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PROPOSED RULE ON OCCUPATIONAL EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA

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- Paul Emrath
- Vice President-Survey and Housing Policy Research




PROPOSED RULE ON OCCUPATIONAL EXPOSURE TO RESPIRABLE CRYSTALLINE SILICA
Testimony of Paul Emrath on OSHA's Preliminary Economic Analysis (PEA)

From the perspective of the home building industry, the PEA suffers from several flaws, including

- Failure to adequately capture the structure of the industry
- Mismatch between the PEA's narrow focus and the broad language of the regulation
- Use of industry profit rates and revenue from an unrepresentative historic period

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Failure to Adequately Capture the Structure of The Industry

Use of using broad 4-digit NAICS categories in construction, rather than 6-digit detail

- Is unnecessary (data sources used, like the Occupational Employment Statistics Survey and the IRS, have more detail).
- Is internally inconsistent (the PEA uses 6-digit NAICS categories in General Industry and Maritime).
- Disguises impacts on some types of businesses-lumping those that are adversely impacted with others that are unaffected.
- Is used to ignore special issues that arise in significant segments of the industry—such as residential **remodeling**.

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Residential Remodeling

Characterized by small firms:

Median revenue in 2012 (from NAHB's Member Census):

- Single-family builders \$1.8 million
- Multifamily builders \$4.4 million
- **Remodelers \$0.6 million**

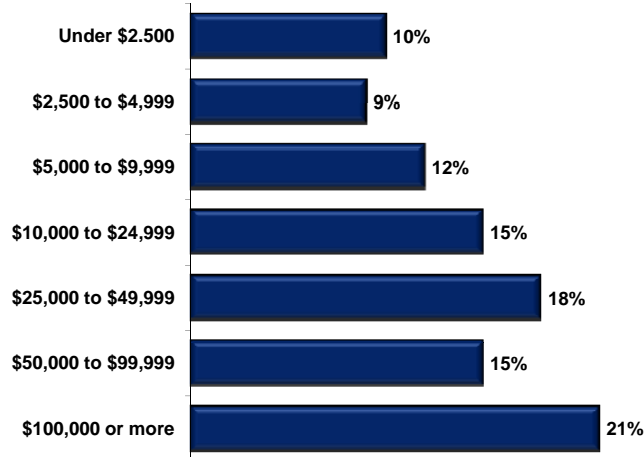
Often involves removing or altering materials with unknown silica content

Often involves moving crews from site to site to cover a number of small projects during the course of a year.

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Share of Remodelers' business (in dollar volume) by size of jobs in a typical year



Source: NAHB Remodeling Market Index Survey: 3rd Quarter 2011, Based on 545 Responses

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Failure to Capture the Structure of The Industry

Proposed rule: *The employer shall conduct additional exposure assessments as required under paragraph (d)(3) of this section whenever a change in the production, process, control equipment, personnel or work practices may reasonably be expected to result in new or additional exposures at or above the action level.*

Some of the PEA's assumptions such as stable 4 person crews working on the same tasks during the same shift in the same work area don't reflect the reality of residential construction.

Visiting multiple dissimilar sites in a year suggests multiple assessments per worker year, not vice versa (true in residential construction in general, but especially in remodeling).

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Failure of the PEA to Capture the Structure of the Residential Construction Industry

Identifies representative jobs and costs using only RS Means **Heavy Construction Cost Data** (includes highways, bridges, utilities, rails and marine projects, but **not residential**).

Ignores **non-employers** (i.e., small self-employed construction workers with no paid employees). 2.4 million in construction according to latest Census estimates.

Also ignores implications of **subcontracting**.

Most of the typical home builder's construction costs are subcontracted.

If costs are passed on, trade contractor costs need to be passed downstream (with a mark-up) to builders and remodelers.

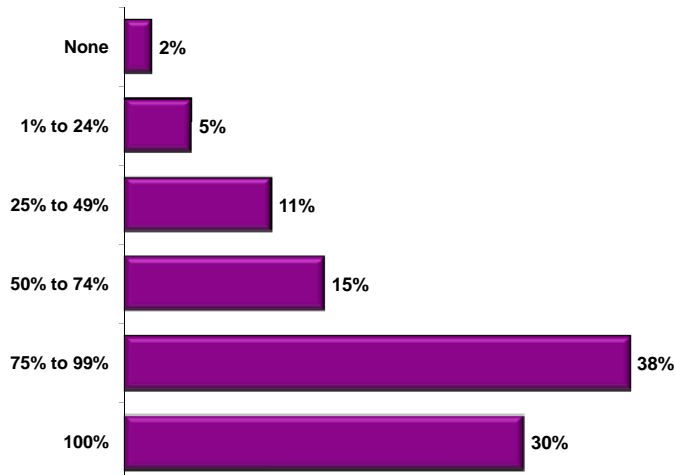
If not passed on, reduction in trade contractor output means builders and remodelers don't have enough of a key input.

