax along to their customers, diffusing the burden throughout the State's economy. With respect to oil, the theory pretty well accorded with reality. Since New Jersey has no domestic sources of petroleum, all of its oil arrives from out-of-state, and most of it enters through a major facility.

As of January 1980, about 100 major facilities had registered with the State Division of Taxation, the agency responsible for administering the taxation provisions of the Spill Act.<sup>10</sup> Registration with the Division is required within 20 days after the first taxable transfer involving a major facility, and it remains effective thereafter.<sup>11</sup> Tax returns must be filed monthly except where the Director of the Division allows quarterly filing (allowed in the case of smaller-volume facilities). Although about 100 facilities had registered, only about 70 were regular taxpayers; the rest reported infrequent taxable transfers.

Prior to April 1, 1980, when the revised taxation provisions of the amended Spill Act took effect, collections of the Spill Tax were running at about \$6.4 million per year. In the first 27 months of the Spill Act's operation, approximately \$13.9 million were collected, representing a taxable transfer of 139 million barrels of hazardous substances.

Fairly early in the Act's operation a disparity between the sources of the Fund's revenues and the objects of its disbursements came to be perceived by the major taxpayers, the oil companies. It appeared that about 90% of the taxes collected were derived from petroleum transfers; only about 10% came from levies on other hazardous substances, i.e., chemicals. On the other hand, better than 90% of the Fund's disbursements (\$1.9 million<sup>12</sup> for cleanup costs through June 30, 1979) were on account of spills of chemicals.

It is not possible to pin down the accuracy of the estimated 90-10 split on the Fund's revenue base. Until the recent amendment the Division of Taxation's return forms did not distinguish between "petroleum" and "other hazardous substances". The estimate was arrived at by looking at the product mix of taxpaying facilities and determining what percentages were devoted to petroleum and which to chemicals. But while the exactness of the 90-10 estimate can be questioned, the general situation that it represents has not been, either by the oil industry or the chemical industry in New Jersey.

This perceived inequity resulted in the 1979 amendment which, among other things, made major changes in the Spill Act's taxation provisions. These are discussed shortly. There had been one earlier change in the Spill Act since its original enactment in 1977: an amendment passed at the request of public storage

terminal operators shifting the burden for paying taxes from the terminal operator to the "owner" of the hazardous substances transferred to the terminal.<sup>13</sup> The main reason asserted by the terminal operators for seeking the change was not to relieve themselves of a tax burden, since they could pass that on to the customer in any case. It was mainly to avoid the paperwork burden of keeping records, collecting the tax and filing the returns. Storage terminals operators rent tank space. They do not necessarily keep track of what the customer puts in and takes out of a tank; they do not need to. Having to pay the tax would have required them to start keeping records of transfers as well as of tank usage.

The major purpose of the recent changes in Section 9 of the Spill Act was to increase the share of tax being paid by chemical companies, to put them on something like parity with the oil company taxpayers. This was deemed especially critical by the oil companies in light of the legislature's intention to make up to \$3 million per year available for cleaning up abandoned hazardous waste sites and other "ancient source" problems - situations perceived as the chemical industry's legacy, not oil's.<sup>14</sup>

Expansion of the revenue base for the non-petroleum component of the Spill Tax was accomplished by:

(a) Expansion of the taxpaying class by reducing the "major facility" threshold for chemical facilities from 400,000 gallons storage capacity to 50,000 gallons.<sup>15</sup>

(b) Expansion of the category of taxable transfers by defining them, in the case of hazardous substances other than petroleum, as any transfer into or out of a major facility, not just transfers to vessels or other major facilities.<sup>16</sup> (However, the bar against taxing the same barrel twice remains.)

(c) A change in the tax rate applied to transfers of non-petroleum chemicals. The new rate is the greater of 1¢ per barrel or 0.4% of fair market value (FMV).<sup>17</sup>

Finally, the amendment effectively expanded the category of taxable hazardous substances, since DEP is now required to include on its list of hazardous substances not only the EPA Section 311 list<sup>18</sup> but also the list of toxic pollutants under Section 307 of the Clean Water Act.

Thus the Spill Compensation and Control Tax is now really two taxes: one on transfers of petroleum and another on non-petroleum hazardous substances (chemicals). Both feed a unitary Spill Compensation Fund; however, the amended Spill Act includes feedback mechanisms designed to keep the collections from oil and chemicals roughly proportional to the claims experience attributable to each industry. One such mechanism provides that in the event of a major oil spill that results in claims exceeding the balance of the Fund, the oil tax can be raised to as much as 4¢ per barrel. A similar escalator<sup>19</sup> applies in the event of a major chemical incident or series of incidents. Finally, if the Fund's claims

experience over the long run indicates claims on account of chemical incidents exceed 70% of total claims, then the chemical tax can be increased until the imbalance between oil and chemical revenue flow is redressed.<sup>20</sup>

It is not yet fully known how much additional revenue the revised tax on chemicals will produce. The amended tax on transfers of non-petroleum hazardous substances took effect on April 1, 1980. During development of the recent amendments the Treasury Department estimated that about \$6 million per year in additional revenues would become collectible from the chemical industry. Industry representatives claimed the new provisions would bring in far more than that, and they lobbied successfully for the insertion of a \$7 million per year limitation on the amount of revenue that can be collected from the chemical component of the Spill Tax. On the basis of early returns (April, May and June of 1980) it appears that additional revenues on account of the chemical component of the Spill Tax are running below projections. Figures for those months imply an annual collection rate of about an additional \$3.4 million on top of the underlying \$6.4 million per year that was being brought in under the old system. This would imply tax revenues of about \$9.8 million for FY 1981 if present collection rates continue through June 1981.

Another expected development that has so far failed to materialize is the substantial expansion of the taxpaying class. The organized chemical groups active in the state wanted the chemical tax to be applicable to all transfers of hazardous substances, not just those involving "major facilities". The Treasury department did not favor this because it would have created too many taxpayers to be policed. However, the change from a 400,000 gallon to a 50,000 gallon threshold was expected to expand the class of regular taxpayers far beyond the previous 70 or so. 50,000 gallons is a volume considerably smaller than a squash court, and a recent study by the N.J. Department of Labor and Industry estimated the number of significant chemical manufacturing plants in New Jersey at about 900. However, only about two dozen additional taxpayers have registered since the first of April.

It is possible that the unexpectedly low additional revenues stem from ignorance of the tax on the part of some facility operators. The Division of Taxation is planning an effort to seek out and notify operators who should be paying the tax.

The change in the chemical tax raises some questions about valuation in determining "fair market value". If a taxable transfer involves a sale, there is no problem; the statute equates FMV to invoice price plus transportation cost.<sup>21</sup> If no sale occurs at the point of transfer (as would be the case if a company-owned facility transfers to another owned by the same firm), then FMV must be computed by looking to prevailing commodity prices. This could be a source of disputes.

A further amendment to the Spill Act was signed into law in August. Its intent was to give relief to recyclers of certain precious metals, including silver and copper, on whom the amended Spill Tax would have fallen with unexpected harshness. Instead of being taxed on the high fair market value of the precious metals, facilities handling such materials will be taxed at the basic rate of 1¢ per barrel transferred, as under the original act.<sup>22</sup>

To summarize the collection experience under New Jersey's Spill Compensation and Control Act in the first three years and three months of operation (April 1, 1977 through June 30, 1980), the figures are as follows: Collections of Spill Tax totalled about \$20.75 million. Added to this as revenue to the Spill Compensation Fund were approximately \$95 thousand in penalties and interest, and \$3 million earned on investment of principal in the fund. This is balanced against expenditures from the fund totalling about \$9.08 million, of which \$6.73 million represents direct costs of cleanup efforts undertaken by the Department of Environmental Protection, \$1.69 million represents general costs of administration by DEP, the Division of Taxation and the Administrator of the Spill Compensation Fund. The remainder went for miscellaneous expenses, including research grants authorized under the Spill Act.<sup>23</sup> The balance in the Fund as of June 30, 1980, stood at \$14.76 million.

NOTES

1. L. 1976, c. 141, N.J.S.A. 58:10-23.11 et seq. (1977 ed.)
2. L. 1979, c. 346
3. See N.J.S.A. 58:10-23.11g (1979 ed.)
4. L. 1976, c. 141, Sec. 9(b), N.J.S.A. 58:10-23.11h(b) (1979 ed.)
5. L. 1976, c. 141, Sec. 3(j), N.J.S.A. 58:10-23.11b(j) (1979 ed.) The new amendment requires DEP's list not only to be consistent with but also to include both the EPA Section 311 list and the list of toxic pollutants under Section 307 of the Clean Water Act. L. 1979, c. 346, Sec. 1, N.J.S.A. 58:10-23.11b(k) (1980 ed.)
6. L. 1976, c. 141, Sec. 3(r), N.J.S.A. 58:10-23.11(r) (1979 ed.)
7. N.J.S.A. 58:10-23.11h(a) and (b) (1979 ed.)
8. N.J.S.A. 58:10-23.11b(k) (1979 ed.)
9. 400,000 gallons is the equivalent of the volume of a cube approximately 38 feet on a side - about 3.5 times the volume of a standard handball or racquetball court. Few gasoline stations have a storage capacity greater than 50,000 gallons.
10. Administration of the Spill Compensation and Control Act is split between three agencies of State government. DEP administers the environmental protection aspects, including the designation of "hazardous substances," enforcement of the prohibition against discharges, and the cleanup and removal of spilled hazardous substances. The Division of Taxation administers the Spill Tax. Responsibility for managing the Fund, and authorizing disbursements from it, rests with the Administrator of the Spill Compensation Fund, an officer appointed and supervised by the State Treasurer. The Administrator also manages the adjustment of damage claims. See N.J.S.A. 58:10-23.11j (1980 ed.). The split in authority between DEP and the Administrator has proven a source of some administrative difficulties when the agencies differed on interpretation of the Act. This led to the agencies facing one other in court in an unreported N.J. case, State DEP v. Ventron Corporation (Ch. Div., Bergen Cty., 1979).
11. N.J.S.A. 58:10-23.11h(c)(2) (1979 ed.)
12. Source for statistics on Spill Tax revenues: Annual Reports of the Administrator of the N.J. Spill Compensation Fund
13. L. 1979, c. 6.
14. L. 1979, c. 346, Sec. 4, N.J.S.A. 58:10-23.11f(d) (1980 ed.)
15. Id., Sec. 1, N.J.S.A. 58:10-23.11b(k) (1980 ed.)

16. Id., Sec. 1, N.J.S.A. 58:10-23.11b(e) (1980 ed.)
17. Id., Sec. 6, N.J.S.A. 58:10-23.11h(b) (1980 ed.)
18. Id., Sec. 1, N.J.S.A. 58:10-23.11b(k) (1980 ed.)
19. Id., Sec. 6, N.J.S.A. 58:10-23.11h(b) (1980 ed.)
20. Id., Sec. 6, N.J.S.A. 58:10-23.11h(i) (1980 ed.)
21. Id., Sec. 1, N.J.S.A. 58:10-23.11b(1) (1980 ed.)
22. L. 1980, c. 73, Sec. 3, N.J.S.A. 58:10-23.11(b)
23. N.J.S.A. 58:10-23.11o(3) and (5). Research grants are funded out of interest earned by the Fund.

Senator BRADLEY. I think we want to move along now. Thank you. Now Mr. Grannis.

**STATEMENT OF ALEXANDER GRANNIS, VICE CHAIRMAN, COMMITTEE ON ENVIRONMENT AND NATURAL RESOURCES AND ASSEMBLYMAN FROM THE STATE OF NEW YORK**

Mr. GRANNIS. Mr. Chairman, I am appearing here today not only on behalf of the State Assembly in New York where I chair a subcommittee on toxic and hazardous substances but also on behalf of the National Conference of State Legislatures, which is the official representative of the 7,500 members of the State legislatures throughout the country.

You started your statement today, Senator Bradley, with a sentiment with which we concur in most heartedly, that there is a pressing need for a bill like the Superfund bill, and the need is now. The examples of Love Canal—and certainly New York would love to be in the position of not having the notoriety of being the home of the Love Canal—but it points up the national problem.

The cost of Love Canal to us so far at the State level is approximately \$40 million. Hooker Chemical, which was the primary depositor of wastes in that site over the past years, has contributed virtually nothing so far. And I think a number of us are not terribly optimistic about the outcome of the lawsuit which New York State has filed against Hooker for covering those costs, but that lawsuit is going on.

It is a very expensive proposition. We have not really cleaned up that site with the \$40 million. We have bought the homes of the people that were living nearby. That is an ongoing cost to us.

But a number of States have recognized the problems of exposures to and improper practices of disposal of toxic wastes in the past.

Forty-eight States now have various kinds of legislation on their books to deal with the problems. Some States have come up with money for these programs, such as New York and New Jersey; other States have done likewise. The overall costs of cleaning up these sites, and Federal EPA estimates there are approximately 2,000 sites in the country that are of primary concern, is going to run into the hundreds and millions of dollars.

And those are just the inactive sites. We are not even talking about the broader nature of the problem, which the Senate bill 1480 addresses, which is the release of hazardous materials at all levels, not just from inactive sites but into the air, water, and ground and

from spills as well. So there is a substantial need to have a big fund to do the job that is necessary to clean up and protect the people of this country from the hazards of exposure to toxic materials.

There are also other kinds of problems. The ground water contamination problem. We have spent half a million dollars just trying to determine the size of the ground water contamination problem on Long Island, which is a special need for us because of our 3 million residents that live on Long Island and depend on a sole source ground water aquifer for their drinking water. Just monitoring those sites to find out what the problem is has already cost us half a million dollars to reach the point of trying to correct the problems that we have discovered already on Long Island.

Michigan has discovered over 300, nearly 200 sites of ground water contamination for different wells throughout the State. The cost of cleaning that up, the Michigan authorities estimate, is between \$22 and \$70 million. Obviously some of those costs are going to have to be borne by the people of Michigan. I think that the overall responsibility for the problems of toxics are best addressed on a national scale by a bill such as S. 1480.

The comparable measure in the House, H.R. 7020, which has received also a great deal of attention, we don't think is sufficient. It doesn't cover spills and discharges other than those from inactive sites. The size of that fund is substantially smaller than that contained in the Senate bill. It is not as comprehensive in nature. It won't cover many of the other kinds of problems which are addressed in our overall statement which we have submitted to you, such as problems of livestock contamination. Michigan has spent millions of dollars already in buying up livestock which has been contaminated through feed which was laced with PBB's. I think the figure so far is \$20 million.

These kinds of problems are paramount. And other people here have discussed and I am sure you know from your own records of these kinds of problems.

The final point we would like to make other than the overall statement is the question of the oil spill fund which is addressed by the two amendments, primary amendments to your bill from Senator Gravel and Magnuson. We are tremendously concerned about the efforts in those amendments to preempt existing State funds and State programs for dealing with oil spills.

New York is one of 18 coastal States that already has an oil spill program. We have a record. We have a fund that we know how to use. And our fund covers administrative costs which the funds that are being discussed in your bill, at least in these two amendments would not cover, administrative costs which are present whether or not we know who caused the spill. If we know who caused the spill, the costs of cleanup can be borne by that person.

But we still have State administrative costs. And our fund covers that. It is funded by a 1-cent-per-barrel tax on oil. It hasn't been a terribly burdensome tax because we have had very little lobbying effort to repeal that tax. We have a \$7 million fund. For dealing with the small problems we have been able to use our fund, which in the last year we had 70 spills which we covered at a cost of \$1 million. Including the administrative costs, that leaves us \$6 mil-

lion We can handle the small spills under our own funds. And the States I don't think want their existing oil spills funds preempted by a Federal law. They know how to work those funds. Those funds could tie in effectively with the Federal fund if that is to be the case. The small spills we can deal with.

It is the big spills, the multistate spills, the spills that have catastrophic ramifications as major ground water contamination might have where we could go to a Federal fund. We would ask that these amendments, to the extent that they would preempt our local funds, not be accepted and that we be allowed to, as the States have been encouraged in the past in the environmental cleanup funds, to develop our own resources and our own capabilities for dealing with our own problems.

And to the extent that we cannot cope with those, to then move into a dependence on a Federal fund.

[The prepared statement of Mr. Grannis follows:]

**STATEMENT OF ASSEMBLYMAN ALEXANDER B. GRANNIS ON BEHALF OF THE NATIONAL CONFERENCE OF STATE LEGISLATURES AND THE NEW YORK STATE ASSEMBLY**

Mr. Chairman and members of the committee, I am Pete Grannis, Assemblyman with the New York State Assembly. I am here today on behalf of the National Conference of State Legislatures, an official representative of the nation's 7,500 state lawmakers and on behalf of the New York State Assembly, where I chair the Environmental Conservation Committee's Subcommittee on Toxic and Hazardous Substances. I would like to thank the members of this committee for allowing me to share our views on S. 1480, the Environmental Emergency Response Act and on the two proposed amendments addressing oil spill liability and compensation schemes.

I do not intend to devote my statement today to the horrors of Love Canal with which by now, we are all well acquainted. Rather, I will point to New York's Love Canal as an incident which has served to raise our nation's consciousness to the critical need for a joint industry/government (federal, state and local) effort to develop and implement a framework within which we can work to solve our nation's hazardous waste problems. I fear that New York's Love Canal and Kentucky's Valley of the Drums are only an initial indication of the need for a program broad in scope and of sufficient funding to correct the legacy of toxic chemicals in our environment.

There is no question that problems associated with hazardous substances, both from direct release and from in-ground disposal sites, underly the main health concerns which face our nation today. On behalf of NCSL and the New York State Assembly, I am pleased that these problems are not recognized as being national in scope and warranting a national solution. We believe that enactment of S. 1480 as approved by the Senate Environment and Public Works Committee will provide a significant framework for the remedy of hazardous substance emergencies.

I will begin by addressing the size of the proposed fund under S. 1480. It is my understanding that the Environmental Emergency Response Act authorizes a fund in the amount of \$4 billion to be collected by fees and appropriations over a 6 year period. Two-thirds of the fund balance in any one year would be reserved for clean-up and remedial actions, restoration of natural resources and various studies and surveys, with one-third of each year's balance to be reserved for the compensation of third party damages.

NCSL and the New York State Assembly firmly believe that the fund size and breadth are critically needed in order to deal with the number and complexity of hazardous substance problems which have already been identified.

Clean-up and remedy of abandoned sites alone will cause a substantial drain on the fund. According to a 1979 study, the Environmental Protection Agency estimates that there are between 30,000 and 50,000 inactive hazardous waste sites; 1,200 to 2,000 of which have the potential of posing a risk to public health. EPA has also estimated that clean-up of these sites will average \$2 million per site. In a recent letter to Congress, the Chemical Manufacturers Association references their own study and admits that clean-up and containment will average \$1 million per site. In my own state of New York, irrespective of the \$40 million spent to date on the Love Canal sites, survey results indicate that there may be as many as 700 more sites with potential dangers. The New York survey and analysis of these sites alone is expected to run in the neighborhood of \$0.5 million. I could go on with similar

figures for other states, but I believe the point is obvious—no matter whose figures are used, the cost of remedying inactive hazardous waste disposal sites alone could run into the hundreds of millions of dollars.

While in the past, national attention has been primarily focused on emergencies at inactive hazardous waste sites, the perils of other hazardous substance release situations should not be underestimated. We believe that any federal legislation to remedy the nation's hazardous substance emergencies, must address all releases into air, water and ground. Any legislative proposal short of that, we feel, will be merely an ineffective band-aid solution. For that reason, we strongly support the comprehensive nature of S. 1480.

A problem which has reached critical proportion is that of groundwater contamination. On Long Island, groundwater contamination is being monitored by the New York Department of Environmental Conservation at a cost of over \$0.5 million and we have not idea of the costs which may be required to remedy the many problems which threaten the vital water supply for Long Island's nearly 3 million residents. In Michigan, a 1980 study identified 268 sites where groundwater is known to have been contaminated and 381 sites where ground water is suspected to have been contaminated. The Michigan Department of Natural Resources estimates that it would cost \$22 to \$77 million just to determine the extent of contamination; the total bill for remedial action would be in the hundreds of millions of dollars. New York and Michigan are not facing this problem alone, many states have identified groundwater contamination as a critical problem. Other than cases in which groundwater contamination is caused by inactive hazardous waste sites discharges, H.R. 7020 would provide no means of remedying the problem.

Another problem with no remedy under H.R. 7020, is the contamination of livestock by hazardous substances. In 1973, PBB's contaminated cattle feed in Michigan. Approximately 5 million cattle, swine, sheep, goats and poultry had to be destroyed. Economic loss alone reached a level of \$100 million. Since 1977 the State of Michigan has been buying, with general revenues, livestock contaminated with PBB above a certain level. This effort has cost the state of Michigan's Department of Agriculture over \$20 million to date.

I will stop here, far short of relating the thousands of accounts of hazardous substance crises facing each of our 50 states. While a recent survey completed by NCSL concludes that 48 states have recognized their responsibility to address and rectify hazardous substance problems by enacting appropriate legislation, state financial resources fall far short of those needed to provide comprehensive solutions. It is for that reason that NCSL and the New York State Assembly seek your support for the comprehensive solution we feel S. 1480 would provide. Furthermore, in our opinion, a \$4 billion fund is absolutely necessary if we are to adequately address the magnitude of hazardous substance problems of which we are today aware.

Let me now turn my attention to the two amendments proposed by Senators Gravel and Magnuson which would establish a comprehensive system of liability and compensation for the clean-up and damages of oil spills. NCSL has followed closely the years of congressional debate on this subject. NCSL's concern has not changed. We feel strongly that federal laws must respect individual state's solutions to environmental problems. States should be responsible for developing and managing their own oil spill programs, particularly in cases where states have taken the lead, in the absence of federal legislation, and have efficient and effective programs already in place. We oppose any efforts to establish a federal law preempting the states from determining their own programs, funding mechanisms, and liability limits.

Allow me to be more specific. A January 1980 study by the Congressional Research Service highlights oil spill liability statutes of 18 coastal states. The point here is that at least 18 states have identified oil spills as a significant problem, and have acted to establish programs and mechanisms which allow the state to effectively deal with the problem. Funding mechanisms for state clean-up activities vary from state to state. Six states (Alaska, Florida, Maine, Maryland, New Jersey and New York) have funds which are financed by fees or taxes on oil. The maximum tax on oil imposed by any state is 2 cents per barrel in Florida. Other states finance their oil spill funds by state appropriation or through the collection of fines and penalties. In my own state of New York, we have established an oil fund for clean-up, containment, restoration and compensation for economic loss, based on a 1 cent per barrel fee. As of March 31, 1980 our fund balance was over \$7 million.

Let me take a moment to acquaint you with our fund operation over the past fiscal year. Unlike the proposed amendments which address oil pollution in navigable waters, our New York law addresses oil pollution of both navigable and ground waters. Our fund covers state administrative expenses as well. Last year New York

received reports of approximately 1,600 spills—400 spills into groundwaters and 1,200 spills into surface waters. Of the 400 groundwater spills, 200 were remedied by the spiller and 40 were cleaned up by the state through the use of the fund. Of the 1,200 surface water spills, 1,000 were remedied by the spiller and 30 by the state. The remainder of the reported spills are either still undergoing clean-up procedures or were of such a magnitude that clean-up was unnecessary. Costs for the 70 spills amounted to approximately 1 million dollars which was immediately available from the state fund. In addition, some \$40,000 was awarded to claimants to the state fund. Thus in one year the fund provided more than \$1 million for oil spill clean-up and compensation in New York State.

An important function of our oil spill fund is the availability of financing for the administration of the oil spill program. Whether the state or the spiller undertake clean-up activities, state administrative oversight is necessary. In New York as in other states, spill assessment and monitoring activities require trained personnel. Even when the spiller undertakes clean-up responsibilities, state personnel must be present to assure that proper techniques are employed and to assure that adequate mitigation efforts ran in excess of \$700,000. Again, the state fund assumed the costs.

The point which I wish to make is that in the past year, New York's oil spill fund has enabled the state to clean up more than 70 spills totaling \$1 million and to compensate for damages in the amount of \$40,000 without pursuing funds from the federal government and without draining state general revenue coffers.

NCSL and the New York State Assembly support a congressional effort to combine several federal laws and to thereby establish a single comprehensive statute to deal with liability, compensation for damages, and clean-up costs caused by oil spills. We, however, urge the committee to assure that state oil spill programs, which currently are operated in accordance with the National Contingency Plan called for under the Federal Water Pollution Control Act, not be preempted by any federal program.

In support of our position, I wish to raise the following points for consideration by the committee:

(1) preemption of state oil spill funds is contrary to the underlying intent of most environmental protection laws and moreover is contrary to the theme of the proposed "Superfund" bills. States historically have been encouraged to develop capabilities to address environmental problems. Remedy is sought first from responsible parties, then from states and only as a last resort from the federal government.

(2) Senator Magnuson's amendment precludes states from establishing funds except for the purchase and prepositioning of oil discharge clean-up equipment. We question the rationale of precluding actual clean-up operations while sanctioning equipment purchase. In the case of New York, 1 cent per barrel is sufficient to allow the state to perform both functions.

(3) By preempting existing state funds, New York would be made to bear the administrative costs of clean-up procedures, which are presently financed by the fund.

(4) If it is the intent of these amendments to encourage state clean-up efforts with future reimbursement as a claimant under the fund, then we point out that reimbursement and appeals procedures outlined by Senator Gravel could necessitate an immediate state outlay and a delay of up to 9 months for reimbursement.

In conclusion, we urge the committee to insure that any oil spill program respect individual state solutions to their own environmental problems. Most states do not want a federal law ending those state programs already proven effective. State and local agencies should be encouraged to develop the capability to provide immediate response to the many small spills, thereby freeing up limited federal personnel to tend to major incidents.

In closing, I would like to thank the committee for the opportunity to speak to the importance of the legislation before you. The National Conference of State Legislatures and the New York State Assembly stand ready to assist your committee and the federal government in seeking the proper solutions to these critical national problems.

Senator BRADLEY. Thank you very much, Mr. Grannis.

We will now hear from John Degnan, the attorney general of the State of New Jersey.

**STATEMENT OF JOHN DEGNAN, ATTORNEY GENERAL OF THE STATE OF NEW JERSEY, ON BEHALF OF THE NATIONAL ASSOCIATION OF ATTORNEYS GENERAL**

Mr. DEGNAN. Thank you, Mr. Chairman.

