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Public Interest Comment on
Lead Clearance and Clearance Testing Requirements[1]

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The Regulatory Studies Program (RSP) of the Mercatus Center at George Mason University is dedicated to advancing knowledge of the impact of regulation on society. As part of its mission, RSP conducts careful and independent analyses employing contemporary economic scholarship to assess rulemaking proposals from the perspective of the public interest. Thus, this comment in response to the Environmental Protection Agency's (EPA's) Notice of Proposed Rulemaking[2] does not represent the views of any particular affected party or special interest group, but is designed to assist the EPA as it seeks to reduce dust-lead hazards.

I. Introduction

The EPA recently proposed a regulation that requires dust wipe testing for lead dust generated by renovations covered by its 2008 Renovation, Repair, and Painting Program rule. Except for a small number of specified situations, the proposed rule requires that the results of the dust wipe test be furnished to building owners. For certain jobs that involve demolition, destruction, or use of high-speed equipment such as power sanders, the regulation requires the renovator to demonstrate through dust wipe testing that dust-lead residues are below the levels permitted by regulation. The proposed rule covers most pre-1978 housing and "child-occupied facilities," such as schools and daycare centers. This comment focuses on the proposed rule as it applies to residential housing.

The EPA's Economic Analysis estimates that the dust wipe testing provision accounts for 96 percent of the regulated events covered by the proposed rule, 94 percent of the costs created by the proposed rule, and 98 percent of the individuals affected by the proposed

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[1] Prepared by Jerry Ellig, senior research fellow, Mercatus Center at George Mason University. This comment is one in a series of Public Interest Comments from the Mercatus Center's Regulatory Studies Program and does not represent an official position of George Mason University.

[2] Environmental Protection Agency, "Lead: Clearance and Clearance Testing Requirements for the Renovation, Repair, and Painting Program, Proposed Rule," 75 Fed. Reg. 25038 (May 6, 2010). (Hereinafter "Proposed Rule.")

rule.[3] Understanding the likely effects of the dust wipe testing provision is thus critical to understanding whether this proposed rule will accomplish its intended purpose of protecting individuals from lead exposure. Unfortunately, the agency merely speculates about two types of benefits the regulation might produce: (1) it provides information about lead exposure that building owners and occupants could use to make decisions about additional cleaning, and (2) the information may motivate renovators and building owners to change their behavior over time, leading to greater use of lead-safe renovation practices.[4]

Essentially, the public is asked to accept on faith that the regulation will improve safety for the 8.2 million individuals affected by the dust wipe provision.[5] The EPA refers to these individuals as the people "protected" by the regulation.[6] But in the absence of empirical evidence that the dust wipe provision will actually produce changes in behavior that reduce lead exposure, any claim that these individuals are "protected" by the regulation is merely a faith-based assertion, not an evidence-based conclusion.

The root cause of this deficient justification for the regulation is that EPA has failed to identify the systemic problem this particular regulation is supposed to solve and present evidence that the regulation will actually produce the hoped-for health outcomes. Presumably, the systemic problem that the agency seeks to solve is a high lead concentration (as indicated by blood or hair lead levels) in a sensitive population, particularly children. If such populations are exposed as a result of the "events" that this rule covers, they would receive positive health benefits from additional actions to reduce further exposure. But the EPA has not demonstrated that this regulation will lead to improved health outcomes.

The agency has overlooked a much more precautionary alternative to mandatory dust wipe testing that would better reflect the uncertainties and lack of information the agency faces in this proceeding. Instead of mandating dust wipe testing, the EPA could mandate that renovators must offer the customer the option of dust wipe testing for an additional, itemized charge. This option would likely generate the health benefits the EPA seeks to achieve by promoting productive discussions between renovators and customers about the risks of lead dust, while allowing customers to decide for themselves whether the additional information from dust wipe testing is worth the additional cost.

[3] Author's calculations based on figures in U.S. Environmental Protection Agency, Economic and Policy Analysis Branch, Economics, Exposure and Technology Analysis Division, Office of Pollution Prevention and Toxics, "Economic Analysis of the Proposed Dust Testing and Clearance Amendments to the TSCA Lead Renovation, Repair, and Painting Program for Target Housing and Child-Occupied Facilities" (April 10, 2010). Table ES-3, ES-4, and ES-6. (Hereinafter "Economic Analysis.")

