

DESCRIPTION OF H.R. 2922
("LEAD-BASED PAINT HAZARD ABATEMENT ACT")

Scheduled for a Hearing
Before the
SUBCOMMITTEE ON SELECT REVENUE MEASURES
of the
HOUSE COMMITTEE ON WAYS AND MEANS
on July 1, 1992

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of the
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INTRODUCTION

The Subcommittee on Select Revenue Measures of the House Committee on Ways and Means has scheduled a public hearing on H.R. 2922 ("Lead-Based Paint Hazard Abatement Act") on July 1, 1992. H.R. 2922 (introduced by Messrs. Cardin and Waxman and Ms. Schroeder on July 17, 1991, and cosponsored by Messrs. Stark, Rangel, McDermott, Moody, Donnelly, Ford of Tennessee, Matsui, Guarini, et al.) would establish a new Lead Abatement Trust Fund, financed by an excise tax on lead produced in or imported into the United States. Expenditures from the Trust Fund would be authorized for grants to State and local governments for the abatement of hazards associated with lead-based paint in low-income housing and day care centers. H.R. 2922 was referred jointly to the Committee on Energy and Commerce and the Committee on Ways and Means.

This document,¹ prepared by the staff of the Joint Committee on Taxation, provides a description of present law (Part I) and H.R. 2922 (Part II), and an analysis of related issues (Part III).

¹ This document may be cited as follows: Joint Committee on Taxation, Description of H.R. 2922 ("Lead-Based Paint Hazard Abatement Act") (JCX-26-92), June 30, 1992.

I. PRESENT LAW

Environment-related excise taxes

Present law imposes excise taxes on various products to finance Federal environmental cleanup programs. Examples of these taxes and the programs they fund are crude oil and refined petroleum products the proceeds of which are used to fund the Oil Spill Liability Trust Fund and the Hazardous Substance Superfund and the tax on certain listed chemicals (e.g., benzene and lead oxide) the proceeds of which are used to fund the Hazardous Substance Superfund. Additionally, an excise tax is imposed on certain ozone-depleting chemicals the proceeds of which are deposited in the General Fund.

No tax is imposed under present law on lead and no Code trust fund exists to fund Federal programs associated with the cleanup of lead hazards.

Percentage depletion

Taxpayers who own economic interests in certain mines, wells, and natural deposits are permitted to claim percentage depletion deductions with respect to the production from such interests. A percentage depletion deduction for a taxable year is claimed with respect to an interest in such a property in lieu of a deduction based on cost depletion if the percentage depletion deduction exceeds the taxpayer's allowable cost depletion deduction for that property. Percentage depletion is computed by multiplying the gross income from the property from mining for a taxable year by a specified percentage. In the case of lead, the specified rate of percentage depletion is 22 percent (sec. 613(b)).

The allowance for percentage depletion with respect to the extraction of lead is limited (on a property-by-property basis) to an amount not in excess of 50 percent of the taxpayer's net taxable income from the property, computed prior to the deduction for depletion.

Unlike the deduction for cost depletion, which is computed with respect to, and limited to, the taxpayer's adjusted basis in the depletable property, the deduction for percentage depletion is based solely on gross income from the property and is not dependent on, or limited to, the property's adjusted basis. Thus, the deduction for percentage depletion often allows an aggregate amount of deductions in excess of the total amount of depletable costs that the taxpayer incurred with respect to a particular property. A deduction in excess of basis constitutes an item of tax preference for purposes of computing the alternative minimum tax.

Mining exploration and development expenditures

Under present law, taxpayers may elect to expense exploration costs associated with hard mineral deposits (sec. 617). Taxpayers also may expense development costs associated with the preparation of a mine for production (sec. 616).