I appear here both in my capacity of attorney general of New Jersey and as a representative of the National Association of Attorneys General.

I don't detail any further for this committee the magnitude of the problem in New Jersey. I think Commissioner English has already done a good job of that. I will tell you though, as the Senator has noted, that it has been the subject of intensive attention on the part of the government in the State of New Jersey over the past 3 years both from my perspective in terms of trying to impose civil liability on the owners of land, for example in the Meadowlands, a 40-acre site of ecologically sensitive land which is contaminated by mercury in the groundbreaking Bentron suit, and in criminal liability where some of the first indictments on common law nuisance theories have prevailed and the trial courts have sustained in the appellate courts of New Jersey against toxic wastes disposal facilities.

The one site which Commissioner English mentioned, which I would like to talk about for a second, is Chem Control because I think it serves as a kind of paradigm of the kind of problems which we face in New Jersey and which I know my colleagues, particularly those in the Northeast with whom I have discussed the problem at great length, recently are facing. We now have in New Jersey a spill compensation statute which allows the State Department of Environmental Protection to move into clean up a site in advance of a spill. But that was not always the case. And it is not always the case now in other jurisdictions.

We had to rely in New Jersey for a time on a clumsy court action seeking the appointment of a receiver for Chem Control facility, and the operation of that facility for a period while the assets were mobilized under the receiver. It was while that time-consuming court action was going on that the fire erupted at that site. On the basis of that experience alone I think it is critical that the State jurisdictions have the power created by the Compensation Act, which is reflected in Senate bill 1480.

I would also add that I think the attorneys generals of the various States ought to have authority to seek remedial action where toxic waste hazards present an imminent hazard to the public safety.

I would like to take just a moment—I submitted a statement and I am sure it will get the committee's attention—to address a point that I know was raised yesterday in testimony before this committee on the part of the chemical industry, and that is that this bill represents a radical departure from existing law in seeking to impose liability on a strict and on the joint and several basis against generators, haulers, and disposers of toxic wastes. In our view under New Jersey law that simply is not the case. And I suspect that it is not the case around the country.

The liability imposed by your bill is not a radical departure from either judicial decisions which have been developing over the last two decades which extend liability on a strict basis, or from statutory developments which embody that judicial development in terms of public policy in our state.

I had the good fortune to clerk for a supreme court justice in New Jersey, Justice John Francis who wrote the first case, which

began the development of the law on product liability: *Peningson (?) v. Bloomfeld Motors* in 1962. And essentially the court adopted a broad view public policy basis that the imposition of costs for personal injuries flowing from the manufacture of an automobile ought to be imposed on the manufacture of that automobile where the costs could most fairly be spread out among all the consumers of the automobile, and in fact be insured against by the producer.

I think that that kind of development is reflected in a recent appellate case, which I think you might want to know about, which imposes a liability for the manufacturer of a machine on its successor in interest of the original manufacturing company which had done the design work some 20 years before. That machine was sold by the predecessor in interest company, whose interest was later bought out by the successor. But the court held, and I think fairly, so, that the successor in interest on an enterprise liability theory, ought to be the one held liable for the defect in design which resulted in personal injuries to the consumer of that machine.

That kind of development in the judiciary is reflected dramatically in the Spill Compensation Act in New Jersey where both strict and joint and several liabilities are imposed against those responsible for the release of hazardous wastes. And I think it reflects a public policy determination in our State which is a reasonable one, that that is where the costs of the burden ought to be imposed.

Finally I think that the theory which is embodied in that statute underlies the action which my office brought in the Bentron suit, which is a case I alluded to earlier involving 40 acres in the New Jersey Meadowlands not too far from Manhattan which have a very serious mercury contamination problem. There six successor owners of those properties were joined by us as defendants in the action.

Had we chosen, as the manufacturer suggested, to join only one of those, of course that defendant could have enjoined the others. And we don't have the discretion to determine who might be the defendant in that suit because the defendants can join each other.

In any event we tried to impose on a common law theory a liability which was both strict and joint and several.

In the trial court decision, which although under appeal, is the ruling law in the state at the moment, the court did discriminate. It acted sensibly I think and imposed joint and several liability against two of the defendants and only single liability against the other two of the defendants.

What I think that goes to point out is that the kind of remedy which you are structuring in your bill is one which combined with proper use of its discretion and factfinding on the part of the judicial body, will result in the imposition of liability which is generally fair and which reflects a public policy to impose the cost at that level.

On that basis I thank you again for letting me be here this morning to try to impress upon you the importance of this bill to New Jersey and to my colleague jurisdictions. Thank you.

[The prepared statement of Mr. Degnan follows:]

## REMARKS BY JOHN J. DEGNAN, ATTORNEY GENERAL, STATE OF NEW JERSEY

Mr. Chairman, members of the Committee, my name is John Degnan, and I am Attorney General of the State of New Jersey. I appreciate the opportunity to present the views of the National Association of Attorneys General on one of the most important pieces of legislation before the Congress, the Superfund bill, which is before you in the form of Senate Bill 1480.

The problems of toxic waste disposal are exploding, in some cases literally, all around us. The U.S. Environmental Protection Agency estimates that only 10 percent of approximately 11 billion pounds of toxic waste generated each year in this country is disposed of properly in an "environmentally sound manner." The statistics are sobering: a pound of poisonous waste generated every day for every person in the United States. Although the impact on human health and safety and the damage inflicted on property and the environment are difficult to quantify, some horrifying facts have been determined. According to the EPA, of 645 dumps surveyed so far, 100 pose a serious threat to the health and safety of about 600,000 people. With as many as 50,000 dumps scattered around the country, millions of people are likely threatened with potentially devastating health problems. Our duty is to frame a program to clean up these disposal sites as quickly as possible.

To help defray the cost of clean-up of abandoned toxic waste sites, Congress is now considering legislation which would establish a national superfund. Consistent with other federal environmental protection states, this legislation would give the states primary responsibility for enforcing environmental quality standards.

In most states this responsibility falls on the Attorney General as the Chief Legal Officer for the Environment Agencies. Because of their role, and the increasing public awareness of toxic waste problems, the Attorneys General have carefully considered over the past 13 months whether the proposed Superfund legislation would significantly enhance state enforcement in this area. After careful study and discussion, the National Association of Attorneys General has concluded that the Congress should enact Superfund Legislation which should: Provide direct funding to State Attorneys General for enforcement of toxic waste laws; confers specific authority on State Attorneys General to take remedial action when disposal sites pose an "imminent hazard" to public health or safety; impose strict liability for producers and disposers of toxic waste; impose liability for past and present owners as well as lessees for abandoned disposal sites and require the reporting of the discovery of such sites immediately to the Superfund Administrator; establish no statute of limitations for civil liability; provide a tremble damage remedy for intentional violations; prohibit use of tax dollars to finance the superfund; require clean-up of sites before compensation is awarded for private property damage; include coverage of oil spill clean-up.

In the remainder of my testimony, I would like to highlight the reasons why these provisions are necessary to an effective Superfund Bill.

**A. Direct funding for State attorneys general.**—The mechanics of the Superfund Legislation will require litigation as a major facet of the overall program and direct involvement by State Attorneys General will significantly enhance effective enforcement. The Attorneys General would bring the States' Police powers, quick reaction time, and an understanding of local interests and problems to this effort. Litigation support is expensive, though. These cases will require well-trained lawyers, skilled investigators, and expert witnesses. State legislatures cannot be counted upon to appropriate sufficient funds to meet these necessary costs. Thus, the Association urges Congress to authorize EPA to disperse annually \$25 to \$30 million to the State Attorneys General for enforcement purposes.

Furthermore, the Association believes that, as has been true with federally sponsored programs in the medicaid fraud and antitrust areas, the amount of money recovered in damages will far exceed any federal appropriation. Absent direct funding, the States' ability to litigate will be severely hindered.

**B. Imminent hazard authority.**—In 1976 Congress enacted the Resource Conservation and Recovery Act (RCRA) authorizing the federal government to take remedial action when a toxic waste disposal site posed an "imminent hazard" to public health safety. We believe that this authority should also be specifically conferred on State Attorneys General who are the officials most closely involved with environmental litigation in their states and perhaps most uniquely able to respond to such an immediate crisis.

In terms of federal expenditures and federal authority, State Attorneys General have been overlooked as a valuable enforcement tool in the toxic waste area. Since litigation continues to be the most effective method of closing sites that pose an immediate danger to the public and of recovering damages from those who have harmed the environment, the addition of State Attorneys General to the enforcement effort would significantly augment the current capabilities of EPA. Some State

Attorneys General have already initiated significant enforcement actions. Suits filed in Michigan, Illinois, New York, California, as well as my own State of New Jersey are a tribute to ingenious use of scarce resources and, often, limited statutory authority. In some cases, the basis for litigation has been little more than common law public nuisance authority, although several states including New Jersey have substantially stronger statutory authority. The magnitude of the problems associated with toxic waste disposal and the lack of sufficient enforcement tools require federal statutory support.

**C. Strict liability.**—The Association believes that a federal standard of liability is necessary to avoid legal entanglements arising from conflicting state laws. That standard should be strict liability and should apply to all provisions of the Act. The handling of toxic substances is an inherently ultrahazardous activity that involves a risk of serious harm to the public and cannot be eliminated completely even through application of the most stringent precautions. Without an absolutely clear standard of strict liability, problems of proof with regard to proportionate liability will inevitably occur and seriously hamper effective enforcement. Furthermore, imposition of strict liability will have significant deterrent effects for those who generate toxic waste. The Association supports an exemption from strict liability only when the disposal was specifically directed by an authorized Governmental Authority.

**D. Liability for abandoned sites.**—The Association believes that past and present owners as well as lessees should be liable for damage occurring at an abandoned chemical dump site. Seeking relief against the present owner is not always appropriate since the present owner may be completely unrelated to the prior dumping. The only way to ensure effective enforcement is to impose liability on all parties potentially responsible for the abandoned site and to determine which owner or lessee is actually responsible through appropriate investigations.

**E. Statute of limitations for civil liability.**—The Association believes that any statute of limitations for civil liability is inappropriate and opposes its inclusion in the Act. It is impossible to establish a distinct time period in which one can identify all the problems which have occurred or will occur from improper disposal. We cannot permit a statute of limitations to bar the clean-up of such sites under the Act.

If Congress believes a statute of limitations is necessary, we urge that it begin to run only upon passage of the Act or upon the discovery that a site poses a health hazard, whichever occurs later. Regardless of the approach selected, the protection of those who may have been harmed by improper disposal of toxic waste requires that legal action against those responsible be made possible.

**F. Treble damages.**—The Association believes that treble damages, analogous to those in the federal antitrust laws, should be a remedy in cases of intentional violations. Treble damages will provide an effective deterrent to improper disposal and will insure that those responsible for disposal problems will be induced to comply with official requests to clean-up the site. Since the actual discharger has the greatest knowledge of a particular waste problem, it seems appropriate, where possible, to have those responsible either clean the site or contract for clean-up with someone else.

**G. Financing the superfund.**—The Association believes that tax dollars should not be used to finance the superfund. Rather, the chemical, petroleum, and other companies who are responsible for creating toxic waste problems should pay for clean-up through a system of user fees. Taxpayer subsidies would have the unfair result of forcing those most likely to suffer personal health and property damages to bear the additional cost of clean-up.

**H. Regional disposal sites.**—This Association believes that federal, state, and local officials should initiate a cooperative effort to establish adequate regional waste disposal sites which will minimize the dangers posed by the long-haul transportation of these materials. The Association believes that it is unsound public policy to transport at a high risk to public health thousands of gallons of extremely toxic material across country simply because no other waste disposal site is available. The sites currently designated for disposal are being filled quickly and in a few years will no longer have the capacity to handle the waste generated in this country. The need for regional disposal sites is immediate.

**I. Compensation for personal and property damages.**—The Association believes that compensation for people who suffer private property damage and could seek relief through civil litigation must be deferred until adequate funds exist for both clean-up and compensation.

**J. Coverage of oil spills.**—The Association believes that since the Oil Companies will make significant contributions to the superfund and since oil spills do, in fact,

cause environmental damage, oil spills should be included in a single comprehensive bill.

My own state of New Jersey has been an active center of chemical manufacturing since the inception of the industry. New Jersey has embarked on an ambitious program to identify and clean-up the contamination caused by the improper and illegal dumping practices of the past. We have established a comprehensive State Spill Fund, a Criminal Strike Force to apprehend and prosecute illegal dumpers, a manifest system to track hazardous waste from point of origin to point of disposal, a program of rigorous weekly inspections of all hazardous waste management facilities in the State and finally we are working to establish a program to site, license and operate new environmentally sound hazardous waste management facilities.

Our experience has shown that the magnitude and complexity of the toxic and hazardous waste problem mandates a comprehensive Congressional response. It is imperative that Congress act now, by passing S. 1480 during this Congress, to supplement the existing successful state programs and establish a viable federal program to address this most urgent national crisis, which daily threatens our environment and the public health of our citizens.

Thank you.

Senator BRADLEY. Thank you very much.

Now we will hear from Ruth Kretschmer. Welcome to the committee.

#### STATEMENT OF RUTH KRETSCHMER, SUPERVISOR, Du PAGE COUNTY, ILL.

Ms. KRETSCHMER. Thank you Mr. Chairman.

I am Ruth Kretschmer, supervisor from Du Page County, Ill. I'm here today as a representative of the National Association of Counties—NACo—and the National League of Cities. Together our organizations represent almost 20,000 local governments across the country. We are concerned, as we assume you are, that the health and safety of our constituents is being threatened by chemical time bombs which frequently go off without warning and whose effects may not be felt for many years. As a result, we welcome this opportunity to appear before this committee.

As the units of government closest to the people, and the official entities people turn to first when there is a problem, we are frankly scared. Each month the list of communities affected by the discovery of a hazardous waste site grows. Each new site discovered adds to the already enormous costs, both financial and human, which this problem has generated. Failure to act will only compound the problem and increase tremendously the cost of the inevitable solution.

I will not repeat the litany of statistics you have heard during the last day and a half of hearings. However, one item is worth repeating. The EPA's estimate of the cost of cleanup of sites which pose an imminent danger to public health carries an initial price tag of \$3 to \$6 billion. The cost of ultimate remedies not including victim-compensation could range as high as \$44 billion.

We share the skepticism concerning EPA's estimates. However, our concern is a little different from that you may have heard from industry. In our experience with EPA, particularly in the clean water area, we have found their estimates to be consistently less than the ultimate costs. As a result, we feel that the EPA's cost estimates in this area may be quite conservative when compared to what will really be required.

Whatever the ultimate costs of remedying this problem, a secure and predictable source of financing is essential. I think that you would agree that Federal appropriations from general revenues

does not meet the basic criteria of secure and predictable. A fee, or tax, on the feed-stocks and raw materials which go into making hazardous substances does meet this criteria. The concept of the fee, or tax, is simple and equitable. Those sections of industry, and clearly we the consumers who benefit from these products, should bear the responsibility for paying for the side effects generated by these products.

We do not feel that the imposition of the fee on an industrywide basis penalizes companies which have acted responsibly or "bails out" companies which have acted irresponsibly. Those companies which have not exercised proper care in the past can still be held liable for their past practices and be made to compensate the fund for its expenditures.

If the resources of the fund are not to be depleted, a comprehensive liability scheme must remain an integral component of a hazardous response fund. As a result, we have endorsed the concept of joint, several and strict liability for those parties who cause or contribute to a release of hazardous substances. We understand that some local governments that owned or operated disposal sites containing hazardous substances will thereby be brought under the strict liability scheme. But we have agreed that all responsible parties should share in this liability, including generators, transporters, and disposers of hazardous substances.

It seems inequitable to us to single out owners and operators to impose strict liability, as some have proposed, while holding generators, transporters and disposers to a lesser standard of liability. Owners or operators of sites, who are sometimes local governments, would thereby be forced to bear the entire liability burden in cases where they have exercised at least as much care as the generators, transporters and disposers.

A dual standard of liability seems to us a reversal of established concepts of strict liability. Many States recognize that all parties engaged in ultrahazardous activities are responsible for subsequent harm caused by those activities, regardless of the level of care exercised. ~~Nor can parties engaged in ultrahazardous activities shield themselves from liability by use of an independent contractor.~~

The practical effect of a dual liability standard would be pernicious. For sites owned by local governments, either the Federal Government would have to pursue them to recover all Federal costs or the Federal Government would have to absorb the costs. In the former case, many financially strapped local governments would not be able to pay the costs, resulting in default judgments. In both cases, Federal response funds would be depleted at a more rapid rate, leaving fewer resources to deal with abandoned sites where no liable parties can be identified.

We do, however, support the provision which would allow any person who can demonstrate that their contribution to a release was not significant to have their liability reduced in proportion. We feel that this provision will protect those companies that fear that the discovery of a single barrel of their product at a site will make them liable for the entire costs of cleaning up that site, without doing damage to the concept of joint, strict and several liability.

In addition to the support for the liability scheme contained in S. 1480 we also generally support the uses to which the fund can be put. We are particularly concerned that health studies remain an allowable claim against the fund. In many cases determinations of what the appropriate response to a release or spill should be is dependent on studies demonstrating the effects of a spill or release. Without this information, effective action can be greatly constrained.

An example of this problem is occurring at this moment in Shelby County, Tenn. Shelby County is looking at two sites in particular. At one of the sites, there have been a great number of health complaints without any documented release at the nearby site.

Senator BRADLEY. Ms. Kretschmer, I think that we should go to the questions in order to make sure that we have time. Your statement will be placed in the record as read and as written. [The prepared statement of Ms. Kretschmer follows:]

STATEMENT OF HON. RUTH KRETSCHMER, SUPERVISOR, DU PAGE COUNTY, ILL.

I'm Ruth Kretschmer, Supervisor from Du Page County, Illinois. I'm here today as a representative of the National Association of Counties (NACo)<sup>1</sup> and the National League of Cities. Together our organizations represent almost 20,000 local governments across the country. We are concerned, as we assume you are, that the health and safety of our constituents is being threatened by chemical time bombs which frequently go off without warning and whose effects may not be felt for many years. As a result, we welcome this opportunity to appear before this Committee.

As the units of government closest to the people, and the official entities people turn to first when there is a problem, we are frankly scared. Each month the list of communities affected by the discovery of a hazardous waste site grows. Each new site discovered adds to the already enormous costs, both financial and human, which this problem has generated. Failure to act will only compound the problem and increase tremendously the cost of the inevitable solution.

I will not repeat the litany of statistics you have heard during the last day and a half of hearings. However, one item is worth repeating. The EPA's estimate of the costs of clean-up of sites which pose an imminent danger to public health carries an initial price tag of three to six billion dollars. The cost of ultimate remedies not including victim compensation could range as high as forty-four billion dollars. We share the skepticism concerning EPA's estimates. However, our concern is a little different from that you may have heard from industry. In our experience with EPA, particularly in the clean water area, we have found their estimates to be consistently less than the ultimate costs. As a result, we feel that the EPA's cost estimates in this area may be quite conservative when compared to what will really be required.

Whatever the ultimate costs of remedying this problem, a secure and predictable source of financing is essential. I think that you would agree that Federal appropriations from general revenues does not meet the basic criteria of secure and predictable. A fee, or tax, on the feed-stocks and raw materials which go into making hazardous substances does meet this criteria. The concept of the fee, or tax, is simple and equitable. Those sections of industry, and clearly we the consumers who benefit from these products, should bear the responsibility for paying for the side effects generated by these products. We do not feel that the imposition of the fee on an industry-wide basis penalizes companies which have acted responsibly or "bails out" companies which have acted irresponsibly. Those companies which have not exercised proper care in the past can still be held liable for their past practices and be made to compensate the fund for its expenditures.

If the resources of the fund are not to be depleted, a comprehensive liability scheme must remain an integral component of a hazardous response fund. As a result, we have endorsed the concept of joint, several and strict liability for those parties who cause or contribute to a release of hazardous substances. We understand that some local governments that owned or operated disposal sites containing

<sup>1</sup>The National Association of Counties, (NACo) was founded in 1935 as the national spokesman for counties, to serve as a liaison between county governments and other levels of government, and to improve the public understanding of the role of counties in the federal system.

hazardous substances will thereby be brought under the strict liability scheme. But we have agreed that all responsible parties should share in this liability, including generators, transporters and disposers of hazardous substances.

It seems inequitable to us to single out owners and operators to impose strict liability, as some have proposed, while holding generators, transporters and disposers to a lesser standard of liability. Owners or operators of sites, who are sometimes local governments, would thereby be forced to bear the entire liability burden in cases where they have exercised at least as much care as the generators, transporters and disposers.

A dual standard of liability seems to us a reversal of established concepts of strict liability. Many states recognize that all parties engaged in ultrahazardous activities are responsible for subsequent harm caused by those activities, regardless of the level of care exercised. Nor can parties engaged in ultrahazardous activities shield themselves from liability by use of an independent contractor.

The practical effect of a dual liability standard would be pernicious. For sites owned by local governments, either the federal government would have to pursue them to recover all federal costs or the federal government would have to absorb the costs. In the former case, many financially-strapped local governments would not be able to pay the costs, resulting in default judgements. In both cases, federal response funds would be depleted at a more rapid rate, leaving fewer resources to deal with abandoned sites where no liable parties can be identified.

We do, however, support the provision which would allow any person who can demonstrate that their contribution to a release was not significant to have their liability reduced in proportion. We feel that this provision will protect those companies that fear that the discovery of a single barrel of their product at a site will make them liable for the entire costs of cleaning up that site, without doing damage to the concept of joint, strict and several liability.

In addition to the support for the liability scheme contained in S-1480 we also generally support the uses to which the fund can be put. We are particularly concerned that health studies remain an allowable claim against the fund. In many cases determinations of what the appropriate response to a release or spill should be is dependent on studies demonstrating the effects of a spill or release. Without this information, effective action can be greatly constrained. An example of this problem is occurring at this moment in Shelby County, Tennessee. Shelby County is looking at two sites in particular. At one of the sites, there has been a documented release, but few health complaints from any of the nearby residents. At the second site, there have been a great number of health complaints without any documented release at the nearby site. Clearly further extensive study, beyond the financial means of the affected county, will be required in this case.

Mr. Chairman, in the interest of brevity, I would like to make one final point, and then join my fellow panelists in answering questions. Without passage of this bill, local governments will face the justified demands of their citizens for remedial action. The costs of such action, as previously noted, are beyond the means of virtually all local governments, even when acting in cooperation with the states. Even where the local government has not owned or operated a site, demands will be made on that government. New Hanover County, North Carolina recently faced just such a situation. In their case, the only county involvement with a site which ended up contaminating nearby wells was to grant the operator a franchise to collect and dispose of solid waste, *not* hazardous waste, in the county. However, following the contamination, the county was sued by the Justice Department along with the operator and site owner. The main effect of this action has not been to clean up the site or to compensate the victims. The main effect has been to keep employed the lawyers of the area.

We do not expect this to be an isolated case. Unless S-1480 is passed, clean-up of these sites will have to await the outcome of time consuming and expensive litigation. Not only will local tax dollars be spent to defend local governments from the demands of their own citizens, but the hazards in question will continue unabated. At least under this proposal the threat to public health and safety will be removed and *then* the search for the liable parties will begin. Local governments will not escape liability under this bill. Where we have acted improperly or recklessly, we will be expected to pay our rightful share of the costs.

In summary, the National Association of Counties and the National League of Cities strongly support S-1480. We appreciate the opportunity to speak on this issue and I am prepared to answer any questions you might have.

**Senator BRADLEY.** And we will pursue some of these points in questions.

For the purpose of questions I would like to limit it to 10 minutes per round. Let us begin with Senator Danforth.

Senator DANFORTH. Mr. Chairman, thank you very much.

I would like to address a question to all of you. And it might take a little bit of time to unwind the question. But it is basically whether because of the joint responsibilities of the Federal Government and State governments we are in the process of trying to bail out a leaking boat which will continue to fill up with water as quickly as we bail it out.

The bill that is before us provides a superfund for the purpose of cleaning up spill sites, dump sites and the kind of thing that has been portrayed in this very interesting picturebook from New Jersey where barrels have been left in the woods or in junk yards.

And in the bill that is before us we have a sunset provision. 1986 this is supposed to come to an end. But I am wondering if we are in a situation and increasingly getting ourselves into a situation where there isn't going to be any end to clearing up abandoned sites, the sort of situation where barrels were left in the woods and in junk yards and so forth.

Governor Teasdale pointed out a couple of interesting things in his comments. One was that in the State of Missouri alone, some 1.2 million to 1.4 million tons of hazardous wastes are being produced each year. Well, I take it that that is not going to decline either in Missouri or anywhere else. Hazardous wastes are going to continue to be produced.

The second thing that he pointed out was that the people of Missouri are up in arms. Fifty thousand signatures appeared on petitions that were presented and rallies are being held. But that does not have to do with existing sites. That has to do with a public furor over the creation of new sites for disposing of hazardous wastes, of hazardous material.

Now we have a law in our State which provides, as Governor Teasdale pointed out, for public hearings as to waste disposal sites. And my concern and my question to you is: Will we ever be in a position politically at the State level where approved sites will be available for disposing of hazardous wastes particularly if we have licensing requirements and particularly if we have requirements for notice and public hearing and particularly where those who perform the licensing function are appointed by the Governor, who is by his very nature an elected official, and he is a politically sensitive individual?

In other words, aren't we getting ourselves into a situation where forever we are going to have midnight dumping and forever we are going to have barrels left in the woods and discovered and where there will be no sunset of this bill? And the problem is going to get worse and worse. And practically from our standpoint, as we proceed with drafting this bill, is there anything that we can write into it which would assist you as people at the State level in making the tough political decisions so that approved hazardous waste sites will become politically feasible and will not become the subject of the sort of furor that Governor Teasdale mentioned in his testimony?