[4] Proposed Rule, p. 25046.

[5] Figure is from the Economic Analysis, Table ES-6, proposed option.

[6] Proposed Rule, p. 25059.

II. The EPA's Analysis

In its justification for the regulation, the EPA cites extensive research on the health hazards of lead exposure. The agency also makes a case that renovation, repair, and painting can leave levels of dust-lead that exceeds federal standards.[7] However, the agency offers only weak theoretical justification and no empirical evidence that mandatory dust wipe testing will improve health outcomes for the 8.2 million individuals the agency claims the regulation "protects."

A. Absence of systemic problem

A key prerequisite for a regulation to produce improvement in human welfare is the existence of a widespread and systemic problem that the regulation could solve. A widespread problem is one that occurs widely—not just a problem that occurs occasionally and is documented only by a few anecdotes. A systemic problem is one that could potentially be remedied by some change in the "rules of the game" that govern the way renovators and their customers interact.

Market failure is one possible source of a systemic problem. The Economic Analysis mentions two possible market failures that might justify the regulation: externalities and inadequate information.

1. Externalities

The EPA suggests several possible externalities that may lead to under-investment in dust sampling and testing. For rental properties, the owner makes renovation decisions even though the tenants receive the principal benefits from lead dust reduction. The owner may have "an insufficient incentive to take the benefits to their occupants into account when making this decision."[8] For owner-occupied housing, current owners may have insufficient incentives to take into account the benefits received by "residents of adjacent properties, future occupants, visitors, and children receiving child care on the premises…" In addition, "children cannot express their willingness-to-pay for risk reduction and rely on their parents' or the property owner's willingness-to-pay." Finally, the legal system probably provides a poor remedy for such externalities, because it is unlikely to hold owners or renovators responsible for the risks their decisions impose on these other parties.[9]

[7] Proposed Rule, pp. 25039-25043.

[8] Economic Analysis, p. 3-11.

[9] Economic Analysis, pp. 3-11 – 3-12.

2. Inadequate information

The regulatory analysis also cites inadequate information as a potential market failure affecting both customers and renovators. According to the EPA, current levels of lead-safe renovation practices may be sub-optimal because, in the absence of dust wipe testing, customers and renovators may not know how much lead dust remains in the areas that were renovated. The results of dust wipe testing would help owners and occupants make more informed choices about risk management (such as additional cleaning). Dust wipe testing would also allow building owners to identify renovators who do a better job of controlling lead dust. Dust wipe testing would give renovators more information about the effectiveness of their cleaning procedures, encouraging them to improve.[10]

The regulatory analysis uses supply-and-demand curves to theorize that if these market failures are corrected, the quantity of renovations employing lead-safe practices will increase and the quantity of renovations employing "standard" practices will decrease. Tellingly, the theoretical analysis also notes that the effect of the proposed rule on do-it-yourself projects, which likely use fewer lead-safe practices, is ambiguous.

After presenting the market failure concepts and supply-and-demand graphs, the Economic Analysis then concludes,

> As demonstrated in this section, due to inadequate information and the existence of externalities, the quantity of lead-safe RRP services currently provided is likely to be inefficiently low. Failure in the market for lead-safe RRP services is significant in both qualitative and quantitative terms. Childhood lead exposure continues to be a major public health problem among young children in the United States. From 1999 to 2002, approximately 310,000 children aged 1 to 5 years, had blood-lead levels greater than 10 μg/dL, despite the removal of lead from gasoline and a ban on lead-based paint in 1978 (CDC 2005). Most children with blood-lead levels in excess of CDC's current level of concern have been exposed to lead in non-intact paint, interior settled dust, and dust and soil in and around deteriorating older housing or other buildings where they spend time. According to the Center for Disease Control (CDC), "renovation and remodeling activities that disturb lead-based paint can create substantial amounts of lead dust in the home; such dust can then be inhaled or ingested by children" (CDC 1997). An insufficient number of lead-based paint interventions have occurred to remove the dangers posed by uncontrolled renovation activities; renovation activity thus continues to pose a significant risk of lead exposure.[11]

[10] Economic Analysis, p. 3-13.

[11] Economic Analysis, pp. 3-16 – 3-17.

The references to Center for Disease Control conclusions suggest that the EPA may have identified a problem that is significant, but the agency has not demonstrated that this is a systemic problem that the proposed regulation is likely to solve.