Mining exploration costs are expenditures for the purpose of ascertaining the existence, location, extent, or quality of any deposit of ore or other depletable mineral, which are paid or incurred by the taxpayer prior to the development of the mine or deposit. When the mine reaches the producing stage, adjusted exploration expenditures (but not development costs) either (1) are included in income (i.e., recaptured) and recovered through cost depletion; or (2) at the election of the taxpayer, reduce depletion deductions with respect to the property. For this purpose, adjusted exploration expenditures with respect to a property equal the amount of expensed exploration costs attributable to the property, reduced by the excess of percentage depletion which would have been allowed but for the deduction for those exploration costs over cost depletion for the corresponding period. Exploration costs are also subject to recapture after expensing these amounts (sec. 617(d)).

Development costs include expenditures incurred for the development of a property after the existence of ores or other minerals in commercially marketable quantities has been determined. These costs typically include costs for construction of shafts and tunnels and, in some cases, costs for drilling and testing to obtain additional information for mining operations.

In the case of a corporation, the allowable deduction with respect to mining exploration and development costs that the taxpayer would otherwise be entitled to expense is reduced by 30 percent (sec. 291(b)). The disallowed amount is required to be amortized over a 60-month period, starting with the month in which the costs are paid or incurred.

Exploration and development costs paid or incurred with respect to mines or other natural deposits located outside of the United States are required to be capitalized and, at the election of the taxpayer, may be recovered in either of two manners (secs. 616(d) and 617(h)). A taxpayer can elect to include such costs in the adjusted basis of the property and thus recover such costs through depletion or depreciation (as appropriate). Alternatively, such capitalized costs can be recovered ratably over the 10-taxable year period beginning with the taxable year during which the costs are paid or incurred.

For purposes of the alternative minimum tax, the computation of alternative minimum taxable income requires

mining exploration and development expenditures to be capitalized and amortized ratably over a 10-taxable year period beginning with the taxable year in which the expenditures are incurred (sec. 56(a)(2)).

II. DESCRIPTION OF THE BILL

Explanation of Provisions²

Imposition of tax

An excise tax would be imposed on lead produced in or imported into the United States.³ The tax rates would be 75 cents per pound on primary lead and 37 cents per pound on secondary lead.

The bill defines primary lead as lead that has not been used previously in any finished or unfinished product. Secondary lead would include all previously used lead (i.e., recycled lead).

Establishment of trust fund

A new Lead Abatement Trust Fund ("Trust Fund") would be established as part of the Internal Revenue Code. The bill would appropriate to this new Trust Fund revenues equivalent to the tax imposed on lead. Expenditures from the Trust Fund would be authorized for spending purposes authorized under amendments to the Public Health Service Act that would be made in a separate title of the bill.

These spending purposes, in general, would provide for grants to eligible States and local governments that provide matching funds and agree to use the monies for--

(1) inspecting low-income housing and day-care facilities for the presence of lead-based paint or lead in surface dust on building interiors;

(2) encapsulating or removing the lead-based paint or dust, or removing affected structural components of the building where necessary to abate the lead hazard;

(3) providing temporary housing for occupants of structures during the lead abatement process; and

(4) training individuals in lead removal processes and providing counseling on lead poisoning associated with

² This section describes Title II of H.R. 2922. Title I generally establishes a program of grants for abatement of lead-based paint hazards.

³ The bill would not impose tax on the lead content of imported products (i.e., the bill does not include a so-called "derivatives tax").

lead-based paint.

Effective Date

The excise tax and Lead Abatement Trust Fund would be effective on the date of the bill's enactment.

III. ANALYSIS

A. General Issues

Theory of environmental taxes, marketable pollution permits, and environmental regulation

Medical evidence indicates that the dissemination of lead into the environment may have adverse effects on the health of the population at large (especially children). The true cost to society of using lead includes both the lead producer's internal costs for labor, fuel, etc., and the environmental cost. Since the direct users of lead may not generally be required to compensate those who suffer these adverse health effects, this total cost may exceed the value society places on the product. Economists term the environmental cost element a "negative externality," that is, a cost to society at large that is not borne by the particular individuals or firms who are the direct users of the product.

