[JOINT COMMITTEE PRINT]

BACKGROUND AND ISSUES RELATING TO H.R. 5640, THE SUPERFUND EXPANSION AND PROTECTION ACT OF 1984

SCHEDULED FOR A HEARING

BEFORE THE

COMMITTEE ON WAYS AND MEANS

ON JULY 25, 1984

PREPARED BY THE STAFF

OF THE

JOINT COMMITTEE ON TAXATION

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ERRATA AND ADDENDUM SHEET FOR JCS-27-84
(JULY 23, 1984)

(1) On page 22, the tax rate on lithium carbonate under H.R. 5640 should be $14.94, rather than $2.77 and the tax rate on manganese under H.R. 5640 should be $2.77, rather than $14.94.

(2) On page 44, at the end of the first sentence of the last paragraph, add:

> "Assuming appropriation of the $1.1 billion of general revenues authorized, these estimates imply that total funds available for the Superfund program under H.R. 5640 would be $8.8 billion over the 1986-1991 period, rather than the $9.5 billion intended by the Committee on Energy and Commerce and reflected in the text above (pages 4, 19 and 31). The primary difference arises from a lower estimate of the revenues to be generated by the waste-end tax."

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INTRODUCTION

The Committee on Ways and Means has scheduled a public hearing on H.R. 5640, the Superfund Expansion and Protection Act of 1984, on July 25, 1984. H.R. 5640 amends the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, the tax provisions of which expire on September 30, 1985.

H.R. 5640 was introduced on May 19, 1984, by Mr. Florio and others and referred to the Committees on Energy and Commerce and Public Works and Transportation for a period ending not later than July 24, 1984, and to the Committee on Ways and Means. On June 21, 1984, the Committee on Energy and Commerce ordered the bill reported, as amended, by a vote of 38 to 3 and the committee report was filed on July 16, 1984. The Committee on Energy and Commerce also adopted several motions specifying amendments that the Committee will recommend to the Committee on Rules and to the House, involving changes to the tax provisions of the bill.

The first part of the pamphlet is a summary. The second part discusses the tax and other provisions of present law (i.e., the Comprehensive Environmental Response, Compensation, and Liability Act). The third part reviews the operation of the current Superfund program. Part four explains the provisions of H.R. 5640 along with amendments to the tax section recommended by the Committee on Energy and Commerce. (The brief description of the non-tax section of the bill is provided for the convenience of the members of the Committee on Ways and Means; additional detail is available in the Energy and Commerce Committee report on H.R. 5640.) Part five analyzes the issues relating to the tax provisions of the bill. The last part presents estimates of the revenue effect of the bill.

I. SUMMARY

A. Present Law

Hazardous Substance Response Trust Fund

Under present law, excise taxes are imposed on crude oil and certain chemicals, and revenues equivalent to these taxes are deposited into the Hazardous Substance Response Trust Fund. These amounts are available for expenditures incurred in connection with releases or threats of releases of hazardous substances into the environment. These provisions were enacted in the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), which established a comprehensive system of notification, emergency response, enforcement, and liability for hazardous spills and uncontrolled hazardous waste sites.

The crude oil tax of 0.79 cent per barrel is imposed on the receipt of crude oil at a U.S. refinery, the import of crude oil and petroleum products, and the use or export of domestically produced crude oil (if the tax has not already been paid).

The tax on chemicals is imposed on the sale or use of 42 specified organic and inorganic substances if they are produced in or imported into the United States. The taxable chemicals generally are chemicals that are hazardous or chemicals which may create hazardous products or wastes when used. The rates vary from 22 cents per ton to $4.87 per ton.

The taxes generally will terminate after September 30, 1985. However, the taxes would be suspended during calendar years 1984 or 1985, if, on September 30, 1983, or 1984, respectively, the unobligated trust fund balance were to exceed $900 million, and if the unobligated balance on the following September 30 would exceed $500 million, even if these excise taxes were to be suspended for the calendar year in question. Further, the authority to collect taxes will terminate when cumulative receipts from these taxes reach $1.38 billion.

Post-closure Liability Trust Fund

Effective after September 30, 1983, an excise tax of $2.13 per dry weight ton is imposed on hazardous waste which is received at a qualified hazardous waste disposal facility and which will remain at the facility after its closure. These tax receipts are deposited into the Post-closure Liability Trust Fund. This trust fund is to assume completely the liability, under any law, of owners and operators of closed hazardous waste disposal facilities which meet certain conditions. These provisions were enacted in CERCLA.

Authority to collect the tax will be suspended for any calendar year after 1984, if the unobligated balance in the Trust Fund exceeds $200 million on the preceding September 30. Further, author-

ity to collect the tax will terminate when cumulative receipts from the crude oil and chemical excise taxes described above reach $1.38 billion, or, if earlier, after September 30, 1985.

B. H.R. 5640

The bill, H.R. 5640, as reported by the Committee on Energy and Commerce, would continue and expand the Hazardous Substance Response Trust Fund by providing for an additional $9.5 billion in funding for the trust fund over the period October 1, 1985, through September 30, 1990. Under the bill, the purposes of the Trust Fund would be expanded to include response to releases of petroleum and petroleum products and the financing of certain emergency relief and health effect studies, certain toxicological profiles, and certain hazard evaluation projects.

To finance the expanded superfund program, the bill would extend the petroleum tax imposed under present law and increase the rate from 0.79 cent a barrel to 4.5 cents a barrel. Similarly, the excise tax on feedstock chemicals would be increased and applied to 20 additional feedstock chemicals. Under an amendment recommended by the Energy and Commerce Committee, an alternative 5-percent tax would be imposed on the landed value of certain imported substanced manufactured from feedstock chemicals. The bill would also impose a new tax on the disposal of hazardous substances after December 31, 1986, and before October 1, 1990.

The bill would also repeal the Post-closure Tax and Trust Fund provided for under present law.

With respect to the program to be conducted using superfund monies, the bill would require that no fewer than 1,600 sites be placed on the National Priorities List by 1988 and that the EPA begin cleanup work at no fewer than 150 sites each year. The bill would also clarify the liability of private parties for cleanup costs incurred by the Superfund and would permit citizens' suits to force the EPA administrator to perform any act or duty required under CERCLA, as amended, which is not discretionary. Finally, the bill provides for an extensive regulatory program relating to leaking underground storage tanks and makes Superfund money available to cleanup leaks from underground storage tanks including tanks that store petroleum or petroleum products.

II. PRESENT LAW

A. Tax Provisions

1. Hazardous Substance Response Taxes and Trust Fund

Hazardous Substance Response Trust Fund

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) (P.L. 96-510) establishes a comprehensive system of notification, emergency response, enforcement, and liability for hazardous substance spills and uncontrolled hazardous waste sites.

The Hazardous Substance Response Trust Fund ("Superfund") was established by CERCLA as a trust fund in the Treasury of the United States. Amounts in the Hazardous Substance Response Trust Fund are available for expenditures incurred under section 111 of CERCLA (as enacted) in connection with releases or threats of releases of hazardous substances into the environment. Allowable costs include (a) costs of responding to the presence of hazardous substances on land or in the water or air, including cleanup and removal of such substances and remedial action, (b) payment of claims for injury to, or destruction or loss of, natural resources belonging to or controlled by the Federal or State governments, and (c) certain costs related to response including damage assessment, epidemiologic studies, and maintenance of emergency strike forces.

Under CERCLA, there are appropriated to the Hazardous Substance Response Trust Fund: (1) amounts equivalent to amounts received in the Treasury under sections 4611 (pertaining to the petroleum tax) and 4661 (pertaining to the tax on feedstock chemicals); (2) amounts recovered from responsible parties on behalf of the Hazardous Substance Response Trust Fund under CERCLA; (3) penalties assessed under title I of CERCLA; and (4) punitive damages under section 107(c)(8) of CERCLA (pertaining to damages for failure to provide removal or remedial action upon order of the President).[1]

In addition to these amounts, CERCLA authorizes to be appropriated from general revenues to the Trust Fund $44 million per year for fiscal years 1981 through 1985 (i.e., an aggregate of $220 million) and, for 1985, an additional amount equal to so much of the aggregate authorized to be appropriated for 1981 through 1984 as has not been appropriated before October 1, 1984. Not more than 15 percent of the Trust Fund receipts attributable to taxes and general revenue appropriations may be used for the payment of natu-

[1] The fund also may be used for payment of claims asserted and compensable but unsatisfied under section 311 of the Clean Water Act. All moneys recovered under section 311(b)(6)(B) of the Clean Water Act were appropriated to the Trust Fund. These claims and moneys involve certain costs arising before the date of enactment of CERCLA.

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ral resource damage claims. CERCLA further provides that claims against the Hazardous Substance Response Trust Fund may be paid only out of the fund. If, at any time, claims against the fund exceed the balance available for payment of those claims, the claims are to be paid in full in the order in which they were finally determined.

The Trust Fund has authority to borrow for the purposes of paying response costs in connection with a catastrophic spill or paying natural resource claims. Outstanding advances at any time may not exceed estimated tax revenues for the following 12 months; advances for paying natural resource claims may not exceed 15 percent of such revenues. All advances must be repaid by September 30, 1985.

The Hazardous Substance Response Trust Fund is managed by the Secretary of the Treasury, who is required to report annually to Congress on the financial condition and operations of the fund.

Petroleum tax

Present law (sec. 4611 of the Code) imposes an excise tax (the "petroleum tax") of 0.79 cents per barrel on domestic crude oil and on petroleum products (including crude oil) entering the United States for consumption, use, or warehousing. The tax on domestic crude oil is imposed on the operator of any United States refinery receiving such crude oil, while the tax on imported petroleum products is imposed on the person entering the product into the United States for consumption, use, or warehousing. If crude oil is used in, or exported from, the United States before imposition of the petroleum tax, the tax is imposed on the user or exporter of the oil.

Domestic crude oil subject to tax includes crude oil condensate and natural gasoline, but not other natural gas liquids. Taxable crude oil does not include oil used for extraction purposes on the premises where it was produced, such as for powerhouse fuel or for reinjection as part of a tertiary recovery process. In addition, the term crude oil does not include synthetic petroleum (e.g., shale oil, liquids from coal, tar sands, biomass, or refined oil).

Petroleum products which are subject to tax upon being entered into the United States include crude oil, crude oil condensate, natural and refined gasoline, refined and residual oil, and any other hydrocarbon product derived from crude oil or natural gasoline which enters the United States in liquid form. For purposes of determining whether crude oil or petroleum products (and chemicals subject to the feedstock tax) have been produced in, entered into, or exported from the United States, the term United States means the 50 States, the District of Columbia, Puerto Rico, the Northern Mariana Islands, the Trust Territory of the Pacific Islands, and any possession of the United States. The United States also includes the Outer Continental Shelf areas and foreign trade zones located within the United States. There is no exception for bonded petroleum products. Revenues from the petroleum tax are not paid to Puerto Rico or the Virgin Islands under the cover over provisions of section 7652 of the Code.

Present law specifies that the petroleum tax (under Code section 4611) is to be imposed only once with respect to any petroleum product. Thus, anyone who is otherwise liable for the tax may

avoid payment by establishing that the tax already has been imposed with respect to that product.

Amounts equivalent to the revenues from the petroleum tax are deposited, together with amounts equivalent to the revenues from the tax on feedstock chemicals and certain other amounts, in the Hazardous Substance Response Trust Fund (discussed below).

The petroleum tax is scheduled to expire on September 30, 1985. Present law also provides that if on September 30, 1983, or September 30, 1984, (1) the unobligated balance in the Hazardous Substance Response Trust Fund exceeds $900 million and (2) the Secretary of the Treasury, after consultation with the Administrator of the Environmental Protection Agency, determines that such unobligated balance will exceed $500 million on September 30 of the following year if no tax is imposed under section 4611 (relating to the petroleum tax) or section 4661 (relating to the tax on feedstock chemicals) of the Code during the calendar year following the date referred to above, then no tax is to be imposed during the first calendar year beginning after the first date referred to above. (As of September 30, 1983, the unobligated balance in the Hazardous Substance Response Trust Fund was approximately $332.8 million.) Further, the authority to collect the tax will terminate when cumulative receipts from the petroleum and chemical taxes reach $1.38 billion (sec. 303 of CERCLA).