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Share of Builders' Construction Costs Subcontracted

(over the past 12 months, based on a 2012 survey of single-family builders)



Source: NAHB Housing Market Index Survey: July 2012, Based on 444 Responses

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Mismatch between PEA's narrow focus and the broad language of the regulation

Much of residential construction involves work where silica exposure is not very high.

But many workers at some time perform a task involving dust that could contain some silica.

Difficult to impossible for builders or remodelers to predict.

Broad language of the regulation thus implies substantial costs of assessment and record keeping for many workers.

The PEA ignores these complications, narrowly capturing only a few of the costs.

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The PEA's narrow focus

Very common construction tasks are potential sources of exposure:
e.g., drilling, sawing, sweeping

But PEA narrowly maps tasks onto a limited set of OES occupations and NAICS industries

For example, no costs are estimated for

- Flooring installers
- Electricians
- Plumbers

Neglects or underestimates aspects of home building that don't correspond directly to one of the occupations or industries

- Kitchen cabinets & countertops
- Siding
- Final clean up

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Construction Occupations I

Orange Highlight = Occupation at Risk in the PEA

Code	Occupation Title	May '14 Employment	PEA pct at risk
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	467,130	0.0%
47-2011	Boilermakers	15,950	
47-2021	Brickmasons and Blockmasons	58,730	22.5%
47-2022	Stonemasons	10,410	20.0%
47-2031	Carpenters	580,570	1.0%
47-2041	Carpet Installers	24,640	
47-2042	Floor Layers, Except Carpet, Wood, and Hard Tiles	10,020	
47-2043	Floor Sanders and Finishers	4,200	
47-2044	Tile and Marble Setters	30,090	
47-2051	Cement Masons and Concrete Finishers	141,910	7.5%
47-2053	Terrazzo Workers and Finishers	3,220	
47-2061	Construction Laborers	824,970	3.0%
47-2071	Paving, Surfacing, and Tamping Equipment Operators	55,720	5.0%
47-2072	Pile-Driver Operators	3,620	
47-2073	Operating Engineers and Other Construction Equipment Operators	340,950	75.0%
47-2081	Drywall and Ceiling Tile Installers	79,950	25.0%

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Construction Occupations II

Orange Highlight = Occupation at Risk in the PEA

Code	Occupation Title	May '14 Employment	PEA pct at risk
47-2082	Tapers	16,120	25.0%
47-2111	Electricians	542,680	
47-2121	Glaziers	44,050	
47-2131	Insulation Workers, Floor, Ceiling, and Wall	23,850	
47-2132	Insulation Workers, Mechanical	27,740	
47-2141	Painters, Construction and Maintenance	192,890	
47-2142	Paperhangers	3,460	
47-2151	Pipelayers	41,080	
47-2152	Plumbers, Pipefitters, and Steamfitters	351,380	
47-2161	Plasterers and Stucco Masons	20,600	
47-2171	Reinforcing Iron and Rebar Workers	17,280	
47-2181	Roofers	99,060	
47-2211	Sheet Metal Workers	134,110	
47-2221	Structural Iron and Steel Workers	57,480	
47-2231	Solar Photovoltaic Installers	4,130	
47-3011	Helpers--Brickmasons, Blockmasons, Stonemasons, and Tile and Marble Setters	24,280	22.5%

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Construction Occupations III

Orange Highlight = Occupation at Risk in the PEA

Code	Occupation Title	May '14 Employment	PEA pct at risk
47-3012	Helpers--Carpenters	37,400	1.0%
47-3013	Helpers--Electricians	63,660	
47-3014	Helpers--Painters, Paperhangers, Plasterers, and Stucco Masons	11,640	
47-3015	Helpers--Pipelayers, Plumbers, Pipefitters, and Steamfitters	47,160	
47-3016	Helpers--Roofers	13,130	
47-3019	Helpers, Construction Trades, All Other	19,050	
47-4011	Construction and Building Inspectors	87,620	
47-4021	Elevator Installers and Repairers	21,270	
47-4031	Fence Erectors	19,960	
47-4041	Hazardous Materials Removal Workers	40,290	
47-4051	Highway Maintenance Workers	139,070	7.5%
47-4061	Rail-Track Laying and Maintenance Equipment Operators	15,590	
47-4071	Septic Tank Servicers and Sewer Pipe Cleaners	24,030	
47-4091	Segmental Pavers	1,110	
47-4099	Construction and Related Workers, All Other	30,810	

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Special questions on the latest survey for the NAHB/Wells Fargo Housing Market Index (HMI).

