

STATEMENT
OF
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BEFORE THE
SUBCOMMITTEE ON HEALTH
OF THE
SENATE LABOR AND PUBLIC WELFARE COMMITTEE
ON
AMENDMENTS TO THE LEAD-BASED PAINT POISONING PREVENTION ACT
(S. 3080)

MARCH 9, 1972

0007-SWP-036650

Mr. Chairman, members of the Senate Labor and Public Welfare Subcommittee on Health. I appreciate this opportunity to be here today, accompanied by a representative group of executives from our industry, to present the views of the National Paint and Coatings Association on the legislative proposal (S. 3080) which would amend the Lead-Based Paint Poisoning Prevention Act (P.L. 91-695). We are here because our members are vitally concerned over the major impact which one of the provisions of S. 3080 would have on the paint and coatings industry.

I refer to Section 2 of the bill before your Subcommittee today, which would change the definition of "lead-based paint" from the one-percent established by P.L. 91-695 to an arbitrary 0.06 percent. We deem such an amendment not only to be unnecessary and unreasonable, but -- as I shall discuss in some detail later -- highly inappropriate.

The National Paint and Coatings Association (formerly the National Paint, Varnish and Lacquer Association) is a trade association representing the manufacturers of more than ninety (90) percent of the dollar volume of paints, varnishes, lacquers and allied products produced in the United States. In addition, the National Paint and Coatings Association is a spokesman for the major suppliers of raw materials from which the industry's products are made. Industry sales amount to more than \$5 billion dollars annually at retail level, providing employment for more than 70,000 persons at the paint manufacturing level alone and more than 200,000 at the retail level.

At the outset, I want to assure you that the Association and the industry members we represent share your concern over the serious problem of lead poisoning of children which is occurring today in most metropolitan areas, and -- we pledge our full support to continue to work to solve this serious problem. However, I would emphasize that the amendment -- proposed in Section 2 of S. 3080 -- will do nothing toward correcting the present, identified and real causes of lead poisoning of children today.

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THE PROBLEM OF OLD LEAD-BASED PAINTS

In this regard, the major contribution of paint to the poisoning of children today was identified many years ago as the old lead-based paint which is flaking or peeling from the walls of dilapidated housing in the urban areas, particularly in the slum areas where maintenance has been neglected. It is the pre-World War II housing that is most hazardous because, more than 30 years ago, the paint industry began eliminating these old heavily-leaded paints, which often contained 50% or more basic carbonate of lead (white lead), a highly soluble and admittedly hazardous compound. These were, of course, the best quality paints produced at that time, and -- the type prescribed by government specifications.

As stated, the paint industry started phasing out white lead as a basic ingredient of interior paints more than 30 years ago, when titanium dioxide became commercially available. It is no longer necessary (or economical) to use white lead in interior paints because 1 pound of titanium dioxide will "cover" the equivalent of 5 to 7 pounds of white lead, depending on the formulation. Interior paints then ceased to be a cause of lead poisoning. Therefore, with respect to old paint, the term "lead-based" is appropriate but, with regard to modern paints, this is hardly accurate!

In these dwellings, particularly slum housing, where painting maintenance is minimal or even non-existent and where housekeeping is below standard, chips of paint or paint-impregnated plaster may be eaten by young children. This is recognized now as a principal cause of childhood lead poisoning, and, according to medical experts, generally is associated with a condition known as "pica" -- a compulsion to eat non-food materials such as dirt, wood, paint chips and plaster. When such children are living in old pre-World War II housing in the inner cities, they are exposed to the many coats of paint on the walls and woodwork which frequently contain significant amounts of white lead pigments. Additionally, these children are exposed to greater lead pollution in the air and on the ground. Under such circumstances, lead poisoning is most likely to occur.

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What I am trying to highlight at this point -- without debating whether or not modern paints might cause lead poisoning in the distant future 'the unborn children of unborn parents' -- is that the existing causes of lead poisoning of our children today have been identified. These can be corrected if adequate funds are provided and if this effort is given priority attention by authorities in those jurisdictions where such conditions are most prevalent. We recognize, of course, that the sums of money required to accomplish this task are very great; and, as officials of the Department of Housing and Urban Development have commented on several occasions, this is only one of several problems of like magnitude in the housing field.