We went through a process in our State which lasted, it seems like an eternity in trying to find sites for a prison. And I think

everybody will concede that you have to have prisons. And yet for every community that was designated as a possible prison site it became a kind of public cause. No, we don't want a prison site in our community. Now we are going through the same sort of situation with respect to hazardous wastes in northern Missouri, where nobody wants them. And if every time something is suggested or land is acquired, if it has to be licensed by State officials, if you are going to have 50,000 petitions presented in Jefferson City and if you are going to have public rallies and the like are we ever going to get to the end of this situation or is what we are talking about simply an open-ended fund where Uncle continually shells out money over and over again to try to solve a problem which, because it is becoming more politically sensitive and because of the licensing and the notice requirements and what not that is now required at the State level, is going to get harder to solve rather than easier?

Governor TEASDALE. Well, Senator, I would make two points. First of all, there is merit in much of what you say but when I think of the 40-year history of dumping in Missouri, I think first of all we have to address the need to take the most obvious sites that pose a danger and do something about them.

For example, I mentioned to you the site discovered near Aurora in southwest Missouri. I believe that the experts can substantiate that there is enough dioxin, at Verona, near Aurora, to kill 2 million people.

Another example that we have, and I would like to submit and leave this with the committee, another example of the site is the West Lake land fill in St. Louis County. That site with that toxic chemical. Although we don't know for sure, it could contaminate the ground water in the Missouri River flood plain.

In your law, you can write in some reasonable provision by which the States can provide for the Federal Government a list of sites which are most obvious and impose the most real and present danger. You ask if dumping will ever go away. Probably not, but the law that you mention in the State does set up pretty good regulations. And the special legislation being considered by the special session provides for even tougher regulations to prevent really dangerous toxic materials from being dumped.

Senator DANFORTH. Could I just interrupt at that point? You know much more about the Missouri law than I do but I don't understand how that is going to be the case because there are licensing requirements, are there not?

Governor TEASDALE. Yes, sir.

Senator DANFORTH. But the licensing is done by somebody who is appointed by you?

Governor TEASDALE. Yes, sir.

Senator DANFORTH. And you are an elected official?

Governor TEASDALE. Yes.

Senator DANFORTH. And there is a procedure for public notice and public hearing?

Governor TEASDALE. Yes.

Senator DANFORTH. Are you going to be able—and I am not singling you out as one Governor; I am just saying you, as a politician, as an elected person—are you going to be able to with-

stand the heat from people who come from their communities and say, "Put it somewhere else?"

Are we ever under these licensing procedures going to have a safe place for disposing of hazardous wastes?

Governor TEASDALE. Senator, the answer to that question lies more in the hands of science.

Senator DANFORTH. Politics, I would say, not science.

Governor TEASDALE. Well, I would like to add the hope of all of us that a solution can be attained with tax incentives and with ways to put proper pressure, legitimate pressure and incentive on industry to find out ways to dispose of wastes without putting them in the ground, such as recycling, and incineration. I understand from scientists and persons more expert in this field than I, that in the future, hazardous wastes, whether dioxines or PCB's or other wastes of our industrial age, can be disposed of without burying them in the ground.

Again, my testimony was not more to the future of finding sites like the problem of finding prisons. I think our law and the proposed amendments will put us in a position to make those judgments. I am more interested in what are we going to do about the landfills of dangerous materials in St. Louis County, in Jefferson County, and in southwest Missouri.

Senator DANFORTH. I am interested in that, too, but what I am concerned about is, are we setting in motion a process where illicit disposal of waste is going to be even more attractive in the future than it has been in the past?

Governor TEASDALE. I don't think so. I think criminal penalties can be added to the law. I think, again, science can help, and I understand is in a position to help. I am more interested, again as Governor, in the fact that for 40 years in our State and probably in our country, we have allowed this unregulated method of hazardous waste sites to develop.

I think the first priority is to, on a reasonable basis, remove the public health danger and then go on to the question of how you regulate and prevent in the future.

Senator DANFORTH. Well, can you tell me how hazardous waste sites have been licensed in Missouri, approved of, by the State of Missouri under our hazardous waste law?

Governor TEASDALE. The law only went into effect in July of this year, Senator, and we haven't had time to even test that.

Senator DANFORTH. I thought you called a special session to strengthen it?

Governor TEASDALE. We did, and a moratorium has been placed on the granting of any permits until the special session is over.

Senator DANFORTH. But how are we ever going to dispose of 1.2 million to 1.4 million tons of hazardous wastes if you are not giving permits to any place where one can be safely disposed?

Governor TEASDALE. Hazardous wastes do not mean that all of it would constitute a public health problem. Hazardous wastes include—and Fred Lafser is here, if you want to go into categories—hazardous wastes, as defined in Missouri's law, include a wide variety of wastes. The kind of hazardous waste that I am speaking about and the kind of waste that people are fearful of are those that are called poisonous or toxic.

I think we are in a position to limit toxic or poisonous or dangerous wastes. I think we have to be, and I think we have to find different ways of disposing of it than putting it in the ground, which, as you say, may eventually contaminate the water, for example.

Senator DANFORTH. Do you have a way in Missouri?

Governor TEASDALE. Well, there are ways under our law of regulating that, and the question of what to do with poisonous chemicals is a separate question from the cleanup question.

Senator DANFORTH. Thank you.

I would ask the question of everybody in the panel.

Senator BRADLEY. We will let the other panel members respond after Senator Durenberger questions.

Senator DURENBERGER. I would be happy to let them respond to that question, because this is the same line of questioning that I wanted to suggest. I guess it is our responsibility here to look at the tax that is generating the Superfund. But the secondary question with regard to the tax is whether or not it is going to be money spent wisely, and I think Jack is putting his finger on that issue, as several of you have in your testimony.

There is an obvious concern. You know I come from another do-gooder State like Missouri, with the same kinds of problems, a State that is always trying to get out ahead of these problems; and yet, you know, it is very clear to us that the solution should be at the State and local levels, and that the ultimate solution is not just in cleaning up old waste sites but it is getting out ahead of the disposal problem.

And yet we have lived in our community with the fact that you people are also promoting industry for very good reasons; you need the tax base; and every time there is an environmental issue that comes up in a county or a city in my State, and most cities around this country, it is an issue of are we going to injure our tax base by coming down too hard on the environment?

The solid waste act that was passed here, or wherever it was a couple of years ago, creates nothing but controversy in my State. The rural counties don't want metropolitan wastes. The suburban counties don't want the stuff shipped out from the city. Why should we open up umpteen acres in our county?

There is a good illustration here in Ruth's testimony about this county in North Carolina. You know, all we did was issue a franchise for a solid waste site; you know, what has that got to do with anything else?

Well, there is some governmental responsibility to be discharged in this area.

So, with that little added dimension, if it is helpful, I would like to see the rest of the panelists address Jack's questions.

Mr. DEGNAN. Senator, I would like to make a suggestion, in response to your specific request, by pointing out something that we are doing in New Jersey.

Commissioner English had an advisory council formed by the Governor which recently reported, and after which a bill has been introduced into the legislature which will set up a hazardous management corporation, which will have a siting power, and effectively take it away from local control and put it into the body of an

administrative agency, perhaps with gubernatorial appointments, but with specifically designed standards so that the denial of a siting permit could be appealed to the court and reviewed on the basis of its conformance to that standard.

This committee might consider, although not having given it much thought, the availability of the assets in the fund to a particular State on its adopting a statutory scheme which would allow it to assume its fair share of treating toxic wastes.

The technology is available.

Senator DANFORTH. I think that is a good idea and we could do that.

Mr. DEGNAN. I think it is a good idea.

Senator DANFORTH. We could consider any expenditure from the Superfund to a State which does have in place a method of disposing of hazardous wastes.

Senator BRADLEY. I think that is an outstanding idea, particularly if we allowed the States that do have such a law in place to receive a greater proportion of the fund.

Mr. DEGNAN. I might suggest you will be generating by that just the kind of political pressure which might get it passed by the State legislature and signed by our Governor; and if you combine that with strict enforcement—

Senator DANFORTH. General, it is not—do you call yourself general? When I was attorney general I refused to do so.

Mr. DEGNAN. I don't, although I am getting used to it.

Senator DANFORTH. My kids named our dog "General." But let me ask you this: It would have to be conditioned, would it not, not just on passing a law, because Missouri has a law, but also there would have to be actual disposal sites which have been approved of.

The problem that I see with these licensing laws, just intuitively and seeing what is happening in Missouri, is that immediately, once you have this process, it is ultimately responsible to elected officials for approving of hazardous waste sites, and nothing is going to be approved. We are going to have the same sort of moratorium we have now in Missouri, where absolutely nothing is done to create safe disposal sites.

Mr. DEGNAN. I think, if you impose some standards by which that law was reviewed on the part of a Federal agency to insure compliance, that it provides a meaningful opportunity to get licensed facility sites, and if you also pass this bill, which imposes a very generous obligation on the part of generators, we might see the same kind of energy which government and industry are dedicating toward either opposing or proposing this bill, Senator, dedicated to the passage of a meaningful bill at the State level.

Ms. KRETSCHMER. Mr. Chairman, I think, Senator, you have really posed two questions; the first being how to make a hazardous landfill site, or even a conventional landfill site, palatable to elected officials, enabling them to vote for it; and if I had the answer to that, I think I would have the wisdom of Solomon.

I don't think there is an answer, except really doing a lot of groundwork with your constituents, and then having elected officials having the guts to fight, to vote for something they know they should vote for.

In Du Page County we have done that. We are the owners of two landfills right now. One is in my district and I hear about it all the time, but we have been successful at it. It has been a worrismatic feature for us. We are doing it. It has to be done. We are an urban county and everything has to go someplace.

The second question now posed is, is the Federal Government stepping into something that they are going to be into from now until eternity with this bill? And I don't think so. As a matter of fact, I think this bill is part of the solution rather than part of the problem, because it does put the responsibility not only on the landfill owner and operator, but it also puts the responsibility on the manufacturer, the consumer, the transporter, and so on down the line.

So we see this as a step forward because I think chemical and other companies that manufacture hazardous wastes will now recognize they have seven-eighths of the responsibility of any problems that arise. We think this bill is part of the answer, is part of the solution.

Senator BRADLEY. I would like to hear from Commissioner English and then I want to address your question.

Ms. ENGLISH. I appreciate the type of furor you are talking about. I live in a community that will not accept a senior citizens' home.

Moving on, what we are talking about is what is already in place, and the legacy that we have; and we have got to have some way to clean it up, and it costs money. That is what we are talking about; and it has to be a responsible amount, and that is what we have all been talking about this morning.

Will it ever be over? In terms of those finite, abandoned sites, hopefully in some predictable period of time; that is when RICRA comes into effect as to the ongoing activities.

When you add to that an ongoing capability not only on the State level through a hazardous waste management corporation—New York already has a quasilegislative, quasijudicial group that has that kind of siting ability—I think there has to be the next point, and that is the ongoing surveillance. You know, the public is pretty conscious about this situation right now. So we have one situation in our State called Rollins; it is a modern facility; but we have continuing and ongoing public participation there about what they can do next. Can they bury PCB's?

The public comes in and the folks are getting much more sophisticated. So that is part of the system. This is no longer something that can be dealt with by a junkyard dog mentality or those kinds of expenses. This is expensive technology and it is something that we have to license in that way and have very trained personnel.

Moving on, I don't think that any of the chemical corporations that have come here before you are disinterested in this issue, and most of them want to dispose properly of as much hazardous wastes as they can on their own sites, which also has to be something that is regulated.

But we have 15 commercial sites in our State and 24 onsite operations that are going on now, so, yes, it can be done.

The political side of it, frankly, comes down to this: What will the costs be if we don't take care of it now? And I submit those are far in excess.

Senator DANFORTH. What do you think of the Degnan amendment?

Ms. ENGLISH. The Degnan amendment? He had not checked with me about it first.

Senator BRADLEY. Let me interrupt there, to inform the Senator that the Degnan amendment is unnecessary, because it is already a part of S. 1480, and I read from the bill:

The President shall not use any money in the fund unless the State in which the facility or site is located first provides adequate assurance that such State will assure the availability of a hazardous waste disposal facility acceptable to the Administrator and in compliance with the requirements of subtitle (c) of the Solid Waste Disposal Act for any necessary offsite storage, destruction, treatment or secure disposition of hazardous substances.

If you would like to strengthen that, I for one would welcome that effort, Senator.

Senator DANFORTH. I am going to consult with Attorney General Degnan as to strengthening the words.

Senator BRADLEY. Senator Durenberger, any questions?

Senator DURENBERGER. No questions.

Senator BRADLEY. No questions? Have we heard from everybody?

Mr. GRANNIS. Senator, I didn't get a chance to answer Senator Danforth's question. I think the answer, at least from our experience in New York and from some of the experiences of other States in the country, and it is not meant to be a flip answer, but to your overall question, no and yes are the two answers:

No; it is not open ended and, yes; we will have a finite solution in the end.

The number of sites, as Commissioner English said, is finite, and we will be able to deal with those. Once we find out where they are and what is in those sites, we can commit the resources both local and national resources, we hope, to resolving the problems of the past disposal practices.

Until 2 years ago, nobody cared a great deal about the problems of toxics. Most of the hazardous waste management acts that have been put in in this country began in 1978, so that we've got fairly new legislative history prior to that, and because of the lack of action before, I think we have a real crisis in confidence of the government getting involved in this issue.

I have held hearings throughout New York in the last 2 years, nearly 2 dozen hearings, on all different aspects of toxic waste disposal. It is one of the few areas where people are calling for more government. The cry now is to "Get off our backs," except in this issue on the environment. They want more government and they want the government to step in.

New York is proposing to build a new site on State-owned property. We have two licensed sites now that accept wastes from a good deal of the Northeast, from as far away as Puerto Rico and some of the other States that ship toxic materials to our two licensed sites.

The question we are going through—and this is one of the great sleeper issues of this whole toxics problem—is the siting—we are going through the debate now as to whether that high-technology

disposal facility, which will be ultimate disposal for those wastes that can be incinerated, and land burials still for those heavy metals that can't be incinerated, whether that facility will be built with public funds or built and operated privately.

It is an issue that we are going to have to face. I think a number of legislators are going to have to take their tails out from between their legs and deal with this issue, because the option is, as I think other people here mentioned, to have industry stop generating the wastes, and they are not going to do that. Nobody here and no legislature is going to do that.

Senator DANFORTH. Is site location in New York a political football?

Mr. GRANNIS. Of course it will be; it will be a political football for the actual site; where the plant will be built, it will be built—it is our feeling now—on State-owned property; and I think once we get by the sensitive election coming up, people can stand up a little straighter and will stand up a little straighter.

We are going to make a move, I think, to limit the ability of localities to zone out a clean, high technology site, which will be heavily monitored, of course, by both the State and locality and will be watched over; and a number of laws that we did not have before for tracking these wastes. Well, the reason I can say with some assurance we are going to be at the end of the problem is that the Federal rules at long last are slowly coming on line for identifying and manifesting these wastes, so that we will know who is generating what, where it is going, who is disposing of it.

Criminal penalties have been increased in a number of jurisdictions. As people have watched this issue more carefully over the last 2 years, we have begun to get the handle on it legislatively; and I think we will. I think a number of States, those that want the business to stay, also the big business of disposing of these toxic wastes, are going to get into the business and make those decisions that are difficult.

Senator BRADLEY. Thank you.

Let me interject here, if Senator Durenberger doesn't have any questions, I have a number.

I would say that prospectively some of the problems that you are talking about will be dealt with with the strict imposition of the Resource Recovery and Conservation Act regulations, and that in combination with the Superfund, I think, goes some ways toward answering your fear, which I certainly hold as well, about the political determination to actually site a waste disposal facility.

I would say that the Superfund bill is really important, for several reasons:

First of all, the chemical industry needs the Superfund bill now to restore public confidence in the industry to establish that they are not constantly polluting all over this country. I also think the industry needs the postclosure fund, where they will have a way of ensuring themselves against future liability with the postclosure fund that is in the bill now; and, third, it is sunsetted so that after 6 years we can take a look at it and see if it has worked well.

If it hasn't worked well, we can see if it has been abused, and if indeed it is simply, as some have been concerned, a payout in the

long term, without any corrective measures being taken to cut off the supply of toxic wastes into the environment.

And it is with these things in mind that I would like the panel, and particularly the Attorney General, to address the liability portion of this bill.

I would like to have your impressions as to whether you think as I do—that the joint, strict, several liability for clean up and third party damages in this bill is an incentive for the clean up of dumps that were caused by past practices.

Do you feel that the liability provisions would be an incentive?

Mr. DEGNAN. Absolutely, I do. I should have added that as a point which I think underlies the public policy of imposing strict liability against the manufacturer or the generator in this case the hauler or disposer as well, Senator, and; that is, that it builds in an incentive, aside from distributing the cost burden fairly and allowing for insurance against it, it provides an incentive for the legal prospective disposal of toxic wastes, and I think also, because of the magnitude of the liability involved, and the potential that it will get worse, for the clean up of existing sites known to the generator or the disposer to exist, who knows that without some action on his part he faces a very serious liability problem.

I have said it as well as I could.

Senator BRADLEY. Without that liability indeed he might just continue to go forward without improving the standard of care?

Mr. DEGNAN. I think on a hard, economic basis it might be worth the risk to him without that strict liability.

Senator BRADLEY. If you recall the first witness who testified that it was easier in Louisiana in the refinery to pay the \$500 a month in fines and go ahead and pollute than it was to correct.

Mr. DEGNAN. And I might add, on the basis of our experience, I think we have done as much as any State in the Nation in terms of criminal enforcement of the penalties for illegal disposal of toxic wastes; well, let me say it would be a mistake to rely on increased criminal law enforcement attention to this problem as a remedy to it.

We turn too often to the companies to do that which we can otherwise achieve. I think it would be a great mistake to just hit them with a club and not provide some built-in incentives for self-motivated actions.

Senator BRADLEY. Yesterday, we did hear testimony from, and comments from, members of the committee about the insurance costs involved in trying to cover a company against this liability. You alluded to the experience of product liability and spill fund liability. The charge was made yesterday that if this strict, joint, several liability goes into effect, that it would basically put small businessmen out of business, bankrupt them, because they couldn't afford the insurance costs.

In your judgment, has that been the experience with product liability or with spill fund liability, and would you expect that to be the case? And, please, I don't want this just to go to the Attorney General, but I would like him to comment on it, and anyone else who would choose to, I would welcome their comments for the record.

Mr. DEGNAN. It certainly hasn't been my experience in observing the development of product liability law in New Jersey that it has put people out of business. On the contrary, it has taught them to anticipate that those costs are part of the cost of doing business and ought to be considered by them in what ultimate consumer price is set for the product.

It has certainly not been our experience in connection with our civil lawsuit; for example, the Ventron suit has not gotten to the point where it is putting anybody out of business, despite the same kinds of fears which were articulated in New Jersey when that suit was first generated; and I think it is too early to tell with the spill compensation fund. But so far the compensation fund itself is, or the costs inherent to it by the people who pay for it, certainly hasn't put anybody out of business.

The only people put out of business were illegal toxic waste disposers.

Mr. GRANNIS. Senator, if I could just add to what the Attorney General just said, one of the interesting points that has come up in our hearings is that one of the inducements to industry to properly comply with the law would be a possible addition in a liability section to say that if wastes are disposed of in a licensed and approved facility, knowing where we are in 1980, that at that point, assuming that the manifest was properly filled out and that everything else was done according to the existing rules and regulations, that that ultimate disposal would terminate the chances for liability against a generator transporting those wastes, Senator, to say that there is some finite cutoff point that after which we can say you cannot worry about those wastes.

Senator BRADLEY. Well, the bill has gone to some length to narrow the scope of liability by exempting from liability those substances that are undesignated by the various environmental acts as being hazardous substances, and it also has excluded from its liability provisions waste management in compliance with a permit.

So, I think you have made a good suggestion though.

Mr. GRANNIS. Well, it comes out of the Love Canal experience, Senator, arguably, and this is not my part to argue the industry's side, that they did comply with whatever rules and regulations, as weak as they were at Love Canal site when Hooker was dumping.

There is a broader question involved than Hooker at the Love Canal particularly, and that is, that we have increasing evidence of Federal Government involvement in the dumping at Hooker Canal. We have what the Army, from the munitions plants and some of the chemical plants that operated in the Erie-Niagara area during the Second World War—Senator, we have a number of eyewitness accounts of Army vehicles present at the site and disposing of undesignated wastes in the Love Canal sites.

And the position of the Army so far has been to stonewall their investigation into our eyewitness accounts of what went on there. So that the liability goes beyond just private sector liability and goes to public sector liability as well.

Senator BRADLEY. Let me ask you another question, and this goes to the issue of the size of the fund. We have a fund here of \$4.1

billion. The fund which the House has under consideration is \$1.9 billion.

Now, we heard testimony yesterday from the chemical industry that said that our fund is way too high. Now, we have here today individuals who represent Governors of the country and the State legislatures of the country and the counties, and the attorneys general and environmental commissioners, and I was curious as to whether you think this is the proper solution.

I would like you to give me some response or facts so that I don't just hear that "We want more from the Federal Government." I think that the New Jersey experience of the cost of various clean-ups is constructive here and the potential costs of cleanups of the polluted atmosphere.

Senator DANFORTH. I wonder if you could ask what the States responsibility should be, and what portion of the total amount should be furnished at the State level?

Senator BRADLEY. As it is now, the bills do not require State contributions to the fund.

Senator DANFORTH. But if the State officials are going to tell us the degree of Federal involvement that they think is required, I would like to find out what they are prepared to do.

Senator BRADLEY. It is fine with me. We have an outstanding record in New Jersey.

Ms. ENGLISH. If I may respond, first of all, because New Jersey began in 1977, we have a fund that reached \$7 million. We also have a State responsibility which is \$3 million in terms of our general revenues.

We then also go against the fund for some administrative expense, I think, which will about equal that; so I think you can see that there has been a State role that has been pretty significant.

In my own budget that is about 10 percent. We only have a \$5 billion budget in the State, and I think that puts it in some sort of perspective for you.

Senator DANFORTH. So the total amount that New Jersey spends is what?

Ms. ENGLISH. The total amount that New Jersey spends in terms of its own operating dollars, out of its own revenues, is \$3 million, which goes over the whole hazardous waste and hazardous products area, and not just cleanup. It is the No. 1 concern of my department in terms of putting together a staff. I would continue to go before my State legislature to increase the technology, to increase the level of personnel, and then what we are doing is going against the fund in order to get contractors.

One thing that I should point out to the committee, which has been helpful to us, is that we have a treble damages aspect of the fund which should work very well in trying to get companies to clean up themselves. If they don't clean it up when we tell them to, then we clean it up and charge them three times the amount. That has turned out to be a powerful incentive.

Senator DANFORTH. But the cleanup operation itself, what portion of the governmental dollars do you think should be spent by the Federal Government and what portion by the State government?

Senator BRADLEY. Let me correct the record there, to say that the bill does provide for a 10-percent State payment of the costs of government response. The response fund in this bill would be about \$2.6 billion.

Senator DANFORTH. What portion do you believe the States should pay?

Ms. ENGLISH. Based upon our experience and what I have been testifying to you about, we find our own experience to be much closer to the Pennsylvania estimate, \$4 billion, than the chemical manufacturers' guess.

Senator DANFORTH. But the idea of a superfund is that the Government is to spend  $x$  dollars for cleanup, but of the total proportion what percent do you think the States should pay?

Ms. ENGLISH. Ninety-ten has done a lot in this country and I will go along with that.

Senator DANFORTH. You think the States should only have to pay 10 percent?

Ms. ENGLISH. Ten percent of what?

Senator DANFORTH. Of the cleanup cost, no more than that?

Ms. ENGLISH. That is correct.

Senator DANFORTH. Has New Jersey been one of the States petitioning to Congress to call the constitutional convention in limiting the expenditures?

Ms. ENGLISH. No. At the same time, I bring to the Senators' attention that our department has been testifying in the Congress since 1975 on this issue, so that I have watched funding levels and I have watched committees that this issue has mysteriously appeared before moving from jurisdiction to jurisdiction, and I submit to you, Mr. Chairman, that this is now the time for the Congress to act.

Ms. KRETSCHMER. I have to add that we may be a local level of government, but we have been very, very positive in what we have been doing in our county. We recently purchased two old dumpsites, and we purchased them because they presented a hazard to the people of our county.

We haven't gotten into what is in them as yet, but at this point we are prepared to clean them up. Given the fact we don't run out of money, hopefully we won't have a Love Canal; but we have done this because it had to be done. There was no one else to do it, and we did it.

We aren't looking to the Federal Government for anything. If we run into something that we can't handle, then I suppose we will come looking to some other entity. At this point we are doing it ourselves.

We also have completed what we hope is a successful landfill, to be used as a recreational area. We spent \$60,000 last year just monitoring that site with test wells and experts which were to tell us what it was. We also are operating two landfills. We are putting aside a portion of our revenue from the dumping at those landfills, and we have them contracted out to other people to operate them. We are putting aside a certain portion of the revenue for any cleanup or any restoration that has to be done.

I think that the county government as a whole has acted responsibly. We do not look to the States or the Federal Government for money unless we find that it is beyond our ability to act.

Mr. DEGNAN. I have two points: It seems to me you are trying to do three things: You're trying to create a fund to handle the problem, where there is a possibility. I think we will all probably agree that no amount of money is enough to deal with the potential problem we have, and we have a real potential problem on those sites.

On the otherhand, you want to create a fund, the fees of which are sufficient to put adequate pressure on producers, generators, and disposers to do it legally, and to make the cost of doing it illegally sufficiently high that there is a self-generated pressure to do it legally.

I don't think this bill is enough, although I recognize that there are limits on even the Federal Government's ability, but I do know that the House bill isn't adequate.

Senator BRADLEY. When you say abandoned sites or orphan sites, did you also mean to say that you included releases as it is included in S. 1480, we want to clean up not just abandoned sites but also the possibility of a truck breaking down on the turnpike, and we would like to be able to clean that up?

Mr. DEGNAN. Yes.

Mr. GRANNIS. The fee system that you are talking about, the Federal fund under S. 1480 is an 80-20 split, so there is \$100 million, or whatever the figure comes out, and 20 percent comes from Federal tax levy funds and the rest is an industry fee, so that the 90-10 match that you talked to Commissioner English about, with the States joining in a partnership with industry and the Federal Government, I think, is a fair split.

Senator DANFORTH. Only 10 percent, you mean?

Mr. DEGNAN. I can't go to the math on what the Federal tax levy share will be of that, but the Federal taxes make up only 20 percent of the ultimate size of the fund.