III. Weaknesses in the EPA's Analysis

The EPA's analysis has four shortcomings which, taken together, seriously undermine the EPA's justification for the proposed regulation: externality theory, inadequate information theory, perverse effects, and the absence of empirical evidence supporting the theories.

Externality theory. Externalities involving renters and future occupants are possible. But one could just as easily theorize that landlords and home sellers have strong incentives to consider the effects of lead-safe practices on renters and future occupants if these beneficiaries actually care about lead risks. Federal law already requires that landlords and home sellers must disclose information on lead-based paint and lead-based paint hazards.[12] A landlord who can guarantee that renovations at his property left low levels of lead dust would have a significant marketing advantage and may even be able to charge higher rents. A home seller who could offer a similar guarantee could similarly sell a home faster or at a higher price. In both cases, the property owner would have incentives not just to hire contractors who use lead-safe practices, but also to have dust wipe testing performed and make the results available to prospective tenants or buyers.

The externality involving children exists only if we presume that parents or guardians do not sufficiently consider the welfare of their children when making renovation decisions. If this is indeed a significant problem (and considerable evidence should be offered in support of such a claim), it probably requires a much more sweeping solution than mandatory dust wipe testing.

Inadequate information theory. The inadequate information theory ignores the possibility that renovators face strong incentives to perform dust wipe testing or provide other assurances that the job site is lead-safe if their customers actually value the information or value lead-safe buildings. If they do not currently provide this information, that may simple signify that most customers do not value the information highly enough to pay for it.

Perverse effects. As the EPA's analysis acknowledges, the regulation could have perverse effects by driving more homeowners to substitute do-it-yourself renovation for professional renovation. Since the analysis makes no attempt to quantify this substitution, the agency does not know how big the associated deleterious health effects may be. Since

[12] http://www.epa.gov/lead/pubs/leadpdfe.pdf.

at least some substitution will likely occur, the EPA's calculations necessarily overstate the number of individuals truly "protected" by the regulation.

Absence of empirical evidence. Finally, the EPA presented no evidence that the alleged externalities or information problems actually exist or that they are significant. Rather, the agency simply assumed that since some children are still exposed to high levels of lead dust, one or more of these market failures must exist, and therefore the EPA has not yet performed a sufficient number of interventions to reduce lead dust exposure.

This stunning leap of logic ignores several other possible explanations for lead dust exposure that have nothing to do with the absence of mandatory dust wipe testing. Perhaps homeowners and tenants are already sufficiently informed by existing EPA disclosure requirements regarding dust-lead hazards, but they have decided that the additional reduction in risk is not worth the additional cost. Or perhaps most of the remaining dust-lead exposure occurred in properties where the renovator could opt out of EPA's lead-safe training and work practice requirements if the owner certified that the residence is occupied by no children under six years of age or pregnant women, and it is not a "child-occupied facility" such as a day care center. In that case, EPA's companion regulation removing the opt-out provision could be sufficient to control this source of lead dust exposure.[13] Or perhaps most of the remaining lead-dust exposure occurs in buildings where renovators failed to follow existing EPA regulations, or do-it-yourselfers failed to use lead-safe renovation practices.

The EPA presented no empirical evidence that would allow us to distinguish these explanations from the alleged externalities and inadequate information problems. Therefore, it did not demonstrate that the externality and information problems actually exist, or that they explain any remaining hazardous dust-lead exposure in renovated buildings. Furthermore, since the EPA's analysis does not clearly identify the source of any remaining hazardous exposure, it does not demonstrate that this regulation will reduce lead exposure or produce any positive health outcomes.

The EPA's analysis does not adequately support the proposed regulation as written. The agency cannot know whether the proposed regulation is justified until its analysis addresses the following issues:

- The theoretical analysis of inadequate information should acknowledge and explicate an alternative hypothesis that recognizes information itself is costly, the cost of the information to renovators and their customers may not be worth the benefits, and existing market incentives and regulations may already motivate customers to acquire information about lead hazards to the point where the additional benefits equal the additional costs.

[13] Environmental Protection Agency, "Lead; Amendment to the Opt-Out and Recordkeeping Provisions in the Renovation, Repair, and Painting Program," 74 Fed. Reg. 55506 (Oct. 28, 2009).