Environmental taxes

The theory of an environmental excise tax is that a polluter should pay for the environmental costs of its pollution. Such a tax "internalizes" the externality as a cost to firms or individuals. This is a market approach to pollution control which provides a financial incentive for polluters to reduce pollution.

Under this approach, firms determine the least costly method of production of their products taking account of the tax on pollution. They may choose to invest in any existing technology that saves more in pollution taxes than the technology costs. A pollution tax also creates incentives for technological innovation. For example, new technologies that reduce the cost of controlling pollution can increase firm profits by reducing pollution tax liability. In addition, to the extent that the price of the firm's products reflects the pollution tax, some consumers will reduce their demand for the firm's products, which also will reduce pollution.

If the rate of the pollution tax equals the value of the environmental damage caused by the extra pollution, then consumers will purchase the firm's product only if the value of the product exceeds all costs (including the environmental costs created by the pollution). This maximizes social welfare because whatever pollution remains is created only in the process of serving the most highly valued needs of society.

There are, however, two potential disadvantages to this approach. First, while economic theory argues that an

environmental excise tax should be imposed to reflect the environmental harm from the production and use of lead, in the absence of good measures of this harm it is difficult to assess whether any particular rate of tax is too high or too low. Second, it may be difficult to set a tax rate that will yield a specific quantity of pollution reduction, even though such a specific reduction may be an important objective.

Marketable pollution permits

Another market approach to pollution control is the sale of marketable pollution permits, such as the allocations in the Clean Air Act. Taxes can be used in tandem with marketable permits to recapture some, or all, of the profits that arise from the sale of permits. This approach can produce the same emissions level as an environmental tax, subject to the same qualifications noted there.

Direct regulation

Direct regulation is the predominant approach to pollution control in the United States. Direct regulation usually involves specifying maximum permissible quantities of emissions. Direct regulation of emissions levels has the advantage of targeting the amount of reduction from current pollution levels. Emissions limitations also may facilitate monitoring compliance. However, it is difficult to determine the appropriate quantity reduction which is consistent both with reducing environmental harm and with efficient resource use. Specifying technology standards may achieve short-run goals rapidly, but is unlikely to be cost effective. The market-oriented emissions reduction policies allow firms greater flexibility in choosing low-cost emissions control technologies, and thus generally are more cost effective than direct regulation. For example, adoption of a specific technology standard may slow the development of potentially cheaper control technologies.

Lead consumption and production

Supply of lead.--The current price of lead is approximately⁴ 30 cents per pound or \$600 per ton. In 1991, United States⁴ lead production totaled approximately 1,229,000 tons. Of this total, 346,000 metric tons resulted from primary refinery production of lead (from mines) of which approximately 22,000 metric tons was from foreign ores. Secondary lead, that is lead recovered from recycling, accounted for 884,000 metric tons or 72 percent of total production. Imports represented an additional 130,000 metric

⁴ The data in this paragraph are based on preliminary data provided by the Bureau of Mines.

tons while approximately 200,000 metric tons were exported (excluding scrap). Table 1 identifies the sources of recycled lead processed in the United States. The table distinguishes "new scrap" from "old scrap." New scrap generally consists of process scrap from the production of products containing lead or from the refining of lead and lead by-products. Old scrap represents post-consumer recycling.

Table 1.--Lead Recovered from Scrap Processed in the United States by Type of Scrap, 1991

<u>Type of scrap</u>	<u>Metric tons</u>	
New Scrap		
Lead-base	42,629	
Copper-base	5,471	
Tin-base	<u>4</u>	
Total		48,104
Old Scrap		
Battery lead plates	785,664	
All other lead-base	77,704	
Copper-base	10,725	
Tin-base	<u>- - -</u>	
Total		874,093
Grand Total		922,197

Source: Data provided by the Bureau of Mines.

The lead mining and primary refining industry is geographically concentrated. Lead is mined in 11 States, but 89 percent of 1989 production was from nine mines in Missouri.⁵ Secondary refiners, that is, those refiners who refined recycled scrap lead, are more geographically dispersed.