Governor Teasdale. The National Governors Conference endorsed the 90-10 match, and I agree with that. It is hard to be arbitrary, but my idea at least is a reasonable amount of participation by the States, which would require they be serious in their effort.

On the chairman's question about the cost, we don't in Missouri even have the ability to make an accurate estimate as to cost. In the special session I called, I am asking our Missouri Legislature for about almost \$800,000 for that specific reason, to give some estimate on how much it would cost to clean up the sites in Missouri.

Senator BRADLEY. That is a very valuable contribution, I think. The cost is very important. I think it is good to keep in mind when we talk about funds of this dimension, \$2.6 billion, that the estimate is that that is only going to be available to clean up the 400 or 500 worst sites in the country. The rest, of course, would be left to the State to take over or for further legislation.

I would like to also put in the record the exact figures on the New Jersey control fund, how much revenues have been collected, and I would submit that for the record now. It shows that in the course of operations in the last year or 2 years that a total of \$20

million had been collected, and the total of \$9,000,000 be expended. Now, that is in part because of the problem that Commissioner English referred to, because it takes a long time to clean up these sites.

Senator BRADLEY. If we could, I would like to get into the question of the manifest system. We have had disagreement in the committee and among the chemical industry representatives as to how a manifest system should work.

I am curious for the record, Commissioner English, if you could tell us how the manifest system works in New Jersey. If we went to a waste tax tomorrow, a hazardous waste tax, would that manifest system that is in place do the job, and how long would it be before we could actually get sufficient revenues from a manifest waste fee system?

Ms. ENGLISH. Senator, to us the New Jersey experience which has been, again, in place since mid-1977, the manifest system was designed not as a taxing mechanism but it is an enforcement tool, to find out, once generated and once disposed of, does what you generate get to the disposal site in the truck with what you said was in there, so you can dispose of it properly.

That, I submit, is what the system ought to be. It is really a police tool; a taxing system is another issue.

As I understand the proposal that may have been put before you yesterday, there are some members of the industry who would prefer to tax on the basis of what is disposed of, as opposed to what is generated. I do not believe that that is the system, number one, that you can check as carefully, frankly, because there are two different items.

From our point of view, where the technocrats are involved, they want to make certain that they can keep track of what the substance is and make certain it is being properly disposed of, and that is the way you also try to keep track of the illegal dumping.

So, one is a police system, if you will, and the second is another thing. I believe the generation of the substance is the proper way to do it, and the way we do it in New Jersey.

Senator BRADLEY. And the fee is placed at what juncture of production or transportation?

Ms. ENGLISH. At the transfer.

Senator BRADLEY. One cent on the barrel, basically?

Ms. ENGLISH. One cent a barrel on petroleum products. Wait a minute. I have to go through all of this again. It is 0.4 percent of fair market value, whichever is higher.

Senator BRADLEY. That is for chemicals?

Ms. ENGLISH. Yes.

Senator BRADLEY. And there are how many substances that are dealt with there?

Ms. ENGLISH. 300.

Senator BRADLEY. Senator Danforth, do you have any further questions?

Senator DANFORTH. Do you think that that is workable, or is that unworkable?

Senator BRADLEY. I think that that is a good question. How long has it taken New Jersey to get its manifest system in place so it is reasonably workable?

Ms. ENGLISH. Three years; but may I explain something, why that is so?

We use a computerized system and I do not want to go into the technology that has caused all of the problems, except that that makes a wonderful intergovernmental hassle of what type of system that you are really going to use.

I would not submit that part is the proper mode, but assuming one has a computerized system and one knows who the generators are, then you can pretty well keep track.

Mr. GRANNIS. That doesn't cover transportation in and out of New Jersey; that is one problem we have been working on, the need for a continuing manifest system, so when it crosses State lines we know where it is going and we find out whether the material really gets there.

Senator BRADLEY. It has to be a national system, or all of the wastes are going to go in the wrong place, where you don't have a manifest system, which means it could be a long time before we get a workable Federal manifest system; wouldn't you agree, Senator?

Ms. ENGLISH. My assistant here says it is 5 years to fulfill what apparently has been actually suggested by the chemical manufacturers association.

Ms. KRETSCHMER. You can't always rely on what the manifest says as to what is in the truck. We started spot-checking trucks that had manifests and found when we started to check them, some turned around and left, because they didn't have in them what they said was in them.

Now that we have an inspector part time, we aren't having the problem. Before they were making the assumption that our inspector wasn't there; so the manifest doesn't tell you what is inside the vehicle at all times. You have to be suspicious.

Senator BRADLEY. I would like to thank the panel very much for your contribution. If you have any further statements or contributions you would like to submit for the record, I will leave the record open so that it will reflect those second thoughts, or afterthoughts or additions.

With that, I would like to say this is the second hearing on the Superfund bill. I think these hearings reflect the complexities in alternate ways of trying to handle toxic substances as well as the optional ways to do this.

The committee stands in adjournment.

[Whereupon, at 12:30 p.m., the hearing was adjourned.]

[By direction of the chairman the following communications were made a part of the hearing record:]

STATEMENT OF THE AMERICAN FEDERATION OF LABOR AND CONGRESS OF  
INDUSTRIAL ORGANIZATIONS

On behalf of the American Federation of Labor and Congress of Industrial Organizations, I appreciate the opportunity to submit the following comments on S. 1480, the "Environmental Emergency Response Act," awaiting action by your Committee.

The purpose of this legislation is to 'provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive waste disposal sites.'

For the record, the AFL-CIO has been concerned with the vast and growing problem areas of hazardous substances, both in the workplace and in the ambient environment. We have a particular concern over the health and safety of workers who are involved in the numerous aspects of the investigation and cleaning up of hazardous waste sites. Already many workers are so involved, and their number will grow as the cleanup program enlarges upon implementation of the kind of program contemplated by S. 1480.

The Thirteenth Convention of the AFL-CIO in November 1979, adopted a policy statement on the environment that included the following recommendation on the cleanup on the inheritance of our industrial past—the vast no-man's-land of hazardous waste dumps in every section of the nation:

"The AFL-CIO . . . 'Supports legislation to deal with the massive problem of hazardous and toxic waste disposal by placing the responsibility for immediate cleanup and its costs on those companies responsible. Adequate financial and personnel resources should be provided by the Congress to enable the EPA to identify hazardous wastes sites, enforce their cleanup and develop safe methods for disposal of wastes. Provision should be made for identification of citizens suffering property damage or loss, death or illness from exposure to these sites.'"

In supporting the Resource Conservation and Recovery Act of 1976, the AFL-CIO, with most others, looked to the future improvement of solid wastes management embodied in that statute and overlooked the accumulated dangers of past irresponsible disposition of hazardous wastes for which RCRA provides no relief nor remedy.

In addition to our broad concern over the potential for environmental and public health threats that are already being manifested in one area after another across the land, our particular concern is the health and safety of workers involved in the investigation and cleanup of hazardous wastes sites. The size of this workforce will grow at a rate proportional to the resources devoted to the cleanup task authorized by this legislation. It is our belief, moreover, that as information broadens resources will be made available by the Congress on a far more massive scale than is provided by S. 1480. However, the Administrator is required to report to Congress within four years of the funds establishment as to adequacy and any changes in the fee systems.

The AFL-CIO strongly endorses this bill and expresses the hope that this Committee and the Congress fully recognizes the need for its passage and enactment during this session of the Congress. The indefinite continuation of a basically unabated situation will only prolong the damage to natural resources and human health by this gargantuan toxic sore on the body of America, and needlessly increase the costs of the cleanup effort.

The record is replete with various estimates of the number of disposal sites in the United States containing potentially hazardous wastes, ranging from 30,000 to 50,000 with perhaps 1,200 to 2,000 posing danger to health and the environment. Leaching of these chemicals contaminates groundwater runoff or overflow; contaminates surface waters; the air is polluted by open burning, evaporation and wind erosion, fire and explosion. Poisoning of human beings, fish, and wildlife comes by way of the food chain. Human beings can be contaminated by direct contact with the toxic material or materials. Already there are numerous reported cases of workers suffering adverse health effects, particularly skin related conditions. The potential synergistic effects among chemicals lying in waste sites, and unknown chemicals lying in such sites increases the risks associated with exposure to them.

Protection of workers involved both in the cleanup of abandoned and inactive sites, as well as the management and cleanup of sites in use must be considered as an element of the highest importance in this legislation.

We believe that S. 1480, when enacted will constitute a strong push on companies dealing with hazardous substances to comply by establishing the doctrine of strict liability for those responsible for cleanup costs, abatement and third-party damages. Moreover, machinery for prompt and adequate compensation to injured parties is provided by S. 1480. In this connection, Sec. 4(c)(3)(A) confers a benefit of great value to workers who may be involved in hazardous wastes and suffer a disabling occupational illness, and gives us hope that it will set a precedent which will hasten the day when this benefit will be available to all workers suffering disabling occupational illnesses. We are referring specifically to:

1. The provision that certain kinds of medical and scientific evidence can be used to demonstrate causal relationship between exposure to toxic materials and occupational illness. These would include animal and tissue studies, epidemiological studies, if the court decides such data are sufficiently probative to be admitted as evidence.

2. The rebuttable presumption language which allows a worker or other claimant to introduce evidence showing that he or she has been exposed for a sufficient

period or to a sufficient quantity of a toxic material or materials for which the defendant is liable under S. 1480.

We are gratified to see the provision conditioning the issuance of grants or contracts on compliance with the prevailing wage provisions of the Davis-Bacon Act, and an additional provision protecting employees from employer discrimination arising from their lawful participation in the Act.

We wish to present for your consideration some suggestions for strengthening S. 1480. They are as follows:

1. Definition of a "hazardous substance" in Sec. 2(a)(13). This definition would appear to be too narrow in scope and fails to include substances ignitable at less than 140° Fahrenheit, and those which are corrosive or explosive. These categories just referred to are defined in various EPA regulations, and should be clearly included in the definition in this subsection.

2. In Sec. 10(e), the President is empowered to investigate threatened plant closures or layoffs which a management alleges are brought about by the administration of this bill when in effect. We recommend that the President be directed to investigate the allegations, not only at the request of any party, but on his own information, that he be given the power to subpoena records of the facility or the parent corporation, and that if the resultant findings of fact demonstrates false information by the employer, the latter shall be subject to a civil penalty of \$10,000. Such changes would, in our opinion, provide substantial relief to workers from the old device of environmental blackmail consistently practiced by managements on their employees in order to obtain their support against necessary environmental cleanup.

3. If the protection of workers involved in hazardous wastes cleanup is to be adequately carried out, it will require the full and active cooperation of the three leading agencies (EPA, NIOSH, and OSHA) whose governing statutes enable them to participate in such an overall program. Also indispensable to a successful effort is the cooperation of management as well as the assistance of workers.

Sec. 6(a)(1)(p) provides the foundations for such a joint program. What we would like to see in this subsection is language designating the lead agency in its implementation. This could be accomplished by establishing a rotating chairmanship with the designee of Administrator of the Environmental Protection Agency starting off, and passing the baton to the next agency head's designee after a year's period.

In our judgment, there are two other weaknesses in this subsection. The first is that there is no means of arriving at final evaluation and approval of a joint worker protection program developed by these agencies except mutual agreement among themselves. Perhaps this problem could be solved by requiring the finally formulated operational plan to be submitted to the Administrator of EPA, and the Secretaries of Labor and Health and Human Services for the final decision to proceed.

Attached to these comments are copies of correspondence between the Director of the Department of Occupational Safety and Health of the AFL-CIO, who wrote on November 26, 1979, and the Administrator of EPA, the Assistant Secretary of Labor for OSHA, and the Director of the National Institute for Occupational Safety and Health of the Department of Health and Human Services.

This correspondence illustrates the needed delineation of the basic components of protection of workers in hazardous wastes cleanup and the particular contributions toward this goal which each agency can accomplish, with proper resources at its disposal, under its governing statute or statutes.

Since this exchange of letters, there have been two joint meetings with representatives of the three agencies and those involved unions, together with two internal meetings of the agencies. We believe that progress is being made toward a final joint administrative agreement which will provide some measure of progress in protecting some workers until such a time as S. 1480 is law.

All of this is prelude to our strong suggestion that the responsibilities of each agency to carry out the intent of Sec. 6(a)(1)(p), be clearly set forth in the legislative history of S. 1480, in elaborating on what the broad provisions of the above subsection refer to in a practical, programmatic way.

In conclusion we wish to reiterate our strong endorsement of the major provisions of the Environmental Emergency Response Act (S. 1480). We urge you to consider favorably our suggestions for improvement. Finally, we believe that this present Congress should and must enact this legislation and without further delay prepare this nation to meet the most dangerous environmental challenge of this decade. Needless delay will only make the problem more acute, the dangers more imminent and the job of cleanup more costly to us all.

DEPARTMENT OF OCCUPATIONAL SAFETY AND HEALTH,  
November 26, 1979.

Mr. DOUGLAS M. COSTLE,  
Administrator, Environmental Protection Agency,  
Washington, D.C.

DEAR DOUG: During recent weeks, it has come to my attention that workers engaged in cleanup of Love Canal and other chemical dump sites are in immediate and grave danger from exposure to toxic waste chemicals. According to physicians and researchers monitoring the Love Canal situation, workers involved in cleanup operations have not been informed of potential risks and are being afforded little or no protection from exposure to toxic chemicals.

Given the extent of the waste chemical problem, we can expect many thousands of workers to be engaged in cleanup operations over the next decade. As the representative of many workers involved in cleanup, including members of the Operating Engineers and Laborers International Union, the AFL-CIO is deeply concerned that the poisoning and pollution of community lands and waters not be extended to thousands of workers whose jobs will involve the cleanup and disposal of environmental wastes.

At this time, the AFL-CIO asks you to take the following actions under the Resource Conservation and Recovery Act to protect workers engaged in chemical cleanup and disposal:

(1) Identify all dump sites where cleanup is currently under way or planned and transmit such information to OSHA and NIOSH.

(2) In coordination with OSHA and NIOSH, develop a hazard alert which sets forth detailed procedures for protection in cleanup operations—i.e., appropriate protective clothing, respiratory protection, hygiene, medical surveillance and training—in addition to characterization of exposure potential and risks.

(3) Establish a contingency program for the awarding of federal monies for cleanup of chemical waste which requires a demonstration that proper and adequate protective measures will be afforded workers engaged in cleanup.

In addition to yourself, I have contacted Dr. Eula Bingham and Dr. Anthony Robbins requesting action by OSHA and NIOSH in this matter. I would like to convene a meeting with the principals of the three agencies within the next few weeks to discuss the problems, actions outlined above and plan a coordinated program for protecting workers engaged in cleanup operations.

I will be contacting your office within the next few days to set up a time for the meeting.

Attached is a copy of that section of our recent Convention's policy resolution on the environment and dealing with hazardous and toxic wastes disposal.

Thank you for your time and attention in this matter.

Sincerely,

GEORGE H. R. TAYLOR, *Director.*

U.S. ENVIRONMENTAL PROTECTION AGENCY,  
Washington, D.C., January 30, 1980.

Mr. GEORGE H. R. TAYLOR,  
Director, Department of Occupational Safety and Health, American Federation of Labor and Congress of Industrial Organizations, Washington, D.C.

DEAR GEORGE: Thank you very much for your letter of November 26, 1979, which emphasized the desire that we both share, that all workers involved in cleanup operations at hazardous waste sites be informed of potential risks and be afforded adequate protection.

Worker protection for the Environmental Protection Agency (EPA) personnel investigating and directing emergency response at these sites is one of the our highest priorities. This emphasis on protecting our employees will also be carried forward to all workers involved in clean up or control operations directed by EPA.

I understand that Congress, under the proposed Superfund legislation, is directing increased attention to the protection of workers who might participate in hazardous waste site control activities and who are engaged in the treatment, storage, transportation, and disposal of hazardous wastes. Staff from our Office of Legislation have discussed possible amendments with American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) staff to assure adequate worker protection and to improve coordination between appropriate Federal agencies.

I concur with your recommendation that EPA work closely with Occupational Safety and Health Administration (OSHA) and National Institute of Occupational

Safety and Health (NIOSH) to help insure that the latest information and technique are made available for worker protection at hazardous waste sites. I understand that you have also discussed this matter with Dr. Joseph L. Highland of the Environmental Defense Fund (EDF), and I welcome their interest and support on this issue. I have instructed Mr. Robert C. Magor, the head of the EPA Office of Occupational Safety and Health to work closely with your office, OSHA, and NIOSH and develop an approach under existing laws that will maximize workers' safety. I understand that you will be meeting on February 6, 1980, to discuss this matter.

Again, thank you for your concern.

Sincerely yours,

DOUGLAS M. COSTLE.

DEPARTMENT OF OCCUPATIONAL  
SAFETY AND HEALTH,  
November 26, 1979.

Dr. EULA BINGHAM,  
Assistant Secretary, OSHA, Department of Labor,  
Washington, D.C.

DEAR EULA: During recent weeks, it has come to my attention that workers engaged in cleanup of Love Canal and other chemical dump sites are in immediate and grave danger from exposure to toxic waste chemicals. According to physicians and researchers monitoring the Love Canal situation, workers involved in cleanup operating have not been informed of potential risks and are being afforded little or no protection from exposure to toxic chemicals.

Given the extent of the waste chemical problem, we can expect many thousands of workers to be engaged in cleanup operations over the next decade. As the representative of many workers involved in cleanup, including members of the Operating Engineers and Laborers International Union, the AFL-CIO is deeply concerned that the poisoning and pollution of community lands and waters not be extended to thousands of workers whose jobs will involve the cleanup and disposal of environmental wastes.

At this time, the AFL-CIO asks you to take the following actions to protect workers engaged in chemical waste cleanup and disposal:

(1) Immediately identify all chemical dump sites within the jurisdiction of each OSHA Regional and Area office. In particular, dumps where cleanup is underway or planned should be targeted.

(2) Immediately inspect/evaluate all major cleanup operations currently underway to determine the type and extent of exposures, the effects of exposure and adequacy of protective measures.

(3) Develop a comprehensive regulatory program to protect workers engaged in cleanup operations. In conjunction with NIOSH and EPA, OSHA should develop a hazard alert which outlines exposure potential, risk from cleanup and details specific protective measures, i.e., identification of toxic chemicals, protective clothing, respiratory protection, hygiene, medical surveillance and training. Enforcement of the measures should be implemented through a program directive under Section 5(a) or the appropriate health standard.

In addition to yourself, Douglas Costle and Dr. Anthony Robbins have been contacted with requests for action on this matter. I should like to convene a meeting of the principals of the three agencies within the next few weeks to discuss the problems, actions outlined above and plan a coordinated program for protecting workers engaged in cleanup.

Attached is a copy of that section of our recent convention's policy resolution on the environment and dealing with hazardous and toxic wastes disposal.

I will be contacting your office within the next few days to set up a time for the meeting.

Thank you for your time and attention to this matter.

Sincerely,

GEORGE H. R. TAYLOR, Director.

U.S. DEPARTMENT OF LABOR,  
 OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION,  
 Washington, D.C., January 24, 1980.

Mr. GEORGE H. R. TAYLOR,  
 Director, Department of Occupational Safety and Health, American Federation of  
 Labor and Congress of Industrial Organizations, Washington, D.C.

DEAR GEORGE: Thank you for your letter requesting a meeting to discuss OSHA's role in protecting workers engaged in cleanup operations of chemical dump sites (e.g., Love Canal). Please accept my apology for the delay in responding.

We are in the process of studying the action described in your letter, and I would like to confirm OSHA's interest in meeting with you to discuss this matter. Please contact my office to set up a time for the meeting.

Sincerely,

EULA BINGHAM,  
 Assistant Secretary.

DEPARTMENT OF OCCUPATIONAL  
 SAFETY AND HEALTH,  
 November 26, 1979.

Dr. ANTHONY ROBBINS,  
 Director, National Institute for Occupational Safety and Health,  
 Parklawn Building, Rockville, Md.

DEAR TONY: During recent weeks, it has come to my attention that workers engaged in cleanup of Love Canal and other chemical dump sites are in immediate and grave danger from exposure to toxic waste chemicals. According to physicians and researchers monitoring the Love Canal situation, workers involved in cleanup operations have not been informed of potential risks and are being afforded little or no protection from exposure to toxic chemicals.

Given the extent of the waste chemical problem, we can expect many thousands of workers to be engaged in cleanup operations over the next decade. As the representative of many workers involved in cleanup, including members of the Operating Engineers and Laborers International Union, the AFL-CIO is deeply concerned that the poisoning and pollution of community lands and waters not be extended to thousands of workers whose jobs will involve the cleanup and disposal of environmental wastes.

At this time, the AFL-CIO asks NIOSH to take the following actions to protect workers engaged in chemical waste cleanup and disposal:

(1) A health hazard evaluation of major cleanup operations in progress to determine the type and extent of exposures, effects of exposures and adequacy of protective measures.

(2) In coordination with OSHA and EPA, develop a hazard alert which sets forth detailed procedures for protection in cleanup operations, i.e., appropriate protective clothing, respiratory protection, hygiene, medical surveillance and training—in addition to characterization of exposure potential and risks.

I am aware that NIOSH is currently involved in an assessment of occupational exposure to waste chemicals in several plants located near or on chemical dumps in upstate New York. I am interested in determining more fully the present and planned activities of NIOSH on this problem and in discussing the expansion of those efforts to include the actions outlined above.

In addition to yourself, I have contacted Douglas Costle and Dr. Eula Bingham requesting action by EPA and OSHA on this matter. I would like to convene a meeting with the principals of the three agencies within the next few weeks to discuss the problems, actions outlined above and plan a coordinated program for protecting workers engaged in cleanup operations.

Attached is a copy of that section of our recent Convention's policy resolution on the environment and dealing with hazardous and toxic wastes disposal.

I will be contacting your office within the next few days to set up a time for the meeting.

Thank you for your time and attention in this matter.

Sincerely,

GEORGE H. R. TAYLOR, Director.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE,  
PUBLIC HEALTH SERVICE,  
Rockville, Md., January 4, 1980.

Mr. GEORGE H. R. TAYLOR,  
*Director, Department of Occupational Safety and Health, AFL-CIO,*  
*Washington, D.C.*

DEAR GEORGE: Thank you for your letter of November 26. Our experience with toxic waste sites also suggests a need for a set of recommendations for protective procedures in clean-up operations. The DHEW Interagency Committee on Potential Health Effects of Toxic Chemical Dumps, I hope, will help to coordinate the varied agencies concerned with these problems.

As you suggested, NIOSH has gained practical experience in this area by performing Health Hazard Evaluations (HHE) and offering technical assistance to other agencies. Such projects have included removal of stored dioxins, removal of roadbed contaminated with PCB, investigating health effects associated with the Hyde Park landfill, and participation in removal of hexachlorocyclopentadiene from a waste water treatment plant. We welcome and are prepared to do other HHE's in this area, not just to be of service, but as you suggest, to gain further expertise.

I look forward to participating in the upcoming meetings.

Sincerely yours,

ANTHONY ROBBINS, M.D., *Director.*

September 17, 1980

**AMERICAN  
MINING  
CONGRESS**

FOUNDED 1897  
RING BUILDING  
WASHINGTON  
D.C. 20036  
202-861-2800  
TWX 710-622-0126

The Honorable Russell B. Long  
Chairman  
Committee on Finance  
United States Senate  
Washington, D.C. 20510

Dear Mr. Chairman:

The membership of the American Mining Congress (AMC) will be directly impacted by both the liability and funding provisions of the "Environmental Emergency Response Act" (S. 1480). The fees imposed on suppliers of inorganic raw materials will be paid by AMC members.

As you are aware, AMC is an industry trade association of over 500 companies. The association's membership includes the producers of most of America's metals, coal and industrial and agricultural minerals; manufacturers of mining and mineral processing machinery and supplies; and the financial institutions which serve the mining industry.

AMC recognizes that there is a genuine need for a program to provide prompt, effective cleanup of abandoned hazardous wastes. AMC supports legislation limited to the establishment of a program for the cleanup and stabilization of orphaned and abandoned sites. The program would provide for correction of imminent hazards to public health and compensation for damages arising from those sites.

Unfortunately, S. 1480 does not limit itself to addressing the real problem. It seeks to utilize this genuine problem as a vehicle to carry amendments which will change the thrust of the environmental program established by Congress.

AMC is opposed to S. 1480 as reported by the Senate Committee on Environment and Public Works. In addition, the problems inherent in S. 1480 cannot be removed by amendments. An entirely new piece of legislation is necessary.

The American Mining Congress did not present testimony at the September 11 and 12 hearings of the Senate Finance Committee on S. 1480. At those hearings testimony was heard on the funding provisions of S. 1480 and proposed amendments relating to oil spills. AMC wishes to take this opportunity to comment on the funding provisions contained in Section 5 of S. 1480.

Continued . . .

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\*Executive Committee

†Honorary

This does not mean that the funding provisions of Section 5 can be considered apart from other provisions of the bill. For example, Section 6 opens the Response Fund to claims filed by parties whose claims for medical expenses have not been satisfied by the owner or operator or guarantor of the vessel or facility from which a hazardous substance has been discharged or released (Section 6(b)(3)(D)). Only a limited causal connection between the hazardous substance and the injury is required and the procedure takes on the attributes of a national health insurance plan.

With respect to the fee system set forth in Section 5 of S. 1480, the fee on sulfuric acid is of particular concern to the nonferrous extractive metallurgical industry, especially the smelting industry. In order to meet the requirements with respect to SO<sub>2</sub> emissions established under the Clean Air Act, many metallurgical operations have found it necessary to install sulfuric acid plants which capture the SO<sub>2</sub> released during the process and convert it into sulfuric acid.

Of the 37.9 million tons of sulfuric acid produced in 1979, only 2.89 million tons (or 7.6%) came from such sulfuric acid plants on nonferrous smelters. The production costs of this acid produced as a byproduct of pollution control (with depreciation) averages approximately \$34 a ton.

The sulfuric acid produced by nonferrous smelters usually does not compare in quality or purity to the acid produced from sulfur-burning operations in the chemical industry. It cannot, therefore, command the same price in the marketplace. Also, most smelters are located in isolated desert areas far from the commercial market for the sulfuric acid. The added transportation costs also makes the acid economically unattractive. Consequently, most of the sulfuric acid produced by smelters which is sold on the open market is sold at a loss.

