ON EPA'S

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COMMENTS OF THE COMMERCIAL PROPERTIES COALITION ON EPAôS LEAD RENOVATION, REPAIR AND PAINTING PROGRAM FOR PUBLIC AND COMMERCIAL BUILDING

II. EXECUTIVE SUMMARY

Coalition members met with EPA staff on November 5, 2012, to get some general sense of the Agency's direction in developing a Public & Commercial LRRP Program. Since issuing an ANPR in 2010, EPA has not determined if any dangerous levels of lead exist in public and commercial buildings – or whether any lead-based paint hazards are caused by renovation, repair or painting ("RRP") activities in these structures. Recognizing that the agency is at an early stage of fact-finding, at our meeting EPA indicated that the Program's reach may cover buildings that are:

- Constructed before 1978 and owned by federal, state, local or municipal governments;
- Owned by the private sector, without regard to vintage or age of construction;
- Leased in whole or in part by the federal government, the largest commercial office tenant in the country;
- Occupied by women of child-bearing years, or men that may be prone to hypertension;
- Sites of interior renovations where more than six square feet of painted surfaces are disturbed per room; or
- Sites of exterior renovations where more than 20 square feet of painted surfaces are disturbed.

In short, EPA indicated to us that just about every commercial structure in the country might be subject to its regulatory oversight. Given this initiative's potentially staggering scope, as the Agency develops a record to consider any Public & Commercial LRRP Program it must keep in mind the following overarching themes and points of these comments:

A. EPA should complete any ñhazardò finding under TSCA § 403 regarding public and commercial buildings well before it proposes any regulations of RRP activities in these structures.

Before it may promulgate a Public & Commercial LRRP Rule to regulate renovation and remodeling activities, EPA must first develop a TSCA Section 403 rule to identify whether "dangerous levels of lead" even exist in those buildings. EPA acknowledges that it can address renovations in public and commercial buildings through rulemaking "to the extent such renovations create lead-based paint hazards."[5] The only section 403 hazard rule that EPA has issued to date covers the residential stock and explicitly states: "[I]t is important to emphasize that this rule only applies to pre-1978 target housing and certain child-occupied facilities, and that *these standards were not intended to identify potential hazards in other*

[5] 77 Fed. Reg. at 76,997 (Dec. 31, 2012).

settings."[6] It took EPA more than seven years *after* publication of the final 403 hazard rule for "target housing" to decide how to regulate renovation activities in residences.[7] A similar deliberative process, within a comparable sequence and time frame for agency action, should be conducted here. EPA should propose any section 403 rule for public and commercial buildings, give stakeholders ample opportunity to comment on that proposal, and then finalize any such rule so all advocates and stakeholders can fairly assess the need for RRP regulations to address lead-based paint hazards – which at this point are unknown *vis à vis* the public and commercial stock.

B. Given the fundamentally different uses, occupancies, and renovation work practices that attend to commercial buildings versus residences, EPA cannot simply rely on information gathered for ñtarget housingò to justify a Public & Commercial LRRP Program.

Sentiments expressed by EPA's Science Advisory Board ("SAB") indicate that, for lack of any better lead-based paint information, the Agency should default to data gathered in the "target housing" context and carry it over to public and commercial buildings. An SAB panel has recognized that there is "insufficient data concerning lead dust exposures in commercial or public buildings to support a reliable standard," but nonetheless has been reported to "suggest[ ] that EPA strengthen its hazard standard to protect children under 6 in private residences … and then apply that standard to commercial buildings."[8] Moreover, in a recent response to questions for a Senate hearing record, EPA cited eight "studies" as potentially relevant to lead-based paint issues in public and commercial buildings.[9] In fact, all of the structures assessed in these studies were pre-1978 target housing (except for a single school built in 1967 and a one-story business well over 150 years old). Two of these studies state – on their face – that they provide no basis upon which to draw conclusions about lead-based paint, RRP activities, or associated hazards in public and commercial structures.

The Coalition strongly cautions against a reductive approach that relies upon studies conducted in residential settings to somehow buttress any Public & Commercial LRRP Program. EPA must recognize and account for the profound differences in uses, occupancies, sizes, and renovation work practices in commercial buildings compared to homes, and between commercial buildings as a stock. The Agency cannot discharge its administrative and legal responsibilities simply by compiling Residential LRRP information and deeming it probative for Public & Commercial LRRP purposes.

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[6] *Lead; Identification of Dangerous Levels of Lead*, 66 Fed. Reg. 1,206, 1,211, (Jan. 5, 2001), (emphasis added).

D. EPA should inventory and consider whether existing regulatory programs and industry practices already address any potential lead-based paint hazards and renovation work practices in public and commercial buildings.

Executive Order 12866 (Sept. 30, 1993) was adopted to "reform and make more

The definition of "public and commercial building" cited above for the asbestos program cross-references EPA's term "child-occupied facilities," as used in the Residential LRRP Program:

> ***Child-occupied facility*** means a building, *or portion of a building*, constructed prior to 1978, visited regularly by the same child, under 6 years of age, on at least two different days within any week (Sunday through Saturday period), provided that each day's visit lasts at least 3 hours and the combined weekly visits last at least 6 hours, and the combined annual visits last at least 60 hours. Child-occupied facilities may include, but are not limited to, day care centers, preschools and kindergarten classrooms. *Child-occupied facilities may be located in* target housing or in *public and commercial buildings.* With respect to common areas in public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only those common areas that are routinely used by children under age 6, such as restrooms and cafeterias. Common areas that children under age 6 only pass through, such as hallways, stairways, and garages are not included. In addition, with respect to exteriors of public or commercial buildings that contain child-occupied facilities, the child-occupied facility encompasses only the exterior sides of the building that are immediately adjacent to the child-occupied facility or the common areas routinely used by children under age 6.[20]

Accordingly, EPA's current definition of "child-occupied facility" has important ramifications for the scope of any Public & Commercial LRRP Program. If a "public or commercial building" (however it is ultimately defined) contains a "child-occupied facility," then that facility is already subject to EPA's Residential LRRP Program. For example, day care centers in private office buildings are already within the scope of Residential LRRP rules.

Based on EPA's own definition, it follows that any Public & Commercial LRRP Program would cover buildings and spaces outside "child-occupied facilities." Thus, a Public & Commercial LRRP Program could apply to: (1) buildings that do not have "child-occupied facilities" in them; and (2) areas in non-"target housing" buildings that are occupied by: (a) children under age six who are transient visitors of less than 60 hours annually, and/or (b) just about anyone age six or older.

The potential reach of the Public & Commercial LRRP program is, accordingly, massive. It is unclear what (if any) buildings might be excluded from EPA's oversight. If the Agency truly intends for a Public & Commercial LRRP Program to be so boundless in scope, then it is incumbent on the Agency to make sure that all federal, state, local, municipal, non-profit and private sector building owners, managers and contractors have a clear understanding of what is at stake in this RFI.