Tax on feedstock chemicals

Present law (sec. 4661 of the Code) also imposes a tax on the sale or use of 42 specified chemical substances ("feedstock chemicals") by the manufacturer, producer, or importer thereof. These chemicals generally are hazardous substances or may create hazardous products or wastes when used. The tax is imposed on feedstock chemicals manufactured in the United States or entered into the United States for consumption, use, or warehousing. The tax rates are specified per ton of taxable chemical, and vary from 22 cents to $4.87 per ton. In the case of a taxable chemical which is a gas (e.g., methane), the tax is imposed on the number of cubic feet of such gas which is equivalent to 2,000 pounds on the basis of molecular weight. (See table 7, below, for list of taxable chemicals and applicable tax rates.)

Present law provides six exemptions from the tax on feedstock chemicals. Under one exemption, in the case of butane and methane, the tax is imposed only if those substances are used other than as a fuel (in which case the person so using them is treated as the manufacturer). A second exemption is provided for nitric acid, sulfuric acid or ammonia (or methane used to produce ammonia) which are used in the manufacture or production of fertilizer. This exemption applies if the manufacturer, producer, or importer of the chemicals either uses them for fertilizer or sells them to a purchaser who either uses them for fertilizer or sells them to a second purchaser who uses them for fertilizer.[2] Third, present law also

[2] The Tax Reform Act of 1984 modified the method under which the exemption for nitric acid, sulfuric acid, and ammonia used for fertilizer uses may be claimed. Under the 1984 Act, manufacturers or producers of those substances may sell them free of tax, if the purchaser certifies that the material will ultimately be used for fertilizer purposes; certification may be made upon the reasonable expectation of the purchaser. If the material sold tax-free is ultimately used for nonfertilizer purposes, the user is subject to the tax.

provides an exemption for sulfuric acid produced solely as a by-product of (and on the same site as) air pollution control equipment. The fourth exemption is for any substance to the extent the substance is derived from coal.

The Tax Reform Act of 1984, P.L. 98-369 added two exemptions to the tax on feedstock chemicals. First, the 1984 Act provided an exemption for petrochemicals otherwise subject to the tax (i.e., acetylene, benzene, butane, butylene, butadiene, ethylene, methane, naphtalene, propylene, toluene, and xylene) which are used for the manufacture or production of motor fuel, diesel fuel, aviation fuel, or jet fuel. (The petroleum tax will continue to apply to domestic crude oil or imported petroleum products used for these purposes.) This exception applies if the otherwise taxable substance is (1) added to a qualified fuel, (2) used to produce another substance that is added to a qualified fuel, or (3) sold for either of the uses described in (1) or (2), above. Second, the 1984 Act provides that the transitory existence of cupric sulfate, cupric oxide, cuprous oxide, zinc chloride, zinc sulfate or lead oxide during a metal refining process will not be subject to tax if the compound exists in the process of converting or refining non-taxable metal ores or compounds into other (or more pure) non-taxable compounds. (If a substance is removed in the refining process, tax will be imposed even if the substance is later reintroduced to the refining process.)[3]

These provisions will be effective as if enacted as part of the Hazardous Substance Response Revenue Act of 1980.

Under present law, if a taxpayer uses a taxable chemical prior to any sale, the tax is imposed as if the chemical had been sold. Where a taxable chemical is used to manufacture or produce a second taxable chemical, an amount equal to the tax paid on the first chemical is allowed as a credit or refund (without interest) to the manufacturer or producer of the second chemical (but not in an amount exceeding the tax imposed on the second chemical). Thus, the imposition of tax more than once on the same substance is avoided.

Amounts equivalent to the revenues from the tax on feedstock chemicals are deposited in the Hazardous Substance Response Trust Fund. The tax is scheduled to expire, together with the petroleum tax, on September 30, 1985, with a provision for earlier termination if the unobligated balance in the Hazardous Substance Response Trust Fund exceeds $900 million (see description under petroleum tax). Further, the authority to collect the tax will terminate when cumulative receipts from the petroleum and chemical taxes reach $1.38 billion (sec. 303 of CERCLA).

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[3] Proposed regulations published by the Treasury Department on October 20, 1983, had provided that (1) the addition of substances (such as toluene) to gasoline or the use of a light hydrocarbon stream containing taxable chemicals (such as benzene, toluene, or xylene) to make gasoline was subject to tax as a use of feedstock chemicals, and (2) the creation of a metal compound (such as cupric sulfate or similar substances) in a metal refining process would give rise to a tax on use when that substance is consumed in the refining process. The 1984 Act effectively overruled these regulations.

2. *Post-closure Tax and Trust Fund*

Post-closure Liability Trust Fund

CERCLA established the Post-closure Liability Trust Fund in the United States Treasury. The Post-closure Liability Trust Fund is to assume completely the liability, under any law (including the liability provisions of CERCLA), of owners and operators of hazardous waste disposal facilities granted permits and properly closed under subtitle C of the Resource Conservation and Recovery Act (Title II of the Solid Waste Disposal Act). This transfer of liability to the Trust Fund may take place after (1) the owner and operator of the facility has complied with the requirements under RCRA which may affect the performance of the facility after closure, and (2) the facility has been closed in accordance with the regulations and the conditions of the permit, and the facility has been monitored (as required by the regulations and permit) for a period not to exceed 5 years after closure to demonstrate that there is no substantial likelihood that any migration offsite or release from confinement of any hazardous substance or other risk to public health or welfare will occur (sec. 107(k) of CERCLA). The transfer of liability is to be effective 90 days after the owner or operator of the facility notifies the Administrator of the Environmental Protection Agency (and the State if it has an authorized program) that the required conditions have been satisfied. In addition to payment of damages and cleanup expenses for such sites, the fund also may be used to pay costs of monitoring and care and maintenance of a site incurred by other persons after the period of monitoring required by RCRA for facilities meeting the applicable transfer of liability requirements. The Post-closure Trust Fund does not assume the legal liability of waste generators or transporters; only the liability of owners and operators of disposal facilities is affected by the Post-closure Trust Fund.

As in the case of the Hazardous Substance Response Trust Fund, claims against the Post-closure Liability Trust Fund may be paid only out of the fund. If, at any time, claims against the fund exceed the balance available for payment of those claims, the claims are to be paid in full in the order in which they are finally determined. The Post-closure Liability Trust Fund is subject to the same administrative provisions as the Hazardous Substance Response Trust Fund, including the right to borrow limited amounts from the Treasury as repayable advances; no more than $200,000,000 of such advances to the Post-closure Liability Trust Fund may be outstanding at any time.

Tax on hazardous wastes

Present law (sec. 4681 of the Code) imposes an excise tax (the "post-closure tax") of $2.13 per dry weight ton on the receipt of hazardous waste at a qualified hazardous waste disposal facility. The tax applies only to hazardous waste which will remain at the 9 facility after the facility is closed. The tax is imposed on the owner or operator of the qualified hazardous waste disposal facility.

For purposes of the post-closure tax, hazardous waste means any waste (1) having the characteristics identified under section 3001 of the Solid Waste Disposal Act, as in effect on December 11, 1980

(other than waste the regulation of which had been suspended by Congress on that date), and (2) which is subject to reporting and recordkeeping requirements under the Solid Waste Disposal Act as in effect on that date. Qualified hazardous waste disposal facilities are facilities which have received a permit or been accorded interim status under the Solid Waste Disposal Act.

The post-closure tax applies to the receipt of hazardous waste after September 30, 1983. However, if as of September 30 of any subsequent calendar year, the unobligated balance of the Post-closure Liability Trust Fund exceeds $200,000,000, no tax is to be imposed during the following calendar year. Further, authority to collect the tax will terminate when cumulative receipts from the petroleum and chemical taxes described in the previous section reach $1.38 billion, or if earlier, after September 30, 1985 (sec. 303 of CERCLA).

B. Non-tax provisions

General provisions

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) provides a statutory scheme to insure prompt response to and cleanup of releases of hazardous substances and to place the burden of such actions on the responsible party or, in the absence of a responsible party, on producers and users of the chemical feedstocks associated with the generation of hazardous substances. In general, the law is designed to allow a governmental response to proceed where necessary, with the parties legally responsible for the release of hazardous substances later being held liable (without regard to fault) for damages and costs resulting from the release. To accomplish this, the law created the Hazardous Substance Response Trust Fund ("Superfund") to be financed by a combination of special environmental taxes and Federal appropriations and to be available for response actions and certain related liability claims.

Response authority

Under CERCLA, the President is authorized, in the case of a release or threatened release of a hazardous substance into the environment, to take whatever removal, remedial or other response action he determines to be appropriate under the National Contingency Plan (originally contained in the Clean Water Act but subsequently revised to apply to CERCLA). Releases subject to CERCLA include any release of a hazardous substance other than workplace releases, certain nuclear releases, engine exhausts, and the normal application of fertilizer. Hazardous substances are defined as toxic substances identified in specified sections of the Clean Water Act, the Clean Air Act, the Solid Waste Disposal Act, and the Toxic Substance Control Act. Hazardous substances do not include petroleum (unless specifically designated as hazardous under these laws), or natural or synthetic gases. The Environmental Protection Agency (EPA) is authorized to designate additional substances as hazardous if they present substantial danger to the public health or welfare or to the environment.

CERCLA required the Federal government to develop a national list of sites (the National Priorities List) which are serious enough to require remedial action. This National Priorties List is required to include the 400 most hazardous sites, and is required to be updated annually. In compiling this list, the EPA identifies hazardous sites and evaluates the sites, beginning with a preliminary assessment of available information and proceeding (where appropriate) to an actual site inspection. The sites are then ranked according to criteria relating to relative potential danger from the release or threatened release of hazardous substances into the air, surface water, or groundwater at the site, with the highest ranking sites being selected for the National Priorities List.

Sites which are listed on the National Priorities List are eligible for long-term cleanup actions by EPA, using money derived from the Hazardous Substance Response Trust Fund. The State in which the site is located generally is required to pay 10 percent of the costs spent in the cleanup (50 percent for State-owned and operated sites). As an alternative to proceeding with such a clean-up, the EPA has authority, under section 106 of CERCLA, to initiate enforcement actions (including civil action and administrative orders) to compel responsible parties to finance cleanup activities. The EPA also has broad authority to enter into negotiations with responsible parties regarding voluntary cleanups or cash settlements. The availability of these alternatives (i.e., negotiations, enforcement, and governmentally funded cleanups) is intended to permit a larger number of sites to be cleaned up than would be possible using any one method.

If a governmental cleanup is initiated, the EPA has further authority to allow the State to take a lead role in site response (cooperative agreements) or (if EPA takes the leading role) to follow various long-term cleanup strategies. The EPA may also initiate removal actions to prevent immediate and significant harm to human life, health, or the environment.

In addition to the cost of cleanup applications, there is authorized to be paid out of the Hazardous Substance Response Trust Fund certain unsatisfied claims for damages resulting from the release of hazardous substances, claims for injury to, or destruction of, natural resources owned or controlled by the Federal or State governments, and specified costs relating to site response or resource restoration. Payment of these claims by the fund transfers to the fund the right of the claimant to sue the party responsible for releasing the hazardous substance; thus, fund representatives may attempt to recover claim payments from the responsible party or parties. There is no general provision for private damage claims against the fund.

Liability

Section 107 of CERCLA imposes liability for cleanup costs incurred under the National Contingency Plan, and for costs associated with natural resource damages, on any person who is the owner or operator of a site or the generator or transporter of hazardous substances released into the environment. A strict liability standard (i.e., regardless of negligence) applies, with only limited defenses (including acts of war, acts of God, and acts of independ-

ent third parties where the defendant exercises due care) are allowed. No liability arises with respect to releases permitted under provisions of existing Federal laws or the application of registered pesticides. Liability under the Act is limited generally to $50 million per release, allowing owners and operators to obtain more readily insurance to cover possible costs. In addition, owners and operators of vessels and offshore facilities are required to maintain evidence of financial responsibility, and the President is authorized to provide financial responsibility requirements for onshore facilities beginning in 1985.

