National Center for Healthy Housing

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Office of Pollution Prevention and Toxics (OPPT)
Environmental Protection Agency, 1200 Pennsylvania Ave., NW,
Washington, DC 20460-0001
ATTN: Desk Officer for EPA, 17th St., NW Washington, DC 20503

SUBJECT: Comments On EPA's Economic Analysis for the RRP Rule

Re: Docket ID: EPA-HQ-OPPT-2005-0049

The Economic Analysis accompanying the proposed regulation, which shows that the costs of the regulation are far less than its benefits, is comprehensive. Nevertheless, we believe the analysis underestimates the benefits and overestimates the costs. Furthermore, the analysis needs to be strengthened considerably, because the options presented do not include the use of existing validated instruments, protocols and tools that have been developed by the U.S. Environmental Protection Agency, the U.S. Department of Housing and Urban Development, other agencies and local governments for lead hazard identification and control activities. These procedures have been used widely for housing repair, renovation, and painting activities in federally assisted housing and in other housing. Increased use of these tools and protocols can be expected to enhance the effectiveness and reduce the estimated cost of the rule. By including these as formal options in the Economic Analysis, the Agency's decision on which option is best for the final rule will be much better informed.

Detailed comments are as follows:

Paint Testing Should Be Presented as a Formal Option

The existing analysis assumes that paint testing can only be performed using a spot test kit, which the Agency states has a 63% false positive rate in the first year of the rule and lower after that. There is no formal monetized option of using the much more accurate and precise test available from laboratories and/or XRF testing, both of which have established quality control procedures in place. Paint testing will greatly reduce the costs of the rule, since most paint, even in older housing, is not, in fact, lead-based paint. Therefore, the costs associated with unnecessary compliance can be dramatically reduced. Furthermore, in calculating the impact of false positive and false negative rates, the Economic Analysis should not assume that all surfaces to be tested are exactly at the minimum regulated level, which is 1 mg/cm^2 (milligram of lead per square centimeter).

Instead, the actual distribution of paint lead levels in the nation's housing stock, as reported in HUD's National Survey of Lead and Allergens in Housing, should be used. These data show that only 2% of all lead paint is between 0.8 and 1 mg/cm^2 and only 4% is between 1.0 and 1.3 mg/cm.^{2} In other words, most lead paint concentrations are at levels that can be readily detected with a smaller sampling and analytical error than EPA assumes in the Economic Analysis. As the lead loading in paint films rises or declines, the accuracy and precision (i.e., the rate of false positives and false negatives) of testing methodologies will also improve. In short, the actual error that will be experienced by contractors trying to determine whether they need to comply with the rule is likely to be much lower than EPA assumes in the Economic Analysis, which will make paint testing using existing validated methods far more cost-effective.

Clearance Testing Costs and Benefits Should Be Considered As Formal Options

Options for clearance testing, both for all the housing units and for a targeted sample of the units treated by each contractor, were not considered as formal options in the Economic Analysis, but should have been. There is no analysis of how the costs of clearance compare to the benefits. Even if the Agency determines that clearance testing cannot be done in each housing unit treated under the rule, it could require random, worst-case or targeted clearance testing in a sample of the units. In this way, contractors could establish a documented record that their cleaning procedures are adequate, increasing the benefits of the regulation.

Reductions in Training Costs Due To The Presence Of An Existing Trained Workforce Should Be Calculated

The effect of the existing trained workforce for abatement and for interim controls in federally assisted housing will logically reduce the training costs estimated in the Economic Analysis, since these workers will not only be available for work covered by the rule with no additional training, but can also be expected to influence the entire industry. Many lead hazard control contractors also do housing repair, renovation, and painting work and will not require additional training under this regulation. This will reduce the estimated costs of the rule.

The Assumption That Some Tasks Will Always Disturb Paint Is Not Reasonable

Some tasks are always assumed to disturb paint. For example, all pipe replacement is assumed to disturb paint. This is not a reasonable assumption and unnecessarily expands the number of regulated events, increasing the costs.