[20] 40 CFR § 745.83 (2012) (emphasis added).

B. General Characteristics of U.S. Commercial Buildings

The general definitions discussed above are helpful guides. But they do not reflect the real breadth of complexity and diversity between and among public and commercial structures. Except for the fact that it does not include the full range of manufacturing, industrial, and agricultural buildings, CBECS provides the most comprehensive data on the sundry characteristics of the public and commercial stock property types.[21]

Information collected through CBECS is used throughout the government and private sectors to answer basic questions about commercial real estate, such as: What building types are there? How large are they? How old are they? Where are they? CBECS has been recognized as part of President Obama's "Open Government Initiative" to expand use of and reliance on data sets generated by the federal government.[22] Congress has cited CBECS data, recognizing its value to government programs.[23] CBECS data reflecting the size, age, and myriad uses of buildings are reported as conclusive by the U.S. Census.[24] And, as explained below, CBECS provides essential information for other program offices within EPA.

Among other things, the most recent version of available CBECS data reports:[25]

- ***Amount:*** There are nearly 4.9 million commercial buildings in the U.S. spanning a broad spectrum of types and uses, and comprising more than 71.6 billion square feet of floorspace.

- ***Size:*** Commercial buildings range widely in size. The vast majority of commercial buildings are in the smaller size categories. More than half of buildings are 5,000 square feet in size or smaller, and nearly three-fourths are 10,000 square feet or smaller.

- ***Vintage:*** Buildings constructed from 1970 to 2003 comprise 58 percent of buildings and 63 percent of floorspace.

- ***Growth Trends:*** Since the first CBECS in 1979, the commercial buildings sector has increased in size. From 1979 to 2003, the

[21]EPA will need to justify its basis for including or excluding any categories of structures from the scope of the Program.

[22]See *Commercial Buildings Energy Consumption Survey*, DATA.gov, http://www.data.gov/energy/datasets/commercial-buildings-energy-consumption-survey (last visited Mar. 27, 2013).

[23]See Letter from High-Performance Building Congressional Caucus Coalition to Senate Energy & Water Appropriations Subcommittee Staff (July 25, 2011) http://www.hpbccc.org/CBECSMemo.pdf.

[24]U.S. Census Bureau, Statistical Abstract of the United States: 2012, Table 1006 at p. 630.

[25]See *Overview of Commercial Buildings, 2003*, U.S. Energy Info. Admin., http://www.eia.gov/emeu/cbecs/cbecs2003/overview1.html (last visited Mar. 27, 2013). This information is from the 2003 edition of CBECS. A survey is being conducted by EIA this year, with preliminary results scheduled to be reported in 2014. See *How Will Buildings Be Selected for the 2012 CBECS?*, U.S. Energy Info. Admin., http://www.eia.gov/consumption/commercial/2012-cbecs-building-sampling.cfm.

number of commercial buildings increased from 3.8 million to 4.9 million. And, the amount of commercial floorspace increased from 51 billion to 72 billion square feet.[26]

- ***Location:*** The South Census Region, the most populous of the four regions, accounts for more than one-third of both commercial buildings and floorspace. The fewest commercial buildings are found in the Northeast Census Region, while the smallest amount of commercial floor space is found in the West Census Region.

- ***Occupancy:*** Key occupancy information such as numbers of workers, median square feet per worker, and median hours per week of operation, significantly vary across all building types and sub-types.

C. Diversity of Commercial Buildings: Types, Uses, and Occupancies.

The most recent CBECS survey identified more than 100 specific activities, aggregated into fourteen "principal building activities" which are then broken down into numerous sub-types based on the primary business, commerce or function conducted within each structure, as follows:[27]

Bldng. Type	Definition	Subcategories
Education	Buildings used for academic or technical classroom instruction, such as elementary, middle, or high schools, and classroom buildings on college or university campuses. Buildings on education campuses for which the main use is not classroom are included in the category relating to their use. For example, administration buildings are part of "Office," dormitories are "Lodging," and libraries are "Public Assembly."	• elementary or middle school • high school • college or university • preschool or daycare • adult education • career or vocational training • religious education
Food Sales	Buildings used for retail or wholesale of food.	• grocery store or food market • gas station (w/ convenience

[26]See *Overview of Commercial Buildings, 2003*, U.S. Energy Info. Admin., http://www.eia.gov/emeu/cbecs/cbecs2003/overview2.html (last visited Mar. 27, 2013).

[27]See

Bldng. Type	Definition	Subcategories
		store) • convenience store
Food Service	Buildings used for preparation and sale of food and beverages for consumption.	• fast food • restaurant or cafeteria
Health Care (Inpatient)	Buildings used as diagnostic and treatment facilities for inpatient care.	• hospital • inpatient rehabilitation
Health Care (Outpatient)	Buildings used as diagnostic and treatment facilities for outpatient care. Medical offices are included here if they use any type of diagnostic medical equipment (if they do not, they are categorized as an office building).	• medical office (see previous column) • clinic or other outpatient health care • outpatient rehabilitation • veterinarian
Lodging	Buildings used to offer multiple accommodations for short-term or long-term residents, including skilled nursing and other residential care buildings.	• motel or inn • hotel • dormitory, fraternity, or sorority

Bldng. Type	Definition	Subcategories

Bldng. Type	Definition	Subcategories

Bldng. Type	Definition	Subcategories
		• photo processing shop • beauty parlor or barber shop • tanning salon • copy center or printing shop • kennel
Warehouse and Storage	Buildings used to store goods, manufactured products, merchandise, raw materials, or personal belongings (such as self-storage).	• refrigerated warehouse • non-refrigerated warehouse • distribution or shipping center
Other	Buildings that are industrial or agricultural with some retail space; buildings having several different commercial activities that, together, comprise 50 percent or more of the floorspace, but whose largest single activity is agricultural, industrial/ manufacturing, or residential; and all other miscellaneous buildings that do not fit into any other category.	• airplane hangar • crematorium • laboratory • telephone switching • agricultural with some retail space • manufacturing or industrial with some retail space • data center or server farm
Vacant	Buildings in which more floorspace was vacant than was used for any single commercial activity at the time of interview. Therefore, a vacant building may have some occupied floorspace.	• No subcategories collected.

<u>Note as per CBECS:</u> These subcategories are not exhaustive lists of the types of buildings included in each category. For every general category, there are some "other" types of buildings that did not fit into any of these given subcategories.

Significantly, EPA *itself* relies upon CBECS's differentiations of building types

in the United States.[28] Moreover, ENERGY STAR recognizes different characteristics with regard to non-owner-occupied multifamily buildings[29] – such as apartments (yet another type of structure that may fall within the ambit of any Public & Commercial LRRP Rule).