- The theoretical analysis of externalities should acknowledge and explicate an alternative hypothesis that identifies the market incentives and already-existing regulatory requirements that may prompt home sellers and landlords to take into account the effects of lead-disturbing renovations on future purchasers or renters.

- The analysis should identify what kinds of empirical evidence would help distinguish which of the theories about information and externalities are more likely correct. The analysis should then gather and include this empirical information.

- The analysis should estimate how the proposed regulation and its alternatives would alter the quantity of lead-safe renovation practices. The estimates should adjust for perverse effects created when owners opt for less safe, do-it-yourself remodeling.

- The analysis should explain why this rule is necessary given that blood lead levels have been declining dramatically for over ten years.[14] This issue goes to the baseline from which benefits and costs accrue. If we can expect this progress to continue in the absence of the proposed rule, how much of a problem remains for the proposed rule to solve?

- It is not sufficient to claim that all of the individuals living in properties affected by the regulation are "protected" by the regulation. For all alternatives assessed, the analysis should show how the change in the incidence of lead-safe renovation practices would affect the amount of lead-related health problems

- The EPA might also compare the mandated expenditures with the costs and benefits of other safety measures in the same price range that are not mandated—such as outfitting a house with as smoke detectors, which cost less than $25 apiece.[15] This would allow the EPA to perform a risk/risk analysis (or health/health) analysis to determine if this rule might be justified even on a public health basis.

The EPA's economic analysis notes that there is a paucity of studies that provide the information necessary to calculate the health effects of the proposed regulation on the quantity of lead-safe renovations.[16] Given that mandatory dust wiping would cost $228 million annually, a relatively modest investment in original economic research to perform

[14] http://www.cdc.gov/nceh/lead/data/State_Confirmed_ByYear_1997_2007Total.pdf.

[15] http://www.consumersearch.com/smoke-detectors.

[16] Economic Analysis, pp. 3-26–3-27.

the necessary calculations could be well-justified.[17] Only after addressing these topics can the EPA credibly claim to know whether the proposed regulation or any other alternative approach is likely to create positive health outcomes by reducing dust-lead exposure.

III. An Alternative Proposal

It is not clear whether the externality and information problems alleged by the EPA actually exist. Therefore, it is not clear whether the proposed dust wipe regulation would actually produce any health benefits. Nevertheless, it would impose more than $200 million in costs annually on renovators and their customers. This works out to a cost of about $122–$227 per residential renovation "event," to supply customers with information that they may or may not value.[18]

Given the empirical uncertainties in the EPA's analysis, there is a non-negligible risk that the proposed regulation would mandate the provision of costly information that in many cases has little value for renovators or their customers. The proposed regulation also risks increasing health hazards for the subset of customers who opt for less safe, do-it-yourself renovations due to the increased cost of hiring a professional. In this section, we suggest a more precautionary approach to regulation that avoids these dangerous risks.

The EPA could adequately address any inadequate information problem by requiring that renovators offer their customers the option of dust wipe testing for an additional, itemized charge. This could be accompanied by the provision of educational materials that explain how dust wipe testing works and how the customer could use the information from the test. Such requirements would ensure that customers know the information is available. Requiring a separate, itemized charge would allow customers compare the additional cost of the information to them with its additional benefits.

The EPA need not require that the itemized charge reflect the full cost of the testing. Renovators who seek to develop a reputation for lead safety and want to build a database of test results might want to subsidize the testing, since they could derive some benefits from it. They should be allowed to do so.

This proposal would not, by itself, address the potential externality problems mentioned in the EPA's analysis. Given the absence of evidence that these externalities exist, a less-intrusive approach than the proposed regulation may be warranted. The EPA could motivate homeowners to consider the effects of their renovations on future purchasers by explicitly requiring homeowners to disclose, when the home is placed on the market, any professional renovations they undertook that may have created dust-lead hazards, along with the results of any dust wipe testing. A similar disclosure requirement for landlords

[17] Figure is from the EPA's Economic Analysis, Table ES-4. Figure is annualized cost discounted at 3 percent.

[18] Range is from the Economic Analysis, Tables 4-40–4-43.

could head off potential externalities with regard to renters. At the time the building owner undertakes the renovation, he or she would know that the renovation and any test results must be disclosed. The owner would then need to consider the value of the test results to potential purchasers or renters. Owners could also be permitted to wait and contract for dust wipe testing immediately prior to making the building available for sale or rent, since testing at that time would give potential buyers or renters the most relevant and up-to-date information about potential lead hazards.