The Assumption That The Rule Is Triggered By Lead Paint Anywhere In A Room Is Not Reasonable

The analysis uses an estimate of the number of rooms with lead paint anywhere in them to estimate the universe of events covered by the regulation. A more realistic estimate

would have been generated by using the lower percentage of building components coated with lead paint; such data are available from the HUD National Survey of Lead and Allergens in housing. Those data show that most building components, even in older housing, do not in fact have lead paint, as shown in Table 1. EPA's economic analysis should have included this likelihood and should use the prevalence of lead paint by building component to estimate how often the rule will be triggered. The assumption that the rule would be triggered by the presence of lead paint on a baseboard in a room where a window without lead paint is being replaced is unreasonable.

Table 1.
Building Components Coated with Lead-Based Paint
by Year of Construction (%)

Component Type	All Years	1978-98	1960-77	1940-59	Pre 1940
Interior					
Walls, floors, ceilings	2	0	1	2	7
Windows	9	1	2	6	21
Doors	7	0	1	7	22
Trim	5	0	2	4	15
Other	4	0	1	2	12
Exterior					
Exterior Walls	14	0	9	18	34
Windows	25	0	12	30	41
Doors	15	2	5	29	33
Trim	11	3	8	16	24
Porch	15	1	7	25	28
Other	18	0	8	37	37

The Assumption That All Tasks Are Discreet, Separate Events Is Not Reasonable

The analysis assumes that all tasks covered by the rule do not occur simultaneously. For example, painting plus adding an addition to a house are assumed to never occur simultaneously. This is a poor assumption, because a significant portion of housing repair, renovation, and painting work goes on simultaneously. A better assumption would use an estimate showing that a percentage of the work is done simultaneously. This would reduce the number of events covered by the regulation, and thus its estimated costs.

The Effect of On-Going Renovation and Remodeling Is Not Included

While the effect of building demolition over the 50-year forecast horizon is included in the Economic Analysis, the effect of ongoing renovation is not. Yet on-going renovation, remodeling, and other repair work in buildings that removes surfaces coated with old paint is known and quantified. Such estimates were included in the President's Task Force report[1] in the accompanying appendix and should have been included here as well. Because the number of renovations far exceeds the number of building demolitions, this impact can be expected to greatly reduce the number of events covered by the rule over the 50-year forecast horizon, because there will be progressively fewer surfaces with lead paint due to renovation and other repairs. In the future, far less than 4.4 million events will be covered by the rule.

Benefits To Nearby Properties Are Not Monetized

The benefit calculations assume there is no benefit to neighbors whose homes would otherwise be contaminated by unregulated home repair and painting activities. While data may not be readily available, the assumption that the benefits to neighbors are zero is not logical. A more reasonable assumption will increase the benefits of the regulation with no increase in costs.

Benefits Associated With Avoided Adverse Health Effects Should Be Expanded

The benefit calculations are limited to cognitive function and cardiovascular effects, despite the fact that dose response relationships for other adverse health effects are known. For example, the benefit of reduced crime in later life is not included, even though a longitudinal study has shown that at least 9% of the variation is explained by early childhood lead exposure,[2] and there is significant other evidence supporting this association.[3, 4,5, 6] Similarly, the association of dental caries and lead exposure is not included, as is the effect of increased expenses due to special education and avoided medical care. Limiting the positive health effects to only cognitive function and cardiovascular disease is far too narrow, given the large amount of toxicological data on lead exposure. Their combined effect is clearly not zero as EPA's Economic Analysis assumes. A more reasonable estimate will increase the benefit estimates of the regulation.

The Assumption That Cleaning Effectiveness Is Constant Is Not Reasonable

The assumption that there is a constant rate of cleaning effectiveness regardless of dust lead levels is not reasonable and underestimates the benefits of the regulation. A more reasonable assumption showing that cleaning effectiveness changes with dust lead levels should be used instead. This will increase the calculated benefits of the regulation.

The IQ/Blood Lead Relationship Used By EPA Is Outdated And Should Be Replaced By More Recent Data

EPA's use of the 1994 study by Schwartz to estimate the IQ decrement per unit blood lead level should be replaced by more recent and robust estimates.[7, 8] These newer studies show that the IQ decrement for blood lead levels in the lower ranges that characterize most children today are between 0.62 to 0.74 IQ points/ 1 microgram per deciliter. The Schwartz estimate used by EPA is 0.25 IQ point/ 1 microgram/deciliter, which is based mostly on children with blood lead levels well above 10 micrograms per deciliter. Use of the more recent estimate will increase the benefits associated with cognition dramatically.