Lead and zinc often occur together geologically. Almost all United States mines that produce lead also produce zinc, and almost all United States mines that produce zinc also produce lead. In addition, lead mines are the source of a number of other important by-products. Current United States lead production is estimated to meet ten percent or more of the domestic demand for

⁵ Other producing States are Alaska, Arizona, Colorado, Idaho, Illinois, Montana, Nevada, New Mexico, New York, South Dakota, Tennessee.

zinc, silver, bismuth, cadmium, germanium, and indium.⁶

Demand for lead

Table 2 below provides information on the uses of lead by domestic industry. By far the major use of lead is in the manufacture of lead-acid storage batteries. Lead-acid batteries are used in the electrical systems of automobiles, trucks, ships and aircraft. They also are used as the standby, uninterrupted power supply systems for hospitals, large computer systems, and telecommunications systems, as well as for emergency lighting.

Table 2.--United States Consumption of Lead
by Product, 1991

<u>Product</u>	<u>Metric tons</u>	<u>Percentage of total consumption</u>
Ammunition	58,210	4.6
Bearing metals	5,212	0.4
Brass and bronze	9,943	0.8
Cable coverings	18,253	1.4
Caulking, building construction	1,688	0.1
Casting metals (includes nuclear radiation shielding)	14,843	1.2
Pipes, traps, extruded products	9,281	0.7
Sheet lead		
Medical radiation shielding	3,479	0.3
Building construction and other	17,534	1.4
Solder	16,490	1.3
Storage batteries	1,019,637	80.1
Other metal products	3,812	0.3
Other oxides (paint, pigments, glass, ceramics)	56,484	4.4
Miscellaneous (including gasoline)	<u>40,361</u>	<u>3.2</u>
Total	1,273,226	100.0

Source: Data provided by Bureau of Mines

⁶ Marilyn Biviano and Judith Owens, "The Minerals Related Implications of a Direct Tax on U.S. Primary Lead Production and Primary Lead Imports," photocopy, Office of Special Projects, Bureau of Mines, April 1992. Other by-products include copper, gold, antimony, cobalt, nickel, and tellurium.

Some of the production of these final products is exported, so this table does not represent final consumption of lead by domestic consumers. For example, approximately half of the leaded gas produced is exported. On the other hand, domestic consumers import products which contain lead. The Bureau of Mines estimates that the United States annually imports 120,000 metric tons of lead contained in manufactured products. This represents approximately ten percent of domestic manufacturers' use of lead. The lead used in television and video display terminals constitutes the largest component of lead imported in manufactured products.

Design of an environmental excise tax on lead

Taxing lead production or use as a proxy for taxing lead pollution

Both the primary refining of lead and the secondary refining of recycled lead products create emissions of lead into the atmosphere. Additionally, mining, refining, and working with lead exposes the employees to lead, and may be further sources of introduction of lead into the environment other than as an airborne pollutant. The production of products that contain lead also emit lead into the environment and expose employees to lead.

The use of products that contain lead may or may not introduce lead into the environment. The burning of leaded gasoline emits lead into the atmosphere. Similarly, the use of leaded solder on pipes and cans introduces lead into water supplies and food consumption. However, the lead contained in batteries generally is not identified as exposing the population to potential harmful effects of lead. In addition, the EPA currently estimates that approximately 80 percent of batteries are recycled. Similarly, the use of lead in underground cable and ammunition generally is not cited as creating problems of exposure for the general population. The disposal of lead and products containing lead (including batteries) may create the potential for

7 Biviano and Owens, "The Minerals Related Implications."

8 As reported in Table 1, batteries are the primary source of recycled lead. The Bureau of Mines estimates a higher recycling rate for lead-acid batteries, estimating that 95 percent of the lead in spent batteries was recovered in 1989. See, Biviano and Owens, "The Minerals Related Implications."