We deem Federal financial assistance and technical guidance to local jurisdictions to be vital in this matter; and, by public announcements and letters to the Secretaries of Health, Education and Welfare and Housing and Urban Development, this Association has urged that maximum funds be made available for these purposes. We strongly support the funding provisions of Section 3 of S. 3080 and concur that these additional funds should be authorized. We will continue to urge the Secretaries of HEW and HUD to include such funds in their budget requests and to utilize the funds so appropriated for the purposes intended.

We consider it most unfortunate, however, that the subject of lead in modern paints seems to be getting more attention today from the Congress, the Federal agencies and many public health officials than the real problem. The record will show that, ever since hearings were conducted by the House Banking and Currency Subcommittee on Housing in July 1970, the focus has been changed from the detection and elimination of the old lead-based paints to the question of what further reduction in the amounts of lead used in modern paints should be made by the industry.

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LEAD IN MODERN PAINTS

I turn now to the matter of vital concern to the paint industry, particularly to the large number of small manufacturers in our industry. I refer again to Section 2 of S. 3080 which would change the definition of "lead-based paint" (a misnomer) from one percent to "0.56 per centum lead by weight (calculated as lead metal) in the total non-volatile content of liquid paints or in the dried film of paint already applied."

Before proceeding, let me remind you that we no longer are talking about lead-based paints, but we really are talking about small quantities of lead in paints. The manufacture of "lead-based" paints, especially for interior surfaces, was discontinued more than thirty years ago. Lead pigments, such as lead chromates and lead molybdates, have been used to provide the popular bright colors -- reds, yellows, greens and oranges; and, of course, lead compounds have been used, where appropriate, in corrosion-resistant coatings because they are especially valuable for such uses. The use of lead in corrosion-resistant coatings today is not being questioned because it is recognized that these are essential to property maintenance and no hazard to children exists from such uses.

However, lead pigments for colors and most other uses already have been largely discontinued in interior residential paints to ensure that these products would not exceed the one percent level established some years ago by a voluntary standard and recently incorporated into P.L. 91-695. (It is my understanding that the implementing regulations -- making this one percent level mandatory at the Federal level for the first time -- are being published this week by HEW, in accordance with Title IV of P.L. 91-695.)

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The voluntary standard, just mentioned, is USA Standard Z56.1 which was developed in 1955, under the sponsorship of the American Academy of Pediatrics, to deal with the toxicity hazards which may be encountered through the ingestion of dried coatings on articles or surfaces accessible to children. The standard was reviewed and approved by the American Standards Association (ASA) Sectional Committee on Prevention or Control of Hazards to Children. The organization now is known as the American National Standards Institute.

This standard served as a pattern for the several statutes, regulations and ordinances dealing with the subject, which were adopted by more than twenty jurisdictions between 1955 and 1970. However, a sampling by New York City, under its Health Code, in the Summer of 1971 indicated that not all manufacturers were adhering precisely to either the voluntary standard or the stated provisions of that code.

Although we believe there has been substantial compliance with the voluntary standard and a related labeling program, sponsored by our Association, we have cooperated to the fullest extent in proper discussions initiated by the Food and Drug Administration, U. S. Department of Health, Education and Welfare, looking to the establishment of regulations under the Federal Hazardous Substances Act. Such regulations would make mandatory the prescribed levels of lead in modern paints and provide for requisite precautionary labeling. Subsequently, on November 2, 1971, FDA published in the Federal Register a proposed regulation -- A Proposal To Declare Certain Heavy Metal-Containing Paints and Other Surface-Coatings "Hazardous Substances" and To Require Special Labeling for Child Protection (21 CFR Part 191). As proposed, this would establish a 0.5 percent standard for lead in paints, a fifty percent reduction from the one percent voluntary standard which was incorporated in P.L. 91-695.

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Our industry considered this to be a most important proposal and a progressive step by the Food and Drug Administration, an agency for which we have the highest regard and for which, in our opinion, the record shows effective administration of its responsibilities under the Federal Hazardous Substances Act since its enactment in 1960. Our Association announced publicly its support for this proposed regulation and urged membership support.

This regulation is still awaiting final action by the Food and Drug Administration because of the pressures for even further reductions in the use of lead in coatings for toys, children's furniture and interior surfaces of residential dwellings, which also are reflected by the amendment being considered today. This would operate to eliminate the one remaining intentional use of lead in paints and coatings -- the lead driers.

I shall comment only briefly on this in my own statement because other industry witnesses, scheduled to testify before your Subcommittee, will discuss the state of the art, the search for substitutes for lead driers, and other requirements which must be considered in paint reformulations today. They will comment also on the great impact, particularly on small manufacturers, of precipitous action by legislatures or regulatory bodies which would deny the use of lead driers to them.