The costs associated with the operation of the sulfuric acid plant at the nonferrous smelter (less the amount recovered from the sale of the sulfuric acid) constitute part of the production cost of the metals produced. The metals produced are traded on the international market which does not allow these pollution control costs to be passed along to the consumer.

Continued . . .

S. 1480 would add an additional cost to these expensive pollution control devices in the form of a fee on sulfuric acid commencing at 16¢ a short ton in 1981, increasing to \$1.00 per short ton in 1983, and climbing to the potential figure of \$10 a short ton thereafter. This appears to impact unfairly the nonferrous industry which produces sulfuric acid solely to comply with the mandates of the Clean Air Act.

S. 1480 does contain two provisions which lessen the impact of the sulfuric acid fee on the nonferrous smelting industry. First, the exemption from the fee for acid used to make fertilizer. Second, the discretionary authority to reduce the fee imposed on material "produced solely as a byproduct of pollution controls and used on-site or sold to other persons" (Section 5(e)(4)(f)(1)). The latter provision, albeit discretionary, was added by the Committee on Environment and Public Works (which also has jurisdiction over the Clean Air Act) in recognition of the problems faced by the nonferrous smelter industry as described above. AMC urges that this provision be modified to exempt from the fee sulfuric acid produced solely as a byproduct of pollution control or that the provision at least be retained in its present form.

During testimony before the Finance Committee, the Chemical Manufacturers Association and others urged that the fee system contained in S. 1480 be changed from the feedstock approach currently utilized to a fee based on the volume of hazardous waste. AMC opposes a fee system based on the volume of waste produced.

The mining industry produces large volumes of material which EPA chooses to characterize as hazardous waste. AMC does not agree with that designation, but there exists the strong probability that EPA will continue to insist that much of the material resulting from mining, smelting and beneficiation of ores is hazardous because laboratory analysis reveals the presence of trace/quantity metals, albeit in stable, relatively insoluble forms. The material is characterized by a high volume and low toxicity. It presents an extremely low risk if indeed any risk at all.

The Administration has consistently taken the position that it cannot set a fee based upon the degree of hazard associated with waste, due to the technical and administrative complexities involved. This is especially unfair considering the fact that no evidence points to the mining industry as the culprit in the vast majority of the chemical incidents cited as the basis for this legislation.

Finally, a brief discussion of the post-closure liability provisions of S. 1480 is appropriate. It must be recognized that these provisions address problems different than those sought to be remedied by the superfund legislation. AMC supports some provisions which allow the owner or operator of a hazardous

Continued . . .

waste facility to accurately forecast the costs that will be associated with that facility after operations have ceased. This will allow such costs to be accurately projected in determining the operating expenses of the site.

The collection of a fee on hazardous waste deposited in such a facility which will remain in place after the facility is closed appears to be one possible solution to this issue. AMC particularly supports the requirement contained in S. 1480, Section 5 (k) (2) which states "For wastes of large volume and relatively low hazard, such fee shall reflect the relative hazard."

However, while AMC supports the concept of a post-closure fund it does not fully endorse those provisions contained in S. 1480. Those provisions constitute a first step, but additional consideration is necessary before final passage of such a measure.

In conclusion, I wish to reaffirm AMC's opposition to S. 1480. Legislation is needed to address the problem of orphaned and abandoned sites, but S. 1480 is not that piece of legislation. If the AMC can be of any assistance in providing further data in support of these points, please feel free to call upon us for assistance.

It is respectfully requested that this letter be included in the Committee Hearing record on S. 1480.

Sincerely,



Edward R. Bingham  
Chairman  
AMC Environmental Matters Committee

AMERICAN TEXTILE MANUFACTURERS INSTITUTE, INC.,  
Washington, D.C., September 10, 1980.

Hon. RUSSELL B. LONG,  
Chairman, Senate Finance Committee,  
Dirksen Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: We would appreciate having this letter included in the record of hearings on Section 5 of S. 1480, "The Environmental Emergency Response Act." ATMI opposes the inequitable taxing of industry to supply money for the creation of a "superfund" for environmental clean up.

ATMI is the central trade association of the United States textile mill products industry representing some 80 percent of the domestic capacity for spinning, weaving, knitting, and finishing textile products of cotton, wool, man-made fibers, and silk. Our industry is in the process of spending millions of dollars in order to comply with provisions of the Clean Water Act, the Clean Air Act, and the Resource Conservation and Recovery Act—expensive environmental legislation already enacted by the Congress.

The Hazardous Waste Response Fund created by section 5 of S. 1480 relies in large part upon fees imposed on current industry which would be used in connection with prescribed response authority to cover certain costs caused by the harmful effects of releases of hazardous substances. Under this scheme, current industries are taxed to remedy the effects of past industrial activities which may have been consistent with best techniques practiced at the time. In addition, the fee-paying industry may be providing funds to remedy situations for which it had no responsibility whatsoever. In light of these important considerations, ATMI favors the use of federal funds for the clean up, containment, and compensation of damages provided for in S. 1480.

A waste end response fee is no more equitable than petrochemical feedstock fees and presents several different problems in administration and fee levels. If the RCRA regulations promulgated in May, 1980, listing numerous substances, waste streams, and characteristics as "hazardous" are presumed as the basis for a waste end fee system, a good possibility exists that the court challenges already filed for review in the U.S. Court of Appeals for the D.C. Circuit will radically alter what eventually will be defined as hazardous under RCRA. Legislation may be considered poorly drafted if the funding mechanism for S. 1480 is dependent upon another legislative measure which is still evolving in terms of its implementation at the administrative level. In addition, the imposition of a tax at the disposal level will require a fee of at least \$30. per ton of hazardous waste in order to meet S. 1480's funding levels. The size of the fee may be large enough to encourage increased "midnight dumping" and other avoidance tactics.

In conclusion, ATMI opposed the inequitable taxing of industry to provide environmental clean up monies for the creation of a superfund. These fees are an added burden to industries which are already endeavoring to raise the capital necessary to comply with all other environmental legislation. The waste end response fee creates administrative and fee level problems in its implementation and is no more equitable than the current superfund fee structure. ATMI prefers the use of federal funds for the environmental clean up and damage compensation envisioned in S. 1480.

Sincerely,

W. RAY SHOCKLEY,  
Executive Vice President.

STATEMENT BY THE CORDAGE INSTITUTE—ROBERT J. KEEFE, EXECUTIVE DIRECTOR;  
LEGARE R. HOLE, PRESIDENT

The Cordage Institute is an interested party to S.1480, The Environmental Emergency Response Act, "To provide for liability compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites."

The Cordage Institute is a nonprofit trade association whose members are the principal rope and twine manufacturers in the United States. The basic objectives of the Cordage Institute are to promote the common business interests of the cordage industry and to retain a viable domestic cordage industry to supply the nation's cordage requirements. Institute members produce about 85 percent of the total domestic production of cordage. A list of members is Exhibit I.

In regard to S.1480, the Cordage Institute is greatly concerned and will be affected by the \$3.88 per ton tax on both propylene and ethylene [as described in Section 5(d)(4)]. Both propylene and ethylene are used in the production of polypropylene and polyethylene rope and twine, the major portion of synthetic cordage sales by Institute members. In 1979, Cordage Institute members' sales of synthetic rope were 57.5 million pounds, of which 28.2 million pounds were of polypropylene and polyethylene. Industrial and agricultural polypropylene twine sales in 1979 totalled 33.5 million pounds, over 80 percent of total synthetic twine sales. (See Exhibit II for 1979 and current sales of Cordage Institute members.)

The tax as applied to propylene and ethylene would, of course, increase the final cost of olefin cordage products, approximately \$.01 per pound. This tax, in addition to the ever increasing costs of the petrochemical feedstocks, would increase the costs of producing synthetic cordage and would result in a

higher-priced product for the already beleaguered consumer.

One product line in particular clearly illustrates the impact of higher prices of propylene and its effect on the price of polypropylene twine. Polypropylene agricultural twine is manufactured by Cordage Institute members. This product competes directly with sisal agricultural twine. Sisal is a natural hard fiber grown principally in such underdeveloped countries as Mexico, Brazil, Kenya, and Tanzania. Sisal twine production in the United States has been virtually eliminated since the removal of the tariff on sisal agricultural twine in 1950. The fiber producing countries have developed their own manufacturing capabilities since that time and now export the finished product (twine and rope) instead of the raw material (sisal fiber).

The import statistics for sisal agricultural twine illustrate the high volume of this product. In 1979 total imports of sisal agricultural twine totalled over 250 million pounds (see Exhibit III). Total sales of olefin agricultural twine as published by the Textile Economics Bureau were 26.6 million pounds in 1979 (see Exhibit IV). It is obvious that the competition is still heavily favored toward natural fiber twine.

Sisal twine producers are very concerned and affected by the effect of high petrochemical costs, in particular propylene resins. In reviewing the informal price and quota arrangements for sisal, the Intergovernmental Group on Hard Fibres of the Food and Agriculture Organization of the United Nations studies the effects of oil prices on prices of polypropylene twine. This price arrangement not only provides remuneration to the growers, and considers the inflation rate and its effect on the costs of production and freight, but safeguards its position with respect to synthetic twine.

Exhibit V is a copy of the study by the Intergovernmental Group on Hard Fibres entitled, "Some Longer-Term Effects of Recent Developments in the

Petrochemical Sector on the Competitive Position between Sisal and Polypropylene."

This report outlines the effect of higher prices of propylene on prices of polypropylene twine:

Polypropylene polymer, the basic raw material for producing polypropylene agricultural twine, is of overriding importance in the economics of twine manufacturing. Polypropylene resin accounted for almost two-thirds of production costs of twine and this proportion may even rise further in future. [Page 4]

The report further demonstrates that any increases in the cost of producing polypropylene twine would be advantageous to the sisal twine manufacturers. As there is virtually no sisal twine industry left in the United States (one producer, Twine Products Corporation of New Orleans, Louisiana, still produces approximately 3 to 5 percent of U.S. consumption), the cordage industry has the capacity to manufacture polypropylene twine for U.S. farmers.

The increased costs of producing polypropylene twine in the United States will continually place it in a disadvantageous position with respect to sisal agricultural twines. An additional tax placed on the raw material costs of cordage production (both rope and twine), is an extra burden unfairly placed on U.S. cordage manufacturers. The cordage manufacturer is already bearing the increased costs of petrochemical feedstocks which the tax as proposed in S.1480 will only increase further.

The Cordage Institute respectfully requests that S.1480, The Environmental Emergency Act, not be passed in its present form.

# CORDAGE INSTITUTE

1625 MASSACHUSETTS AVENUE, N.W., SUITE 505, WASHINGTON, D. C. 20036

TELEPHONE: (202) 234-1161

## LIST OF MEMBERS

### REGULAR MEMBERS

American Cotton Yarns, Inc.  
400 Plaza Drive  
Westmont, Illinois 60559  
312-654-3600

American Manufacturing Co., Inc.  
P.O. Box 631  
Honesdale, Pennsylvania 18431  
717-253-5860

Lafayette Rope Division  
P.O. Box 52125 - Oil Center  
Lafayette, Louisiana 70505  
318-837-9241

Artcraft Braid Company  
39 Manton Avenue  
Providence, Rhode Island 02909  
401-831-9077

Berkley and Company, Inc.  
Highway 71 & 9  
Spirit Lake, Iowa 51360  
712-366-1520

Bevis Rope Manufacturing Co., Inc.  
Div. of Markrue Corp.  
321 Hogan Road  
Rossville, Georgia 30741  
404-866-4954

Blue Mountain Industries, Inc.  
Blue Mountain, Alabama 36201  
205-237-9461

Bridon Cordage, Inc.  
909-16th Street  
Albert Lea, Minnesota 56007  
507-377-1601

Brownell & Co., Inc.  
Main Street  
Moodus, Connecticut 06469  
203-873-8625

Cavnar-Johnson Cordage Co., Inc.  
P.O. Box 36  
Prattville, Alabama 36067  
205-365-5416

The Cordage Group  
Div. of Columbian Rope Company  
Columbian Drive  
Auburn, New York 13021  
315-253-3221

Exxon Chemical Company U.S.A.  
Twine Division  
P.O. Box 3272  
Houston, Texas 77001  
713-656-0139

The Hooven and Allison Company  
P.O. Box 340  
Xenia, Ohio 45385  
513-372-4421

Lambeth Corporation  
P.O. Box G-825  
New Bedford, Massachusetts 02742  
617-995-2626

Lehigh Cordage  
1929 Vultee Street  
Allentown, Pennsylvania 18105  
215-797-6470

New England Ropes, Inc.  
Popes Island  
New Bedford, Massachusetts 02740  
617-999-2351

Nova Products, Inc.  
220 Avenue "C"  
Carrollton, Georgia 30117  
404-832-9086

January 1980

Nylon Net Company

7 Vance Avenue, Box 592  
Memphis, Tennessee 38101  
901-525-8616

Rinek Rope Company, Inc.

991 Bushkill Drive  
Easton, Pennsylvania 18042  
215-258-6191

Samson Ocean Systems, Inc.

Div. of Enserch  
99 High Street  
Boston, Massachusetts 02110  
617-426-6550

Shuford Mills, Inc.

P.O. Box 2228  
Hickory, North Carolina 28601  
704-328-2131

Sunshine Cordage Corporation

7250 N.W. 41st Street  
Miami, Florida 33166  
305-592-3750

SPECIAL MEMBERSCanada Cordage, Inc.

P.O. Box 158  
Kitchener, Ontario, Canada N2G 3Y2  
519-745-7391

#1-3511 Viking Way  
Richmond, B.C., Canada V6V 1W1  
604-270-1691

Cordage Institute of Canada

1080 Beaver Hall Hill, #1002  
Montreal, Quebec, Canada H2Z 1T6  
514-866-2081

ASSOCIATE MEMBERInternational Fibres, Inc.

784 River Street  
Woonsocket, Rhode Island 02895  
401-769-0719

Cordemex S.A. de C.V.

Apartado Postal 1  
Cordemex, Yucatan, Mexico  
2-01-00

Tubbs Cordage Company

P.O. Box 7986  
San Francisco, California 94120  
415-495-7155

Plant: P.O. Box 709

Orange, California 92666  
714-538-1161

Jackson Rope Division

4201 South Congress Avenue  
Austin, Texas 78760  
512-441-8741

Wall Industries, Inc.

Railroad Avenue  
Beverly, New Jersey 08010  
609-877-1800

Wellington Puritan Mills, Inc.

P.O. Box 244  
Madison, Georgia 30650  
404-342-1916

Yale Cordage, Inc.

Div. of Wall Industries, Inc.  
Old Sparhawk Mill  
Yarmouth, Maine 04096  
207-846-9048

Guelph Twines Limited

P.O. Box 125  
Guelph, Ontario, Canada N1H 6J6  
519-821-9140

Poli-Twine Corporation

180 Bethridge Road  
Rexdale, Ontario, Canada M9W 1N3  
416-745-9990

Cordemex - USA, Inc.

14323 So. Outer 40 Road, Suite S501  
Chesterfield, MO 63017  
314-434-3373

FROM: Cordage Institute  
1625 Massachusetts Ave., N.W.  
Washington, D.C. 20036

Exhibit II  
Report for  
January-December 1979

REPORT OF SALES OF  
ALL SYNTHETIC ROPE AND BRAID  
(Unit: Pounds)

TYPE	COMMERCIAL		GOVT.	TOTALS	
	Twisted	Braid and Plaited	All Types Dir. & Indir.	Pounds	Dollars
<b>NYLON</b>					
3/16" to 3/4" dia.	4,995,453	2,388,751	104,597	7,488,801	17,255,262
3/4" through 1" dia.	1,088,976	327,966	61,212	1,478,154	3,196,057
Over 1" dia.	3,853,173	1,080,139	809,478	5,742,790	12,312,479
Totals				14,709,745	32,763,798
<b>POLYESTER</b>					
3/16" to 3/4" dia.	501,051	1,408,909	13,479	1,923,439	4,732,439
3/4" through 1" dia.	80,828	451,486	6,096	538,410	1,326,537
Over 1" dia.	758,244	801,860	88,848	1,648,952	3,605,847
Totals				4,110,801	9,664,823
<b>POLYETHYLENE/ POLYPROPYLENE</b>					
3/16" to 3/4" dia.	13,302,924	2,966,742	29,005	16,298,671	21,628,634
3/4" through 1" dia.	4,382,136	175,953	7,182	4,565,271	5,352,908
Over 1" dia.	5,755,328	1,605,734	16,703	7,377,765	7,616,459
Totals				28,241,707	34,598,001
<b>OTHER (Incl. Blends)</b>					
3/16" to 3/4" dia.	2,442,379	976,704	41,742	3,460,825	7,091,144
3/4" through 1" dia.	1,010,981	198,001	5,432	1,214,414	2,291,047
Over 1" dia.	3,818,966	1,484,379	437,483	5,740,828	10,075,272
Totals				10,416,067	19,457,463
<b>GRAND TOTALS (Pounds &amp; Dollars)</b>	41,990,439	13,866,624	1,621,257	57,478,320	96,484,085
<b>SYNTHETIC TWINES</b>					
	Commercial	Government	Total Pounds	Dollars	
<b>INDUSTRIAL AND AGRICULTURAL POLYPROPYLENE</b>	33,542,873		33,542,873		
<b>TWISTED TWINES &amp; BR. CORDS OTHER (Incl. Nylon)</b>	7,152,529		7,152,529		
<b>TOTALS (Pounds &amp; Dollars)</b>	40,695,402		40,695,402		

FROM: Cordage Institute  
 1625 Massachusetts Ave., N.W.  
 Washington, D.C. 20036  
 202-234-1161

SALES REPORT  
 SYNTHETIC ROPE

January - June 1980

LINE	TYPE Diameter (in inches)	COMMERCIAL TWISTED		COMMERCIAL PLAITED		COMM. DOUBLE BRAID		GOVERNMENT Direct Pounds	TOTALS (Incl. GOVT.)	
		Pounds	Dollars	Pounds	Dollars	Pounds	Dollars		Pounds	Dollars
1	<u>NYLON</u> 3/16" thru 1/2"	1,356,465	X	658	X	114,736	X	23,830	1,495,689	X
2	9/16" thru 1"	756,163	X	6,366	X	177,952	X	176,046	1,116,527	X
3	1-1/16" and up	1,970,136	X	313,458	X	200,070	X	182,206	2,665,870	X
4	<b>TOTALS- NYLON</b>	4,082,764	9,571,396	320,482	777,544	492,758	1,732,001	382,082	5,278,086	13,005,357
	<u>POLYESTER</u>									
5	3/16" thru 1/2"	188,187	X	↓	X	393,209	X	106	581,502	X
6	9/16" thru 1"	57,807	X	↓	X	272,417	X	922	331,146	X
7	1-1/16" and up	455,058	X	↓	X	112,429	X	20,034	587,521	X
8	<b>TOTALS- POLYESTER</b>	701,052	1,633,423	288,441	671,154	778,055	2,783,786	21,062	1,788,610	5,144,570
	<u>OLEFINS</u>									
9	3/16" thru 1/2"	5,530,163	X	↓	X		X	39,479	5,569,642	X
10	9/16" thru 1"	1,809,494	X	↓	X		X		1,809,494	X
11	1-1/16" and up	3,232,433	X	↓	X		X		3,232,433	X
12	<b>TOTALS - OLEFINS</b>	10,572,090	13,407,664	1,061,632	1,228,432	*	*	39,479	11,673,201	14,720,141
	<u>COMBINATIONS</u>									
13	3/16" thru 1/2"	633,804	X	↓	X	↓	X		633,804	X
14	9/16" thru 1"	681,266	X	↓	X	↓	X		681,266	X
15	1-1/16" and up	2,026,998	X	↓	X	↓	X	114,794	2,141,792	X
16	<b>TOTALS - COMBINATIONS</b>	3,342,068	6,139,754	718,825	1,253,478	162,335	592,790	114,794	4,338,022	8,253,584
17	<b>GRAND TOTALS</b> (lines 4+8+12+16)	18,697,974	30,752,237	2,389,380	3,930,608	1,433,148	5,108,577	557,417	23,077,919	41,123,652

\*Not enough companies reporting.

644

FROM: Cordage Institute  
1625 Massachusetts Ave., N.W.  
Washington, D.C. 20036

SALES REPORT  
BRAIDED CORD AND ROPE

January-June 1980

(Month)

	TYPE Diameter (in inches)	HOLLOW BRAID		HOLLOW BRAID W/CORE		SOLID BRAID		GOVERNMENT Direct Pounds	TOTALS (Incl. Govt.)	
		Pounds	Dollars	Pounds	Dollars	Pounds	Dollars		Pounds	Dollars
	<b>NYLON</b>									
1	3/32 thru 5/32"	↓	X	116,660	X	140,510	X		257,170	X
2	3/16 thru 3/8"	↓	X	107,567	X	613,621	X		721,188	X
3	7/16 thru 3/4"	↓	X	27,332	X	105,200	X		132,532	X
4	TOTALS - NYLON	43,262	118,402	251,559	754,716	859,331	2,464,522		1,154,152	3,337,640
	<b>POLYESTER</b>									
5	3/32 thru 5/32"	↓	X	17,116	X	22,843	X	1,000	40,959	X
6	3/16 thru 3/8"	↓	X	7,590	X	91,257	X	277	99,124	X
7	7/16 thru 3/4"	↓	X	24,708	X	3,823	X		3,823	X
8	TOTALS - POLYESTER	14,308	33,248	24,708	76,393	117,923	319,340	1,277	198,214	453,842
	<b>OLEFINS</b>									
9	3/32 thru 5/32"	40,627	X	39,960	X	9,494	X	65	90,146	X
10	3/16 thru 3/8"	594,924	X	↓	X	255,942	X		850,866	X
11	7/16 thru 3/4"	103,476	X	0	X	↓	X		103,476	X
12	TOTALS - OLEFINS	739,027	1,611,842	39,960	143,071	265,436	673,474	65	1,044,488	2,430,462
	<b>COMBINATIONS</b>									
13	3/32 thru 5/32"	142,041	X	X	X	X	X		142,041	X
14	3/16 thru 3/8"	↓	X	X	X	X	X	4,620	4,620	X
15	7/16 thru 3/4"	88,101	X	X	X	X	X	7,432	93,333	X
16	TOTALS - COMBINATIONS	228,142	658,713	*	*	*	*	12,052	240,194	692,129
	<b>COTTON &amp; COTTON BLENDS<sup>①</sup></b>									
17	3/32 thru 5/32"	X	X	159,674	X	1,794,037	X	7,282	1,960,993	X
18	3/16 thru 3/8"	X	X	633,558	X	↓	X	21,033	654,591	X
19	7/16 thru 3/4"	X	X	0	X	52,378	X		52,378	X
20	TOTALS - COTTONS	X	X	793,232	1,343,108	1,846,407	3,683,663	28,315	2,667,954	3,911,219
21	GRAND TOTALS	1,024,739	2,442,005	1,109,457	2,519,288	3,089,097	7,143,601	41,709	3,265,002	12,225,092

① Includes synthetic cores.

\*Not enough companies reporting. \*\*Includes figures not previously published.

SALES REPORT  
SYNTHETIC TWINE AND YARN

January-June 1980

Month

(In Pounds)

	TYPE AND SIZE	TWISTED	BRAIDED	TOTALS (Incl. Government)
S P I N N E S	1 NYLON FILAMENT Up to #72	1,119,608	45,429	1,165,037
	2 " Larger than #72	"	"	"
	3 " TOTALS (Add lines 1 + 2)	1,119,608	45,429	1,165,037
O T H E R S	4 OLEFIN - INDUSTRIAL	7,205,669		7,205,669
	5 OLEFIN - FARM	16,346,516		16,346,516
	6 NYLON	411,988	36,237	448,225
	7 POLYESTER	168,660		168,660
	8 COTTON & COTTON BLENDS	1,044,757		1,044,757
	9 COMBINATIONS (Polypropylene and Nylon or Polyester)	"		"
	10 TOTALS (Add lines 4 thru 9)	25,177,590	36,237	25,213,827
Y A R N S	11 NYLON	0	0	0
	12 POLYESTER	0	0	0
	13 OLEFIN MONO	311,649	0	311,649
	14 OLEFIN FIBRILLATED	302,549	0	302,549
	15 COMBINATIONS	0	0	0
	16 TOTALS (Add lines 11 thru 15)	614,198	0	614,198
17 GRAND TOTALS (Add 3 + 10 + 16)	26,911,396	81,666	26,993,062	

(A) Includes all sizes -- treated, spun, braids under 3/32" diameter.

(B) Cordage components - converter trades, etc.

\*Not enough companies reporting.

FROM: Cordage Institute, 1625 Massachusetts Ave., N.W., Suite 505, Washington, D.C. 20036.

FROM: Cordage Institute, 1625 Massachusetts Ave., N.W., Washington, D.C., 20036 - February 6, 1980

IMPORTS OF BALER AND BINDER TWINE INTO THE UNITED STATES - ENTERED FOR CONSUMPTION  
December 1979

Country	Not Over 375 Feet Per Pound			Over 375 Feet Per Pound			Totals	
	Pounds	Dollars	U.Value	Pounds	Dollars	U.Value	Pounds	Dollars
Mexico	9,588,880	4,482,713	.467	1,478,344	793,542	.537	11,067,224	5,276,255
Haiti	400,000	155,079	.388	7,750	2,981	.385	407,750	158,060
Brazil	38,915,321	16,533,517	.425	1,403,420	711,524	.507	40,318,741	17,245,041
Portugal	158,123	67,442	.427	64,800	23,040	.356	222,923	90,482
Tanzania				90,000	33,042	.367	90,000	33,042
Totals	49,062,324	21,238,751	.433	3,044,314	1,564,129	.514	52,106,638	22,802,880

January - December 1979

Canada	68,600	22,960	.335	108,800	52,612	.484	177,400	75,572
Mexico	49,844,818	15,592,013	.313	9,567,014	3,421,909	.358	59,411,832	19,013,922
Honduras	39,000	9,812	.252				39,000	9,812
Haiti	8,855,371	2,242,593	.253	297,800	80,461	.270	9,153,171	2,323,054
Brazil	141,146,466	44,282,459*	.314	8,042,783	3,026,506	.376	149,190,249	47,308,965
Portugal	7,744,293	1,653,362	.213	945,530	269,672	.285	8,689,823	1,923,034
Philippine Rep.	7,163	3,041	.425				7,163	3,041
Kenya	69,203	18,280	.264				69,203	18,280
Tanzania	10,779,574	2,405,046	.223	826,549	191,995	.232	11,606,123	2,597,041
Mozambique	12,240,106	2,096,603	.171				12,240,106	2,096,603
Totals	230,794,594	68,326,169	.296	19,789,476	7,043,155	.356	250,584,070	75,369,324

\*The November entry of 1,635,000 pounds @ \$687,300 was incorrectly identified as from the Bahamas. The Bureau of Census has determined that it should have been applied to the entry from Brazil. It has been added to the cumulative total from Brazil.