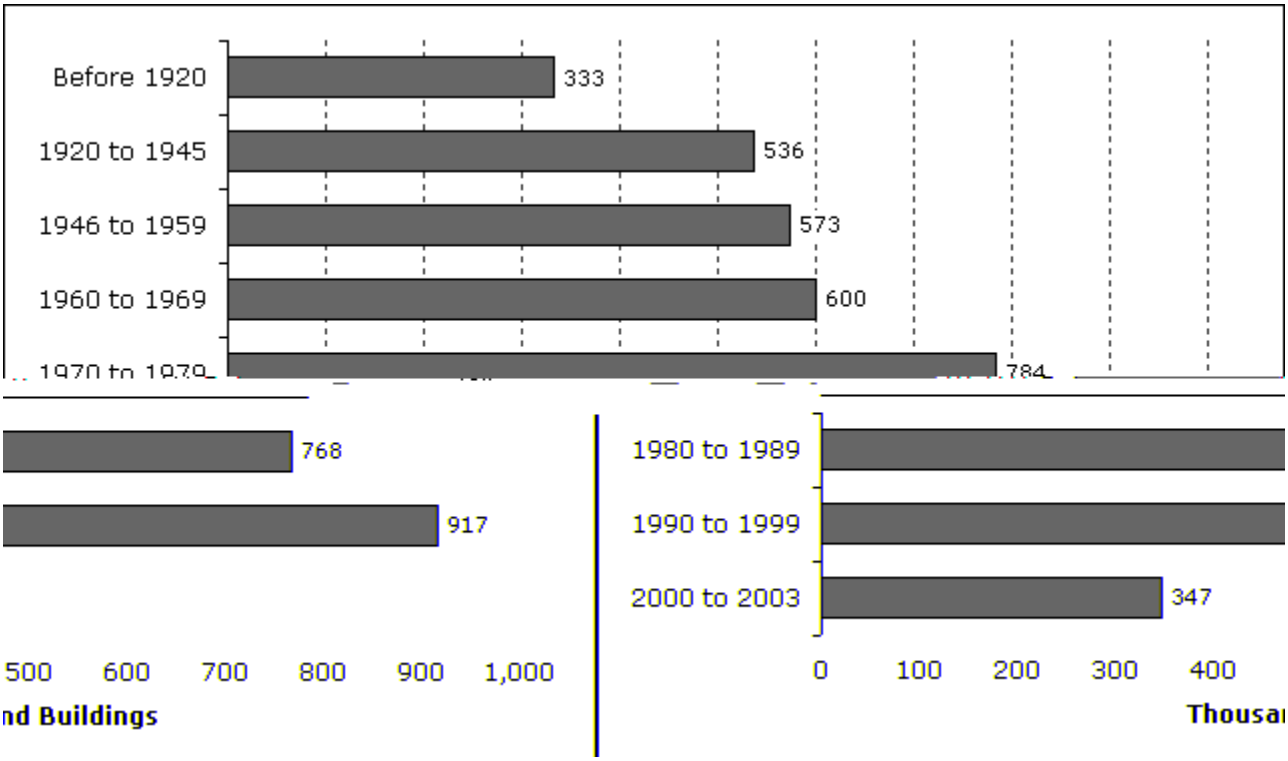
The U.S. Green Building Council ("USGBC"), a non-governmental organization that provides voluntary rating platforms for buildings based on a number of environmental and

Default Occupancy Numbers Used by LEED, Core & Shell Development ,

	Gross Square Feet per Occupant	
	Employees	**Transients**
General office	250	0
Retail, general	550	130
Retail or service (*e.g.*, financial, auto)	600	130
Restaurant	435	95
Grocery store	550	115
Medical office	225	330
R&D or laboratory	400	0
Warehouse, distribution	2,500	0
Warehouse, storage	20,000	0
Hotel	1,500	700
Educational, daycare	630	105
Educational, K-12	1,300	140

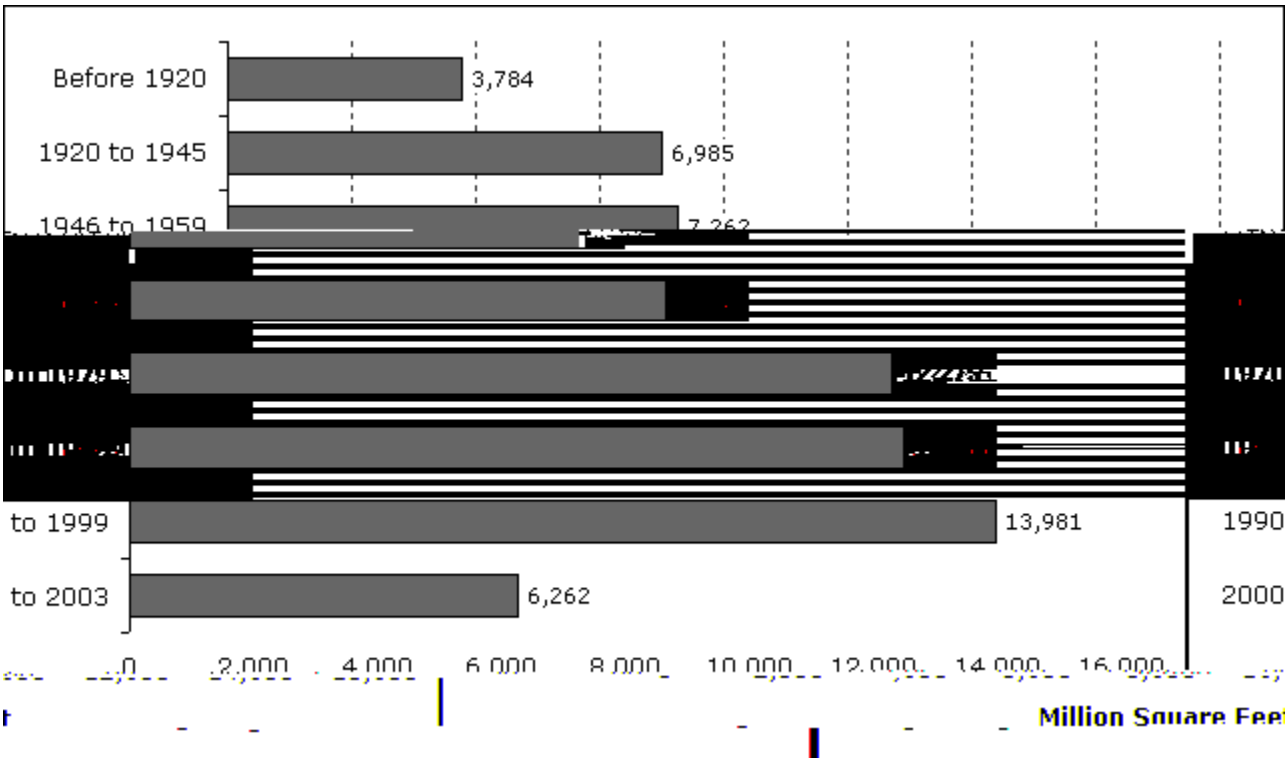
CBECS provides statistics on the age and size of non-residential U.S. buildings:

Age of Commercial Buildings[34]



[34]See U.S. Energy Info. Admin., *Overview of Commercial Buildings, 2003*, Figure 14, ftp://ftp.eia.doe.gov/consumption/overview.pdf (Nov. 14, 2008).