Survey of single-family builders used to generate the NAHB/Wells Fargo HMI. Often includes a set of “special” questions on a topic of current interest.

Special questions for March 2014:

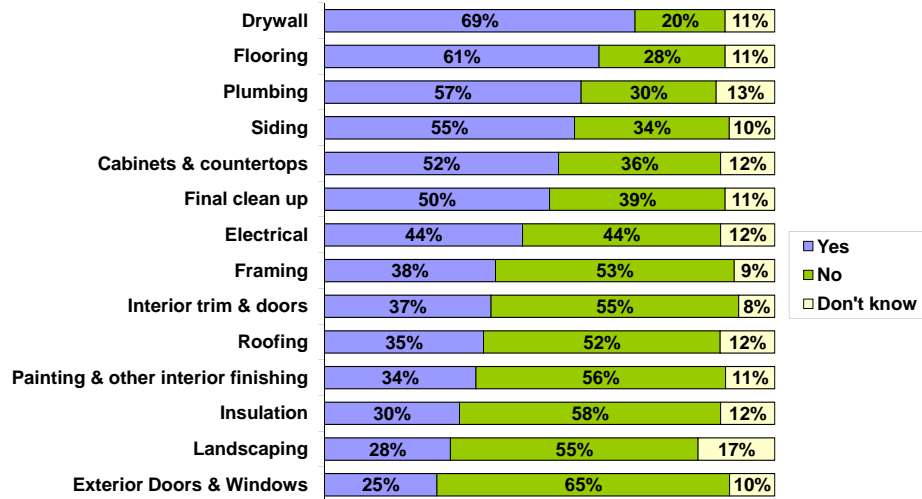
Do any of your employee/subcontractor crews ever saw or drill into materials other than wood or metal in the course of their work, or sweep floors covered in something other than pure sawdust, while working on the following components of a home?

While working on the following components of a home, do any of your employee/subcontractor crews ever work in the same vicinity as another crew while the other crew is drilling or sawing into materials other than wood or metal, or sweeping something other than pure sawdust?

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Do builders' employee/subs saw, drill or sweep something other than wood or metal while working on home components?

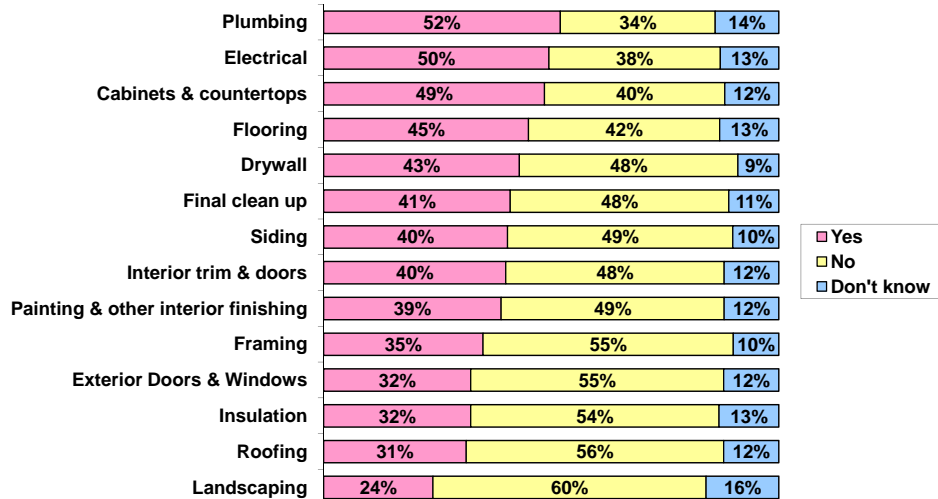


Source: NAHB Housing Market Index Survey: March 2014,
Based on 203 Responses

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Do builders' employee/subs work in the same vicinity as anyone else sawing, drilling sweeping these materials?