We do not agree that this elimination is in any way necessary for the safety and health of children today, or yet unborn. It is our contention that neither human experience, records of the poison control centers, nor adequate research and animal-feeding studies have shown the need for such action. However, before turning to this critical issue of how much lead can be safely used, I would like to touch upon a common misconception often quoted by those not informed regarding the paint industry; namely, that all manufacturers can easily remove all lead now.

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Perhaps, some apparent credence was given to this fallacy by recent samplings and tests conducted by the National Bureau of Standards on paint products in the marketplace. This work was conducted pursuant to the terms of Title III of P.L. 91-675 as a preliminary study paving the way for a broader national sampling program. The paint products were not selected according to a statistically valid sample of any kind -- nor were they supposed to be for this preliminary survey. The results of one part of this program showed that 74% of the paint products contained less than 0.1% ($\pm 0.1\%$).

While this may reflect to some degree the sincere desire of most paint manufacturers over the past decade to reduce lead content to the lowest possible level, it cannot be cited as proof that all paint manufacturers can eliminate all lead from all product lines immediately. This is an unfair use of the NBS data, which was not intended to accurately test the present status of lead in paint products in the marketplace. It is typical of the questionable data offered to justify the unreasonable standard desired by some.

It is also interesting to note that these analytical tests had a 100% margin of error at this level. Products shown as 0.1% lead could actually be 0.2% or 0. Analyses of this kind are not easily conducted, have questionable reproducibility, depending on sample preparation, and cannot be conducted routinely by the majority of paint companies. As we have shown the committee, through the letters from industry members forwarded to your offices, the problem of removing all but trace amounts of lead from paint is a monumental one indeed. A random sampling of one or two market areas is certainly not a valid indication of the magnitude of the problem.

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I would remind you that paints and coatings are products not commodities, and -- each manufacturer formulates in order to produce what, in his opinion, is the best possible product. Probably in no other industry are brand names so important, and -- consumers rely heavily on the reputation of the manufacturer whose products they have used successfully in the past. Performances with substitutes are not simple, but quite complex because the interactions of one ingredient with another must be determined. Adequate tests cannot be made in the laboratory; only actual exposure experience can be completely reliable.

WHAT IS A HAZARDOUS LEVEL OF LEAD IN PAINT?

Those who insist that all lead in paint should and can be eliminated (and the proponents of the .06% level all are in that category) base this demand on the assumption that lead levels in excess of this amount would build up to a hazardous level over the years after several layers of modern paints had been applied. This assumption includes consideration of the lead taken into the body from natural sources as well as lead pollution from automotive and all other industrial sources. I feel constrained to comment briefly on this point for it is being made such a vital issue in this and other legislative and regulatory proceedings today.

The proponents of the .06% level of lead in paints base their conclusions principally on the work of Dr. Robert A. Kehoe at the Kettering Laboratory, University of Cincinnati. The validity of his work is not being challenged by us, but -- we are challenging the assumptions made and conclusions drawn by such people as Dr. Barry King of the U. S. Public Health Service, Department of HEW, whose work (which is also the basis for the position of the American Academy of Pediatrics), we contend is based more on mathematical extrapolations from Dr. Kehoe's work than on adequate research and appropriate animal-feeding studies.

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This is particularly important when it is recognized that Dr. Kenne's conclusions were based on the use of lead acetate, a very soluble lead compound, which was introduced into the drinking water of the adult human subjects. The conclusions of Dr. Barry King do not take into consideration the fact that the lead compounds used in paint are far less soluble than lead acetate and, when ingested in the form of dried paint chips, should be absorbed by the human body at a much slower rate, if at all.

A dried film of modern paint is a hard, fairly insoluble substance containing resins, pigments and other ingredients that are not easily dissolved in the human system. We do not know what amount, if any, of lead compounds -- encapsulated in paint films -- is absorbed (made biologically available) into the human system. There is urgent need for experimental testing to make this determination.

I believe the testimony of the witnesses who have preceded me confirm our very strong belief and contention that, at this time, there is insufficient scientific data available showing the use of 0.5 percent (or even one percent) lead in modern paints to be a hazard. To respond to requests for further reduction in lead levels to .06% would be condemning a product which has never been tested!