Commercial Building Floor Space, Correlated to Building Age



While this information will necessarily change based on the data gathered through the 2012 CBECS process (which is scheduled for preliminary release in 2014), the following conclusions on building age and size can be drawn from the 2003 data set:

- The median year constructed for all commercial buildings is 1973.
- About 2.8 million of the 4.9 million buildings estimated by the 2003 CBECS, or 58 percent, were constructed from 1970 to 2003. These buildings comprise 63 percent of total commercial floorspace.
- As of 2003, about 2 million of the 4.9 million buildings estimated by the 2003 CBECS – or 42% – were constructed from 1980 to 2003.
- Buildings are getting larger. The mean size of commercial buildings is greatest for the most recently constructed buildings. Buildings constructed between 1970 and 2003 have a mean size of 16,000 square feet while those constructed before 1970 have a

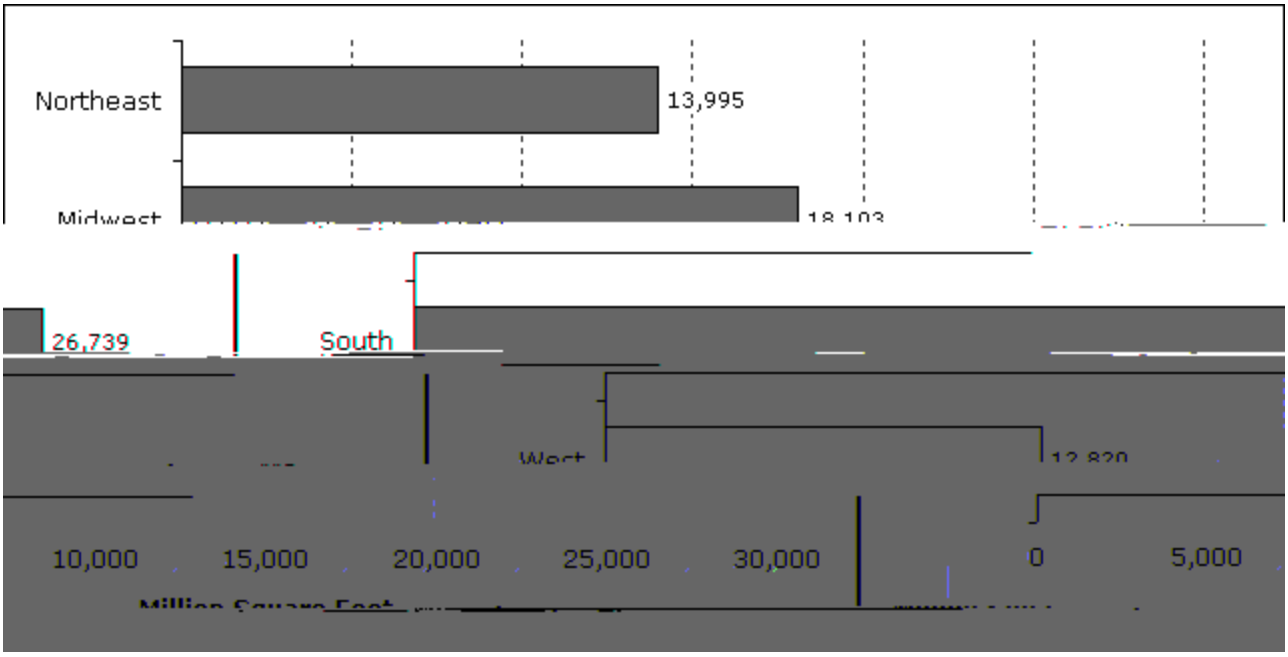
[35]See U.S. Energy Info. Admin.,

mean size of 13,100 square feet, a difference that is statistically significant.

E. Location of Commercial Buildings by U.S. Census Region[36]

EPA should also understand the impacts of any Public & Commercial LRRP Program across regions of the U.S. The South Census Region, the most populous of the four Census Regions, has the largest percentage of commercial buildings and commercial floorspace (more than one-third of both total buildings and floorspace). Although buildings in the Northeast region are, on average, several thousand square feet larger than buildings in the other regions, the differences are not considered as statistically significant by CBECS.

Nearly 40 percent of commercial floorspace is found in buildings in the South:



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(2) ***EPA has a responsibility to educate federal building owners and managers about the Public & Commercial LRRP Program, and convene a joint meeting with Coalition members.*** At our November 5 meeting, the Coalition impressed upon EPA the importance for comprehensive, continuous, and coordinated engagement with sister agencies and fellow federal staff that manage federal facilities. Because the LRRP Program at issue will affect public buildings, we continue to suggest that EPA convene a meeting with federal facilities managers and Coalition members to fairly share in the responsibility to identify, gather, and assess information as relevant to the RFI. As explained below, the Coalition has reached out to other federal personnel (as well as key non-federal and industry stakeholders) in the intervening weeks since the RFI was published. Invariably, the first time federal building managers heard about the RFI was due to our communication efforts. We are concerned that EPA has not (thus far) adequately seized opportunities to engage with and gather substantive data from the federal facilities community.

(3) ***To date, EPA has virtually no data on lead***

The results of the Phase III portion of the study "indicate that children *residing in homes* where R&R activities were conducted are more likely to have elevated blood-lead concentrations than children *residing in homes* where R&R was not conducted."[45] The Coalition could otherwise find no indications in this study as to whether buildings in the field sample included non-target housing.

- EPA states that the study listed at bullet point 2 in the Senate QFRs is expressly limited to *"residential buildings."*[46]

- Likewise, EPA states that the study listed at bullet point 3 is expressly limited to *"residential buildings."*[47]

- The report listed at bullet point 4 in the Senate QFRs is a "Summary Report" from May 1997, of a study denoted as EPA 747-R-96 (the "EPA 747 Study"), titled "Lead Exposure Associated with Renovation and Remodeling Activities." Based upon the Coalition's review of the Summary Report, there is nothing in that document to consider whether the EPA 747 Study developed any information whatsoever regarding public and commercial buildings. In fact, the Summary Report admits: *"[T]here are no data at this time to assess whether environmental exposures monitored in target housing are representative of environmental exposures encountered in public or commercial buildings."*[48]

- The report listed at bullet point 5 in the Senate QFRs is the "Worker Characterization and Blood-Lead Study" component of the general EPA 747 Study. This component included worker questionnaires and telephone interviews, and collection of worker blood samples, with sampling frames identified by union membership lists and workers targeted in St. Louis and Philadelphia. The 585 surveyed workers reported that they "were evenly divided between those that worked in residential and nonresidential buildings."[49] Yet, the questionnaire results emphasized that the sampled workers conducted renovation and

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[45] *Id.* at p. 8 (emphasis added).