NOTE: Unit value does not include duty, marine insurance, ocean freight, port, or other charges.

SOURCE: National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia



	<b>FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS</b>	<b>CCP:EP 80/6</b> <b>February 1980</b>
	<b>ORGANISATION DES NATIONS UNIES POUR L'ALIMENTATION ET L'AGRICULTURE</b>	
	<b>ORGANIZACION DE LAS NACIONES UNIDAS PARA LA AGRICULTURA Y LA ALIMENTACION</b>	

COMMITTEE ON COMMODITY PROBLEMS

INTERGOVERNMENTAL GROUP ON HARD FIBRES

Fifteenth Session

Rome, 20-22 February 1980

SOME LONGER-TERM EFFECTS OF RECENT DEVELOPMENTS IN THE PETROCHEMICAL  
SECTOR ON THE COMPETITIVE POSITION BETWEEN SISAL AND POLYPROPYLENE

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INTRODUCTION

1. The Intergovernmental Group on Hard Fibres reviewed the longer-term outlook for sisal and henequen at its Fourteenth Session in April 1979. It was then considered possible that the developments in the crude oil and petrochemical sector which had just emerged might have an impact on the future competitive position of hard fibres vis-à-vis their synthetic substitutes in favour of the natural products. However, the Group recognized that it had been too early in April 1979 to make a judgement as to whether the polypropylene prices, which had only started to rise early in the year, would have a lasting effect on sisal's competitive position. The Group, therefore, requested the Secretariat to closely monitor these developments and to prepare a note covering their longer-term effects in order to facilitate a more thorough examination at the Fifteenth Session.

2. The processing economics of feedstocks, base chemicals and derivatives originating from crude oil is an extremely complicated subject matter. It is therefore difficult in a brief document to do full justice to the complex technical and economic relationship between the raw materials, the intermediate and end-products. These inherent difficulties are further enhanced by the extremely volatile current market situation for crude oil. The conclusions on the outlook of prices for polypropylene and twine made from it are, therefore, of necessity very tentative and should be considered as illustrative examples.

I. TECHNICAL AND ECONOMIC BACKGROUND

3. Polypropylene twine is produced from polypropylene homopolymer. The polymer comes in granular form, is melted and extruded and the resulting film is slit into tapes and twisted. The polymer itself is obtained by polymerising propylene monomer. Propylene, the base chemical, in turn is derived from naphtha or natural gas liquids by steam cracking. Finally, naphtha is obtained from refining crude oil and gas liquids are derived from natural gas.

4. Propylene is a joint product with ethylene and owing to this joint product nature propylene is notoriously difficult to cost. Also, producers of propylene monomer are mostly vertically integrated or identical with those of polypropylene polymer. In such cases, the cost price imputed to propylene will depend on internal accounting practices of the company as well as on the profit/loss account of polypropylene vis-à-vis other petrochemical products which the company sells. This account is often conditioned by the actual market prices which the company can obtain in a given supply/demand situation. In fact, naphtha, base chemicals and derivatives, including polypropylene, have become commodities in their own right and petrochemical companies often are, over extended periods of time, following market sentiments when pricing them rather than applying strict cost considerations.

II. RECENT PRICE DEVELOPMENTS OF OIL AND DERIVED PRODUCTS IN MAJOR MARKETS OF WESTERN EUROPE AND NORTH AMERICA1. Western Europe

5. Table 1 illustrates recent developments in prices of crude oil and products derived from it in western Europe. The official price of Saudi Arabian light crude was US\$ 12.70 per barrel f.o.b. during the whole year 1978. At the OPEC meeting in June 1979 the official price for this quality was lifted to US\$ 18.00 which was the price prevailing till December 1979. Most OPEC contract prices for crudes ranged between US\$ 19.00 and the agreed upper limit of US\$ 23.50 per barrel during the initial period following June 1979. However, free market prices reached more than US\$ 35.00 by the end

of 1979. In December the price for Saudi Arabian light crude for 1980 was lifted to US\$ 24.00 per barrel. As no agreement was reached at the 55th OPEC meeting in December 1979 on a reintroduction of a uniform pricing structure, other OPEC members added premiums and grade differentials bringing official quotations of some types of crudes to above US\$ 30.00 per barrel in early 1980.

6. Prices of naphtha and propylene, the basic feedstock and base chemical for the manufacture of polypropylene, contained in table 1, are contract prices, with spot market prices frequently being quoted higher. Prices for naphtha and propylene followed the sharp rise of prices of crude oil, although there were additional market factors unrelated to the oil costs, which influenced price developments for feedstocks and base chemicals. As a consequence, the price of polypropylene almost doubled within a year or so from about US\$ 550 per ton by end 1978 to around US\$ 1 030 by end 1979.

Table 1: Western Europe - Recent price developments of polypropylene and its base chemical, chemical feedstock and raw material

	end 1978	mid-1979	end 1979
Crude oil f.o.b. <sup>1/</sup> (US\$/barrel)	12.7	18.0	18.0
Naphtha <sup>2/</sup> (US\$/ton)	155	235	300
Propylene <sup>2/</sup> (US\$/ton)	220	390	475
Polypropylene (US\$/ton)	550	900	1 030

1/ There are about 7.5 barrels in a ton and freight costs were assumed to be US\$ 1.00 per barrel.

2/ Average of contract price ranges.

## 2. United States

7. In the United States the price of polypropylene is linked to the cost of oil in a somewhat different way from that in western Europe. The cost of oil to a United States refiner is an average of imported crude at the world price and of domestic crude at a lower price which is controlled. The domestic crude is planned to be decontrolled during 1981 to 1983 so that thereafter the United States price may be the same as in western Europe. The price setting mechanism for propylene in the United States is further complicated by the fact that a much larger share of it than in Europe is obtained from gas liquids than from naphtha. This factor is reflected in much less steep price increases for propylene monomer and polypropylene, compared to western Europe between end 1978 and 1979 as shown in table 2.

Table 2: United States - Recent price developments of polypropylene and its base chemical

	end 1978	mid-1979	end 1979
	(.....US\$/ton.....)		
Propylene	225	262	275
Polypropylene	595	670	705

### III. SOME CONSIDERATIONS ON POSSIBLE COST/PRICE IMPLICATIONS FOR POLYPROPYLENE POLYMER

8. Polypropylene polymer, the basic raw material for producing polypropylene agricultural twine, is of overriding importance in the economics of twine manufacturing. Polypropylene resin accounted for almost two-thirds of production costs of twine and this proportion may even rise further in future. Thus, because of its importance in determining the competitive position with sisal, production economics of polypropylene polymer are examined a little more closely below. A somewhat hypothetical cost/price situation of polypropylene polymer is set out in table 3, which, with certain qualifications, can serve as an illustrative example for recent and possible future developments. This particular example relates to western Europe. However, it is equally applicable to the United States for 1985. By then no price differentials in crude oil are expected to exist and differences in processing costs are believed to be marginal already now.

Table 3: Illustrative example of estimated costs of production of polypropylene polymer 1978, 1979, 1980 and projected 1985

	end 1978	end 1979	early 1980	1985
Process	slurry	slurry	slurry	vapour phase
Operating rate	70%	70%	70%	85%
Crude oil price	(..... US\$/bbl .....)	12.7	18.0	24.0
Propylene price	(..... US\$/ton .....)	220	475	500
<u>Cash costs of production</u> (raw materials, utilities, operating costs, cash overheads)	<u>550</u>	<u>850</u>	<u>880</u>	<u>950</u>
Depreciation (10 years)	147	147	147	165
Return on investment (10 percent)	182	182	182	200
<u>Transfer price 1/</u>	<u>880</u>	<u>1 180</u>	<u>1 210</u>	<u>1 315</u>
<u>Selling price</u>	<u>550</u>	<u>1 030</u>	<u>1 030</u>	<u>1 315</u>

1/ The term "transfer price" was used to denominate a price which would cover cash cost of production, depreciation and a reasonable return on investment.

9. After the new price for Saudi Arabian light crude decided in December 1979 of US\$ 24.00 per barrel, a moderate annual rise of 7.5 percent to 1985 has been assumed for that type in the table as well as an increase in transport cost per barrel from about US\$ 1.00 in 1979 to US\$ 1.50. However, it must be realized that in present circumstances this is an arbitrary assumption as prices for Saudi Arabian crude may well exceed the assumed rate of growth to 1985, given that the price for some non-Saudi Arabian grades in early 1980 were already close to the price assumed for Saudi Arabian crude for 1985. Thus, the oil price and cost figures used for 1985 in tables 3 and 5 could be regarded as the lowest conceivable. Estimates for polypropylene costs would have to be raised if they were based on spot prices or on non-Saudi Arabian crudes.

10. Furthermore, in order to arrive at the 1985 projected situation, an assumed "fair transfer" contract price has been used for propylene. However, as explained in

paragraph 4, not only will the transfer price used by companies depend on internal accounting practices, but the market price can also differ considerably from the calculated transfer price depending on supply/demand conditions. Thus, for 1985 a price ratio of 18 : 1 per ton of propylene/barrel of crude oil has been used which is considered "normal" in petrochemical circles, but differs substantially from the ratio 26 : 1 which prevailed during parts of 1979.

11. Finally, a shift in the type of polymerisation process used has been assumed from the first generation solution polymerisation plants (slurry or bulk polymerisation processes), which are currently being phased out, to the vapour phase or highly active slurry process. The lower costs of the vapour phase process is expected to gradually influence the market and was assumed to represent the best technology by 1985.

12. Despite the inevitably arbitrary selection of quantitative cost figures, some valid conclusions can be drawn from the material presented in table 3. Polypropylene prices prevailing in the market in 1978 just covered cash costs of production but yielded no return on investment and depreciation charges amounting to about US\$ 330 per ton for plants not yet written off. Cash costs of production seem to have risen by about 60 percent between late 1978 and early 1980, largely as a result of the upsurge in oil prices which doubled and propylene prices which rose by more than 115 percent. However, although selling prices of polypropylene polymer rose even faster than cash costs, they were still more than 10 percent below aggregated costs, depreciation and return on investment in late 1979. Thus, despite the considerably higher price obtained by petrochemical companies in 1979, they still considered this situation, which probably deteriorated again slightly in early 1980, unsatisfactory and polypropylene polymer prices too low.

13. On the assumptions made, cash costs for polypropylene polymer may be expected to rise by about 11 percent between early 1980 and 1985. This may be considered surprisingly low but can largely be ascribed to the new energy-saving vapour phase process which is expected to reduce the utilities component by more than half. Raw material costs, which in 1979 amounted to about 55 percent of total cash costs, are, therefore, expected to account for 65 percent of the total in 1985. Although total cash costs are not expected to rise dramatically up to 1985, polypropylene prices would nevertheless have to be raised by more than 25 percent above their current levels, i.e. to some US\$ 1 315 per ton, if they were to be adequate to cover cash costs and depreciation and to provide an adequate return on investment (table 3).

14. However, given past experience, it would be hazardous to assume that the projected increase in costs will necessarily lead to an increase in the selling price of polymer of the magnitude indicated above. In fact, the most significant single reason for the uneconomically low market prices for polypropylene up to 1978 was the prevailing excess polymerisation capacity as shown by the figures contained in table 4. Thus, in the United States more than 25 percent of the potential effective capacity and in western Europe almost 30 percent were lying idle.

15. The capacity and demand figures for 1985 are tentative estimates based on known expansion plans for plants coming on stream by 1982. However, assuming for a plant to become operative after a construction period of two to three years, the above does not represent the full picture, i.e. decisions taken in 1982 or 1983 could still increase the polymerisation capacity in 1985. Thus, should the supply still be in excess of demand by 1985 the projected operating rate of 85 percent might not be achieved, and consequently the cost of production would be higher than estimated in table 3.

Table 4: Estimated supply/demand position for polypropylene 1978 and projected to 1985

	1978		1985	
	US	ME	US	ME
	(.....thousand tons.....)			
Nameplate capacity	2 180	2 050	2 770	2 710
Potential supply at 85 percent of nameplate capacity	1 850	1 740	2 350	2 300
Domestic demand	1 225	1 040	2 500	1 990
Export demand	140	180	-	300
Deficit (-)/surplus (+)	(+) 485	(+) 520	(-) 150	(+) 10

16. It may be assumed, however, that petrochemical companies will in future, more than in the past, attempt to equate the transfer price of polypropylene with the actual selling price. For not only will losses not be carried ad infinitum but new plants using the most modern technology are capital intensive and an adequate return on investment has to be recuperated at some stage. A closer balance between capacity and demand for polypropylene and a utilisation rate of close to 85 percent of the effective capacity has therefore been considered likely for 1985. Thus, a selling price equal to the transfer price of at least US\$ 1 315 per ton of polypropylene has been assumed. This may in fact turn out to be too low, given the probability of prices for crude oil and/or propylene in 1985 to be higher than those assumed in table 3.

#### IV. SOME CONSIDERATIONS ON POSSIBLE COST/PRICE IMPLICATIONS FOR AGRICULTURAL POLYPROPYLENE TWINE

17. The estimated cost/price situation for polypropylene agricultural twine is presented - again for illustrative purposes - in table 5. An attempt has been made there to assess the impact of the rise in polypropylene prices on the price for polypropylene twine to 1985. It will be noted that in 1979 the cost/price relationship for polypropylene twine was the reverse of that of polypropylene polymer. That is to say, whereas in the case of polypropylene polymer the selling price was below the transfer price (i.e. economically unsatisfactory), the selling price of polypropylene twine exceeded the transfer price by a substantial margin. However, if marketing costs of twine are put at between five and ten percent of the transfer price, i.e. about US\$ 120 per ton, most of the margin between transfer and selling prices would be absorbed. If marketing costs are assumed to rise to US\$ 170/ton in 1985 a sales price of US\$ 2 400 per ton of twine could be estimated for the mid-eighties. The sales price per bale of agricultural polypropylene twine, equivalent to a sisal bale of 38-40 lbs, could thus rise from around US\$ 15.75 at present to 21.80 in 1985, representing an increase of almost 40 percent.

Table 5: Illustrative example of estimated costs of production of polypropylene twine in western Europe 1979 and projected 1985

	end 1979	1985
Capacity	(.....tons.....) 1 400	1 400
PP polymer	(.....US\$/ton.....) 1 030	1 315
Cash costs (raw materials, utilities, operating costs, cash overheads)	<u>1 425</u>	<u>1 930</u>
Depreciation (10 years)	50	85
Return on investment(25 percent)	125	215
<u>Transfer price</u>	<u>1 600</u> (14.50.....US\$/bale....20.20)	<u>2 230</u> (17.75.....US\$/bale....21.80)
<u>Selling price</u>	<u>1 730</u>	<u>2 400</u>

18. In late 1979 and very early 1980, market prices for agricultural twine from sisal were around US\$ 19.00-19.50 per standard bale of 38-40 lbs in Europe as well as in the United States. It was reported that an equivalent bale of polypropylene twine was selling at between US\$ 15.50-16.00 in both markets. Thus, should the current price difference between sisal twine and polypropylene twine of over US\$ 3.00 per bale persist in 1985, a price per bale of sisal twine of around US\$ 25.00 could be conceivable as a competitive price with equivalent polypropylene twine. The estimated price for sisal twine could exceed US\$ 25.00 per bale if the price for Saudi Arabian crude would rise faster than assumed and if the calculation were based on spot prices and/or non-Saudi Arabian crudes provided there would still be differentials between these quotations in 1985.

19. However, similar to polypropylene polymer, pricing of polypropylene twine frequently follows its own course not always related purely to cost logic. The twine market and twine pricing is characterized by a complex interdependence of costs of sisal twine manufactured in producing and consuming countries, producer and export price policies of sisal and twine of exporting countries, employment and marketing strategies of companies in importing countries which at the same time may import raw sisal for spinning, import sisal twine and extrude polypropylene twine and market all of these products through their established channels. All these imponderables influence actual prices and they are impossible to single out and to assess in quantitative terms.

#### V. TENTATIVE CONCLUSIONS

20. It cannot be overemphasized that the many imponderable factors affecting prices of crude oil and the products derived from it make any projections as well as the assumption on which they are based a highly speculative exercise. Nevertheless, it seems a reasonable expectation that crude oil prices, polypropylene and polypropylene twine costs

1/ For a series from 1972 to end 1979 of estimated average market prices of natural and synthetic raw materials and agricultural twines see annex table 1.

and prices will rise further, even though serious uncertainties exist on the degree of the increase. Thus, the competitive price of sisal and sisal products will probably advance steadily and possibly beyond the levels indicated in paragraph 18. At face value, this would seem to be a favourable development for sisal's future position. However, there are a number of cautioning factors which should be taken into account in assessing the generally optimistic outlook for the competitive position of sisal fibre and its chief end-products:

- the upsurge of polypropylene polymer prices in 1979 was not only due to rising oil prices, but was also heavily supported by a fast expanding demand for polypropylene associated with the strength in the economies of many industrialized countries. The uncertainty on future economic growth coupled with the still existing overcapacity of polypropylene polymer production could exert a dampening effect on polymer prices in the coming years. With the high proportion of polymer costs in total polypropylene twine costs, a lowering of the polymer price would weaken the position of sisal vis-à-vis synthetics;
- the market for agricultural twine (independent of the material from which twine is made) continues to shrink with an expansion of non-twine using fodder preservation methods, i.e. silage. Apparently, in some European countries there is a gradual switch to broader grass varieties which are particularly suitable for silage. Also, cereal varieties yielding shorter straw contribute to the contraction of twine usage. By contrast, in the United States the largest producer of polypropylene agricultural twine terminated its manufacture thus providing sisal twine with the possibility of regaining some market shares;
- perhaps the gravest deficiency for an accurate assessment of the competitive position is the lack of quantitative knowledge regarding the impact of rising oil prices on production costs of sisal fibre and conversion costs into twine through higher prices for fertiliser, energy, transport fuel, etc. There can be no reason for complacency and the need for measures raising productivity in production and extraction of fibre is as acute as ever;
- finally, in the present precarious economic situation not only different production cost structures but also monetary policies of individual twine producing countries will affect the competitive position of sisal versus polypropylene twine; the competitive strength of sisal will, therefore, continue to vary from country to country, perhaps even more than in the past.

Annex Table 1: Estimated average market prices of natural and synthetic raw materials and agricultural twines

	1972	1973	1974	1975	1976	1977	1978	1979			
								1st.qu.	2nd.qu.	3rd.qu.	4th.qu.
(.....US dollars/ton.....)											
<b>Sisal fibre</b>											
(cif Europe)											
East African UO	239	549	1 057	580	468	511	475	507	675	845	825
Brazilian No. 3	232	483	973	663	405	457	433	498	633	812	755
<b>Polypropylene polymer</b>											
(ex-factory)											
Western Europe	380	390	670	600	620	530	557	550	865	950	1 050
United States	370	460	530	575	615	625	617	617	670	705	705
(.....US dollars/bale 1/.....)											
<b>Sisal baler twine</b>											
Western Europe	5.50	8.60	17.40	20.50	11.50	12.60	12.50	12.50	12.50	12.50	19.00
United States	4.80	7.30	18.80	21.20	8.00	9.00	9.90	12.00	12.00	12.00	19.00
<b>Polypropylene baler twine</b>											
Western Europe	8.20	6.85	10.60	12.50	8.60	9.35	9.85	9.85	9.85	9.85	15.75
United States	5.50	5.50	10.00	19.50	9.00	9.20	9.50	9.50	9.50	9.50	15.75

1/ For sisal/henequen, standard 38-40 lbs bale c.i.f. or ex-factory; for PP, bale equivalent to standard sisal bale, ex-factory, assuming ramage 2 : 1 per weight unit.

STATEMENT OF RICHARD A. LILLQUIST, PRESIDENT, FLEXIBLE PACKAGING  
ASSOCIATION

Mr. Chairman, my name is Richard Lillquist. I am the President of the Flexible Packaging Association, the principal association representing the flexible packaging industry. I am pleased to have this opportunity to express our Association's views on S. 1480, which is the subject of today's hearings.

First, however, a few words about our Association and the industry it represents. The flexible packaging industry's annual sales are approximately \$4 billion a year, most of which represent sales of flexible packaging used for food or health products. The industry has about 50,000 employees and operates 900 plants. The Association's members produce approximately 85 percent of the industry's products. The typical flexible packaging company is a relatively small company (\$3 to \$6 million/year in sales) or a division of a large company. The industry is very competitive because large amounts of capital are not needed to enter the business.

I turn now to our comments on S. 1480. In the first place, Mr. Chairman, we believe that the tax system contained in S. 1480 would severely harm the flexible packaging industry and the plastics industry in general. A substantial portion of our industry's products consist of plastic packaging and are derived from petroleum feedstocks. It has been estimated that the Superfund taxes under the bill would ultimately amount to 0.6 cents per pound on the feedstocks used in manufacturing most plastics. The amount of such a tax would ultimately be passed on to the manufacturer of the end product made from plastics. One such product, for example, is the bag used to contain bread, 18 billion of which are produced each year. Imposing such an additional tax on bread bags and the many other products we fabricate will have a serious effect on our ability to compete in both domestic and export markets.

The flexible packaging industry is a lean and efficient industry whose members average a net return of only 0.3 cents per dollar of sales in a highly competitive market. Naturally, we are concerned by the proposed imposition of taxes which, when passed on, would amount to 30 percent of our profit—an amount significant enough to bankrupt some of our smaller member companies during difficult times.

A price differential of a fraction of a cent would also seriously impair our ability to compete with foreign suppliers, since the tax on feedstock imports will not fall on imported sheet, film, bags, etc., which compete with our products. More plentiful feedstocks, expanding facilities abroad, and reduced U.S. tariffs, are already a serious cause for concern without an additional burden of further taxation and higher costs.

Our hopes for expanding the industry's export business would be damaged, because fractions of a cent can cause the loss of a sale in the competitive world of packaging materials. Other ill effects could result from the loss of packaging business to competing materials and systems of distribution.

Second, Mr. Chairman, we believe that it is grossly unfair and improper to impose a tax on products, such as petroleum feedstocks, that are used to manufacture other products which are entirely safe and which contribute to the health and welfare of our society. Flexible packaging products, which are made from feedstocks, pose no health problem.

The plastics we process are approved by the FDA as safe for packaging foods of all types: bread, fruit, meat, cheese, and other dairy products, in endless variety supplied to all segments of our population. Not only are these materials safe themselves, but they also provide many advantages in the distribution and merchandising of a myriad of products. Sealed food packages provide health benefits to the public through reduced contamination and spoilage. Food costs represent a significant portion of the average citizens' personal budgets and a major part of the budgets of our less affluent citizens.

The tax under S. 1480 would be passed on to manufacturers of virtually all packaging products, thereby burdening the public with increased costs of food, clothing and other needed items which are contained in such packaging. Clearly, such a result would be unjust. Particularly so when the tax would affect products such as ours, which have not contributed to the dumping and spillage of toxic chemicals.

In conclusion, Mr. Chairman, we urge the Finance Committee to consider an alternative fee system in which the tax is imposed on the generators and disposers of end waste products. Such a tax would fairly affect those companies and their products which contributed to the hazardous waste problem.

## STATEMENT OF THE NATIONAL LP-GAS ASSOCIATION

The National LP-Gas Association (NLPGA) offers its comments on the "Environmental Emergency Response Act", S. 1480, on which your Committee has scheduled hearings for September 11 and 12, 1980. We request that our comments be included in the official record of these hearings.

NLPGA is the national trade association of the LP-gas industry representing over 4,000 LP-gas industry members. In addition, NLPGA includes 47 affiliated state and regional LP-gas associations representing all 50 states. Our membership consists primarily of LP-gas (predominately propane) dealers who market propane to residential, agricultural, commercial and industrial users at some 18 million installations nationwide. Although we include in our membership producers, gas processors and international importers and exporters of LP-gas we do not profess a special expertise in these areas and are here speaking primarily on behalf of propane resellers, retailers and users.

## BACKGROUND

At the outset, we wish to focus your Committee's attention on the nature of the product about which we are speaking. LP-gas stands for liquefied petroleum gas. LP-gas is also known as propane, butane, bottled gas, tank gas, or by the brand name of the supplier. The makeup of the gas can vary, but the most common forms include propane, butane, and propane/butane mixes. LP-gas is stored and transported as a liquid and generally utilized as a vapor in numerous appliances and items of equipment. It is a clean burning gas, providing the same convenient services as natural gas; however, its mobility makes use possible anywhere. It is a portable fuel delivered by trucks, either in packaged cylinders or in bulk quantities to a consumer's storage tank on his property.

Propane's predominant market is on the farm, in small towns, and in rural areas. It is used for the same purposes as natural gas, plus other uses where a mobile source of energy is desirable. It is used extensively for cooking, water heating, home heating and air conditioning, clothes drying and incineration. In fact, the uses of LP-gas cover a wide range from butane cigarette lighters to large industrial applications, including propane use as an engine fuel to operate forklift trucks, industrial type vehicles, school buses, selfpropelled recreational vehicles, and the family automobile. There are over 25,000 retail sales outlets consisting of approximately 5,000 large retailers with a total of between 8,000 and 9,000 bulk storage plants for local distribution, and approximately 20,000 relatively small retailers of propane that sell "bottled gas" as part of another business, such as a hardware store.