In view of our vital responsibility in this regard, we in the paint and coatings industry would like to see this issue resolved once and for all. To avoid claims of bias and to insure that the proper research equipment and other resources are available, federally-funded, independent studies should be conducted to make a responsible scientific finding as to what is a truly hazardous content for lead in paints. We believe that P.L. 91-695 provides the authority to the Departments of Health, Education and Welfare and Housing and Urban Development to make such studies. We formally requested that this action be taken and offered our full support and cooperation.

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Until such definitive studies are conducted on dried paint film containing the types and amounts of lead compounds actually used by the paint industry today, the reduction of the lead content in paints to an exceedingly low level, such as the .06% standard, would be a precipitous and totally unwarranted action. I repeat: We are confident that such studies and the related research will prove that the 1% level of lead in modern paints is not a hazard to children. We would welcome the support of your Subcommittee in recommending such studies and amending Title III of P. L. 91-695 to provide for this specific action.

Even if the industry were given the time and could provide the funds for these studies, the credibility of the results still could be questioned by those who blindly demand the elimination of all lead from paints. We believe this matter to be sufficiently in the public interest to justify the expenditure of federal funds. Again I assure you that the industry has offered whatever assistance and support might be considered appropriate -- and, I am confident that the industry would respond rapidly to conform with the findings of such studies, whatever they might be.

Pending the conduct of such studies, we ask that you not legislate to change the definition of "lead-based paints" as now proposed. We believe this is a matter that can be determined more properly and effectively by the government agencies who have such responsibilities.

Both Title IV of P.L. 91-695 and the Federal Hazardous Substances Act delegate authority to the Secretary of HEW to designate the proper means for protecting the consumer from the hazard of dangerous materials such as lead. Right at this moment, the Food and Drug Administration, DHEW, is collecting data relating to this subject, with a view toward promulgating as soon as possible the regulations mentioned earlier. I strongly suggest that DHEW be permitted to act on this problem, in accordance with their statutory responsibilities, rather than being pre-

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empted by Congress. The maximum allowable lead levels then could be established by implementing regulations without requiring that P.L. 91-695 again be amended.

The need for careful determination of data upon which laws and regulations are based has become all too apparent in recent years. One need only mention the phosphates and hexachlorophene fiascos and, more recently, the saccharin problem. Lead in paint can easily become, and shows all signs of doing so, an issue solved by emotion and half-done research rather than factual data.

There is another important side to this matter that should be considered, but unfortunately it is often overlooked. Substantial harm would be done, not only to the paint industry, but to the overall public interest as well, by unnecessarily limiting the use of lead levels in paints. As previously stated, small amounts of lead are used in many interior and exterior coatings for drying purposes. Lead driers promote firm, hard paint films. Also additives, which prevent loss of drying of oil-type coatings during long storage, often contain some lead. These have become valuable tools for the coatings industry and the coatings chemist, and they have been used effectively in quantities of less than 1% of the non-volatile content of the coating for many years. Now technological developments permit our industry to consider a reduced standard (0.5%) and still maintain these uses. This, and the fact that it will provide an extra margin of safety, is the reason we supported the reduced standard (from 1% to 0.5%) proposed by FDA, even though adequate showing has yet to be made that a 1 percent standard is hazardous.

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The .06% standard proposed would preclude the use of these small amounts of lead compounds. In fact, this exceedingly low level would force manufacturers to engage in expensive and burdensome "pharmaceutical-type" analysis of all their raw materials to make certain that the amount of lead allowed is not exceeded. As a matter of fact, the problem of contaminants during manufacture is most significant and could include substantial amounts of lead from the atmosphere, from the city water supply, and the air pollution resulting from proximity to highways or urban areas.

In addition, it would be difficult to get agreement, among trained analysts, as to precisely how to determine if such miniscule amounts of lead are present. (e.g. the $\pm .1$ in the NBS analysis.) What all this could easily add up to is harder-to-make products, costing much more to manufacture and, consequently, more to buy in the marketplace. Steps leading to this, when they have not been shown to be necessary for the health and safety of children, definitely would not be in the public interest and would penalize unnecessarily an industry that has done so much to make our environment more attractive. Incidentally, I should mention here that the complete elimination of lead driers will seriously affect the through-dry of products, and we have found that this can cause shrinking of the film and even a greater tendency to peel.

Another factor, and perhaps the most important one, is that the enforcement of a .06% standard would be difficult, if not impossible. This is partly due to the difficulties of analysis, as we have pointed out. A lot of time, money and effort would be spent by Federal, state and local officials in trying to enforce an unreasonable lead limit that has in no instance, been shown to be necessary for safety.