The amounts recovered under the provisions above are deposited in the Hazardous Substance Reponse Trust Fund. CERCLA also provides for certain penalties and punitive damages which are to be deposited in the fund. These include punitive damages of from one to three times the amount of costs incurred as a result of the failure without sufficient cause, by a person liable for a release or threatened release of a hazardous substance, to properly provide removal or remedial action upon order of the President pursuant to the act.

CERCLA also authorizes creation of an Agency for Toxic Substances and Disease Registry to improve data collection and otherwise assist in matters concerning toxic substances and human health.

Related statute: Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) 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.

III. OPERATION OF SUPERFUND PROGRAM UNDER PRESENT LAW

A. Superfund Program Activities

Since the Superfund program started operating in 1981, it has been involved mainly in coordinating emergency responses ("removal actions") and in identifying and evaluating abandoned waste sites in order to implement long term cleanup ("remedial action"). As of the end of fiscal year 1983, the Environmental Protection Agency (EPA) had identified 16,200 potentially hazardous sites in the United States. As shown in Table 1, preliminary assessments were completed at 7111 of these sites (44 percent). Of the sites assessed, investigations were completed at 2,197 sites, and 546 were subsequently placed on the National Priorities List (NPL) based on their high degree of hazard. The EPA estimates, assuming current ranking criteria, that between 1403 and 2200 sites will ultimately be added to the NPL.

Table 1.—Status of Potentially Hazardous Waste Sites

[Number of sites]

Site status	Through fiscal year 1983	Projected		
		Low	Middle	High
Listed in ERRIS[1]	16,200	22,000	NA	NA
Preliminary assessment	7,111	15,200	NA	NA
Site investigation	2,197	4,285	NA	NA
National Priorities List[2]	546	1,403	1,800	2,200

[1] The Emergency Remedial and Response Information System (ERRIS) is an inventory of potentially dangerous sites maintained by the EPA.

[2] The National Priorities List contains sites determined to require remediation.

Source: Memorandum to Alvin Alm and Lee Thomas from Alvin R. Morris, Director of Superfund Task Force, Environmental Protection Agency, Office of Solid Waste and Emergency Response (December 8, 1983), p. 12. Updated with information provided by EPA's Superfund Reauthorization Task Force.

As shown in Table 2, of the 546 sites on the NPL, the EPA anticipates beginning initial remedial cleanup measures on 55 sites by the end of fiscal year 1984. To date, 6 NPL sites have been cleaned and removed from the NPL. The EPA has implemented more removal actions (which are generally less expensive and shorter term) than remedial actions. By the end of FY 1984, EPA anticipates completing 321 removal actions.

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Table 2.—Superfund Program Activities

[Number of sites]

Action	Fiscal year—				Total
	1981	1982	1983	1984 [1]	
Remedial:					
Preliminary assessment	[2] 2,610	[2] 2,610	1,891	4,000	11,111
Site inspection	[2] 823	[2] 824	550	1,300	3,497
Feasibility study	21	30	85	55	172
Design	8	8	11	30	57
Initial remedial measure	0	12	18	25	55
Completion	0	0	0	6	6
Removal:					
Immediate	33	50	88	150	321
Planned	0	1	6	20	27
Enforcement:					
Feasibility study	0	0	30	25	55

[1] Projected.
[2] Estimate.

Source: Memorandum to Alvin Alm and Lee Thomas from Alvin R. Morris, Director of Superfund Task Force, Environmental Protection Agency, Office of Solid Waste and Emergency Response (December 8, 1983), p. 12. Updated with information provided by EPA's Superfund Reauthorization Task Force.

B. Hazardous Substance Response Trust Fund

Outlays

Funding for remedial and removal actions comes from the Hazardous Substance Response Trust Fund ("Superfund"). As a result of the long start-up time required for planning site remediation projects, outlays from the Superfund have been substantially less than receipts. As shown in Table 3, outlays through 1983 were $235.4 million, about 30 percent of the $784 million received by the fund in this period.

No claims for injury to, or destruction or loss of, natural resources have yet been paid by the fund. However, 57 claims for such damages, totalling $2.7 billion, have been submitted to EPA. EPA has rejected the claims because they have not been presented to the responsible party and a restoration plan has not been prepared, as required by CERCLA. These claims could be submitted again after these conditions are satisfied.

Table 3.—Superfund Accounts

[In millions of dollars]

Item	Fiscal year—			
	1981	1982	1983	Total
Receipts	145.0	307.4	331.6	784.0
Transfer from Coast Guard	6.7	0	0	6.7
Excise Taxes	127.9	244.0	230.2	602.1
Appropriations (general revenue)	9.0	26.6	40.0	75.6
Interest income	1.3	34.5	61.0	96.8
Recoveries	0	2.3	.4	2.7
Outlays	8.0	79.6	147.8	235.4
End of year cash balance	136.9	364.8	548.6	NA
Budget Obligation	40.2	180.7	230.2	451.2
Removal and remediation	30.7	149.0	194.3	374.0
Enforcement program	2.5	8.4	17.7	28.6
Research and development	4.7	13.8	6.8	25.3
Management and support service	2.3	9.5	11.4	23.2
Unobligated balance	104.8	231.5	332.8	NA

Source: (1) Department of Treasury, *Treasury Bulletin,* First quarter, Fiscal 1984, p. 208. (2) Department of Treasury, "Second Annual Report on the Financial Condition and Results of the operations of the Hazardous Substance Response Trust Fund," (Sept. 30, 1982), p. 6.

Receipts

The excise taxes on 42 chemicals and petroleum ("feedstock tax") enacted in 1980 has been the primary source of Superfund revenue. In addition to the feedstock tax, appropriations from general revenues provided about one-tenth of the Superfund's financing in the first three years of operation. Interest income has become an increasingly important source of revenue as the fund's balance has increased (due to receipts in excess of outlays).

When the Superfund was enacted, it was envisioned that collections from parties responsible for hazardous waste sites would replenish the trust fund. However, cost recoveries have been small, with only $5.06 million collected through May 1984. Cost recovery proceedings are generally initiated after remediation is completed and total costs are known. The EPA expects cost recovery actions could eventually generate $44 million per year.[4] Part of the cost of cleaning Superfund sites is paid by responsible parties directly, under settlement agreements with the EPA, and, thus, is not recovered by the Superfund. As shown in Table 4, private parties agreed to expend $280 million on hazardous waste site cleanups of which $220 million is allocated to sites on the National Priorities List.

Table 4.—Settlement Agreements

[In millions of dollars]

Site	Fiscal year—				Total
	1981	1982	1983	1984	
National Priorities List	12.2	42.8	58.3	107.0	220.3
Other	19.0	2.7	33.8	4.6	60.1
Total	31.2	45.5	92.1	111.6	280.4

Source: EPA, Superfund Reauthorization Task Force.

Feedstock tax

The feedstock tax has generated about three-quarters of the Superfund receipts, although tax revenues are running 20 percent less than the $307 million per year rate anticipated in 1980. The shortfall is in part due to the economy-wide recession during the early part of the period during which the taxes have been effective, which diminished demand for the products that are made from these feedstocks. As shown in Table 5, the portion of the feedstock tax generated from each category (petrochemicals, inorganic chemicals, and petroleum) has been extremely stable, and is remarkably close to the original estimate (65 percent from petrochemicals, 15 percent from inorganic chemicals, and 20 percent from petroleum).

[4] Memorandum to Alvin Alm and Lee Thomas from Alvin R. Morris, Director of Superfund Task Force, Environmental Protection Agency, Office of Solid Waste and Emergency Response (December 8, 1983).

Table 5.—Revenues From Feedstock Tax [1]

[Dollar amounts in millions]

Feedstock	Fiscal year—							
	1981 Quarters III-IV		1982 Quarters I-IV		1983 Quarters I-III		Total 81-83	
	($)	(%)	($)	(%)	($)	(%)	($)	(%)
Petrochemicals	86	66.2	157	65.6	108	66.0	350	65.9
Inorganic chem	24	18.8	42	17.4	29	18.0	95	17.9
Petroleum	19	14.9	39	16.4	25	15.6	84	15.8
Not allocated	0	0.0	1	0.6	1	0.4	2	0.4
Total	129	100.0	239	100.0	163	100.0	531	100.0
Quarterly average	65	.....	60	.....	54	.....	59	.....

[1] In these data, excise taxes are allocated to the fiscal quarter in which the liability arises (which may be earlier than the quarter in which Treasury receives payment).

Source: Dept. of Treasury, Internal Revenue Service, *SOI Bulletin,* Vol. 3, No. 2, (Fall 1983), pp. 31-34; and updated information from the Statistics of Income Branch of the IRS.

The Internal Revenue Service estimates that the feedstock tax, as of June 1983, was paid by just 496 companies. Although the average annual feedstock tax liability for 1983 was approximately $1.3 million per taxpayer, it appears that most of the revenue is collected from a small number of companies with very large production volumes. ARCO Chemical Co. estimates that the 12 largest taxpayers account for almost 70 percent of feedstock tax revenues.[5]

[5] Testimony of Harold A. Sorgenti, president of ARCO Chemical Co., before the Senate Environment and Public Works Committee, May 23, 1984.

C. Studies

Section 301 of the CERCLA required that 9 studies be conducted to evaluate various aspects of the Superfund program and alternatives by December 1984. It was envisioned that these studies would be used by Congress in the course of reauthorizing the Act. The EPA anticipates that drafts of all these studies will be released for public comment by October 15, 1984 (see Table 6).

Table 6.—Section 301 Studies

Study	Topic
A	Effectiveness of CERCLA and Superfund.
B	Superfund Receipts and Outlays.
C	Projected Future Funding Needs and Threat to Public. Health and Welfare.
D	Cost Recoveries and Settlements.
E	Record of State Participation.
F	Impact of Tax on Balance of Trade.
G	Feasibility and Desirability of Alternative Tax Schedules.
H&I	Effects of Tax on Copper, Lead, Zinc Oxide, Fertilizer Feedstocks, and Coal Derived substances.

IV. DESCRIPTION OF H.R. 5640 AND AMENDMENTS RECOMMENDED BY THE COMMITTEE ON ENERGY AND COMMERCE

A. Amendments to Hazardous Substance Response Trust Fund

H.R. 5640 would continue and expand the Hazardous Substance Response Trust Fund by allocating to the fund amounts equivalent to the revenues derived from expanded taxes on petroleum and feedstock chemicals, the new tax on imported chemical substances, and a new waste end tax (discussed below). These taxes are intended to provide $8.4 billion from fiscal years 1986 to 1990, inclusive. The bill would also authorize general revenue appropriations to the fund of an additional $181 million for each of fiscal years 1986 and 1987 and $256 million for each of fiscal years 1988, 1989, and 1990, plus, for each such fiscal year, an amount equal to aggregate amount authorized but not yet appropriated for prior years. Total authorizations over the fiscal year 1986 to 1990 period would be $1.1 billion; taxes and general revenues combined would be $9.5 billion.

Under the bill, the expenditure purposes of the Hazardous Subtance Response Trust Fund would be amended to conform to the expanded list of costs which could be incurred under section 111(c) of CERCLA as amended by the bill, including costs incurred in connection with emergency relief and health effects studies under section 112 of the bill, costs incurred in preparing toxicological profiles, and costs incurred in evaluating potential hazards posed by facilities pursuant to petitions filed by any person. The bill would further specify that no more than 6 percent (as opposed to 15 percent under present law) of fund amounts attributable to the petroleum and chemical taxes and general revenue appropriations may be made available for the payment of damage claims for injury to, or destruction or loss of, natural resources owned or controlled by the Federal or State governments as a result of a release or threat of release of a hazardous substance.