The purpose of the above description is to emphasize to your Committee that we are discussing a product which is used widely by consumers in a variety of ways and is an essential fuel source supplying approximately 3% of the nation's energy needs. Propane is not toxic, leaves no residue or waste, and is not the kind of product intended to be addressed by S. 1480. In addition, propane storage and transportation is already closely regulated through a series of federal, state and local laws and regulations, including the Pipeline Safety Act and the Hazardous Materials Transportation Act. Inclusion of propane in S. 1480 can only result in jurisdictional conflicts and unnecessarily increased consumer costs.

## S. 1480 APPLIED TO PROPANE USES

Turning to specific provisions of S. 1480, we wish to offer the following specific comments.

1. The inclusion of propane in S. 1480 is likely to be inadvertent at best, as will be seen later. With respect to butane, it is specifically listed in Section 5(1)(2) under the definition of "primary petrochemical" and is a listed petrochemical on which a fee is levied for purposes of establishing the Response Fund. Also, in Section 5(1)(6), "petroleum oil" is defined to include crude oil or any fraction or residue therefrom and could, arguably, include all forms of liquefied petroleum gas extracted from crude oil for purposes of the Response Fund fee.

It should be noted that approximately 35 percent of available LP-gas comes from crude oil refining, while 65 percent comes from natural gas processing plants. Thus, the levy might be assessed on only 35 percent of available supply. If this were the case, those consumers who happen to purchase propane derived from crude oil refining would bear the additional cost of this fee, while consumers purchasing propane coming from natural gas fractionation facilities would be able to purchase product at a lower rate because it would not be subject to this fee. In this manner, S. 1480 creates a discriminatory tax.

2. The definition of "hazardous substance" in Section 2(b)(13) would not include propane unless it were to be designated as a hazardous substance under 3(a)(2) or it

could be included under 2(b)(13)(G) due to its flammability. It is instructive to note at this point that the report of the Senate Committee on Environment and Public Works, S. Rept. No. 96-848, July 11, 1980, excludes natural gas and LNG on Page 31:

"The reported bill does not cover spills or other releases strictly of oil. It is also important to note that natural gas, liquefied natural gas (LNG), and high BTU synthetic gas of pipeline quality (or mixtures of natural gas and thus synthetic gas) are not considered hazardous substances within the purposes of S. 1480."

We submit that this finding should be broadened to include LP-gas and made a part of the statutory language so as to eliminate any possibility of confusion. Therefore, we recommend appropriate amendment on page 8 of the Environment Committee reported version of S. 1480, Calendar No. 933 (Star Print), on line 23 after the word "paragraph" as follows: "nor does it include natural gas, liquefied natural gas (LNG), liquefied petroleum gas (LP-gas), and high BTU synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas)."

3. If propane is not specifically excluded, and assuming that it is covered by the provisions of this bill either as a hazardous substance specifically or through the petroleum oil definition, then we believe that the overbreadth of this legislation can create serious consequences and a variety of anomalous situations. For example, the definition of "facility" in 2(b)(9) includes any "building, structure, installation, equipment, pipe or pipeline, \* \* \* storage container, motor vehicle", where a hazardous substance has been stored or otherwise come to be located. This definition when applied to LP-gas without further limitation would include not only railroad tank cars, tank trucks and LP-gas bulk plants, but a propane storage container at a consumer residence used for home heating, cooking, or clothes drying; a small propane cylinder used for outdoor gas grills, outdoor camping or recreational vehicles; a propane torch for soldering; and, a cigarette lighter. In addition, it would also apply to propane containers and equipment used to operate a motor vehicle which is becoming extremely popular today as an alternative to high priced gasoline.

4. The definition of "release" in 2(b)(16)(A) contains no limitation whatsoever when referring to "discharging" or "escaping" so that during the course of normal filling operations at a consumer residence any escape of propane into the atmosphere could trigger the mechanisms under this legislation. Additionally, anytime one lights a cigarette from a butane lighter, there would be a "release" as defined by S. 1480. It should be noted that the exclusions contained in 2(b)(16) as well as the "federally permitted releases" of 2(b)(18) do not include the nominal releases cited above. The very fact that fertilizer applications and motor vehicle exhaust emissions had to be specifically excluded from coverage of 2(b)(16) indicates that others have perceived the extent to which this bill could be carried. Thus, we do not believe that the extremes which we have posited herein are that unlikely.

5. With the above definitions in mind, an examination of subsequent sections of S. 1480 illustrates further unintended, but likely, results. For example, Section 3(a)(1) declares that the "use, transportation, \* \* \* storage, \* \* \* and release of hazardous substances are ultrahazardous activities." Thus, Congress will now declare that the barbecuing of steaks on an outdoor gas grill is an ultrahazardous activity.

Section 3(a)(3)(A) requires that "any person . . . in charge of an . . . on-shore facility . . . shall, as soon as such person has knowledge of any . . . release . . . of a hazardous substance from such . . . facility . . . immediately notify the appropriate agency of the United States government of such . . . release." As written, this notification requirement would extend beyond the LP-gas dealer to include consumer storage, cigarette lighters, gas grills, automotive uses, etc. Failure to so notify carriers with it a fine of not more than \$10,000 or imprisonment of not more than 1 year—a pretty stiff penalty for cooking a steak.

Section 3(a)(4)(A) requires any person within 180 days of enactment who owns or operates a facility at which hazardous substances are stored to notify the Environmental Protection Agency (EPA) of the existence of this facility, "specifying the amount and type of any hazardous substances to be found there, and any known, suspected or likely discharges or releases of substances from such facility or site." This provision would require not only the registration of every LP-gas bulk plant (approximately 8,000 to 9,000), every hardware store and other retail outlet which dispenses LP-gas (approximately 20,000), but every home (about 10.8 million), farm (about 1.4 million or roughly 50% of all of America's farms), commercial and industrial (about one million) and recreational vehicle (about 5.6 million) which uses propane. All told, this could approximate more than 18 million registrations, not including the number of gas grills or cigarette lighters presently in use. Furthermore, subsection (C) requires that any deed or conveyance of a facility shall disclose on its face the identity, quantity, location, condition and circumstance of the storage. Thus, every deed or conveyance of a home or an automobile fueled by propane

would have to bear this information. Furthermore, Section 4(i) would operate to bar the transfer of liability by conveyance without adequate disclosure and thus would operate to require, for example, vendors of butane cigarette lighters to adequately disclose the information specified in Section 4(i).

#### LP-GAS SHOULD BE EXCLUDED FROM S. 1480

Although the situations we have posted above may be laughable, they are the realistic and foreseeable results when LP-gas is included within the scope of S. 1480. We do not believe it is the intent of this bill to cover a vital energy source such as LP-gas on which so many millions of Americans are dependent. We therefore urge the specific exclusion of LP-gas from S. 1480 since it is more adequately regulated by existing federal, state and local laws, and since it is nontoxic and does not present the environmental clean-up problems intended to be addressed by this legislation.

1. The Pipeline Safety Act of 1979 (49 U.S.C. 1671 *et seq*) revised and updated the Natural Gas Pipeline Safety Act of 1968, adding a new title, the Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. 2001 *et seq.*). As a result, the Department of Transportation (DOT) has complete jurisdiction over the pipeline movement and related storage of LP-gas, in both its liquid and gaseous state. The Hazardous Materials Transportation Act of 1974 (49 U.S.C. 1801 *et seq*) gives DOT similar jurisdiction over all other modal shipments of LP-gas, and the regulations promulgated thereunder (49 CFR Parts 170.179) incorporate by reference the Federal Motor Carrier Safety Regulations in 49 CFR Parts 390-397.

Finally, each state exercises safety jurisdiction over the storage and handling of LP-gas through laws based on decades of experiences. These laws and regulations, most frequently enforced by state fire marshals, are grounded on and often incorporate by reference the Standards No. 58 of the National Fire Protection Association, "Storage and Handling of LP-Gas."

2. Liquefied petroleum gases are not toxic substances. Neither LP-gas generally, nor propane or butane specifically, appear on any lists of hazardous substances developed pursuant to the Clean Water Act, the Solid Waste Disposal Act, the Toxic Substances Control Act, or the Clean Air Act. LP-gas are flammable, and they are included as a hazardous material by the Hazardous Materials Transportation Act as noted above. Caution should be exercised, however, to distinguish products according to their individual characteristics.

LP-gases are not a class of material presenting toxic hazards to humans and the environment. The accidental release of LP-gas presents no environmental clean-up problems. LP-gas are nontoxic, are stable products, and will not react nor mix with soil or water. Due to their low boiling points, they will not be retained on land or water, but will readily dissipate in air. In short, they should not be included in S. 1480.

#### RESPONSE FUND

Section 5 establishes a Response Fund and includes butane as a "primary petrochemical", together with a broad definition of "petroleum" oil" which could conceivably include LP-gas derived from crude oil refining. We submit that in any proposal to structure an Emergency Response Fund, the fees for such funds should come from a tax on petrochemicals which are the sources of the waste, and not from fuels. Therefore, we recommend that language be inserted in the legislation to exempt from the fees assessed under Sections 5 any fuels or substances used in the production of fuels. This action would place the burden on the intended parties and avoid saddling consumers of an essential energy source of these extra costs. This action would comport with the apparent intent of the Senate Environment and Public Works Committee which state in its Report No. 96-848, July 11, 1980, at page 21:

"A number of provisions are included in the fee system to assure an equitable fee which avoids unintended economic impacts, including: . . . exclusions from the fees for primary petrochemicals and inorganic raw materials which are used as a source of fuel. . . ."

We would recommend, therefore, the inclusion of the following language on page 60 of the Senate Environment and Public Works Committee reported version of the bill (Calendar No. 933, Star Print), on line 4 after the word "xylene":

"Provided, however, That any substance listed herein which is used as a fuel or to make a fuel shall be treated as a primary petrochemical only when it is used otherwise than as a fuel or to make a fuel (and, for purposes of subsection (c)(1)(A) of this section, the person using it as a primary petrochemical shall be treated as the supplier thereof and shall be responsible for collecting the fee."

We also recommend the following amendment to the definition of "petroleum oil" on page 61, on line 15 after the word "black": "but shall not include liquefied petroleum gases (except to the extent they may be included under subsection (e)(2) of this section)."

In conclusion, we believe the above analysis clearly demonstrates that S. 1480 is overly broad and lacking in specificity. We believe that LP-gases, specifically propane and butane, should be excluded from provisions of this legislation and should be specifically exempted as fuels from the Response Fund fees. The Committee on Environment and Public Works clearly indicated an intent to exclude natural gas and LNG, and to avoid assessing fees on fuels. For the sake of clarity of legislative intent we urge adoption of the amendments recommended herein.

#### NATIONAL LP-GAS ASSOCIATION RECOMMENDED AMENDMENTS TO S. 1480

All amendments are to the version of the bill reported by the Senate Environment and Public Works Committee, July 11, 1980, Calendar No. 933 (Star Print).

1. On page 8, line 23, after the word "paragraph" add: "nor does it include natural gas, liquified natural gas (LNG), liquefied petroleum gas (LP-gas), and high BTU synthetic gas of pipeline quality (or mixtures of natural gas and such synthetic gas)."

2. On page 60, line 4, after the word "Xylene" add:

"Provided, That any substance listed herein is used as a fuel or to make a fuel shall be treated as a primary petrochemical only when it is used otherwise than as a fuel or to make a fuel (and, for purposes of subsection (c)(1)(A)) of this section, the person using it as a primary petrochemical shall be treated as the supplier thereof and shall be responsible for collecting the fee."

3. On page 61, line 15, after the word "black" add: "but shall not include liquefied petroleum gases (except to the extent they may be included under subsection (e)(2) of this section)."

NATIONAL TURKEY FEDERATION,  
Reston, Va., September 15, 1980.

Mr. MICHAEL STERN,  
Staff Director, Committee on Finance,  
Dirksen Senate Office Building, Washington, D.C.

DEAR MR. STERN: The National Turkey Federation (NTF) is the only national trade association representing the turkey industry in the United States. The grower/processor members of the National Turkey Federation are responsible for the production and marketing of the major portion of the nation's turkey crop. NTF is very concerned over the losses suffered by the turkey industry as innocent victims of chemical contamination.

Section 6(a)(1)(N) of S. 1480 properly addresses the crisis that now faces our industry. Under this paragraph, the Fund may be used to compensate an agricultural producer or processor for loss of income or capital loss due to destruction, loss, condemnation, or restriction on use resulting from a release of a hazardous substance. The turkey industry has suffered both income and capital losses because of condemnation or restriction of use resulting from a release of hazardous substances and deserves the compensation offered in this section of S. 1480.

Recent releases of hazardous substances, such as the PCB incident, have brought havoc to the agricultural community. Thousands of animals had to be sacrificed while the marketing system was thrown into disarray. The inequity of the situation is magnified when the agricultural sector is unable to gain compensation for the severe losses that are suffered. Section 6(a)(1)(N) of S. 1480 would grant our industry the indemnification we justly deserve as innocent victims of a nationwide tragedy.

Industry and government attempts to identify contamination incidents before agricultural producers and processors suffer major losses have proved unsuccessful. The danger of contamination faces the industry from every direction. Government monitoring programs have not been able to insulate producers and processors from the losses suffered by recalls and condemnations. It is a sad commentary on the conditions we must face in our everyday operations.

As more and more disposal sites are uncovered around the country, the magnitude of the problem grows. The turkey industry has felt the pain of economic losses inflicted upon unsuspecting parties. The National Turkey Federation feels the agricultural commodity deserves protection against chemical contamination. We strongly support paragraph (N) of section 6(a)(1).

Respectfully submitted.

G. L. WALTS,  
Executive Vice President.

STATEMENT BY JOHN J. SHEEHAN, LEGISLATIVE DIRECTOR, UNITED STEELWORKERS OF AMERICA

Mr. Chairman, members of the Senate Finance Committee, my name is John J. Sheehan and I am the Legislative Director of the United Steelworkers of America.

At the outset let me say that our union supports S. 1480, the Super Fund bill. It is critically necessary legislation which demands immediate Congressional attention. The serious problems of toxic chemical releases and hazardous waste disposal have been permitted to go unresolved for far too long. We, therefore, urge this Committee to consider S. 1480 with all due speed and favorably report it to the Senate floor without weakening amendments.

The need for S. 1480 should be clear to anyone who has examined the problem of industrial disease in the United States. Many health hazards associated with toxic substances have been confirmed in both the work and ambient environments. Exposure to these dangerous materials has resulted in high levels of cancer, birth defects, respiratory illness, and other diseases which are directly linked to the various cycles of chemical production, use, or disposal.

Annually, some 100,000 workers die from occupational disease and another 400,000 become ill from exposure to toxic substances. Moreover, EPA has recently estimated that 1.2 million Americans may be exposed to serious health risks because they live in close proximity to the 645 toxic wastes dumps studied by the Agency. These sites, of course, are only a small fraction of the 30,000 dumps which are suspected of containing hazardous wastes. Thus, the total number of people at risk may be much higher. The tragedies of places like "Love Canal" in New York and "The Valley of the Drums" in Kentucky are dramatic examples of the toxic hazards confronting this nation.

The careless use and disposal of toxic substances by certain sectors of American industry have resulted in a level of industrial disease which no civilized nation should tolerate. For too many years industry has had a relatively free hand in managing and disposing of dangerous chemicals and toxic wastes. As the record clearly demonstrates, industry has been negligent and has failed in its social responsibility to protect workers and communities from harm.

Although there are a number of federal regulatory laws for controlling workplace and environmental pollution, regulation alone cannot do the job. In addition to strong regulatory programs, the problem requires an effective clean-up and victim compensation statute. And in this respect, S. 1480 is unique.

As you are well aware, S. 1480 is not a regulatory measure. Rather, it is a liability bill designed to provide a powerful economic incentive for those who produce, distribute, consume, transport, and dispose of hazardous substances. The bill is based upon the simple principle that those who most directly benefit from commerce in toxic materials, and thus place the public at risk, should properly bear the primary economic responsibility for responding to and compensating victims of toxic substances released or dumped into the environment.

In addition to holding those responsible liable for damage, the second major purpose of the bill is to establish an effective mechanism for cleaning up toxic dumps and providing for victim compensation. This is achieved by the creation of a Hazardous Substance Response Fund designed to finance clean up and compensation actions where the responsible party does not clean-up, cannot be found, or is unable to pay the clean up and compensation costs. Based upon a system of industry fees and federal appropriations, the Fund will permit the federal government to effectively respond to the massive clean up and compensation problems confronting the Nation.

In terms of clean-up operations alone, the EPA has estimated that it will cost from \$65 million to \$260 million to respond to the approximately 3,500 chemical spills that occur each year. As for the more than 2,000 toxic dump sites believed by EPA to require attention, the Agency has estimated that it will cost about \$3.5 million for each site to adequately contain their contents. The problem is large and is serious, and it will be costly to resolve.

Mr. Chairman, we are not in a position to assess the adequacy of the size of the Hazardous Substance Response Fund. However, our union does endorse the policy concepts upon which the Fund is based including:

- (1) Collection of fees from the segment of industry responsible for generating most toxic substances along with a small contribution from the federal government;
- (2) Establishment of "joint, several and strict" liability on those responsible for damages caused by chemical releases and hazardous waste disposal;

(3) Ability of the Fund to respond quickly to the disposal aspects of chemical releases, toxic waste dumps, and to victim compensation claims;

(4) Establishment of a medical causation presumption in victim compensation claims; and

(5) Establishment of certain worker protections.

#### INDUSTRY FEES

As indicated above, our union believes that the major financial responsibility for the costs of toxic substance clean up and compensation should be borne by those segments of industry which generate most of the hazardous substances. S. 14380 accomplishes this objective through the "pollutor-pays" principle. By assessing industry fees of those 46 substances which are either hazardous themselves or as the basic building blocks used to generate most hazardous substances and wastes, the fee system will internalize the "pollutor-pays" concept.

By levying fees on toxic feedstocks, which can be passed on to subsequent customers, the entire commercial chain is assessed for clean-up and compensation costs. The result, of course, is a properly financed fund which can effectively respond to clean-up requirements and compensation claims. Thus, the fee system achieves the twin objectives of:

(1) Placing the costs on those who commerce in toxic substances; and

(2) Creating an independent response mechanism which can act to clean-up and compensate without first attempting the very difficult process of tracking down the specific source of a particular toxic substance.

The Fund, of course, has the authority to assess individual liability so as to recover its costs, but this will not prevent immediate action. Indeed, the seriousness of the problem demands an immediate and large-scale effort which can only be undertaken by a government administered response fund, such as that provided in S. 1480.

#### STRICT LIABILITY

The goals of S. 1480 are, of course, to clean-up and correct past toxic substance damage, respond to future damages, and, perhaps most important, prevent further damage from occurring. It is this preventative aspect of the legislation which should be emphasized.

By holding those who produce, distribute, consume, and dispose of hazardous substances "jointly, severally, and strictly" liable for toxic substance damage, S. 1480 creates a potent economic incentive for the exercise of due care in the release of chemicals and the disposal of hazardous wastes. We believe that this market incentive will go far in protecting workers and communities from the kind of carelessness and disregard which we have witnessed in the past.

#### QUICK RESPONSE

The Fund will permit the federal government to respond quickly to chemical releases, toxic dumps and victim compensation. Rather than waiting for the sometimes difficult and time consuming process of affixing individual responsibility, the Fund can move rapidly to deal with toxic substance situations and then seek to recover expended funds from responsible parties.

#### MEDICAL CAUSATION PRESUMPTIONS

As a part of the victim compensation scheme established by S. 1480, the bill creates a medical causation presumption for the purpose of recovering out of pocket medical expenses for health impairments resulting from exposure to toxic substances. As the report of the Environment and Public Works Committee makes clear, it is often difficult to establish a direct and immediate cause and effect relationship between toxic exposure and disease. Traditional rules of law have evolved within the context of traumatic immediate injuries resulting from visible accidents and in this respect are inadequate to deal with modern industrial diseases with long latency periods.

To deal with these inadequacies, S. 1480:

(1) Specifically authorizes the admission of medical and scientific studies in courts of law including the results of animal studies, tissue studies, and microorganism studies which, in the past, have been excluded by some courts; and

(2) Creates a presumption in favor of a plaintiff when he has shown a reasonable likelihood that his disease resulted from the release of a toxic substance.

To invoke the presumption, the claimant must introduce enough evidence to permit a court to conclude:

(1) That the claimant had been exposed for a sufficient period of time or in sufficient quantity to a hazardous substance; and

(2) That there is a "reasonable likelihood" that the exposure caused or contributed to his disease or injury.

Although the presumption does not relieve the claimant of traditional burden of proof requirements, it does permit a toxic substance victim to proceed with a legitimate claim for medical compensation. In terms of other damages caused by toxic substance diseases, such as lost wages, the presumption does not apply and a claimant is required to proceed under the regular tort system of proof.

#### WORKER PROTECTION

S. 1480 provides for three kinds of worker protections:

(1) Coordination and consultation between EPA, OSHA and NIOSH in the development of safety and health protections for workers involved in the clean-up of toxic wastes;

(2) Prevailing wage protection for workers involved in clean-up operations; and  
 (3) Anti-discrimination protection for workers who report hazardous substances releases or who otherwise provide information which may involve a violation of the law. The anti-discrimination provision basically protects a worker from employer retaliation if the worker reports or provides such information.

It should be noted that S. 1480 does not include workers under the victim compensation provisions. Rather, it maintains the traditional employee-employer relationship established by state workers compensation laws. The bill does, however, preserve workers traditional legal rights to bring actions against third parties which may have contributed to an injury or illness.

#### CONCLUSION

Although the bill does not create a new right for workers for health impairment compensation, it does establish an incentive to prevent industrial disease in the general population. It is this preventative aspect of S. 1480 which cannot be overemphasized.

As you may know, the workers compensation system, in addition to providing compensation for injury, was anticipated to be a marketplace inducement to reduce injury and illness in the workplace. While it may be arguable as to whether workers compensation has fulfilled this function relative to the higher incidence rates of injury, there is no doubt that it has not performed this purpose in terms of industrial disease. Indeed, some 95 percent of all industrial disease cases go uncompensated. Hence, there is little or no marketplace penalty for occupational illness.

We believe however that S. 1480, by providing compensation for the economic losses due to industrial illness suffered by others outside the workplace will help to create the preventative incentive we are also seeking through the workers compensation. In this respect, the bill will have a positive indirect impact on workers by imposing higher standards of care on those who produce, consume, distribute and dispose of toxic substances.

In all of these respects, our union endorses S. 1480 and urges its expeditious consideration and enactment.

WINCHESTER, MASS., April 18, 1980.

DAVID W. WARREN, Jr.,  
 Chief, Office of Opinions and Review, Federal Communications Commission,  
 Washington, D.C.

DEAR MR. WARREN: We wish to convey our strong objection to the use of the sentence, "Without chemicals, life itself would be impossible," and corollary statements used in the current promotional campaign of Monsanto Chemical Corp., because these claims are misleading to such a degree that they could undermine the general public's ability to properly evaluate the hazardous nature of certain substances.

We the undersigned are professionals in science communication and in medicine, respectively. As such, we assure you that to the average layperson—to whom this advertising is apparently directed—the word "chemicals" means something akin to: "Substances put into the biosphere by humans that would not normally be there."

The advertising copy attempts to make the case that all substances, both naturally-occurring and of human origin, i.e., "man-made," are "chemicals," but this implication is dangerously misleading.

Experts in the various scientific disciplines use appellations more limiting and therefore more useful than "chemicals" to refer to substances of particular interest.

Examples are plentiful, and include such nouns as "minerals," "polymers," "antioxidants," "antibiotics," "toxicants," "pesticides," "poisons," and so on.

Of course, all of these substances have a chemical nature that could be precisely delineated. But these nouns and their delineations are semantically quite different from the common interpretation of the word "chemicals."

Stretching of semantics is often a harmless enough exercise: we're all familiar with the outrageous claims of "medicine show" pitches and other offerings from purveyors of products and services of dubious value or having questionable distinction from those of competitors. But we would urge the Monsanto management that approved this particular advertising campaign to reflect upon the genuineness of the services their many products provide, and to consider carefully the effect a backlash from this campaign could ultimately have on corporate credibility.

Further, the Monsanto promotional claim has a potentially illegal component that we would like to call to your special attention. By implying that *all* chemicals (including, for example, carcinogenic, mutagenic, and toxic substances, by lack of a disclaimer or qualifier), fit the Monsanto paradigm linking "chemicals" and "life," the advertising copy takes the general public on a breathtaking leap of illogic that would attempt to link such hazardous materials and life. This is, of course, nonsense.

By definition, such hazardous materials are clear and present dangers to life. The paradigm is thus disproved, and with its demise the advertising claim is proved false and therefore possibly contrary to the standard of truth in advertising set forth by the Federal Communications Commission, whom we have apprised of our criticism.

Since by now it is altogether likely that these considerations have occurred to Monsanto management, we would hope that this letter is redundant with their discovery. But if not, we commend them in advance for reacting in the public interest by acting to remove this misleading promotion from the public eye . . . and to consider the production and broadcasting of messages that may redress some of the damage that may have already been done to the capabilities of public judgment.

Risk is an inherent part of living, most would agree; but the disavowal of the existence of risk would add a factor of ignorance to risk; benefit considerations that must be addressed if we as a nation are to continue to enjoy the fruits of technology with minimal damage to us and to the world in which we live.

Sincerely,

ROBERT F. MOBBS, M.D.,  
LEONARD A. PHILLIPS,  
*Science Editor and Writer.*

By the time of my encounter with the outraged divorcée, I was not a complete stranger to controversy. A local doctor, Robert F. Mobbs, had volunteered to me that the small Taylor Chemical Company plant (also just outside the town limits) was producing a fallout of dust that was dangerous to workers and families living nearby. I had no real sense, in 1949, of the volatility and importance of the environmental- and industrial-safety issues, and I incautiously reported Dr. Mobbs's charges, along with the avuncular denials of the plant management. But I was too inexperienced to know how to follow up, or even that I should. Besides, I left Aberdeen for greener pastures soon after my story appeared.

Dr. Mobbs, it later developed, has hit upon one of the first indications that DDT and other insecticides might be harmful to human beings. His interest had been piqued by the death from unexplained convulsions of a three-year-old Aberdeen girl; and it occurred to him that material in the air from the Taylor plant might have been in some way involved.