[46] *Executive Summary for the report Lead Exposure Associated with Renovation and Remodeling Activities: Phase IV, Worker Characterization and Blood-Lead Study of R&R Workers Who Specialize in Renovation of Old or Historic Homes*, EPA 747-R-99-001 (March 1999) (emphasis added).

[47] *Executive Summary for the report Lead Exposure Associated with Renovation and Remodeling Activities: Phase III, Wisconsin Childhood Blood-Lead Study*, EPA 747-R-99-002 (March 1999) (emphasis added).

[48] *Lead Exposure Associated with Remodeling Activities: Summary Report*, EPA 747-R-96-005 (May 1997), at p. 17 (emphasis added).

[49] *Lead Exposure Associated with Remodeling Activities: Worker Characterization and Blood-Lead*

same 18 residential units, ranging from 50 to 150 years of age, in California, Colorado, Maryland and Missouri considered for the EPA 747 Field Study.

- The report listed at bullet point 8 in the Senate QFRs is from January 2007, titled "Draft Final Report on Characterization of Dust Lead Levels after Renovation, Repair, and Painting Activities." The scope of this study covers "15 housing units and one [child occupied facility] … to complete the 75 experiments."[57] *The only non-residential site considered in this study was a school in Columbus, Ohio built in 1967.*

In sum: A single school built in 1967, and a one-story business well over 100 years old, were the *only* non-residential structures within the scope of *any* of the studies that EPA offered to the Senate as relevant on lead-based paint matters. Considering that there are about 4.9 million commercial structures in the United States, the infinitesimal evidence of lead dust found in a late 60's-era school cannot rationally support the weight of a Public & Commercial LRRP Program – which could cover *all* such structures in the U.S., *regardless* of age. As EPA's own cited studies state on their face, thus far the Agency has no data upon which to draw any conclusions regarding lead-based paint hazards from RRP activities in public and commercial buildings.

B. The Coalitionôs Efforts to Gather Information Responsive to the RFI

The Coalition has acted with due diligence to gather information responsive to the RFI. In fact, we have pursued many of the outreach strategies recommended by the Senators from the Environment and Public Works Committee in their letter dated February 13, 2013.[58] As EPA must develop a sound administrative record upon which it must base any rational decisions for a Public & Commercial LRRP Program, we recommend that the Agency make affirmative efforts to connect with these and other stakeholders to supplement information collected by the Coalition.

Aside from leveraging our own internal resources to research and gather information for the RFI, Coalition members:

- Met with staff from the Small Business Administration's Office of Advocacy on December 14, 2012, to raise its awareness regarding the RFI's imminent publication at that point;

- Held a meeting and call with several federal facilities managers on January 14, 2013, to make sure they were aware of the RFI. Invitees and participants included representatives on behalf of the General Services Administration, Office of the Secretary of

[57] *Draft Final Report on Characterization of Dust Lead Levels After Renovation, Repair, and Painting Activities*, EPA Contract No. EP-W-04-021 (January 23, 2007), at p. 6-1.

[58] See Attachment 6.

Defense, the Naval Facilities Engineering Command (NAVFAC), and the Department of Veterans Affairs;

- Conducted outreach to the National Association of State Facilities

The Coalition reiterates that it is of paramount importance for EPA to educate and engage federal and other government building managers regarding its consideration of a Public & Commercial LRRP Program. While we have started that process, we hope EPA will join us in a substantive outreach plan to GSA, NIBS, the military branches, the Architect of the Capitol, and other public buildings entities that may be profoundly impacted

(2) ***Request 2*: Information concerning the use of lead-based paint in and on public and commercial buildings**

The Coalition has been unable to identify surveys of the prevalence of lead in public and commercial buildings. A common paint history is not the norm in commercial and public spaces where triple net leases, tenant improvements and build-out allowances result in each tenanted space being dissimilar to other spaces in many respects, including paint history. Unlike multi-tenanted residential buildings, there is no federally approved protocol for assessing painted surfaces in public and commercial spaces that does not involve testing each painted surface throughout a building. In the context of multi-tenanted residential spaces, a sampling protocol based on a common paint history was developed.[61] EPA incorporated the HUD Guidelines as a *Documented Methodology* to determine whether or not pre-1978 residential properties are subject to regulation under Title X.[62]

The RFI suggests that EPA is considering applying regulations to a vast number of buildings without having performed the most basic level of analysis.[63] In developing regulations to guide the control of lead based paint hazards in housing, federal agencies conducted several large-scale surveys. HUD and EPA were concerned about the data quality in these studies and jointly sponsored a survey that was published in 1995. The Executive Summary of the *Report on the National Survey of Lead-Based Paint in Housing* shows the effort that federal regulators put into obtaining the data that would be used to regulate housing providers:

> The 1987 amendments to the Lead-Based Paint Poisoning Prevention Act required the Secretary of Housing and Urban Development (HUD) to prepare and transmit to Congress "a comprehensive and workable plan" for the abatement of lead-based paint in housing and "an estimate of the amount, characteristics and regional distribution of housing in the United States that contains lead-based paint hazards at differing levels of contamination." In response to this mandate, HUD sponsored a

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and Frames (Feb. 24, 1994), transmitted to Patrick Connor, President, Connor Environmental Services, by HUD Office of Lead Hazard Control. See Attachment 10. Similarly, the State of Maryland recognizes surfaces with factory-applied lead-based primer as lead-free. See MD Code Regs. 26.16.02.02 (2013).

[61] See U.S. Dep't of Hous. and Urban Dev., *Guidelines for the Evaluation and Control of Lead-based Paint Hazards in Housing – Chapter 7 – Lead-based Paint Inspections*, http://portal.hud.gov/hudportal/documents/huddoc?id=lbph-09.pdf (July 2010). HUD determined if lead levels in all units, common areas or exterior sites tested were found to be below 1.0 mg/cm2 standard, these sample sizes provide 95 percent confidence that: (1) For pre-1960 housing units, less than 5 percent or fewer than 50 (whichever is less) units, common areas or exterior sites, have lead at or above the standard; and (2) For 1960 to 1977 housing units, less than 10 percent or fewer than 50 (whichever is less) units, common areas, or exterior sites, have lead at or above the standard.