The bill would continue the present law provisions regarding administration of the Hazardous Substance Response Trust Fund, including the authorization to borrow limited amounts from the Treasury as repayable advances. Any such advances would be required to be repaid before September 30, 1990.

These amendments would take effect on October 1, 1985.

B. Tax provisions

Overview

H.R. 5640, as reported by the Committee on Energy and Commerce ("the bill"),[6] would extend the petroleum tax (sec. 4611) and the tax on feedstock chemicals (sec. 4661) for 5 years, through September 30, 1990. The amount of revenue to be generated by these taxes would be increased approximately five-fold in order to fund an expanded Hazardous Substance Response Trust Fund ("superfund") program. In the case of the petroleum tax, this would be accomplished by an increase in the tax rate from 0.79 cent per barrel to 4.5 cents per barrel. In the case of feedstock chemicals, the tax rates would be increased and the tax would be extended to 20 additional feedstock chemicals. In addition, an amendment recommended by the Energy and Commerce Committee would impose an alternative 5-percent tax on certain imported substances which contain taxable feedstock chemicals.

Further, the bill would establish a new "waste end" tax on the disposal of hazardous substances which is required to be carried out in compliance with subtitle C of the Solid Waste Disposal Act, to be effective from January 1, 1987, though September 30, 1990. The revenues from this tax (together with the petroleum tax and the tax on feedstock chemicals) would be deposited in the expanded Hazardous Substance Response Trust Fund.

Finally, the bill would repeal the post-closure liability tax and trust fund.

Petroleum tax

The bill would increase the present law petroleum tax from 0.79 cent per barrel to 4.5 cents per barrel, effective October 1, 1985. Amounts equivalent to this tax would continue to be deposited in the Hazardous Substance Response Trust Fund. Under the bill, the petroleum tax would expire on September 30, 1990. Additionally, under an amendment recommended by the Committee on Energy and Commerce, if (1) the unobligated balance in the Hazardous Substance Response Trust Fund were to exceed $3.2 billion on September 30, 1988, or September 30, 1989, and if (2) the Secretary of the Treasury, after consultation with the Administrator of the Environmental Protection Agency, were to determine that such unobligated balance would exceed $1.9 billion on September 30 of the following year if no feedstock chemical or petroleum tax were imposed during the calendar year following the date referred to above, then no tax would be imposed by this section during the first calendar year beginning after the first date referred to above.

Tax on feedstock chemicals

The bill would expand the present law tax on feedstock chemicals (sec. 4661) by (1) increasing the tax generally by three -to five-fold, on substances which are taxable under present law, and (2) adding approximately 20 additional substances to the list of taxable

[6] The Committee on Energy and Commerce did not amend the tax provisions (Title V) of H.R. 5640 as introduced, but did agree to recommend various amendments to these provisions to the Committee on Rules and to the House of Representatives.

items. According to the report of the Committee on Energy and Commerce, H. Rep. 98-890, accompanying H.R. 5640, 98th Cong., 2d Sess., the inclusion of taxable items was based on criteria applied under present law, including the generation of significant volumes of hazardous wastes during the manufacture of the taxable substance and its intermediate or final products; the hazardous nature of the taxable substance in any of its forms (including its intermediate or final products); the capability of the taxable substance to increase the hazard potential of other substances; and the production of the taxable substance in significant volumes, and on certain additional criteria, including finding of the taxable substance, in its raw, intermediate or final product forms, at Superfund sites identified and evaluated by EPA; the finding of hazardous wastes generated in the manufacture of the taxable substance or its intermediate or final products at Superfund sites; and the definition of hazardous substances under relevant provisions of law. The rates for each taxable substance were generally determined by applying the lower of (1) 3 percent of the substance's projected 1986 sales price, or (2) a predetermined cap equal to $29.87 per ton for organic substances and $14.94 per ton for inorganic substances. These levels, in turn, were selected in order to meet an intended revenue target. In certain cases (e.g., aluminum), a lower rate was chosen to reflect the contribution of the substance to contamination of Superfund sites. Table 7 compares the list of taxable substances and applicable tax rates under present law and under the bill.

Table 7.—Current and Proposed Feedstock Tax Rates

[Cost per ton]

Chemical	Current law	H.R. 5640	Percent change
Petrochemicals			
Acetylene	$4.87	$29.87	513
Benzene	4.87	14.88	206
Benzene (derived from coal)	0	14.88	Added
Benzene (mixed into gasoline)	0	2.88	Added
Butadiene	4.87	24.80	409
Butane	4.87	7.09	46
Butylene	4.87	9.92	104
Coal-derived light oils	0	10.63	Added
Coal tars	0	3.93	Added
Ethylene	4.87	17.71	264
Methane	3.44	2.48	−28
Napthalene	4.87	13.82	184
Napthalene (derived from coal)	0	13.82	Added
Propylene	4.87	13.82	184
Toluene	4.87	12.75	162
Toluene (derived from coal)	0	12.75	Added
Toluene (mixed with gasoline	0	2.88	Added
Xylene	4.87	13.11	169
Xylene (derived from coal)	0	13.11	Added
Xylene (mixed into gasoline)	0	2.88	Added

Table 7.—Current and Proposed Feedstock Tax Rates—Continued

[Cost per ton]

Chemical	Current law	H.R. 5640	Percent change
Inorganic Chemicals			
Aluminum	0	1.53	Added
Ammonia	4.45	7.44	67
Antimony	4.45	14.94	236
Antimony trioxide	3.75	14.94	298
Arsenic	4.45	14.94	236
Arsenic trioxide	3.41	14.94	338
Asbestos	0	13.92	Added
Barium sulfide	2.30	14.94	550
Boron trioxide	0	14.94	Added
Bromine	4.45	14.94	236
Cadmium	4.45	14.94	236
Chlorine	2.70	5.67	110
Chromite	1.52	2.55	68
Chromium	4.45	14.94	236
Cobalt	4.45	14.94	236
Cupric oxide	3.59	14.88	314
Cupric sulfate	1.87	14.88	696
Cuprous oxide	3.97	14.88	275
Hydrochloric acid	0.29	0.34	17
Hydrogen flouride	4.23	14.94	253
Lead	0	14.94	Added
Lead oxide	4.14	0	Dropped
Lithium carbonate	0	2.77	Added
Manganese	0	14.94	Added
Mercury	4.45	14.94	236
Nickel	4.45	14.94	236
Nitric acid	0.24	0.28	17
Phosphoric acid	0	0.30	Added
Phosphorous	4.45	[1] 14.94	236
Potassium dichromate	1.69	14.94	784
Potassium dihydroxide	0.22	0.26	18
Silenium	0	14.94	Added
Sodium dichromate	1.87	14.94	699
Sodium hydroxide	0.28	0.33	18
Stannic chloride	2.12	14.94	605
Stannous chloride	2.85	14.94	424
Sulfuric acid	0.26	0.31	19
Uranium oxide	0	1.44	Added
Vanadium	0	2.48	Added
Zinc	0	14.94	Added
Zinc chloride	2.22	0	Dropped
Zinc sulfate	1.90	0	Dropped
Number of taxed chemicals	42	59	

[1] Phosphorous would be taxed at $6.65 per ton under an Energy and Commerce Committee recommended amendment to H.R. 5640.

The bill would retain the present law exemptions for methane or butane used as a fuel; for nitric acid, sulfuric acid, or ammonia (or methane used to produce ammonia) which are used in the production of fertilizer; and for sulphuric acid produced as a byproduct of air pollution control. However, the bill would repeal the present law exemption for benzene, toluene, xylene, napthalene, tars, and light oils derived from coal. Additionally, as indicated in the above table, the bill would impose tax on benzene, toluene, and xylene mixed to produce gasoline. The report of the Committee on Energy and Commerce indicates that this is to include all volumes of such substances which are contained in gasoline at the end of the refining process.

Termination date.—The tax on feedstock chemicals would expire on September 30, 1990, with a provision for possible early termination, as described above in connection with the petroleum tax.

Amendments Recommended by the Committee on Energy and Commerce

In approving H.R. 5640, the Committee on Energy and Commerce recommended several amendments to the tax on feedstock chemicals as described above. First, the Committee on Energy and Commerce agreed to recommend an amendment providing for a credit or refund for the tax on any chemical which is shipped (directly or though an intermediary) for export.

Second, the Committee on Energy and Commerce agreed to recommend an amendment providing an exemption for nonferrous metallic compounds (or solutions or mixtures containing such compounds) which have a transitory presence during any process of smelting, refining, or otherwise extracting metals from metal-bearing substances (including ores or concentrates) which are not themselves subject to the tax. The tax would be reimposed if such compounds were removed from the extracting process for use, sale, disposal, or storage. (This is similar to the provision enacted in the Tax Reform Act of 1984.) An exemption would likewise be provided for nonferrous metals present in ores, concentrates, or other prerefining metal-bearing material, before the state of processing at which the metal is commercially known or sold as such (the amendment specifies that such metals would not be deemed to be "used" within the meaning of section 4661(c) when utilized as new scrap for recycling or production of such metals).[7] Additionally, an exemption would be provided for any metals which (1) have previously been taxed in their current cycle of production and use; (2) are produced from new scrap when such new scrap has been derived from metal previously taxed in its current cycle of production and use; or (3) are contained in a fabricated product, alloy or compound when such metal was previously taxed in its current cycle of production and use.

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[7] For purposes of these exemptions, nonferrous metals include the nonferrous metallic content of (1) any fabricated or semi-fabricated product, shape or form, and other product, which has been customarily considered by agencies of the United States Government in calculating annual production, consumption, and import statistics for such metal, (2) any alloy or compound containing at least five percent of such metal by weight, and (3) lead acid batteries; provided, however, that the Commissioner of Internal Revenue may establish reasonable de minimis levels for exempting from taxation the metal content of any such product or alloy. Except for lead acid batteries, no tax would be imposed on the metal content of any consumer product.

Third, the Committee on Energy and Commerce agreed to recommend an amendment allowing the tax rate for certain recycled metals (including aluminum, chromium, cobalt, lead, nickel, and any other metal recovered or diverted from solid waste) to be reduced by up to 50 percent, if a determination has been made regarding the effect of such reduction on revenues transferred to the Hazardous Substance Response Trust fund and the effect of the tax rate on the level of recycling in the recycling industry. The reduction would not be available to any taxpayer against whom an action or proceeding has been brought under CERCLA or under section 7003 of the Solid Waste Disposal Act, if the taxpayer has failed or refused to comply with an order or judgment issued in such proceeding. For purposes of this provision, solid waste would have the meaning provided by section 1004 of the Solid Waste Disposal Act. The committee report indicates that the Committee on Energy and Commerce expects other committees reviewing the legislation to take the factors discussed above (i.e., effect on revenues available for Superfund and effect on the recycling industry) into account in determining the final tax rate for the covered substances.

Fourth, an amendment recommended by the Committee on Energy and Commerce would lower the tax rate imposed on phosphorous under the bill from $14.94 to $6.65 per ton. The committee report indicates that this amendment corrects a mathematical error made during the compilation of the list of taxable chemicals.

Finally, the Committee on Energy and Commerce agreed to recommend an amendment making certain modifications in the exemption for certain substances used in the production of fertilizer. Under this amendment, phosphoric acid (together with nitric acid, sulfuric acid, ammonia, and methane used to produce ammonia) would be treated as an exempt substance when used (or resold for use) in the production of fertilizer. Second, the exemption generally would be applied under Treasury regulations. Finally, the amendment would specify that (1) the direct application of a qualifying substance as fertilizer meets the requirements of the provision, and (2) any person who uses or resells a covered substance for use or resale otherwise than in the production of fertilizer is to be treated as the manufacturer of the substance and is therefore to be liable for the tax. The amendment would retain the provision of H.R. 5640 allowing resales for ultimate use in fertilizer production to qualify for the exemption.