On investigation, he learned that Taylor was mixing DDT, sulphur, and lindane into a crop-dusting compound; to protect workers who were bagging this mixture, the dust from it was blown by a large fan out of the plant—and allowed to go freely into the atmosphere. As early as December 1948 Dr. Mobbs had published in the *Journal of the American Medical Association* an account of how he had subjected rabbits to lindane dust and they had died—showing evidence of tissue change similar to that found in the dead child.

For the next twenty years, Robert Mobbs was on of a small band of American crusaders against insecticides like DDT; he appeared frequently before congressional and scientific committees and government agencies, mostly to no avail. In Aberdeen, as a consequence, he soon got a reputation as something of a zealot, a man who rocked the boat and who had given the town and one of its industries a bad name. Feeling "ostracized," in 1954 he moved back to his native Massachusetts, where he

now practices in Wilmington—and where on June 14, 1972, he got the news that the federal government finally had banned DDT.

Dr. Mobbs's charges against Taylor Chemical was my first encounter with a so-called "whistle-blower"—one who speaks out against fraud or deception or graft or hazard that might not otherwise be detected. And his treatment in Aberdeen illustrates as well as anything the frequent necessity for whistle-blowers to hide their identities—to become "anonymous sources" protected by a reporter from the vengeance of their superiors or neighbors or competitors or peers.

Mr. KOLOJESKI. Well, I should also clarify that issue. There are several issues of due process which were raised by Shell in its appeal. The argument that an administrative law judge is an employee of the agency and therefore incapable of unbiased, objective evaluation of the evidence has been raised many times by litigants whose ultimate positions were not upheld by an administrative law judge in a particular agency.

In point of fact, an administrative law judge is an independent employee of the Civil Service Commission, assigned to a particular agency. He is no more prejudiced by the fact that he is a federal employee than a federal judge is prejudiced in favor of a federal prosecutor because they're both paid by the same government. The administrative law judge in this aldrin/dieldrin case was a highly respected member of the legal profession and certainly a man of integrity.

Mr. McELHENY. You're talking about Judge Perlman?

Mr. KOLOJESKI. Yes, Judge Perlman. Maybe I misinterpreted the point, but I caught the implication from Mr. Appleby that perhaps this was one big show in which the EPA was the prosecutor and judge at the same time. Actually the case was quite the contrary.

Mr. APPLEBY. I would just like to say this: I certainly don't want to leave the impression that we think there's anything wrong with Judge Perlman. He's an extremely honest and capable and good man. All of these people are. There is just a certain uneasiness about the fact that the agency is prosecutor, judge, and appeals court.

Mr. MOBBS. I'd like to comment on this point. Something like a science court established public policy on DDT in 1949, which in effect set the state for the uncritical registration of pesticides such as dieldrin. In the *Journal of the American Medical Association*, December 25, 1948, I had criticized lindane and DDT. On April 28, 1949, the Associated Press circulated a report of my criticism of DDT. This report followed an extended series of articles by syndicated columnist Albert Deutsch, also critical of DDT and based on the work of Dr. Morton Bisking of Westport, Connecticut. On April 30, 1949, a "science court" composed of representatives of Agriculture, Public Health, the Food and Drug Administration, the armed services, and the Pan-American Sanitary Commission issued a public-policy statement that had the effect of declaring DDT safe by edict.

I might have accepted this statement if someone had examined the photomicrograph available showing similar tissue changes in a human death following exposure to DDT and lindane and in animals exposed to the same chemicals. Also, slides were available, but not examined, showing tumors of the liver produced by intraperitoneal injection of lindane and DDT. In addition, intravenous administration of inositol, of which lindane is the apparent antimetabolite, caused some abnormal cells to return to normal.

A public policy protective toward DDT and other pesticides was followed for several years by federal agencies, and significant research on pesticide toxicity was practically nonexistent from 1949 until about 1968.

In the meantime, the Delaney Committee of Congress in the period from 1951 to 1952 found that pesticides in food were a problem and tried for corrective legislation. This legislation might have passed but for the poor advice Congress was given by the Food Protection Committee of the National Academy of Sciences. In effect, The Food Protection Committee said, "A little poison in food is okay!"—a refrain repeated for about 15 years.

Instead, the basic Food and Drug Law was weakened by the passage of the Miller Amendment in 1954. Before this amendment, only "essential" poisons were allowed to contaminate food—the Miller Amendment changed "essential" to "useful," and today nonessential chemicals contaminate most foods and also tobacco.

In 1954 I suggested at Senate hearings that the addition of carcinogenic chemicals be kept at a zero tolerance level for food and tobacco. The 1958 Delaney Amendment incorporates the zero tolerance standard but applies in only to direct additives, not incidental additives such as pesticides.

To come back to dieldrin, it is a prime example of a pesticide that should have been evaluated prior to registration. The chief chemist of the U.S. Food and Drug Administration, a Dr. Laug, informed me personally that he was extremely dis-

tressed when dieldrin was first registered by the Department of Agriculture. He had been corresponding with people in England who were using dieldrin to produce cellular abnormalities suggestive of possible carcinogenesis, and their data certainly should have been evaluated prior to the registration of dieldrin.

Dr. KARCH. I want to make two comments. Since the issue was raised about a science court, I should mention that a meeting has been scheduled to discuss the idea of a science court. It will be held on September 19 to 21, 1976, in Leesburg, Virginia. The sponsors are the Department of Commerce (the Commerce Technical Advisory Board), the National Science Foundation, and the American Association for the Advancement of Science. The Academy will participate, and the idea is to identify issues for an experiment to try out the science court. Those around Washington may wish to attend that meeting.

My second point concerns the role of scientists in deciding public policy. I think this was critical to the aldrin/dieldrin decision. If the EPA were simply to accept the data and findings originally submitted by industry, without any independent evaluation, as Dr. Epstein has so ably pointed out, a completely different decision would probably have been made. It was clearly necessary for the EPA to enlist independent experts to reevaluate the data. The clash in the case was, in large measure, over a difference in interpretation of those basic data.

COMMITTEE ON FINANCE

U.S. SENATE

Hearings on S. 1480

STATEMENT OF J. WILLIAM FUTRELL  
PRESIDENT, THE ENVIRONMENTAL LAW INSTITUTE

Statement of J. William Futrell, President of  
the Environmental Law Institute

In May 1980 the Environmental Law Institute, a Washington-based research institute, completed a significant legal research report, Six Case Studies of Compensation for Toxic Substances Pollution: Alabama, California, Michigan, Missouri, New Jersey, and Texas. This report was prepared under the supervision of the Congressional Research Service of the Library of Congress. Dr. Gilbert Gude of CRS forwarded the report to Senators Culver and Stafford and the Senate Subcommittee on Environmental Pollution, which was considering the proposed Superfund legislation (S. 1480) to establish a federal liability, response and compensation mechanism for toxic substances pollution.

On September 12, 1980, Dr. Louis Fernandez, appearing on behalf of the Chemical Manufacturers Association (CMA) before the Senate Finance Committee, introduced a statement which attacks the Institute's work, not on the basis of the substantive questions addressed in the report, but rather in pejorative terms, labeling the Institute's report as "unscholarly," "unsupported," using "outdated" citations, "misstating" the law, etc. The testimony borrows this language from a memorandum prepared by Covington and Burling for the use of CMA's General Counsel. The memorandum was attached to CMA's testimony as Appendix 6. For the most part, the memorandum is an argumentative response to the issues raised in the CRS study. However, the opening three pages contain unsubstantiated and intemperate attacks on the quality of the Institute's work. These attacks require an answer for the record.

We stand by the report as a significant legal research effort, highly factual, extensively documented, with careful legal analysis. The Chemical Manufacturers Association's charge that the work is "unscholarly" has no basis. In fact, the researchers consulted with Frederick Anderson, now Professor of Law at the University of Utah College of Law, during the research phase. Professor Kenneth Abraham of the University of Maryland Law School reviewed and helped revise the final drafts. Throughout the process, the Environmental Law Institute adhered to the high standards of objectivity of the Congressional Research Service. For its part, CRS subjected our report to a review process involving three separate divisions of the Library of Congress. The CRS director, Dr. Gude, stated, "Special mention is owed the staff of the Environmental Law Institute for a truly extraordinary effort in completing this sizable work within a period of 2 months."

The Chemical Manufacturers Association's testimony misrepresents the Institute's position. Contrary to its assertion, nowhere in our report do we advocate the adoption of a federal tort law. We have no position on S. 1480. We are a non-partisan research institute which seeks to maintain its institutional objectivity. The CRS report to which CMA takes exception does not address the question of a federal Superfund. Ours is a limited report on a limited question. We were asked to perform an analysis of how six state judicial systems would compensate victims of an injury from

STATEMENT  
page two

toxic substances pollution and to make "appropriately qualified generalizations from the case studies as to the adequacy of state law to provide compensation." Our methodology and results, arrived at in consultation with our academic and CRS reviewers, are discussed at length in the report. We believe that the report and the Institute's work have institutional objectivity.

The CMA memorandum's discussion of the law of the six states surveyed does not lead us to revise our work. CMA discusses only three of the six states surveyed, offering no criticism of our work on Michigan, Texas, and Missouri. Its discussion of Alabama, California, and New Jersey law is largely designed to argue that what we have learned about state law should not lead Congress to adopt S. 1480. As noted above, our report does not address the latter question.

To correct the record, we have prepared a more detailed response to the specific criticisms made in the memorandum. The response is attached as an appendix to this statement.



## Environmental Law Institute

1346 Connecticut Ave. NW • Washington DC 20036 • (202) 453-9889

November 7, 1980

**RESPONSE TO CRITICISM BY THE CHEMICAL  
MANUFACTURERS ASSOCIATION OF THE  
ENVIRONMENTAL LAW INSTITUTE'S REPORT  
ON COMPENSATION FOR TOXIC SUBSTANCES POLLUTION**

Chemical Manufacturers Association (CMA) Claim (page 2):  
The ELI Report is seriously flawed by "unscholarly, incomplete  
legal analysis" and is "rife with misstatements of law."

CMA provides no examples to support this  
claim. Presumably the statement is intended  
as an aggregate reference to CMA's more  
specific contentions, which we discuss below.

CMA Claim (page 2): The information base relied upon is grossly  
inadequate to support the generalizations made in the report.

The information base is adequate. While only  
six states were studied, there is no evidence to  
suggest that these states do not reflect the common legal  
heritage of American jurisprudence. Even so, the report  
itself acknowledges the difficulty of generalizing  
from the number of states studied (See Report, page  
2). In addition, an attempt was made to be systematic in  
selecting the incidents for the study; this process  
was intended to ensure that the results were  
not biased in terms of the likelihood of  
recovery. Thus, California, one of the most liberal  
states in the Nation with respect to toxics  
litigation, was included in the study.

CMA Claim (page 2): ELI's typical analytical technique is to  
compare the sizes of suits instituted with the amount of ultimate  
recovery to prove the inadequacy of state law.

This assertion is untrue. The amounts sought and  
obtained are merely disclosed as part of the factual  
description of the incident. The report neither says  
nor implies that differences between these amounts  
indicates that inadequate compensation has been  
obtained, or that state legal mechanisms are in-  
effective. An entire chapter is devoted specifically  
to the issue of adequacy of compensation, yet this  
chapter never compares amounts sought and obtained

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Page two

to arrive at conclusions regarding adequacy of redress. (Report, pages 499-521).

CMA Claim (page 3): ELI incongruously juxtaposes bases for recovery with assertions as to the inadequacy of state law.

The fact that ELI attempted to examine every conceivable remedy under state law does not mean that state legal mechanisms are comprehensive in directly addressing the issue of toxic substances pollution. Indeed, the mere fact that ELI was able to posit some theoretical avenues of recovery does not mean that state remedies are adequate. ELI specifically noted, throughout the report, that there were problems with each cause of action under state law. Therefore, although ELI's environmental specialists were able to suggest some hypothetical means of redress, this does not indicate that such avenues would, in practicality, be sufficient to compensate victims of toxic substances.

CMA Claim (page 4): The desire of the authors of the report to prove a point overrode the natural consequences of their legal analysis: that creation of a federal "toxic tort" would not only be unwise, but unnecessary.

ELI never advocated legislation in its report. CMA is obviously unfamiliar with ELI, its institutional objectives, or the work it has done. ELI has not taken any position on "Superfund" proposals currently before Congress. ELI is a national, non-profit research organization that neither litigates nor lobbies. Gilbert Gude, Director of the Congressional Research Service, in transmitting the ELI report to Congress, acknowledged that the final report conformed with CRS guidelines and standards. Those guidelines and standards require unqualified adherence to principles of objectivity and nonpartisanship. ELI rigidly conformed to those guidelines, and subjected its report to review by three separate divisions of the Congressional Research Service and independent review by a torts scholar.

If CMA is upset with the use others have made of the report, it would seem more appropriate for them to address their criticism in that direction. ELI's report represents an attempt to provide balanced and reasoned (and admittedly preliminary) analysis in the area of compensation for injuries caused by environmental pollution.

CMA Claim (page 4): CMA's random choice of three of the case studies indicates that it is the ELI report, rather than state law, that is inadequate.

For the foregoing and following reasons, this statement has no material basis in fact.

Page Three

CMA Analysis of California Incident

CMA Claim (page 5): None of the reasons for the lack of private litigation involves perceptions of the inadequacy of state law.

This is incorrect. For example on pages 159-160 the report indicates that proving causation may be difficult in the California case, that witness fees may be up \$50,000, and that scientific studies on the extent of the contamination are still incomplete. Contrary to CMA's claim, these facts are intimately connected with the legal and evidentiary burdens placed on victims under state law.

CMA Claim (page 10): ELI's report "states that private damages for water pollution are clearly recoverable under [The] California Constitution . . . and are probably available for criminal violations of the California Water Code . . ."

Although such damages may be theoretically available under the California Constitution, the ELI report never says such damages would be recoverable in this particular incident. ELI took great care to qualify its remarks on pages 168 ("[I]t could be argued"), 169 ("reparation might be made") and 170 ("There is some possibility"). As noted above and in the report, factual, evidentiary, and legal obstacles may still face victims of the Lathrop incident in attempting to use such theories to recover damages.

CMA Claim (page 7): The report acknowledges that "The likelihood of full damages recovery" in the California case would be "good."

Although the report acknowledges that California law facilitates the recovery of certain damages, the sweeping statement made by CMA simply never appears in the ELI report.

CMA Claim (page 8): "practical problems [of litigation] are by no means unique to hazardous waste litigation . . ."

This is emphatically incorrect. The legal literature literally abounds with discussions of the particularly difficult practical problems faced by victims seeking to recover for many toxic substances-related injuries. See, e.g. Rheingold, Landau and Canavan, Toxic Torts (1977); G. Milhollin, "Long-Term Liability for Environmental Harm", 41 U. Pitt. L.R. 1 (1979); H. Wertz, "Cancer Litigation", 13 Trial L.Q. 71 (1979); "Compensation for Victims of Water Pollution", U.S. House, 96th Cong. 1st Sess., No. 96-4, pp. 311-345 (1979); S. Soble, "A Proposal for the Administrative Compensation of Victims of Toxic Substances Pollution", 14 Harv. J. Legis. 683 (1977); "Judicial Attitudes Towards Legal and Scientific Proof of Cancer Causation", 3 Col. J. Env. Law 344 (1977); "The Viability of Common Law Actions for Pollution Caused Injuries and Proof of Facts", 18 N.Y.L.F. 935 (1973).

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CMA Claim (page 9): ELI's suggestion that a California court might refuse to appoint expert witnesses "seems hardly likely when a court is faced with a poor plaintiff with a strong case who lacks the means to prove it."

This is an example of circular reasoning in suggesting that courts would be likely to appoint expert witnesses for plaintiffs with "strong" cases. How can a plaintiff demonstrate the strength of his case without expert witnesses?

CMA Claim (page 10): The report's statement that "even if appointed the expert [witness'] testimony would be admitted no matter which side it supported leads one to question the objectivity of the authors of the report, since the purpose of expert evidence is to discover truth regardless of whether it favors plaintiff or defendants."

This statement, taken out of context by CMA, never suggested that truth is anything but paramount in the advocacy process. ELI was asked to discuss the legal and practical problems facing toxic substances victims; as such, the freedom experts have to testify for or against any party in a court of law is clearly relevant to the strategy and practical course of litigation. Contrary to CMA's assertion, ELI's statement was meant to aver no more and no less than this.

CMA Claim (page 11): The 16 alleged statutory violations by Occidental will be valuable to plaintiffs "if proven."

"If proven" is, of course, the key phrase. In light of the legal and practical difficulties facing plaintiffs in such cases, (see pages 478-480, 501-502) however, recovery under these theories is far from certain.

CMA Claim (page 11): The difficulty in proving causation is "hardly unique to environmental litigation."

This statement is untrue. Toxic pollution cases are emphatically unlike automobile crashes, assaults, and similar tortious injuries in which the cause of injury is readily apparent. Indeed, CMA's statement suggests that it is blind to the large body of legal literature documenting the difficulties experienced by toxic substances victims in proving causation. See, e.g., *Compensating Victims of Occupational Diseases*, 93 Harv. L.R. 916, 922 (1980); L. Zubrensky, "Establishing Causal Relationship in a Claim for Occupational Cancer", *Wisconsin Bar Bull.* 8 (1980); G. Milhollin, "Long-Term Liability for Environmental Harm", 41 U. Pitt. L.R. 1, 6 (1979); S. Soble, "A Proposal for the Administrative Compensation of Victims of Toxic Substances Pollution", 14 Harv. J. Legis. 683, 706 (1977); R. Harley, "Proof of Causation in Environmental Litigation", in *Toxic Torts* (Rheingold, Landau, and Canavan, eds.), p. 403 (1977); "Judicial Attitudes Towards Legal and Scientific Proof of Cancer Causation", 3 Col. J. Env. L. 344 (1977).

Page Five

CMA Claim (page 15): Future (personal injury) suits would undoubtedly be allowed through operation of the "discovery rule" in the California incident.

As the report notes, the discovery rule is merely a procedural device allowing plaintiffs to proceed with their claims. It does not in the least alleviate the substantive legal, evidentiary difficulties facing toxic victims in attempting to prove causation and other elements of their case some 20 to 40 years after exposure to an environmental toxicant. See, e.g., M. Gelpe and G. Tarlock, "The Uses of Scientific Information in Environmental Decisionmaking", 48 So. Cal. L.R. 371, 404 (1974).

CMA Claim (page 15): ELI's remarks as to serious problems of proof and damage valuations in the California incident are "conclusory".

In light of the report's discussion of the difficulty of establishing a case when latent illnesses manifest themselves, (p. 502) see, e.g., "Compensating Victims of Occupational Diseases", 93 Harv. L.R. 916, 924 (1980); G. Milhollin, "Long-Term Liability for Environmental Harm", 41 U. Pitt. L.R. 1, 6 (1979), the problem of valuating resources, (Report, p. 502) see, e.g., R. DuBay and E. Fidell, "The Assessment of Pollution Damage to Aquatic Resources: Alternatives to The Trial Model", 19 Santa Clara L.R. 641 (1979), and the uncertainty of radiologic and resource contamination (Report, p. 153) in the California incident ELI's remarks can hardly be considered conclusory.

CMA Claim (page 16): ELI implies that state law must be inadequate since no private damages suits have been brought against Occidental.

This allegation is completely unsupported. Any such implication is strictly the creation of CMA.

#### CMA Analysis of Alabama Incident

CMA Claim (page 17): ELI's decision, "apparently without any research", to analyze Alabama law in the PCB pollution incident is "highly questionable", especially since "three of the four suits [in that case study] were filed in Georgia . . . and only one was filed in Alabama."

CMA surely recognizes that the place in which a suit is filed does not necessarily govern the choice of law in a particular case. Furthermore, ELI had no particular reason to prefer an analysis of Alabama law over Georgia law, as CMA seems to suggest. Indeed, in the Alabama case the court refused to transfer the case to Georgia and apparently applied Alabama law to the incident. In addition, the study focused on the Alabama plaintiffs, rather than the Georgia plaintiffs,

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because information was unavailable on the compensation received by the Georgia plaintiffs, thus making it impossible to present any conclusions as to the adequacy of redress.

CMA Claim (page 17): ELI concludes that negligence-based recoveries for water pollution in Alabama are "rare." In fact, our (CMA's) research reveals a legion of Alabama cases arising in this context (citations to seven cases follow, see Memo, fn.)

CMA's "legion" of cases is non-existent, at least according to the cases cited. All but one of the cases presented in their memo involve drying up wells. See, *Corona Coal Co. v. Thomas*, 212 Ala. 56, 101 So. 673 (1924); *Republic Steel Corp. v. Stracmer*, 246 Ala. 620, 21 So.2d 690 (1945); *Woodward Iron Co. v. Early*, 247 Ala. 556, 25 So. 2d 267 (1946); *Tennessee Coal, Iron, and R. Co. v. Aycock*, 248 Ala. 498, 28 So. 2d 417 (1946); *Tennessee Coal Iron, and Ry. Co. v. Ray*, 248 Ala. 499, 28 So. 2d 726 (1946); *Woodward Iron Co. v. Muspower*, 248 Ala. 502, 28 So. 2d 625 (1946). Pollution is not even remotely at issue. While the headnotes for these cases suggest that they are on point, if one takes the time to read the cases their irrelevance becomes obvious. Only one case cited by CMA, *Peerson Drilling Company v. Scoggins* (page 18, fn.) arguably involves water pollution and that is completely inapposite to the Alabama PCB discharge incident. In fact, in that case the discharger was not held liable. Instead of negligence for discharging pollution, that case really involves liability for negligently conducted drilling operations in which the court posited that diversion of water was an alternative basis of liability. At least ELI, in saying that negligence recoveries were relatively "rare" cited two cases on point. Even the most casual reading of the cases relied on by counsel for CMA demonstrates that these cases are not remotely applicable to the Alabama water pollution discharge incident.

CMA Claim (page 19): The ELI report inconsistently with Alabama statutory law argues that compliance with statutory requirements is a defense to negligence.

CMA's statement is incorrect in that it completely misquotes the ELI report. In the text and accompanying note, the report says compliance with statutes is "possibly" a defense to negligence only in certain highly specific circumstances. (Report, pp. 97, 123) Thus, contrary to CMA's assertion, ELI notes that compliance with statutory requirements is rarely a defense to negligence.

CMA Claim (page 19): The reason there are few recoveries for toxics pollution is that this is "an emerging body of law and not one for which there would be tremendous legal precedent . . ."

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If CMA believes that this indicates the adequacy of state law for redressing toxics injuries it is mistaken. The reliance of courts on precedent makes the absence of prior case law a critical shortcoming of state legal mechanisms for obtaining such compensation. Thus, the fact that there is such limited case law in this area may make it extremely difficult for victims to recover.

CMA Claim (page 21): It seems likely that a court applying Alabama law under these circumstances would consider the Alabama incident to involve an "absolute nuisance". The authors of the ELI report do not even address this point.

As CMA even noted (page 21, fn.) ELI did acknowledge the potential availability of absolute nuisance as an avenue of redress. (See report, p. 109, fn. 125.) However, CMA's apparent omniscience in this area, allowing it to conclude that Alabama would be "likely" to declare this an absolute nuisance based on a single 1911 case, seems grounded in sheer speculation.

CMA Claim (page 22): Strict liability for releases of dangerous substances is an "unmistakeable trend of modern state tort law."

This is absolutely irrelevant to the ability of victims to recover under this theory in Alabama, a state that has not adopted this doctrine.

CMA Claim (page 22-23): The restrictive statute of limitations in Alabama is "clearly against the great weight of progressive case law."

This is also irrelevant to the ability of the Alabama victims to recover. Neither this nor the above comment cast doubt on ELI's work.

CMA Claim (page 23): Alabama's failure to adopt a "discovery" rule in its statute of limitations is not a serious bar to recovery under these facts since this would be considered a "continuous" tort, triggering the statute on the day on which the plaintiff was last exposed to the injury-causing activity.

Apart from being speculative, CMA's assertion is incorrect. Even if this were considered a continuous tort, under the facts of the Alabama case the last date of exposure would be the subject of considerable debate. Thus, any claims for latent injuries arising out of the PCB incident might very well be barred if the last date of exposure were deemed to have occurred more than one year prior to filing. In addition, even if the continuous tort doctrine did not bar suit in the Alabama case, damages would most likely be available (if they could be proved after a lengthy latency period) only for injuries incurred within the one year period prior to filing suit. See Garrett v. Raytheon, 368 So. 2d 516, 529 (1979).

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**CMA Claim (page 23):** ELI provides no basis for making any substantial criticism of the ability to recover under Alabama law.

This is an astonishing statement in light of the report's demonstration that negligence recoveries for water pollution are rare, that Alabama has not expressly accepted strict liability for abnormally dangerous activities, that there is a restrictive statute of limitations, and that there are potentially intractable problems of proof and causation in this incident.

#### **CMA Analysis of New Jersey Incident**

**CMA Claim (page 26):** The ELI report concludes that Union Carbide would be liable for well pollution under public and private nuisance theories.

CMA has again incorrectly cited to the ELI report. The report clearly states that proving causation under both legal theories is particularly difficult in this case, a fact even acknowledged by the attorney for the plaintiffs (Report, p. 378, 381).

**CMA Claim (page 26):** There is substantial authority in New Jersey to support the application of strict liability for abnormally dangerous activities to the facts of the New Jersey case.

The ELI report extensively discusses the difficulty plaintiffs may face in attempting to get a court to apply such strict liability to this case (Report pp. 383-386), concluding that this theory is at best a "speculative" basis for recovery.

**CMA Claim (page 27):** Proof and cost barriers are not unique to the area of hazardous waste litigation.

As discussed before, this is incorrect. "Toxic tort" cases pose unique and often insurmountable obstacles to recovery. See Toxic Torts (Rheingold, Landau, Canavan, eds.) 17-21 (1977).

**CMA Claim (pages 27-28):** State legal systems have adopted and will continue to devise mechanisms which greatly lessen burdens on plaintiffs.

The ELI report, studying six state legal mechanisms, fails to support this sweeping conclusion. Advances at the state level lack uniformity and are typically characterized by their potential applicability to very limited groups of plaintiffs involved in isolated cases with highly specific factual settings. Indeed, the fact that potentially serious injuries have gone and may go unredressed in nearly every incident (see Report pp. 499-521) is clearly suggestive of the difficulties that can arise under existing legal mechanisms.