[62] 40 CFR Part 745.227 (2012). *Documented Methodology* was first published in 1995, revised in 1997 and the Second Edition released in 2012.

[63] *Lead; Renovation, Repair and Painting Program for Public and Commercial Buildings*, 75 Fed. Reg. 24,848, (May 6, 2010).

> national survey of lead-based paint in housing and delivered a Report to Congress on a *Comprehensive and Workable Plan for the Abatement of Lead-Based Paint in Privately Owned Housing* in December, 1990. The *Comprehensive and Workable Plan* report was completed under a tight, Congressionally mandated schedule and focused on motivating, developing and presenting the comprehensive plan required by Congress. As such, it only reported the estimates of the extent of lead-based paint in housing required by Congress and provided a brief description of the survey methodology.
>
> This report, sponsored by the Environmental Protection Agency, is a comprehensive technical report on the HUD-sponsored national survey of lead-based paint in housing. It provides a detailed description of the survey methodology. It reports on wide ranging analyses of the national survey data. It reports revised estimates of the extent of lead-based paint in housing, based on a thorough investigation of the multiple sources of error – variability and bias – in the data. These error sources include nonresponse biases, sampling variability between housing units, sampling variability within housing units, X-ray fluorescence device (XRF) measurement error, and laboratory analysis error. The analysis underlying the estimates presented in the *Comprehensive and Workable Plan (CWP)* report incorporated only sampling variability between housing units.[64]

EPA and HUD recognized that the *National Survey* was needed to support a number of research questions including: "analysis of the relationship among sources and pathways of lead in the residential environment; analysis of the characteristics of housing with varying hazard levels; development of indices of lead hazard; analysis of the costs, effectiveness and benefits of alternative strategies of reducing lead-based paint hazards; and the identification of the dimensions of each of these issues."[65]

Unlike the development of regulations for residential buildings, EPA has not commissioned the necessary research to establish the prevalence of LBP across the spectrum of public and commercial buildings. Nor has the Agency undertaken an analysis of the prevalence of lead dust hazards that are created by renovation and repair activities in and on these structures despite a direction from Congress to do so.[66]

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[64]U.S. Dep't of Hous. and Urban Dev. and U.S. Envt'l Prot. Agency, *Report On The National Survey Of Lead-Based Paint In Housing. Base Report*, http://www.epa.gov/lead/pubs/r95-003.pdf (June 1995).

[65]*Id*. at 1-4.

[66]15 U.S.C. §2682 (2010).

(3) ***Request 3:* Information concerning the frequency and extent of renovations on public and commercial buildings**

It is impossible to state with precision the "frequency" and "extent" of public and commercial building renovations in all of those structures across the U.S. In actual practice, the Residential LRRP Program's definitions for "renovation"[67] and "minor repair and maintenance activities"[68] – disturbance of more than six square feet of interior painted surfaces, and more than 20 square feet of exterior painted surfaces – are routine activities in public and commercial buildings. "Renovations" occur "24-7-365" in public and commercial buildings, whenever:

- A new office tenant "fits-out" a leased space, such as when GSA signs a new lease for one of its federal agency clients in a privately-owned building;
- The systems of a commercial or apartment building (such as envelope, lighting, HVAC, and controls) are retrofitted or weatherized to make the structure more energy efficient;
- Personnel needs require structural changes to work spaces, such as when staff and members change offices when a new Congress convenes, or at Executive Branch and embassy buildings when a new Administration is sworn in;
- New carpets are installed, or walls are freshened-up with new paint;
- Displays and advertisements are changed for products in malls, big box stores, other retailers, or movie theaters;
- Exterior walls are cleaned to preserve and protect buildings registered on or eligible for the National Register of Historic Places;
- Hotels, motel or inns update their lobbies, restaurants, rooms, or bathrooms to stay competitive in attracting business and vacation travelers;

[67] "*Renovation* means the structure, or portion thereof, that results in the disturbance of painted surfaces, unless that activity is performed as part of an abatement as defined by this part … The term renovation includes (but is not limited to): The removal, modification or repair of painted surfaces or components (*e.g.*, modification of painted doors, surface restoration, window repair, surface preparation activity (such as sanding, scraping, or other such activities that may generate paint dust)); the removal of building components (*e.g.*, walls, ceilings, plumbing, windows); weatherization projects (*e.g.*, cutting holes in painted surfaces to install blown-in insulation or to gain access to attics, planning thresholds to install weather-stripping), and interim controls that disturb painted surfaces … The term renovation does not include minor repair and maintenance activities." See 40 CFR § 745.83 (2012).

[68] "*Minor repair and maintenance activities* are activities, including minor heating, ventilation or air conditioning work, electrical work, and plumbing, that disrupt 6 square feet or less of painted surfaces per room for interior activities or 20 square feet or less of painted surface for exterior activities …." *Id.*

- Buildings are renovated after natural disasters;
- Restaurants reconfigure guest seating or install new kitchen equipment;
- Schools, colleges or universities expand or contract classrooms or

include, but are not limited to, remodeling, renovation, rehabilitation, reconstruction, historic restoration, changes or rearrangements of the structural parts and changes or rearrangements in the plan configuration of walls and full-height partitions. Normal maintenance, re-roofing, painting, or wallpapering or changes to mechanical and electrical systems are not alterations unless they affect the usability of the building or facility."[74]

- **The U.S. Green Building Council (ñUSGBCò)** recognizes the potentially limitless scope of the term "renovation:" "In general parlance, alteration and additions may range from a complete gutting, major renovation, or large new wing to the replacement of an old window, sheet of drywall, or section of carpet."[75] For purposes of one of its rating products, USGBC also distinguishes building "alterations and additions" from "repairs, routine replacements or minor upgrades" as follows: "Alterations and additions" include "construction activity by more than 1 trade M p ct ` я ľ

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(i) OSHAôs Lead Standard

OSHA's Lead Standard for the Construction Industry, Title 29 Code of Federal Regulations Section 1926.62, covers lead in a variety of forms, including metallic lead, all inorganic lead compounds, and organic lead soaps.

OSHA's lead in construction standard applies to all construction work when an employee may be exposed to lead. All work related to construction, alteration, or repair, including painting and decorating, is included. Under this standard, construction includes, but is not limited to:

- Demolition or salvage of structures where lead or materials containing lead are present;
- Removal or encapsulation of materials containing lead;
- New construction, alteration, repair, or renovation of structures, substrates, or portions or materials containing lead;
- Installation of products containing lead;
- Lead contamination from emergency cleanup;
- Transportation, disposal, storage, or containment of lead or materials containing lead where construction activities are performed; and
- Maintenance operations associated with these construction activities.