Environmental tax on certain imported chemical substances

In addition to the amendments above, the Committee on Energy and Commerce agreed to recommend an amendment which would impose a new environmental tax on five percent of the landed value of certain substances entered into the United States. A taxable substance for purpose of this tax would be any substance immediately derived from a taxable chemical listed in the table under section 4661. A taxable substance would be considered to be "immediately derived" from a chemical or chemicals listed under section 4661 if it is directly and substantially manufactured or produced from the listed chemical or chemicals as raw material or feedstock. The Treasury would be directed to issue regulations establishing

guidelines for determining the percentage of production cost or raw material cost of a substance which must be represented by use of section 4661 chemicals as raw material or feedstock in order for the resulting substance to be considered directly and substantially produced from the listed chemicals.

Under the amendment, no tax would be imposed on any substance unless the chemical from which the substance was manufactured or produced would itself be taxable under section 4661 if manufactured or produced in the United States or if entered into the United States (in its original form) for consumption, use, or warehousing. Thus, the exemptions applicable under section 4661 (as modified by the bill) would remain applicable in determining taxability of a substance under the tax on imported chemical substances. For example, a fertilizer produced with substances which (if otherwise taxable) would qualify for an exemption under section 4661, by virtue of their use in fertilizer production, would not be subject to the tax.

Where applicable, the tax on imported chemical substances would be paid by the importer or ultimate purchaser of a taxable substance. If a feedstock tax is paid on any chemical, and that chemical is subsequently used to manufacture or produce a substance which is taxable under the tax on imported chemical substances, then the tax paid under section 4661 is to be allowed as a credit or refund (without interest) against the tax on the imported chemical substance (but not in excess of the amount of the latter tax).

If the importer or ultimate purchaser of a taxable substance can establish the amount of chemicals listed in section 4661(b) that were used in the manufacture or production of the substance, the amendment would allow that importer or ultimate purchaser, under Treasury regulations, to pay the taxes that would have been paid under section 4661(a) on the sale or use of such chemicals, in lieu of the tax on the imported chemical substance.[8] The tax on imported chemical substances would be effective on October 1, 1985.

Waste end tax

The bill would impose a tax, effective January 1, 1987, on the disposal of any hazardous substance, if such disposal is required to be carried out in compliance with Subtitle C of RCRA. "Hazardous substances" would have the meaning provided by section 101 of CERCLA, while the term "disposal" would have the same meaning as under section 1004 of the Solid Waste Disposal Act. Under a special rule, the storage of hazardous substances for more than one year would also be subject to tax. The committee report further states that the adoption of the CERCLA definition of hazardous substance was intended to provide a broader definition than that presently provided under the Solid Waste Disposal Act.

The tax rates under the bill would be as follows:

[8] The effective date and the use of revenues derived from the tax on imported chemical substances are not specified in the amendment. However, it appears that the tax would be effective for the same period as the tax on feedstock chemicals, and that revenues from the tax would be deposited in the Hazardous Substance Response Trust Fund.

(1) In the case of any hazardous substances for which there is in effect a regulatory reportable quantity requirement of one pound or less (pursuant to section 102 of CERCLA), the tax rate would be $30 for each metric ton (1,000 kilograms) which is not disposed of by underground injection and $15 for each metric ton which is disposed of by underground injection.[9]

(2) In the case of any hazardous substance for which there is in effect a regulatory reportable quantity requirement of more than one pound or for which no reportable quantities have yet been specified in regulations, the tax rate would be $10 for each metric ton which is not disposed of by underground injection and $5 for each metric ton which is disposed of by underground injection.

(3) In the case of mixtures of hazardous substances referred to in paragraph (1) and hazardous substances referred to in paragraph (2), the rates applicable under paragraph (1) would apply. The committee report states the intention of Committee on Energy and Commerce that, in applying this rule to continual flow deep well injections, a method will be developed for evaluating such mixtures in segments so that the higher tax is only paid on the actual volume of the mixtures which contains the most hazardous types of substances.

The waste end tax would be paid by the owner or operator of a facility for which a permit is in effect under subtitle C of the Solid Waste Disposal Act. In the case of disposal other than at a facility for which such a permit is in effect, the tax would be paid by the person disposing of the hazardous substance.

Exemptions.—The following disposals of hazardous substances would be exempt from tax under the bill:

(1) The disposal of any substance by any person in the course of carrying out any removal or remedial action under CERCLA.

(2) The disposal of any substance by incineration in accordance with the standards applicable to incineration facilities permitted under subtitle C of RCRA.

(3) The disposal of any solid waste which is required to be studied under section 8002(f) or (p) of the Solid Waste Disposal Act (unless, after the completion of the studies, a law is enacted subjecting such waste to the tax).

The committee report notes that, in exempting substances disposed of in the course of carrying out any removal or remedial action covered by CERCLA (item (1) above), the bill is intended to include in the exemption from taxation emergency removals (e.g., cleanup of spills, train or truck derailments) which are undertaken voluntarily by private parties in compliance with CERCLA requirements. The report further states that, although disposal by incineration is exempt from taxation, the bill is not intended to exempt from taxation the disposal of residues left after the completion of the incineration process which is carried out at a permitted disposal facility. Finally, the report states the intent of the Committee on Energy and Commerce that the tax will not apply to nonferrous smelter slag, acid plant blowdown, or other wastes indigenous to the process of extracting nonferrous materials from ores and con-

[9] An amendment recommended by the Committee on Energy and Commerce would provide a $5 per metric ton rate for all hazardous substances disposed of by underground injection.

centrates, which materials are currently under study by EPA pursuant to the 1980 Solid Waste Disposal Act Amendments, and are therefore covered by item (3) above.

Special rule for wastes stored more than one year.—Under the bill, waste which has been stored for one year period beginning on the date of its generation (or, if later, the date of the enactment of the bill), and which is listed or identified as a hazardous waste under section 3001 of the Solid Waste Disposal Act as of the close of such 1-year period, would be treated as disposed of on the first day after the end of such 1-year period and the waste end tax under section 4681 would be paid on that day. For purposes of this rule, wastes which are first listed or identified as hazardous wastes under section 3001 of the Solid Waste Disposal Act during the 1-year period would be treated as generated on the date of such listing. A waste would be treated as listed or identified as a hazardous waste on any date for which such a listing or identification is in effect (regardless of when the listing itself was promulgated). The committee report states that payment of the waste end tax following a 1-year storage period is to satisfy the tax obligations of the party responsible for such waste and no second tax is to be imposed if such wastes are subsequently removed from long-term storage and permanently disposed of.

Use of proceeds.—Amounts equivalent to the revenues generated by the waste end tax would be deposited in the Hazardous Substance Response Trust Fund.

Termination date.—The waste end tax would terminate on September 30, 1990.

Recommended amendments.—The Committee on Energy and Commerce agreed to recommend the following amendments to the waste end tax contained in H.R. 5640.

First, the Committee on Energy and Commerce agreed to recommend an amendment lowering the amount of the waste end tax imposed on all deep well injection wells to $5.00 per metric ton (rather than $15.00 per metric ton for substances for which there is in effect a reportable quantity of one pound or less and $5.00 per metric ton for substances having a reportable quantity of more than one pound, as under the original bill). The committee report indicates that this amendment is made in recognition of the substantial amounts of water contained in waste disposed of by underground injection and is intended to remove the disincentive to utilize this method of disposal. A further recommended amendment would clarify that underground injection for purposes of these provisions, includes (but is not limited to) wells which meet the standards applicable to class I wells under the underground injection control program of the Safe Drinking Water Act.

Second, the Committee on Energy and Commerce agreed to recommend an amendment exempting from the waste end tax the treatment of any substance in wastewater facilities utilizing biological activity or carbon adsorption treatment processes in accordance with standards applicable under subtitle C of RCRA. The committee report emphasizes that this exemption is to apply only to facilities utilizing biological activity or carbon adsorption treatments (or a combination of the two processes) in compliance with relevant Federal environmental law and regulations. The amendment does

not specify the status of treatment processes other than biological activity or carbon adsorption for purposes of the waste end tax.

Finally, an amendment recommended by the Committee on Energy and Commerce would exempt from the waste end tax the disposal of any substance for energy recovery in accordance with standards applicable to energy recovery facilities permitted under subtitle C of RCRA, if a study commissioned by EPA has certified that such facilities are in compliance with the destruction efficiency standards applicable to incinerators permitted under that Act.

Repeal of Post-closure Tax and Trust Fund

The bill would repeal the tax on hazardous wastes under section 4681 of the Code effective on the date of enactment, and would terminate the Post-closure Liability Trust Fund as of that date. Amounts in the fund which have not been obligated or expended prior to the date of enactment would be refunded, on a ratable basis, to taxpayers who paid taxes on hazardous wastes under section 4681.

C. Non-Tax Provisions affecting the Hazardous Substance Response Trust Fund

Overview

As discussed above, H.R. 5640, as reported by the Committee on Energy and Commerce would extend the funding of the Hazardous Substance Response Trust fund for 5-years at significantly increased levels. This increase in funding is required primarily by an increase in the number of abandoned hazardous waste sites which are to be cleaned up under the superfund program. The non-tax provisions of H.R. 5640 which will affect the resources available to the fund and the demands on the fund are outlined below.

Mandatory cleanup schedule

As part of the expanded superfund program, the bill would direct the EPA to place no fewer than 1,600 sites on the National Priorities List by January 1, 1988. The EPA estimates that the Fund provided under present law is adequate to cleanup at most 170 sites. The bill further requires the EPA to initiate remedial investigations and feasibility studies for such sites on a regular schedule beginning as of the date of enactment. Finally, the bill requires EPA to begin on-site work at no fewer than 150 sites each year.

When EPA cooperates with States in the cleanup of hazardous waste sites, the bill would permit States to apply the administrative costs of running their own Superfund programs toward their matching share requirements for response costs (generally 10 percent of such costs); additionally, the bill would clarify that nothing in CERCLA is to be interpreted to preempt a authority to impose taxes to support its own Superfund programs. The bill would further specify that the 90/10 Federal/State matching share formula is to apply to long-term operation and maintenance costs.

Amendments to response and liability provisions

The bill would clarify that liability for abatement orders and cleanup costs under Sections 106 and 107 of CERCLA is to be strict,

joint and several. Under this rule, each defendant generally would be liable for the full amount of any combined damages unless the defendant can establish, by a preponderance of the evidence, that the harm caused by a release or threatened release is divisible, in which case the defendant would be liable for only his portion of such harm. In addition to these changes, the bill would clarify the EPA's authority to recover prejudgment interest in cost recovery actions would specify that EPA response actions may be reviewed only in the context of cost recovery enforcement actions or civil actions under section 106, and would make certain other adjustments and clarifications to the CERCLA response and liability provisions. Amounts recovered under these provisions would be added to the Hazardous Substance Response Trust Fund.

Citizens' suits

The bill would allow any person to bring a citizens suit against the administrator of the EPA, alleging failure to perform any act or duty under CERCLA as amended by the bill which is not discretionary with the Administrator. The court would then have jurisdiction to order the EPA Administrator to perform such act or duty.

The bill would provide that citizens suits (other than suits against the EPA Administrator) may not be brought under certain circumstances where the EPA has commenced and is diligently pursuing equivalent actions, or where response actions or consent decrees (in the case of endangerment actions) are in progress with respect to the alleged violation or endangerment. Additionally, the EPA Administrator, if not named as a party, could intervene in any citizens' suit as a matter of right.

The bill would allow the award of reasonable attorneys' fees to prevailing parties in a citizens suit.

In addition to allowing citizens suits, H.R. 5640 encourages citizen participation by establishing a mandatory program for public participation in remedial decisions by EPA and providing authority for the EPA Administrator to use Superfund money to make grants to enable affected communities to obtain expert advice and technical assistance in commenting on the agency's proposed plans for action.