9 Lead in shot was cited as a source of declining populations of waterfowl and potential contamination of some water supplies. Subsequently, leaded shot has been banned by regulatory action in certain areas (e.g., inland waterways).

pollution of ground water supplies.¹⁰

In theory, the environmental tax should be imposed on the pollution itself rather than on the product produced. The product should only be taxed to the extent that there is a uniform relationship between the amount of lead produced and the amount of pollution created. This analysis would argue that all lead should be taxed, because both the primary and secondary refining of lead emit lead into the atmosphere. In theory, however, different rates should be assessed on primary production and recycled lead if the emissions rates differ substantially. This analysis would also argue that certain uses of lead should carry an additional tax because the use of the product increases the exposure of the general population to lead (e.g., leaded gasoline and solder). However, such an additional tax that properly would vary with the product might prove administratively cumbersome.

Effect of tax on different uses of lead

One of the desired results from the imposition of an environmental tax is the reduction of pollution from the targeted source. A substantial increase in the price of lead might make the purchase of leaded gasoline and leaded solder uneconomic, thereby curtailing two sources by which the general population is exposed to lead. However, it is important to observe that in the case of batteries and radiation shielding, there are no viable substitutes for lead. This would imply that the demand for lead would not be very responsive to changes in price, that is, economists would classify the demand for lead as inelastic. Consequently, if a tax increased the price of lead, it would have little effect on at least three quarters of current U.S. lead consumption. Thus, a broad-based tax on lead might not reduce the annual demand for lead substantially.

If airborne lead from the refining process is viewed as a serious source of exposure for the general population, an excise tax on all lead would probably be less effective in controlling lead emissions than an excise tax on, or direct regulation of, emissions from the smelters. Such an excise tax on the emissions, however, may be technically infeasible.

Incidence and economic efficiency of a tax on lead

An excise tax on lead would be expected to be borne largely by consumers. This conclusion is based on the observation that the demand for lead is reasonably inelastic.

¹⁰ Similarly, if in the process of solid waste disposal lead and products containing lead are incinerated, lead may be emitted into the atmosphere.

That is, as the price rises, consumers are unlikely to reduce their consumption very much. This is because lead's primary use is in automobile batteries and, as yet, there is not a cost-effective adequate substitute for lead-acid batteries.

The generally inelastic demand for lead implies that an excise tax imposed equally on all lead, such as the base tax amount, would cause little economic distortion. That is, consumer behavior would be little changed by such a tax. Economists call taxes that do not distort consumer behavior efficient revenue sources and hence a tax on lead could be considered an economically efficient revenue source.¹¹

Exports and imports

To provide a level playing field for domestic (as compared to foreign) producers of lead and derivative products, it would be necessary to impose the proposed excise tax on imports of lead and imports of products produced abroad that contain lead. If such a tax on imports were not imposed, domestic manufacturers would be placed at a competitive disadvantage, and domestic exposure to lead would not necessarily decline.

If lead or derivative products were not exempt from the tax upon export, domestic manufacturers would be placed at a competitive disadvantage in world markets. However, if the refining of lead and production of derivative products are the source of significant amounts of emissions of lead, exempting exports could undermine the goal of reducing emissions in the United States.

Issues in the administration of a tax on lead

An important consideration in the design of any tax is its administrability. An excise tax on lead assessed at the smelter-refinery offers the administrative ease of relatively few collection points. For example, in 1989 there were 50 secondary refineries in the United States.¹² However, complexity may arise if exemption is provided for exported products. The owner of the smelter-refiner may not know if the refined lead is to be exported if the sale is to a broker or wholesaler who subsequently exports the lead. It would be even more difficult to provide exemption from tax for lead

¹¹ This is not to say that a tax which changes consumer behavior is necessarily inefficient. As discussed above, the theory of a pollution tax is to make the market price reflect the social costs imposed by pollution and for consumers to adjust their behavior accordingly.

¹² Biviano and Owens, "The Minerals Related Implications."

contained in manufactured or derivative products that are subsequently exported, such as a video display terminal. This would require determining the lead content of the product and creating a rebate system. If most output of products containing lead is consumed in the domestic market, such a system of export credits for manufactured products may not be necessary.