It is important to recognize that the OSHA Lead in Construction Standard, 29 CFR 1926.62, applies at any detectable concentration of lead – not limited to lead-based paint as defined by EPA and the CSPC. Employers of construction workers are responsible for developing and implementing a worker protection program for employees who may be exposed to lead above the permissible exposure limit ("PEL"). Such a program must include:

- Hazard determination, including exposure assessment;
- Medical surveillance and provisions for medical removal;
- Job-specific compliance programs;
- Engineering and work practice controls;
- Respiratory protection91.15 Tm[(de)4(fine)5(dn Domma)4(dt.)-7(te)5(c)4(ti)-s EMC /P <MCID 19>25t4(

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(ii) OSHA Regulations Protect Workers and Establish Confined/Monitored Spaces in Which Renovation Tasks Are Conducted

- **Rule Applicability.** OSHA lead regulations apply to *any* work setting where employees come into contact with *any* level of lead or lead bearing coatings.

- **Lead-based paint.** The EPA LRRP rule defines lead-based paint as containing more than 0.5 percent lead by weight. Lead coatings below this threshold are exempt from any special EPA certification, training or work practices. On the other hand, OSHA regulates lead in any amount.

- **Regulated areas.** OSHA mandates under Part 1926.62 that employers establish "regulated areas" when lead or lead-coated surfaces are disturbed. A regulated area requires specific OSHA signage. The EPA signs required by LRRP rule do not meet OSHA requirements for a regulated area.

- **Written compliance program.** OSHA regulations require a detailed compliance program listing specific requirements for employers to document.

- **Mandatory respirator use.** OSHA lead regulations require air monitoring for jobs that may generate lead dust or fumes to which workers will be exposed. OSHA has established three work class tasks for which certain exposures abov

(iii) Memorandum of Understanding Between OSHA and EPA

The Secretary of the Department of Labor and Administrator of EPA signed a Memorandum of Understanding ("MOU") on November 23, 1990, with the goal of establishing

consisting mostly of the Federal agencies involved in facility design and construction. Content of the WBDG is a collaborative effort among federal agencies, private sector companies, nonprofit organizations and educational institutions. Its success is based on industry and government experts contributing their knowledge and experience to better serve the building community.

The WBDG also sits atop the Construction Criteria Base, a library containing over 12,000 documents, including criteria, standards,

- Indoor Environmental Quality ("IEQ") Prerequisite 1 (p. 59): Mechanical ventilation systems must be designed using the ventilation rate procedure as defined by ASHRAE 62.1-2007, or the applicable local code, whichever is more stringent. ASHRAE Standard 62.1-2007 User

Filtration media at Class 5 or higher as defined by CEN Standard EN 779-2002, Particulate air filters for general ventilation; or

Filtration media with a dust spot efficiency of 30% or higher and greater than 90% arrestance on a particle size of 3-10 µg;

Replace all filtration media immediately prior to occupancy.

- IEQ Credit 3.2 (pp. 66-67): Reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of construction workers and building occupants, by developing and implementing an IAQ management plan after all finishes have been installed and the building has been completely cleaned before occupancy. Options to achieve these requirements include:

  - Install new filtration media and perform building flush-out by supplying total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal air temperature of at least 60°F and relative humidity no higher than 60%.

  - If occupancy is desired prior to completion of the flush-out, the space may be occupied following delivery of a minimum of 3,500 cubic feet of outdoor air per square foot. Once the space is occupied, it must be ventilated at a minimum rate of 0.30 cubic feet per minute per square foot.

  - Conduct baseline IAQ testing after construction ends and prior to occupancy using testing protocols consistent with the EPA Compendium of Methods for the Determination of Air Pollutants in Indoor Air or the ISO Method to demonstrate maximum contaminant concentration levels that cannot be exceeded.

- IEQ Credit 4.2 (p. 70): Sets requirements for low-emitting paints and coatings for building interiors.

  - Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993.

  - Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed VOC content limit of 250g/L (2 lb/gal) established in Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997.

the building, and require isolation of the work site from regular building occupants for the duration of construction. Also, additions that increase total building floor area by at least 5% are eligible for EBOM certification.

- Materials and Resources ("MR") Prerequisite 1 (p. 41): To reduce the environmental impacts of materials used in the operations, maintenance, and upgrades of buildings, buildings should have in place an Environmentally Preferable Purchasing policy (EPP) that adheres to the "LEED 2009 for EBOM" policy model.

- Indoor Environmental Quality (IEQ) Prerequisite 1 (p. 55): See IEQ Prerequisite 1 for LEED NC, above.

- IEQ Prerequisite 3 (p. 59): Have a green cleaning policy for the building in place to reduce the exposure of building occupants and maintenance personnel to potentially hazardous chemical, biological, and particulate contaminants, which adversely affect air quality, human health, building finishes, building systems, and the environment.

  o Establish standard operating procedures addressing how an effective cleaning and hard floor and carpet maintenance system will be consistently utilized, managed, and audited. Specifically address cleaning to protect vulnerable building occupants.

  o Policy must adhere to "LEED 2009 for EBOM" policy model.

- IEQ Credit 1.1 (p. 60): Develop and implement on an ongoing basis an Indoor Air Quality (IAQ) management program based on the EPA Indoor Air Quality Building Education and Assessment Model (I-BEAM), EPA Reference Number 402-C-01-001, December 2002, available at http://www.epa.gov/iaq/largebldgs/i-beam/index.html.

- IEQ Credit 1.2 (p. 61): To provide capacity for ventilation system monitoring, install permanent, continuous monitoring systems that provide feedback on ventilation system performance to ensure that ventilation systems maintain minimum outdoor air flow rates under all operating conditions.

  o Provide an outdoor airflow measurement device capable of measuring and controlling the minimum airflow rate at all expected system operating conditions within 15% of the design minimum outdoor air rate. Monitoring must be performed for at least 80% of the building's total outdoor air intake flow serving occupied spaces.

- Powered floor maintenance equipment, including electric and battery-powered floor buffers and burnishers, is equipped with vacuums, guards, and/or other devices for capturing fine particulates.

- Equipment is designed with safeguards, such as rollers or rubber bumpers, to reduce potential damage to building surfaces.

- Keep a log for all powered cleaning equipment to document the date of equipment purchase and all repair and maintenance activities and include vendor specification sheets for each type of equipment in use.

- IEQ Credit 3.5 (p. 80): To reduce exposure of building occupants and maintenance personnel to potentially hazardous chemicals and particulate contaminants, employ permanent entryway systems (grilles, grates, mats) at least 10 feet long in the primary direction of travel to capture dirt and particulates entering the building at all public entry points, and develop the associated cleaning strategies to maintain those entryway systems as well as exterior walkways.

  - Public entryways that are not in use or serve only as emergency exits are excluded, as are private offices.