Older Children Will Also Benefit From This Regulation

The assumption that the benefits to older children are zero is biased and not reasonable. Older children are also likely to benefit, although to a smaller degree than younger children. A more reasonable assumption will increase the benefits of the regulation.

The Assumption That Dust Lead Levels In Other Rooms Is Zero Is Not Reasonable

The assumption that the lead dust level in other rooms is zero is unreasonable and not supported by data. Instead, EPA could choose to use the national average dust lead levels, which are documented in the National Survey of Lead and Allergens in Housing.

The Assumption That Dust Lead Levels Following Cleaning Equal Existing Clearance Standards Is Not Reasonable And Is Not Supported By Data

The assumption that lead dust levels following cleaning will be 40 $\mu g/ft^2$ (micrograms of lead per square foot) on floors is not reasonable and not supported by actual data. It is far more likely that post-cleaning dust lead levels will be much lower. Data from the Evaluation of the HUD Lead Hazard Control Grant program on post-cleanup dust lead levels should be used instead of this unsupported assumption. That study found that geometric mean dust lead levels on floors following hazard control was only 12 micrograms per square foot, not the estimate of 40 micrograms per square foot used by EPA.[9] While the intent of this work may differ from those activities to be regulated by EPA, the work was often combined with other housing renovation, remodeling, repair and painting work, which means that, as a practical matter, the actual work performed was similar to the work to be covered under the EPA proposed rule. The idea that intent alone precludes the use of data from lead hazard control work to inform the Economic Analysis is not logical, because intent alone does not change the actual work performed. Fundamentally, lead hazard control work is a specialized form of housing repair work, and thus is similar to the work to be regulated under the proposed regulation. Even the estimate for dust lead levels following lead hazard control work (12 micrograms per square foot) may be too high, because the HUD-funded work was usually carried out in dwellings that were far more deteriorated than those to be covered by the EPA regulation.

Use of a lower post-cleanup dust lead level will increase the benefits associated with the regulation.

A Lower Discount Rate Should Be Used

Finally, it is not appropriate for EPA to use a discount rate of 7% over the 50-year forecast horizon, because this work involves an intergenerational transfer of costs and benefits. Even 3% is likely to be far too high. Most parents and others will make significant investments for the well-being of children, even though they may not personally receive the benefits of such investment. Instead of using a traditional discount rate, a social rate of time preference, on the order of 1% or less should be used. This is supported by the fact that the homes treated under this regulation will likely still be in use well after the 50-year time horizon.

Thank you for the opportunity to submit these comments.

Sincerely,

Rebecca Morley
Executive Director

Endnotes

[1] Eliminating childhood lead poisoning: A federal strategy targeting lead paint hazards, President's Task Force on Environmental Health Risks and Safety Risks to Children, U.S. Department of Housing and Urban Development and U.S. Environmental Protection Agency, Washington DC.

[2] Dietrich, K., Ris, M., Succop, P., Berger, O., & Bornschein R. (2001). Early Exposure to Lead and Juvenile Delinquency, Neurotoxicology and Teratology 23, 511-518.

[3] Denno, D. W. (1990). Biology and Violence, Cambridge University Press, NY, NY.

[4] Needleman, H., Riess, J., Tobin, M., et al. (1996). Bone Lead Levels and Delinquent Behavior, Journal of the American Medical Association 257:363-369.

[5] Needleman, H., McFarland, C., Ness, R., et al. (2003). Bone lead levels in adjudicated delinquents. A case control study**.** Neurotoxicology and Teratology 24:711-717.

[6] Nevin, R. (2000). How Lead Exposure Relates to Temporal Changes in IQ, Violent Crime, and Unwed Pregnancy. Environmental Research 83:1-22.

[7] Canfield, R., Henderson, C., Cory-Slechta, D., Cox, C., Jusko, T., & Lanphear, B. (2003). Intellectual impairment in children with blood lead levels below 10 μg/dL. The New England Journal of Medicine, 348, 1517-1522.

[8] Lanphear B., et al. 2005 Low-level environmental lead exposure and children's intellectual function: an international pooled analysis. Environ Health Perspect Jul 113 (7): 894-9.

[9] National Center for Healthy Housing and University of Cincinnati. 2004. Evaluation of the HUD Lead Hazard Control Grant Program, Final Report, National Center for Healthy Housing and University of Cincinnati, Columbia, MD.