Similarly, a tax on imports would increase the administrative burden of the Internal Revenue Service and importers of such products. As noted above, it is estimated that imported products may contain as much lead as ten percent of the total lead used by domestic manufacturers. However, the major sources of lead imported in such derivative, manufactured products is thought to be televisions, video display terminals, and automobile batteries. To the extent that relatively few imported products contain lead in more than de minimis amounts, the aggregate additional administrative burden from taxing imports would be expected to be small.

Environmental benefits from taxing lead

If the demand for lead is reasonably inelastic, neither substantial reduction in lead consumption nor a substantial increase in lead recycling is likely to result from taxing lead. As noted above, the United States already has a high rate of recycling for car batteries, so the potential for additional gain is probably small.

Summary of tax design issues

An excise tax on lead of 30 cents per pound or greater would raise revenue in an economically efficient manner. Such a rate of tax is high when compared to the current price of lead that is approximately 30 cents per pound. Such a tax would be expected to be borne largely by the consumers of products that contain lead. In addition, such a tax might not be particularly effective at reducing total consumption of lead. It may eliminate certain select uses, but might be perceived as imposing a high burden on other uses that generally do not appear to pose concerns of exposure to the general population.

B. Issues Specific to H.R. 2922

H.R. 2922 would impose a tax of \$0.75 per pound on primary lead and a tax of \$0.37 per pound on secondary lead. Imported lead would be subject to the same rates of tax and exported lead would not be exempt from tax. In addition, the bill would not impose tax on the lead content of imported products, so-called derivative products. A tax such as that proposed in H.R. 2922 can be thought of as a two-part tax which assesses a base tax on all lead, both primary and

secondary (\$0.37 per pound in H.R. 2922), and an additional premium on primary lead production (\$0.38 per pound, the difference between \$0.75 and \$0.37, in H.R. 2922).

Effect of a two-part tax on production of primary lead

Lead is a homogeneous commodity which is traded in a world market. The United States, in fact, has been a modest net importer of lead throughout the 1980s.¹³ It generally is not physically possible to distinguish primary lead from secondary lead. As a consequence, a tax that applies solely to primary lead (or a tax that applies a higher rate on primary lead than that imposed on secondary lead) will increase the demand for secondary lead relative to primary lead. In addition, it will create an incentive for producers to represent primary lead as secondary lead in order to pay a lower rate of tax and offer a lower price to customers. While such opportunities may be limited in the United States, they more readily might exist for foreign producers who generally would not be subject to site inspection by United States revenue agents.

It would be expected that the production of domestically refined secondary lead and foreign secondary lead would expand, displacing domestic primary lead production. To the extent that foreign producers successfully misrepresent primary lead as secondary lead, domestic primary production would be further reduced.

A tax levied in the United States on primary lead that exempted exports would be expected to encourage the retention of lead scrap and the export of primary lead. The United States currently is a net exporter of lead scrap. Lead scrap exports averaged approximately ten percent of domestic primary lead production from 1985 to 1989. Thus, it would appear that there already exists a market abroad for ten percent of domestic primary lead production. Furthermore, the same reasoning would suggest that at the cost of transportation expense, all United States domestic production could be offered on the world market. If non-United States production is diverted to the United States, United States production could be diverted abroad. To be competitive abroad, domestic producers would have to bear transportation costs, but this is \$0.05 per pound or less¹⁴ as compared to the \$0.75 per pound tax proposed in H.R. 2922. Moreover, if

¹³ The United States imported between zero and twelve percent of its industrial demand for lead between 1980 and 1990, with the vast majority of the imports coming from Canada or Mexico. Over the same period, the United States has been a net exporter of lead scrap. See, Biviano and Owens, "The Minerals Related Implications."

the non-United States supply is less than perfectly elastic, that is, if foreign suppliers are unwilling to supply all existing United States demand at existing world prices, domestic producers would not bear the full amount of transportation costs, or something less than \$0.05 per pound.