Relief for injured individuals

The bill would add three basic provisions pertaining to relief of injured individuals which are modeled on a study conducted pursuant to section 301(e) of CERCLA and presented in June, 1982. First, the bill would require the Agency for Toxic Substances and Disease Registry, created under the CERCLA and administered by the Department of Health and Human Services, to prepare toxicological profiles for the 100 chemicals most frequently found, or posing the greatest risks, at Superfund sites. The profiles, which would be based primarily on a compilation of existing literature and limited testing where necessary, would be required to be prepared at the rate of 25 per year for the next four years. Monies for these studies would come from the Superfund.

Second, the bill would provide any individual or group of individuals the right to petition the EPA Administrator for health effects

studies and emergency relief in cases of dangerous exposure to hazardous substances which have been released from dump sites or in the course of a disaster-like chemical fire. If the petitioners are able to demonstrate (e.g., through submission of laboratory tests of drinking water) that they are being exposed to a hazardous substance, the Administrator would be required to determine whether such substances may pose a significant risk to their health and whether it is reasonably likely that such substances come from a covered facility. If the Administrator makes such determinations, the bill would require the EPA to conduct a scientific health effects study of the affected individuals, to be completed within a 6-month period. If a health effects study shows that an exposure to hazardous substances actually does pose a significant risk, EPA would be required immediately to reduce such exposure to safe levels. Actions by the Administrator would include (e.g.) providing alternative drinking water or, in the most egregious cases, emergency relocation.

Finally, the bill would create a Federal cause of action for those injured by exposure to hazardous substances. The cause of action would be limited to land -or water-based disposals of hazardous substances not exempted by CERCLA. Under the provision, plaintiffs could sue parties responsible for the release of hazardous substances, in either State or Federal District Court, for damages including (1) medical expenses, (2) any loss of income or profits, or impairment of earning capacity, (3) pain and suffering, and (4) any economic loss and damages to property, including real and significant diminution in value. The Superfund would not compensate injured parties with respect to any of these damages.

Leaking underground storage tanks

The bill includes extensive provisions regarding the regulation of leaking underground storage tanks. Under the bill, EPA would be required to develop a regulatory program which will contain such requirements as may be necessary to protect human health and the environment in the case of leaking tanks. Such regulations could include, but need not be limited to, design standards for new tanks and monitoring and corrective action requirements for new as well as existing tanks. In addition, to abate threats to public health, Superfund money would be available to clean up leaks from underground storage tanks, including those tanks which store petroleum or petroleum products.

V. ISSUES RELATING TO THE TAX PROVISIONS OF H.R. 5640

A. Funding Level of the Superfund Program

Several issues arise in considering the appropriate level of funding for the Superfund program. These include (1) the ultimate cost of cleaning up all the sites which pose an environmental threat and (2) the rate at which these sites should be cleaned up.

With respect to the ultimate cost of cleaning up all threatening sites, the Environmental Protection Agency recently estimated that the Federal cost of remediating all current and future sites on the National Priorities List will total $9.1–14.5 billion in 1983 dollars (under moderate groundwater contamination assumptions).[10] Some have argued that these estimates are too low because of optimistic assumptions concerning the total number of hazardous sites which exist and the proportion of these which will be cleaned up by private parties. The General Accounting Office has reviewed this estimate and concluded that the cost of cleanup could be as high as $26 billion.[11] These costs could, under H.R. 5640, be even higher due to the more stringent remediation standards, the expansion of the fund's response authority with respect to releases of petroleum and petroleum products, and the greater Federal share of site maintenance costs provided by the bill. Thus, there is substantial likelihood that the $9.5 billion of taxes and general revenues provided by H.R. 5640 will eventually be required.

The second issue related to funding levels is the rate at which the sites should be cleaned up. H.R. 5640 provides a specific schedule for the various phases of cleanup, including minimum number of completions, remedial investigations and feasibility studies, and initial remedial work each year. If the schedule is adhered to, the 546 sites currently on the National Priorities List would be cleaned up within five years; part of the purpose of considering this legislation well before the expiration of the current taxes is to allow the early commencement of the planning studies necessary to meet this schedule. Given the requirements imposed by H.R. 5640, as to the rate at which cleanup is to proceed, it is likely that the $9.5 billion in funds provided by the bill will be required through the period ending in fiscal year 1990.

However, there is some controversy over the rate at which the Superfund can efficiently spend its resources. Hazardous waste cleanup projects require lengthy site analysis, planning, preliminary engineering, and design work. This is particularly the case at sites where groundwater contamination is involved. Given the long

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[10] Memorandum to Alvin Alm and Lee Thomas from Alvin R. Morris, Director of Superfund Task Force, Environmental Protection Agency, Office of Solid Waste and Emergency Response (December 8, 1983), p. 12.

[11] General Accounting Office, "EPA's Preliminary Estimates of Future Hazardous Waste Cleanup Costs are Uncertain," RCED-84-152, (May 7, 1984).

lead time necessary for implementing site cleanups, some have argued that the EPA will be able to spend productively over the 1986–1990 period less than half the revenue provided by H.R. 5640 in this period.

On this ground, it has been suggested that the Superfund should be reauthorized for a period longer than 5 years, but at a lower annual funding level. Alternatively, given the uncertainty about the rate at which the Superfund can be spent, it may be desirable to terminate the Superfund taxes if a large balance builds up in the trust fund. The 1980 Act, for example, contains a trigger mechanism which temporarily suspends the feedstock tax if the Superfund balance exceeds $0.9 billion and would not fall below $0.5 billion in the subsequent year. This type of trigger could guard against excessive prepayment into the Superfund. The Energy and Commerce Committee recommends an amendment which provides such a trigger mechanism.

On the other hand, opponents of this type of trigger argue that it would effectively enable the EPA to control the level of Superfund taxes by manipulating the rate at which outlays are made from the Superfund. In addition, taxpayers would be less certain about their potential Superfund tax liability over the 5-year reauthorization period. It is also argued that without the assurance of adequate revenues, preliminary planning and design activities will be hampered, and the ultimate schedule of cleanup could be significantly delayed. Finally, given the lead time necessary to plan cleanup projects, the Superfund tax might be triggered off just as the demand for fund resources sharply rises in the construction phase of the program.

B. General Revenue Share of Superfund Expenditures

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("Superfund Act") established an excise tax on certain chemical feedstocks and petroleum as the primary revenue source for the Federal Superfund. Through fiscal 1983, appropriations from general revenues have amounted to 12.5 percent of excise tax revenues. The Superfund was intended to cover the cost of cleaning sites only where liability could not be traced to a private party.

Payers of the feedstock tax have challenged the equity of this tax. First, the economic beneficiaries of the prior use of cheap waste disposal practices include: past customers of products fabricated in waste producing plants, past stockholders, and past workers. However, the burden of the Superfund feedstock tax falls on *current* customers, shareholders, and workers. Thus, there is no direct connection between past beneficiaries of cheap waste disposal practices, and the individuals who currently bear the burden of the feedstock tax. Second, companies who pay to remediate all sites for which they are responsible (whether voluntarily or under court order) are, in effect, taxed twice under the feedstock tax. Third, the current excise tax is assessed on chemical feedstocks rather than on the actual hazardous wastes which are commonly found in abandoned disposal sites. Companies outside of the chemical industry that generated these hazardous wastes are not directly taxed

under current law. Even if the disposal of hazardous wastes were taxed, as provided in H.R. 5640, there would be no direct link between current taxpayers and past waste disposers.

On these grounds, it can be argued that general revenues should finance a larger share of Superfund expenditures. Under H.R. 5640, only 12.5 percent of trust fund receipts are derived from general revenues. Unlike many of the other trust funds supervised by the Treasury (e.g., the airport and airway, highway, and inland waterway trust funds), the payers of Superfund taxes do not directly benefit from the facilities which are built and maintained by the hazardous substance response trust fund. In western Europe, general revenue financing is, in fact, the approach generally followed for funding the remediation of abandoned waste sites.

Advocates of the feedstock tax argue that it is appropriate and equitable to place the financial burden of cleaning up hazardous waste sites on the industries responsible for creating the problem.[12] This approach has been followed in other instances where Congress has made the judgment that responsibility for a present problem or condition more properly attaches to a particular segment of the economy rather than the entire body of taxpayers who provide general revenue. For example, under the Black Lung Benefits program, benefits to diseased coal miners and survivors are financed by an excise tax on current coal production. Also, under the Surface Mining and Reclamation Act, reclamation of former surface mining sites is financed by a fee on coal production. Finally, it is argued that in view of the size of the Federal budget deficit it would be irresponsible to finance hazardous waste cleanup from general revenues.

C. Feedstock Tax

CERCLA imposed an excise tax on 42 chemical feedstocks and on petroleum. The main criterion for determining which feedstocks would be subject to tax was the prevalence of hazardous wastes derived from these feedstocks. The basic feedstock tax rates were set at $4.87/ton for petrochemicals, $4.45/ton for inorganic chemicals, and $0.79/barrel for petroleum.[13] These rates were necessary to achieve a $1.6 billion Superfund program over five years and to allocate 65 percent of the tax burden to petrochemicals, 20 percent to inorganic chemicals, and 15 percent to petroleum. This allocation was based on the respective proportions of derived wastes found in hazardous waste sites. In addition, the feedstock rates were limited to 2 percent of wholesale price (based on data available in 1980).

Exemptions were granted for methane or butane used as a fuel; ammonia, sulfuric acid, and nitric acid used in the production of fertilizer; sulfuric acid produced as a byproduct of air pollution control; and chemicals derived from coal. In addition, section 1019 of the Deficit Reduction Act of 1984 clarified that exemptions would

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[12] According to one study the chemical and allied products industries are responsible for producing 84 percent of the contaminants found at national priority list sites. See: Management Analysis Center, Inc. "Financing Superfund: An Analysis of CERCLA Taxes and Alternative Revenue Approaches," (June 1984), p. 38.

[13] Compounds (e.g., arsenic trioxide) were taxed at a fraction of the rate imposed on their constituents (i.e., arsenic) based on percentage composition.

also apply to specified feedstocks used in the production of certain fuels; and transitory chemicals which occur in metal refining processes.

H.R. 5640 taxes 20 additional chemical feedstocks including lead and zinc. Three compounds derived from lead and zinc (i.e., lead oxide, zinc chloride, and zinc sulfate) are exempted from tax; however, these compounds would be taxed indirectly to the extent that their constituent lead and zinc is taxed under the bill. In addition, the bill removes the exemptions for benzene, toluene, and xylene (BTX) mixed in gasoline and for certain chemicals derived from coal. These 20 feedstocks were added to the list of taxed chemicals under current law on the basis of recent EPA data on the hazardous wastes prevalent in disposal sites.

In setting the feedstock tax rates in H.R. 5640, no attempt was made to achieve a predetermined allocation of the tax burden between the petrochemical, inorganic, and petroleum segments, as was done in the 1980 Act. The revised feedstock tax rates provided in H.R. 5640 were determined as the lower of:

(1) 3-percent of wholesale price (based on 1983 data), and

(2) a $14.94/ton cap for petrochemicals and a $29.87/ton cap for inorganic chemicals.[14]

In the case of aluminum, the feedstock tax was adjusted downward, to reflect more accurately the contribution of that substance to contaminants found at the Superfund sites.[15] The $14.94 and $29.87 caps determine the tax rate of 1 of the 20 petrochemicals, and 22 of the 39 inorganic chemical feedstocks. As shown in Table 7, relative to current law, H.R. 5640 raises feedstock tax rates from 17 percent (nitric and hydrochloric acid) to 784 percent (potassium dichromate). In one case (methane) the tax rate was reduced (by 28 percent). Although not shown in Table 7, the tax rate on crude oil would be increased by 470 percent.

The feedstock tax has been criticized as being arbitrary and, at the $1.27 billion per year level proposed in H.R. 5640, potentially damaging to industry. Under the bill, and current law, feedstock taxes are not based on either the degree of hazard associated with wastes derived from these feedstocks or the volume of hazardous waste produced from these chemicals. Thus it is argued that a tax on the disposal of certain hazardous wastes, such as the waste end tax in H.R. 5640, more equitably places the burden of the tax on the wastes which are being cleaned up by the Superfund.