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III. Recommended Limit

It is recommended that the quantity of lead in surface coverings with single and multiple layers of paint, should not exceed 0.03 mg/cm². Where this limit is exceeded the surface covering should be removed, covered, or otherwise treated to ensure that the contained lead is no longer available to children.

IV. Rationale for Recommended Limit

Kahoe established that 0.6mg of lead per day was the maximum that could be ingested by an adult with no increase in blood lead level; at this level input exceeded output with a slight accumulation of body lead burden. A corresponding value for the child was estimated to be 0.3mg lead per day from all sources by an ad hoc committee of pediatricians and biological scientists qualified in the area of prevention of lead poisoning in children.* A range of values for estimated average intake of lead per day in the diet is 0.100mg to 0.140mg. Thus, the ingestion of more than 0.2 mgPb/day from supplementary sources, such as paint chips, would result in an intake in excess of the limiting value recommended for children.

The weight of one and multiple layers of dried interior house paint chips have been measured on prepared samples (Table 2.).

* In the manuscript of the report, the maximum daily limit for intake of lead from all sources is referred to as daily permissible intake (DPI).

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No imminent hazard has been claimed by the proponents of the .06% level in paints, certainly none has been shown. Therefore, these attacks on the use of small amounts of lead in modern paints do not do one thing to alleviate the serious problem of lead poisoning of children today. In fact, it actually hinders progress by clouding the issue and taking the focus off of the heart of the matter. Why do this to the paint industry and to the consuming public? Collaterally, you have another serious consideration, namely -- the possible effects of untested substitute materials.

While we urge that your Subcommittee not take premature action to reduce the permissible lead level in today's paints, we do urge with equal vigor that the responsible Federal agencies continue to study the problem with utmost dispatch in order that they may develop and promulgate realistic and reasonable regulations -- with due consideration to all the facts and based on proper and complete research and studies. In this regard and because of the magnitude of the task, we are hopeful that HEW and HUD will be provided the necessary funds and manpower to accomplish this work. We support appropriations and staffing necessary to permit these Departments to carry out their heavy schedule of statutory responsibilities.

In Conclusion:

It is our sincere belief, based on long and deep involvement in the problem, that once these old coatings are removed or adequately sealed off, and so long as modern paints containing no more than 0.5% (or even 1 percent) lead are applied to surfaces accessible to children, the lead paint poisoning problem will cease to exist. Records in some cities (such as Chicago) today support this claim for, once effective screening programs have been established and children are denied access to the old paints, the incidence of high

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blood lead levels in children have shown a declining trend. The Federal financial assistance, for which additional authorizations are requested in S. 3080, will permit the dedicated public health officials in the local jurisdictions to carry out this work more effectively.

We also believe that continued funding of research projects under P. L. 91-695 is vital. This will permit not only the acceleration of current programs to develop means for testing interior surfaces of sub-standard housing for the presence of lead and determining optimum measures for rehabilitating these dilapidated structures, but would provide the necessary answer to the major question as to what lead levels in paint film actually constitute a hazard or would build up to hazardous levels for future generations of children.

Until such studies are conducted, we do not believe that precipitous action should be taken to change the definition of "lead-based paints" to the unrealistic level of .06%. Such action would eliminate the use of all lead in house paints, resulting in product degradation, and would impose unnecessarily on the industry the economic and liability burden of testing to ensure that the trace amounts of lead in all raw materials used or contaminants from other sources do not exceed the arbitrary limit established.

It should be noted that, if the definition of "lead-based paints" were to be changed to the .06% as proposed, the existing language of Title II of P.L. 91-695 would require the elimination of paint from many additional interior surfaces and practically all "porches and exterior surfaces to which children may be commonly exposed of all residential housing" without regard to age or condition. Obviously, this would be an impossible task for enforcement officials, and the costs of such an action would not only be wasteful but completely unjustified. It also does not, in any way, reflect the hazard that actually exists in the country.

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Finally, we regret that much-needed attention of the responsible officials and the limited resources of our government agencies are being diverted from the present and identified problem of old "lead-based" paints to the question of lead in modern paints and coatings where no imminent hazard exists, none has been claimed, and the future hazard is only speculative and conjectural until adequately researched. We sincerely hope that the latter issue can be put back in perspective and that decisions can be made based on facts rather than politics, emotion and unfounded claims.

If you have any questions, Gentlemen, I shall attempt to answer them now, or if you prefer, you may hold questions until the other industry witnesses have testified.

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