(iii) <u>LEED Commercial Interiors (ñLEED CIò)</u>:

- Available at: http://new.usgbc.org/leed/rating-systems/commercial-interiors

- Coverage (pp. xii-xiv): Addresses the specifics of tenant spaces primarily in office, retail, and institutional buildings. Tenants who lease their space or do not occupy the entire building are eligible.

- IEQ Credit 3.1 (p. 44): Reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of construction workers and building occupants, by developing and implementing an IAQ management plan for construction and preoccupancy phases. See IEQ Credit 3.1 for LEED NC, above.

- IEQ Credit 3.2 (pp. 45-46): To reduce indoor air quality (IAQ) problems resulting from construction or renovation, develop an IAQ management plan and implement it after all finishes have been installed and the building has been completely cleaned before occupancy. See IEQ Credit 3.2 for LEED NC, above.

- IEQ Credit 4.2 (p. 49): Sets requirements for low-emitting paintings and coatings for building interiors. See IEQ Credit 4.2 for LEED NC, above.

- IEQ Credit 5 (p. 55):To minimize building occupant exposure to

- HVAC system protection – one of the following HVAC system protection measures is performed:

  HVAC supply registers (boots), return grilles, and rough-ins are covered during construction activities to prevent dust and other pollutants from entering the system.

  Prior to owner occupancy, HVAC supply registers (boots), return grilles, and duct terminations are inspected and vacuumed. In addition, the coils are inspected and cleaned and filter is replaced if necessary.

(v) Green Globes

- Criteria and Point Allocation available at: http://www.thegbi.org/green-globes/continual-improvement-for-existing-buildings.shtml.

- Coverage

Construction documents specify interior materials that are low-VOC emitting, non-

"repainting phases were completed … to preserve the ironwork during the construction and opening of the Capitol Visitors Center."[91] The Architect was also responsible for "removing lead paint on the exterior and interior surfaces of the skirt and skirt hoop, the brackets supporting the Peristyle, the underside of the Peristyle floor plates, the grand stair, and all masonry walls within the skirt area; repairing the cast iron and stone; as well as repainting the skirt section of the dome …"[92] While the description on the Architect's website sounds more like an abatement project as opposed to renovation and remodeling, we hope that EPA has considered lessons learned from the Capitol Dome's rehabilitation and urge the agency to connect with the Architect if it has not yet taken that opportunity.

In addition, the Architect is responsible for a major restoration of the Cannon House Office Building.[93] Cannon was completed in 1908 and underwent a major remodel in 1932. "[T]he House of Representatives is in the early planning stages for a top-to-bottom renewal of the Cannon Building. [The Architect] has assembled a team of in-house experts and consultants who are working with House leaders to define key aspects of the project. This initial effort will better define the estimated costs, scope of work, and potential timeline for the work. The AOC expects this initial planning to conclude in 2013." It is fortuitous that the time frame for the Cannon Building's restoration complements EPA's schedule to develop the Public & Commercial LRRP Rule, as set forth in the amended litigation settlement agreement. We encourage EPA to contact the Architect's team to learn more about Cannon's renovation, and how it may provide information on dust generation and transport as well as other aspects of the RFI. The Coalition welcomes any opportunity to assist with this outreach.

V. ADDITIONAL CONSIDERATIONS

The Coalition submits that EPA should consider the following additional points in developing any Public & Commercial LRRP Program and associated regulations.

A. Scope of EPAôs Legal Authority Under TSCA Regarding Public & Commercial LRRP

As EPA acknowledges in the RFI – and in the terms of its September 7, 2012 amended settlement agreement – the agency's authority to regulate renovations in public and commercial buildings applies only to the "extent such renovations create lead-based paint hazards."[94] Further delimiting the scope of EPA's regulatory authority, a conjunctive reading of TSCA sections 402 and 403 reflects an expected sequence for agency action – requiring EPA

[91] See *Dome Skirt Rehabilitation*,

first to promulgate regulations that "identify… lead-based paint hazards," the results of which are then to be used in determining whether to "apply the regulations [adopted for "target housing"] to renovations" in public and commercial buildings, or, alternatively, to determine that certain categories of renovation do not require regulation.

Thus far, however, EPA has not met this prerequisite for rulemaking with respect to public and commercial buildings, because the only Section 403 rule it has issued that analyzes lead-based paint hazards explicitly stated that its conclusions "were not intended to identify potential hazards in other settings" besides pre-1978 "target housing."[95] As noted above, to provide support for rulemaking, any new 403 rule for public and commercial buildings would need to establish a credible link between exterior and interior renovations and impacts "that would result in adverse health effects," an empirical data gap that EPA's Science Advisory

B. Inspector Generalôs Report for the Residential LRRP Program

As noted throughout these comments, the Coalition is concerned that EPA will rely heavily on the Residential LRRP rules to develop any Public & Commercial LRRP Program. This is problematic – aside from the obvious reason that the two rules cover completely different types of structures – because much of the analysis EPA relied on for the residential rule was flawed.

A July 2012 Office of the Inspector General ("OIG") report[99] found that EPA's cost-

C. Authority Under the Resource Conservation and Recovery Act (ñRCRAò)

Assuming any lead-based paint hazards in public and commercial buildings are found to exist as the result of LRRP activities in those structures, EPA should assess whether it already has sufficient enforcement authority – outside of TSCA – to address such hazards.

On at least two occasions, EPA has used the imminent and substantial endangerment clause under section 7003 of RCRA[100] to require abatement of lead paint. See *In the Matter of 17th Street Revocable Trust*, RCRA-03-2000-01, and *Order to Group I Management and M275 LLC of Fall River,* RCRA-01-2001-072[101] (attached).

The *Group I Management* order was issued by EPA under its RCRA 7003 authority after a contractor completed the sandblasting of paint from several floors of a commercial building. Dust from the operations migrated through floors and windows. Debris from the operations left outside the building was sampled and found to contain lead. The property owner was ordered to complete lead paint abatement at the property under the order. Similarly, the *17th Street Order* required abatement of lead paint in a multi-unit residential facility that included a day care center. EPA issued the order under Section 7003 after learning of several reports of lead poisoning in children and obtaining sample results of the paint chips at the property.

D. Authority Under Comprehensive Environmental Response, Compensation and Liability Act (ñCERCLAò)

Another statutory scheme that regulates lead-based paint hazards specific to exterior renovations, which EPA should also take into account, is available under CERCLA. Under CERCLA §102, EPA is authorized to “promulgate and revise as may be appropriate, regulations designating as hazardous substar î p ᴺ

VI. CONCLUSION

As set forth above, the consequences of a potential EPA Public and Commercial LRRP program are enormous. Before initiating a TSCA Section 403 rulemaking governing these types of buildings, EPA must ensure that it has fully explored and analyzed all relevant