On the other hand, proponents of the feedstock tax argue that it is successful in accomplishing the stated goal of financing the Superfund program through taxes paid by the industries that account for most of the problem which led Congress to establish the program. According to a report prepared by ICF, Inc. for EPA, 77 percent of all regulated hazardous wastes are produced by the chemical, petroleum refining, and primary metals industries which are the primary payors of the feedstock tax. Almost all hazardous wastes or substances are made from the feedstocks subject to tax;

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[14] These caps are based on the $10/ton and $20/ton limits on petrochemicals and inorganic chemicals, respectively, used in an early stage of the legislative process leading to the CERCLA. These figures are increased by 49 percent for cumulative inflation in subsequent years.

[15] The Energy and Commerce Committee recommends an adjustment to the tax on phosphorous to correct a mathematical error.

the vast majority of those substances ranked highly hazardous at waste sites are taxed feedstocks or their derivatives.

Other than the overall level of revenues to be provided by the feedstock taxes, the principal issues appear to be the formula used for setting the rates, the list of taxable substances, and exemptions for particular uses or processes contained in present law or proposed in H.R. 5640.

D. Effect of Feedstock Tax on Trade

One of the ways in which the feedstock tax is said to harm the domestic chemical industry is its potentially adverse impact on the balance of trade. It is argued that the feedstock tax subsidizes imports derived from taxed chemicals, penalizes exports of taxed feedstocks and derivatives therefrom, and encourages U.S. chemical companies to manufacture offshore. Under H.R. 5640 (and present law), taxes are imposed on domestically produced and imported chemical feedstocks but not on products derived from those feedstocks. Thus, imported products that are derived from feedstocks that would have been taxable if produced or sold in the U.S. escape tax and are, in effect, subsidized by the Superfund tax. For example, batteries consist mostly of lead and lead oxide. Lead is a taxable feedstock under H.R. 5640; however, imported batteries are not taxed. The Battery Council International estimates that under the bill, the feedstock tax on lead raises the cost of manufacturing an automobile battery by 15 cents. Thus, disregarding transportation costs, imported automobile batteries have a 15 cent cost advantage over those produced in the United States. Similarly, exports of U.S. produced batteries suffer from a 15 cent cost disadvantage relative to foreign-produced batteries.

While the feedstock tax could, in theory, harm U.S. trade it is unlikely that the actual damage to the U.S. chemical industry is large. The maximum penalty imposed by the H.R. 5640 feedstock tax on any chemical product is 3 percent of the manufacturing cost.[16] In the battery example, the feedstock tax amounts to less than one-half of one percent of the product's retail price. While some segments of the chemical industry are highly competitive, the recent growth in petrochemical imports appears to be attributable largely to the appreciation of the dollar against foreign currencies, and competition from plants established near low cost sources of natural gas in the Middle East and elsewhere.

The Energy and Commerce Committee has recommended an amendment which would impose a 5-percent tax on the landed value of chemical imports "directly and substantially manufactured or produced from" taxable feedstocks. Such an import tax would tend to protect the domestic market, for products produced from taxed feedstocks, from competition with untaxed imports. However, there are a number of disadvantages. First the taxation of imported products which are not directly taxed in the United States may violate the General Agreement on Tariffs and Trade (GATT), since the 5-percent rate exceeds the effective tax rate on

[16] This follows from the fact that no chemical feedstock is taxed at more than 3 percent of its wholesale price.

domestically produced chemical products. Second, the administration of such a tax would be extremely complex since there are literally thousands of chemical compounds which are derived from taxable feedstocks. There is considerable uncertainty as to the number and identity of the imported products which, under regulations, ultimately would be subject to this tax. The administrative burden on the Internal Revenue Service would be further complicated by a provision which would allow importers to pay the feedstock tax that theoretically would be incurred in the United States, in lieu of the 5-percent landed value tax. (This provision was added to enhance the amendment's conformity with the GATT Code.)

Finally, since foreign manufacturers of chemical imports did not generate the wastes found in U.S. disposal sites, it is difficult to argue that they should pay to clean them up. (However, some chemical imports are used in manufacturing processes which generate hazardous wastes.) Without a doubt many environmental regulations (e.g., the Clean Water Act, the Clean Air Act, the Toxic Substance Control Act, the Solid Waste Disposal Act, the Occupational Safety and Health Act, etc.) raise the cost of manufacturing in the United States. However, Congress has not provided systematic trade relief to offset the effects of any such regulations or taxes which affect the costs of domestically produced goods.

E. Disposal Tax

H.R. 5640 would supplement the existing feedstock tax with a new tax on the disposal of hazardous substances. The tax would be collected from the owners or operators of disposal facilities (hence it is referred to as a "waste end" tax). The rate of tax would vary according to the waste's degree of hazard and the environmental soundness of the disposal method. For disposal methods other than underground injection (including storage of longer than one year), the tax rate is $30 per metric ton for more toxic hazardous substances (reportable quantity requirement of one pound or less under sec. 102 of CERCLA) and $10 per metric ton for less toxic hazardous substances. For underground injection the tax is $5 per metric ton. (Under an amendment recommended by the Energy and Commerce Committee). The disposal tax would be imposed on the basis of wet rather than dry weight. Mixtures of hazardous substances would be taxed at the highest rate applicable to the individual constituents. Certain types of waste treatment, most notably incineration, would be exempted from the disposal tax; however, the hazardous residuals from incineration, and other types of treatment, would be subject to the disposal tax.

Several basic issues are involved in the discussion of a disposal tax in the context of financing Superfund program: incentive effects, predictability of revenues, administrative concerns, trade effects, and appropriate financing sources for the particular expenditures authorized under the program.

Incentive effects

A rationale for the disposal tax, like other pollution taxes, is that the market price of disposal does not reflect the full cost to society. Even waste that is properly disposed of, in a facility regulated

under the provisions of the Resource Conservation and Recovery Act (RCRA), may still pose some long term risk to the public health and welfare. Accidental releases can occur in the transport of hazardous wastes and at disposal facilities. Property values around disposal facilities may be reduced. And if the owner of a hazardous waste facility becomes insolvent, the cost of maintaining the facility is shifted to the government. Thus, in theory, disposal tax rates should vary with the degree of hazard associated with each type of waste and the environmental soundness of the disposal method employed. Treatment and recycling of hazardous wastes should be exempt from tax, and only the untreated hazardous residuals from these processes should be subject to tax upon ultimate disposal.

A disposal tax, unlike a feedstock tax, has the effect of creating a direct economic incentives for waste reduction and safe management. First, at the production level, there is an incentive to adopt manufacturing processes which generate smaller amounts of the more toxic, highly taxed wastes. Second, at the treatment stage, there is an incentive to recycle and otherwise reduce the volume of hazardous wastes which must be disposed of. Finally, at the disposal stage, there is an incentive to use safer methods of waste disposal which are taxed at a lower rate. Thus, the tax, administered by the Internal Revenue Service, would supplement the environmental statutes administered by EPA in attempting to achieve environmental goals.

The disposal tax in H.R. 5640 generally conforms to the economic model of a pollution tax. The most toxic wastes (i.e., with reportable quantities of one pound or less under CERCLA) would be taxed at a higher rate than less toxic wastes. Also, wastes disposed of using environmentally safer methods of waste management, such as incineration, are taxed at a lower rate than waste disposed of by relatively less safe methods, such as landfill. However, the bill departs from this model to the extent that legitimate treatment and recycling technologies are not exempted from the disposal tax. The bill specifically exempts incineration, but the taxation of other forms of treatment appears to be left to regulations.[17] Also, some have argued that despite the lower tax rate provided in the bill, underground injection is too heavily taxed relative to other disposal methods on the grounds that the wastes disposed of are very dilute (H.R. 5640 taxes disposal on a wet rather than dry weight basis), and the disposal method is claimed to be environmentally safe. Further, it is argued that the system of permits and legal liability for damages under CERCLA, RCRA, and State tort law already provide substantial incentives for proper disposal.

However, it is unclear if adequate information exists about the degree of hazard of different wastes and the environmental soundness of alternative disposal methods to design a rational disposal tax. According to the Office of Technology Assessment (which supports the concept of a disposal tax) there is insufficient scientific data to determine whether or not deep well injection is a highly safe method of long term disposal. The inability to adequately define hazardous wastes and determine their relative harmfulness,

[17] The Energy and Commerce Committee Report contains a recommended amendment which exempts biological and carbon adsorption waste water treatment from the disposal tax.

is the primary reason why countries such as France and Germany, which tax the discharge of pollutants into waterways, have not enacted taxes on hazardous waste disposal.

Predictability of revenues

Twenty-three States currently employ or have employed some form of waste-based tax.[18] The General Accounting Office (GAO) recently studied the experience with waste end taxes in New York, California, and New Hampshire, and concluded that[19]

> The three states (1) have not collected the revenues they anticipated, (2) have not determined if the tax achieved its objective of encouraging more desirable waste management practices, and (3) were concerned that a similar federal tax may reduce state tax revenues or increase the incentive to illegally dispose of hazardous waste. In addition, GAO found that in order to implement similar federal waste-end taxes, more data are needed on the types and quantities of waste generated and the treatment, storage, and disposal methods used. These data are necessary to accurately estimate revenue, measure change in disposal practices, and assure compliance with the tax.

The revenue shortfalls in these States were 39 percent in California (disposal tax), 73 percent in New York, and 93 percent in New Hampshire. Florida replaced its waste end tax with a feedstock tax in 1983 after discovering that administrative costs exceeded revenues.[20] The State experience with disposal taxes raises the issue that a revenue shortfall might occur at the Federal level if the disposal tax in H.R. 5640 were enacted.

Part of the revenue shortfalls experienced at the State level are due to out-of-state disposal of wastes. This type of tax avoidance would not affect a Federal level disposal tax (except to the extent hazardous wastes are exported from the country). A second explanation is that most of the State disposal taxes have been enacted since 1980 and are relatively new. This "learning curve" syndrome may be responsible for the greater than 70 percent revenue shortfall in the Federal disposal tax enacted in the CERCLA of 1980 to fund the Post-closure Liability Trust Fund.[21] A third cause of persistent revenue shortfalls is that the disposal tax creates incentives for waste management, both by legal and illegal means. California, in one year, experienced a 28 percent decline in reported waste including a 66 percent decline in extremely hazardous wastes, after enacting a waste end tax.[22]

The limited size of the disposal tax base means that disposal tax rates must be much higher than feedstock tax rates to raise a similar amount of revenue. For example, it is estimated that H.R. 5640

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[18] Fred C. Hart Associates, Inc. "CERCLA Funding Options," pp. 21-22.

[19] GAO, "State Experiences With Taxes on Generators or Disposers of Hazardous Waste," (May 4, 1984), p. ii.

[20] ICF, INC., "Briefing on CERCLA Tax Alternatives prepared for the Environmental Protection Agency, part II, p. 14.

[21] According to the most recent IRS data, the post-closure tax raised only $2.4 million in the first quarter of fiscal 1984 relative to fiscal year budget estimates of $8 million per quarter and estimtes of $25 million per quarter when the tax was enacted in 1980.

[22] ICF, Inc. "Briefing on CERCLA Tax Alternatives," part II, p. 20.

would raise the price of landfilling hazardous waste on the order of 10-30 percent—far greater than the maximum 3 percent tax on feedstocks. In combination with State level waste end taxes, H.R. 5640 could raise the effective tax rate on disposal to the point where serious revenue shortfalls might occur at both levels of government.

At the State level, it appears that some of the hazardous waste reduction is due to "midnight" dumping, waste blending, questionable recycling and treatment operations, and under-reporting of waste volumes.[23] Under-reporting is particularly difficult to detect in the case of on-site disposal, since the waste producer and disposer are the same party. This could be a significant problem for a Federal disposal tax because the EPA estimates that 96 percent of all hazardous waste are disposed of on site. As a result, some argue that the proposed disposal tax in H.R. 5640 could seriously undermine compliance with the RCRA reporting requirements.