Of course, if the premium tax rate on primary lead is less than transportation costs, one should expect no trans-shipment of non-United States lead to the United States and domestically produced lead abroad. In that case, the tax would be borne in the domestic market as will be discussed below.

Clearly, the outcome described above is economically inefficient. It suggests that a premium rate on primary lead in excess of transportation costs will cause non-United States primary lead production to be shipped to the United States while United States primary lead production is shipped abroad. Moreover, no revenue would be collected on production of that primary lead shipped abroad. This analysis suggests that such a tax may merely exchange sources of production without having a large effect on total domestic lead consumption.

If exports of domestically refined primary lead are not exempt from tax, as is the case in H.R. 2922, then the possibility of sale abroad is reduced because the tax creates a price disadvantage for domestic lead on the world market. In this case, penetration of the domestic market by foreign lead could lead to mine and refinery closures. However, two caveats are necessary.

First, the United States is the largest producer and consumer of lead in the world, with, as reported above, United States primary production accounting for somewhat more than ten percent of world primary production. Displacing ten percent of world production would require a substantial increase in non-United States production. While it is unclear what the elasticity (price responsiveness) of world supply is, a substantial increase in demand for non-United States production would be expected to raise the world price of primary lead. This, in turn, would reduce the number of United States mines that would be displaced by import competition. Transportation costs are reported to range from zero to \$0.05 per pound. Presumably lead from Canada and Mexico, major suppliers of imported lead, are near the lower end of that range of transportation costs. If supply in those countries is sufficiently elastic, that is, if small increases in price generate large increases in supply, world prices would not be expected to rise very much. On the other

14 Biviano and Owens, "The Minerals Related Implications."

hand, if these nearby countries cannot expand production much, then the world price of lead should rise to reflect a larger portion of the excise tax.

Second, 90 percent of primary lead was mined from deposits for which a significant share of mine revenues were obtained from the production of zinc, copper, silver, or gold. Mine profitability depends upon revenues from all metals recovered. The closure of lead mines will cause by-product production to fall. If the lost by-product production increases the price of by-products, then the effects of the tax on mine closures are reduced

Effect of a two-part tax on the manufacture of derivative products

A tax on lead should increase the cost of manufacturing products that contain lead. Regardless of whether the tax is a two-part tax or a tax levied at a single rate, if manufacturers of competing imported products purchase their lead untaxed abroad, they will gain a potential cost advantage over domestic manufacturers of those products. The extent to which such a potential cost disadvantage harms domestic manufacturers depends upon how important the cost of lead is to the final cost of the product and on whether the domestic manufacturer may already hold cost advantage over foreign manufacturers.

Incidence and efficiency of a two-part tax on lead

The analysis above discussed the likely incidence that would result from the premium part of the tax. If exports of lead are exempt from tax, the premium tax imposed on primary lead production (in H.R. 2922, the difference between \$0.75 per pound on primary lead and \$0.37 per pound on secondary lead) would largely collect little revenue and impose a burden equivalent to the level of transportation costs on both foreign and domestic producers. In the case where the premium tax on primary lead is at a rate less than the transportation costs of shipping the lead abroad, one would expect the premium tax to be borne in part by consumers in higher prices and to be borne by producers of primary lead to the extent that domestic secondary lead supplies increase to take advantage of the price advantage afforded them by the premium tax. If exports are not exempt from the tax, then the premium tax on primary lead would be borne by domestic producers as well as consumers. Similarly, if imported derivative products are not taxed on their lead content, some of the tax would be borne by domestic producers of such products as well as consumers.

If the premium rate of tax on primary lead is greater than the transportation costs, significant economic inefficiency could be created as both domestic and foreign

producers would have an incentive to incur substantial costs in the trans-shipment of lead to avoid the premium tax.

The discussion above also argues that if it is possible for foreign producers to represent primary lead as secondary lead, there will be little real incentive created domestically or worldwide to increase recycling efforts. If the premium tax is less than transportation costs, there would be some extra incentive to recycle lead domestically.