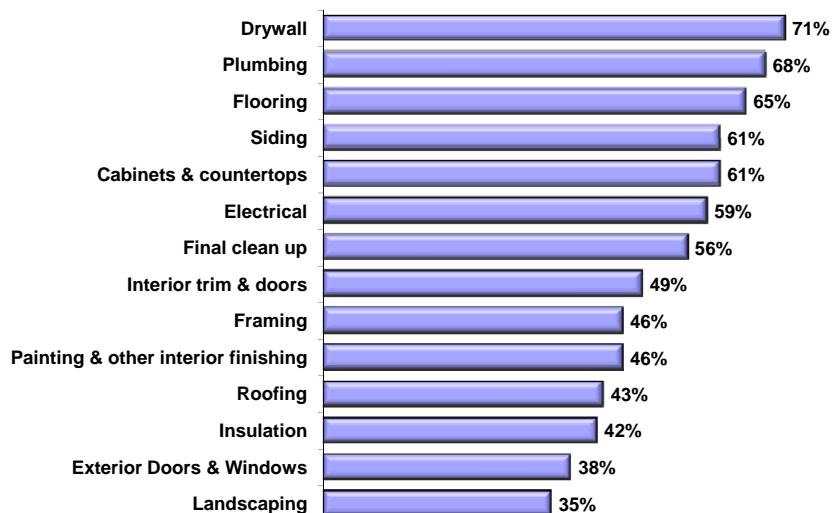


Source: NAHB Housing Market Index Survey: March 2014,
Based on 203 Responses

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Employees/subs who either saw/drill/sweep non-wood/metal or work near someone doing so while working on home components



Source: NAHB Housing Market Index Survey: March 2014,
Based on 203 Responses

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Mismatch between PEA's narrow focus and the broad language of the regulation

The PEA contains no explicit costs for developing and maintaining new record keeping systems.

But the regulatory language is broad and extensive:

The employer shall maintain an accurate record of all exposure measurement results used or relied on to characterize employee exposure ...

(A) The date of measurement for each sample taken; (B) The operation monitored; (C) Sampling and analytical methods used; (D) Number, duration, and results of samples taken; (E) Identity of the laboratory that performed the analysis; (F) Type of personal protective equipment, such as respirators, worn by the employees monitored; and (G) Name, social security number, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored

And, for tracking materials worked on:

A) The crystalline silica-containing material in question; (B) The source of the objective data; (C) The testing protocol and results of testing; (D) A description of the process, operation, or activity and how the data support the assessment; and (E) Other data relevant to the process, operation, activity, material, or employee exposures.

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Profit Rates and Revenue from an Unrepresentative Period

OSHA considers an industry threatened only if costs exceed 1% of revenue, or 10% of profit.

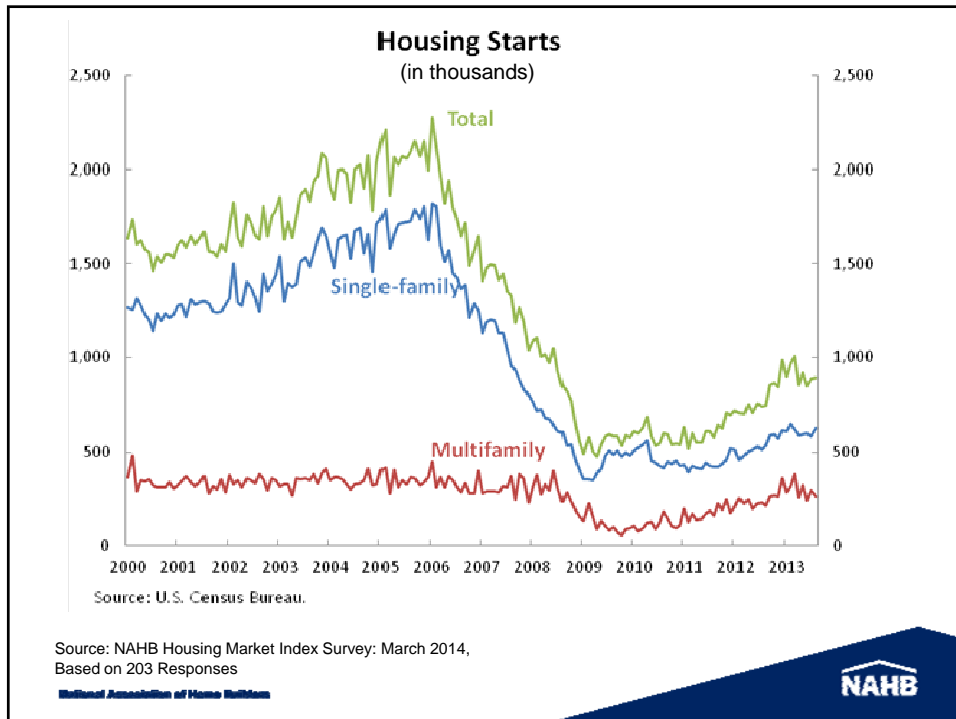
The PEA uses revenue from 2006 and looks at variation in profit rates over the seven-year period 2000-2006.

But this uses data from an unusually strong period, and ignores the historic downturn that followed.

in 2000-2006, housing starts were always above 1.5 million (the long-run historical average), and above 1.8 million for the last four of those years.

In contrast, 2008-2013 were the six worst years for housing starts since World War II.

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A decorative graphic at the bottom of the page depicts a stylized house roof. It consists of a solid dark blue triangular base on the left, with two lines extending from its top edge towards the right. The upper line is blue and the lower line is red, creating a layered effect.

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