Ultimately, there may be a conflict between the two major goals of a disposal tax—the provision of revenue for the Superfund program and the encouragement of proper treatment of hazardous wastes. To the extent that the tax applies only to those disposal practices which cause environmental harm and is successful in discouraging such practices, the revenues generated by the tax decrease.

Administrative concerns

Some have questioned whether the current RCRA regulatory system is adequate for assessing, collecting, monitoring, and enforcing a disposal tax. This regulatory system is the basis for the tax proposed in H.R. 5640. Notwithstanding the RCRA regulatory system, every State that has adopted a waste end tax has found it necessary to develop a separate reporting system.[24] The GAO concluded that current data were inadequate for determining the cause of the revenue shortfalls in the State programs, and the extent to which illegal disposal practices may have increased as a result of taxing hazardous waste disposal.

Another lesson from the State experience is the relatively high administrative cost of a disposal tax. The current Superfund tax is imposed on 43 feedstocks and collected from approximately 500 taxpayers. On the other hand, the disposal tax proposed in H.R. 5640 would be imposed on more than 430 hazardous substances regulated under RCRA and CERCLA, and collected from approximately 10,000 on-site and off-site hazardous waste disposal facilities.[25] The Internal Revenue Service would be required to develop complex regulations covering the hundreds of substances involved, and specifying the taxation of numerous recycling, treatment, and disposal practices.

Further, it is not clear to what extent the RCRA regulatory system is adequate to provide the framework for the administration of a tax. For example, liability for an excise tax generally depends on the occurrence of a taxable event, but the RCRA system

[23] *Ibid.*, pp. 18-19.
[24] *Ibid.*, p. 26.
[25] *Ibid.*, 12.

is geared to the prevention of certain events (i.e., illegal disposals) which are prohibited under that law. It is unclear at what point legal treatment and/or legal disposal would require the payment of a tax. Further, since RCRA allows approved State programs to administer the Federal requirements, it is unclear to what extent a Federal tax based on RCRA would ultimately be administered by the States, which could vary in their definition of terms and administrative practices. Also, there is considerable controversy over the RCRA regulations which define hazardous wastes and various management practices[26]

> Industry and environmentalists alike, unhappy with much of what they already see, have challenged numerous regulations and are involved with EPA in lengthy negotiations over the way those regulations should ultimately read. The states, which administer RCRA, are finding their efforts hobbled because promised federal aid has not materialized.

The House has twice adopted amendments to the RCRA which would, *inter alia,* control certain questionable treatment practices under current law.

Since the disposal tax in H.R. 5640 is tied to the RCRA statute, the delays and frequent changes and challenges to in EPA's regulations could make it difficult for the IRS to administer the tax and issue its own regulations.

Unlike the waste end tax in current law, which finances the Post-closure liability Trust Fund, the disposal tax in H.R. 5640 would be imposed on a wet weight basis. Since wastes injected into underground wells are very dilute (90–99 percent water) taxing disposal on a wet weight basis increases the share of the tax burden paid by underground injection relative to land disposal (if the same tax rate applies to both). H.R. 5640 adjusts for the higher water content of wastes injected into underground wells by lowering the tax rate to $5 per metric ton (vs. $30 or $15 per metric ton for land disposal depending on the waste's degree of hazard). Some have argued that, even at $5 per metric ton, the disposal tax for underground injection is too high relative to landfill.

Whether or not the tax on underground injection is too high, many oppose taxing disposal on a dry weight basis because of the added adminstrative burden. The cost of determining dry weight content has been estimated to be on the order of $20 per barrel, and is often more than the tax liability. As a result, some small waste generators currently do not bother to determine the dry weight content of their wastes and pay the post-closure tax on a wet weight basis. This may put small disposers at a disadvantage relative to large disposers (who have more uniform waste streams and in-house laboratory facilities).

Trade effect

Like the feedstock tax, the disposal tax raises the price of manufacturing certain production in the United States. This effectively taxes exports and subsidizes imports of such products. However,

[26] *Chemical Week,* "Getting RCRA Under Control" (June 9, 1982), p. 36.

the impact of the disposal tax on individual businesses may be larger than the feedstock tax. The feedstock tax in H.R. 5640 never raises production costs by more than 3 percent, while the disposal tax could amount to a much larger percent of manufacturing costs for products whose fabrication involves large volumes of highly hazardous wastes. These waste-intensive products could be priced out of the market by imports from countries which have few, if any, regulations governing the disposal of hazardous waste. In these cases, U.S. manufacturers might shut down production and possibly establish manufacturing operations in other countries with weaker environmental standards. While many would welcome the export of industries which produce large volumes of hazardous wastes, the cost to the U.S. economy in terms of jobs and income must be considered.

Appropriateness of revenue source

One of the arguments for a waste end tax is that under a feedstock tax, the burden of financing the superfund program is not properly placed on many of the industries which produced the hazardous wastes which currently pose an environmental threat. It is argued that since the disposal tax in H.R. 5640 is geared to the degree of hazard and the volume of such wastes, it is more highly correlated with the generation of wastes found at superfund sites.

Opponents of a waste end tax argue, however, that this argument is not valid to the extent that a large volume of wastes is not subject to the tax. Thus, under the proposal in H.R. 5460, wastes which are exported, generated by small generators exempt from RCRA, or are municipal wastes might not be subject to the tax. To the extent the tax is tied to the existing RCRA regulatory system, disposal which falls outside that system would not be subject to the tax.

F. Post-closure Liability Trust Fund

Under current law, the post-closure fund transfers legal liability of owners and operators of private disposal sites to the Federal government, provided that such sites are operated and closed according to RCRA requirements, and the EPA determines, 5 years after closure, that there is no substantial likelihood of future release. In exchange for assuming such liability, a tax of $2.13 per dry-weight metric ton was imposed on the disposal of hazardous wastes at qualified facilities. In effect, the post-closure tax is in lieu of an insurance premium for the coverage of all future claims arising from health and property damage caused by a hazardous waste facility.

H.R. 5640 repeals the post-closure liability trust fund enacted in 1980 and refunds the taxes collected to finance the fund. There are several arguments for repeal. First, no estimate has been made of the liability which ultimately could be transferred to the Federal government under this provision. This liability is unlimited, and is governed largely by State and local laws which could change and could cover such items as medical expenses, pain and suffering, and income losses. Thus, the amount of claims against the fund could be extremely large, and there is concern that the post-closure fund will have inadequate resources to compensate the victims of

even a few releases. This could necessitate a large tax increase or use of general revenues to pay these claims. Second, it is argued that the transfer of liability to the government diminishes the incentive to make these facilities safe over the long run. Under the scrutiny of private insurers (to avoid liability attributable to CERCLA and State tort law), it is claimed that facility operators would continually strive to increase safety in order to keep premiums low. Further, because storage facilities do not pay the tax, a storage facility which switched its status to that of a disposal facility just before closure could transfer liability to the Fund without ever having paid the tax. Other such mismatches between the tax and eligibility for transfer or liability may be possible. In addition, the post-closure fund does not relieve waste generators and transporters from legal liability for damages caused by wastes deposited at a hazardous waste disposal facility.

On the other hand, it is argued that adequate private insurance is not available to cover the long term liability of operators and owners of waste disposal facilities. Non-sudden environmental impairment insurance policies may be cancelled involuntarily by the insurer, and are written on a claims-made vs. an occurence basis. Such a policy would not cover any claim filed after an involuntary termination even if the damage resulted from a release which occurred when the policy was in force. Thus, repeal of the post-closure fund could leave the public without protection where a policy is involuntarily cancelled or a facility operator becomes insolvent. Only the Federal government, it is argued, is capable of fully insuring these risks.[27]

The Environmental Protection Agency is currently studying the question of whether the post-closure fund is, in conjunction with financial responsibility requirements imposed by various environmental statutes, adequate to cover the long term risks posed by hazardous waste facilities.

As an alternative to repeal, one possibility is to the limit the liability of the post-closure fund to sites where the owner and operator are insolvent or the liability of a private party cannot be established. This would have the effect of making the post-closure fund similar to the Superfund (which covers the cost of cleanup where responsible parties cannot be identified). Under this alternative, the post-closure fund would supplement the Superfund by covering liability for damages for medical costs, income losses, pain and suffering, and other items which would not be compensated by the Superfund.

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[27] See Department of the Treasury, *The Adequacy of Private Insurance Protection under Section 107 of the Comprehensive environmental Response, Compensation, and Liability Act of 1980 June, 1983.*

VI. REVENUE EFFECT

Table 8 shows the estimated revenue effect of the feedstock tax provisions in H.R.5640. These estimates assume the adoption of the recommended Energy and Consumer Committee amendments to H.R. 5640, and indicate that receipts of the Hazardous Substance Response Trust Fund from this source would be $6.800 billion through fiscal year 1991.[28] The distribution of the total feedstock tax burden over this period by type of taxable substance indicates that 17.8 percent of the receipts would be collected from the tax on crude oil, 68.2 percent from the taxes on organic chemicals and 14.0 percent from the taxes on inorganic chemicals.

Table 8.—Estimated Feedstock Tax Revenues, Fiscal Years 1986-91

[In millions of dollars]

Feedstock	1986	1987	1988	1989	1990	1991	1986-91
Crude oil	230	243	242	242	240	18	1,215
Organic chemicals	769	891	930	967	1,003	75	4,635
Inorganic chemicals	158	182	191	198	206	15	950
Total, hazardous substance response trust fund receipts	1,157	1,316	1,363	1,407	1,449	108	6,800

Table 9 provides the estimates for revenues expected to be realized from the waste-end tax, again assuming the adoption of proposed amendments. These estimates are quite sensitive to the particular set of assumptions employed. First, assumptions are required as to the specific events and substances subject to the tax under the bill, since there is some uncertainty concerning the taxability of certain forms of treatment and the coverage of certain wastes. Second, the experiences to date with the tax which supports the Post-Closure Liability Trust Fund and of States which have enacted various forms of waste-end taxes suggest that estimates of the quantities of hazardous waste disposed are often quite high in relation to what is ultimately found to be taxable. Additionally, waste-end taxes may promote many types of activity (such as changes in the methods used in handling hazardous wastes or under-reporting of quantities of hazardous waste disposed) whose effects are difficult to quantify given the paucity of reliable data in this area. In recognition of these factors, it is estimated that $0.920

[28] The amendment which would impose a tax on imports derived from taxed feedstocks, and refund the feedstock tax on chemical exports, was not included in the revenue estimate due to inadequate data and ambiguities in the amendment language. This amendment could increase or decrease revenues.

billion would accrue to the Hazardous Substance Response Trust Fund through fiscal year 1991 from the waste-end tax.

Table 9.—Estimated Waste-end Tax Revenue, Fiscal Years 1986–91

[In millions of dollars]

Item	1986	1987	1988	1989	1990	1991	1986–91
Hazardous substance response trust fund receipts	170	244	244	244	18		920

The combined effect of the proposed feedstock taxes and waste-end taxes is to produce $7.720 billion in revenue for the Hazardous Substance Response Trust Fund during the fiscal year 1986-91 period (see table 10). There will be a corresponding reduction in estimated corporate income tax receipts of $1.925 billion during that period, producing a net budget receipt change of $5.777 for the same period. Table 10 provides a summary of the revenue impact of all the tax provisions in H.R. 5640.

Table 10.—Estimated Revenue Effects of All Tax Provisions in H.R. 5640, Fiscal Years 1985–91

[In millions of dollars]

Item	1985	1986	1987	1988	1989	1990	1991	1986–91
Feedstocks tax receipts		1,157	1,316	1,363	1,407	1,449	108	6,800
Waste-end tax receipts		170	244	244	244	18		920
Total, hazardous substance response trust fund tax receipts		1,157	1,486	1,607	1,651	1,693	126	7,720
Post-closure trust fund tax receipts	−18							−18
Change in income tax receipts	4	−289	−371	−402	−413	−423	−31	−1,925
Net change in budget receipts	−14	868	1,115	1,205	1,238	1,270	95	5,777

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