IV. Conclusion

The EPA claims that the proposed mandatory dust wipe testing would "protect" 8.2 million individuals from health hazards associated with lead dust exposure. In reality, neither the preamble to the proposed rule nor the accompanying Economic Analysis demonstrate that mandatory dust wipe testing will produce positive health benefits for anyone. The EPA has theorized about several market failures that might exist, but it has provided no evidence that they do exist. The EPA also failed to consider alternative theories that suggest the current state of affairs may reflect the choices of adequately informed customers who have market incentives to consider the effects of their choices on future purchasers or tenants in their buildings.

Given the vast uncertainties about the existence of a systemic problem that regulation might correct, the EPA should regulate cautiously. In particular, the agency could ensure that a renovator's customers have the opportunity to acquire the information provided by dust wipe testing by requiring renovators to offer dust wipe testing for a separate, itemized charge. Mandating that renovators offer this option would give customers the opportunity to decide whether the additional information is worth the extra cost. The EPA could prompt building owners to consider the effects of their decisions on future buyers and tenants by requiring that any renovations and associated test results must be disclosed to potential buyers or tenants. Building owners would then have to assess whether the value of being able to provide test results to buyers or tenants is worth the additional cost.

Appendix

Element	Agency Approach	RSP Comments
1. Has the agency identified a significant market failure?	EPA names two market failures—externalities and inadequate information—and theorizes how they might lead to sub-optimal use of lead-safe renovation practices **Grade: C**	EPA presents no evidence that these market failures actually exist.
2. Has the agency identified an appropriate federal role?	EPA claims a federal role is justified because Congress has established elimination of lead-based paint hazards as a national goal and because this regulation modifies an existing federal regulation. **Grade: D**	While this may be an adequate legal justification, it does not explain why federal regulation is necessary to address lead-based paint hazards created by renovation, repair, and painting, which are inherently local activities.
3. Has the agency examined alternative approaches?	Analysis considers several thresholds (amounts of renovation work) that would trigger requirements, a requirement that a third party must perform the dust wipe sampling, a requirement for dust wipe testing only, and a requirement that contractors must always bring lead levels down to EPA's standards. **Grade: C**	These are reasonably diverse tweaks on the same basic approach of requiring dust wipe testing after the renovation work is done.
4. Does the agency attempt to maximize net benefits?	Since benefits were not measured, net benefits were not calculated. However, for a few marginal decisions, the preamble indicates that the EPA sought to balance costs or practicality vs. likely benefits. **Grade: D**	There was some sensitivity to net benefit considerations even though net benefits were not calculated. None of those tradeoffs mentioned in the preamble were considered in the Regulatory Impact Analysis.

Element	Agency Approach	RSP Comments
5. Does the proposal have a strong scientific or technical basis?	EPA cites studies demonstrating the dangers of lead in blood. It cites evidence that renovation increases lead levels in blood and that lead exposure leads to health problems. It also presents evidence from field studies showing that cleaning reduces lead exposure. **Grade: C**	For 96 percent of regulated "events," this regulation requires only testing and disclosure. EPA cites no evidence that additional disclosure would reduce lead exposure or would lead to improved health outcomes.
6. Are distributional effects clearly understood?	Analysis estimates number of adults, children under six, pregnant women, and low-income children in housing affected by the proposed rule. Since the analysis does not calculate benefits, it does not show how the benefits are distributed among these groups. An appendix with graphs discusses how elasticities of supply and demand affect the likelihood that costs will be passed on to consumers. This is not quantified due to the absence of elasticity estimates for renovations. Tables show costs for different kinds of renovations. Effects on small businesses are calculated, but costs are somewhat misleadingly divided by total revenues rather than revenues from the regulated renovation events. **Grade: C**	Distributional effects are clearly acknowledged, but shortcomings in the underlying calculations of benefits and costs make it hard to identify how benefits and costs are distributed.
7. Are individual choices and property impacts understood?	Proposed regulation would increase the cost of a residential renovation by $122–$227, based only on theoretical speculation that this information will have value to customers. **Grade: F**	No acknowledgement of the possibility that this testing is not being done because customers do not value the information. Our proposed alternative would ensure that customers know the information is available but leave the decision about the expenditure to them.