




REGULATORY CHANGES FOR DEALING WITH HAZARDOUS BUILDING MATERIALS

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ARCHITECT'S AND DESIGN PROFESSIONAL'S HIDDEN LIABILITY: HAZARDOUS MATERIALS IN CONSTRUCTION

A brief discussion of hidden hazardous materials liability carried by Architects and other Design Professionals on construction, renovation and demolition projects.

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President - Lead and Environmental Hazards Association (LEHA)
 Former Director of Training - Asbestos and Lead at UC Berkeley's Center for Environmental and Occupational Health (UCB COEH)
 Founding Executive Board Member - Association of Northern California Environmental Consultants (ANCEC)

1

If it is legal, it is safe.

1. True
 ✓ 2. False



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2

If it is safe, it is legal.

1. True
 ✓ 2. False



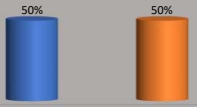
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When Haz-Mat work is conducted legally and safely, the risk is eliminated.



1. True
 ✓ 2. False



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FIRST - SOMETHING THAT MUST BE UNDERSTOOD BY ALL:

Hazardous Materials Remediation Is Not Construction Work, It Is Haz-Mat Work!

The Liability Is Completely Different and You Must Protect Yourself Differently

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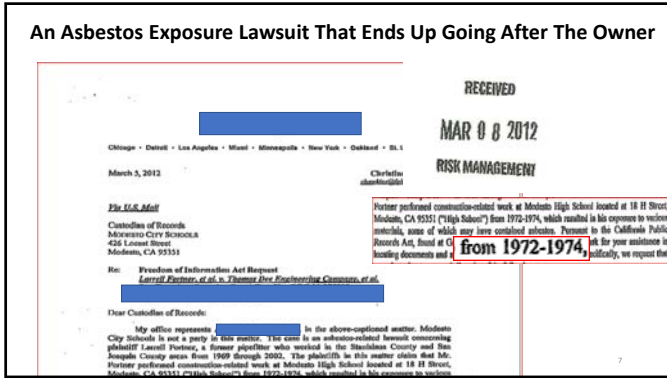
So, A Plumber Crawls Into The Basement During A High School Renovation Project And . . .
 (it would be nice if this were a joke...)

Pulls pipewrap off of hot water pipes - leaving the debris on the basement floor

And nothing happens

For a while . . .

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What is going on with this lawsuit? - Important things to think about!

What Are They Asking For?

- Documents: Documents and records relating to repair, maintenance, demolition, new construction, and addition work performed or to be performed at the High School between 1970 and 1975 (i.e. bids, contracts, work orders, invoices, documents identifying building and construction materials, including asbestos materials, and documents identifying contractors, suppliers and of products and materials);
- Documents: Blueprints, construction drawings, architectural drawings, and building plans for the High School from 1970 to 1975 relating to new construction, remodel, and/or addition work;
- Documents: Any asbestos abatement work that took place at the High School from 1970 on, and laboratory test results regarding the materials tested positive for asbestos and locations at the High School where such materials tested positive;
- Documents: Documents relating to safety precautions taken at the High School between 1970 and 1975 regarding asbestos (i.e., safety manuals, brochures);
- Documents: Documents relating to safety meetings held at the High School and/or regarding the High School from 1970 to 1975 (i.e., meeting minutes or agendas);
- Documents: Documents pertaining to the Modesto City Schools' compliance with OSHA regulations;
- Documents: Documents pertaining to the Modesto City Schools' original asbestos inspection of Modesto High School, any subsequent asbestos-related activities and inspections, and asbestos management plan as required by the Environmental Protection Agency's Asbestos Hazard Emergency Response Act; and
- Documents: Documents pertaining to the Modesto City Schools' knowledge of the hazards associated with asbestos.

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What is going on with this request/lawsuit? Important things to think about!

Who is getting sued at this point?

The General Contractor – not the direct employer (because of worker's compensation insurance), nor the building owner (YET!)

Who is asking for the information from the Building Owner?

The General Contractor's Attorney, not the plumber's lawyer!

What is the General Contractor's Attorney looking for?

A Co-defendant!
 Will the District become a CO-Defendant?
Depends on the documentation!

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Okay – but that was before people started documenting things.

Documenting that the regulations were followed is sufficient to assure the remediation project was conducted correctly.

50% 1. True
 50% 2. False

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Documenting that the regulations were followed is **NOT** sufficient to assure the remediation project was conducted correctly.

- In the previous case (lawsuit) **no regulatory violations took place** – yet the plumber ended up developing an asbestos related disease.
- Just because it is legal, does not mean it is safe.
- The entire project team is responsible for assuring a project is conducted **SAFELY – not just legally!**

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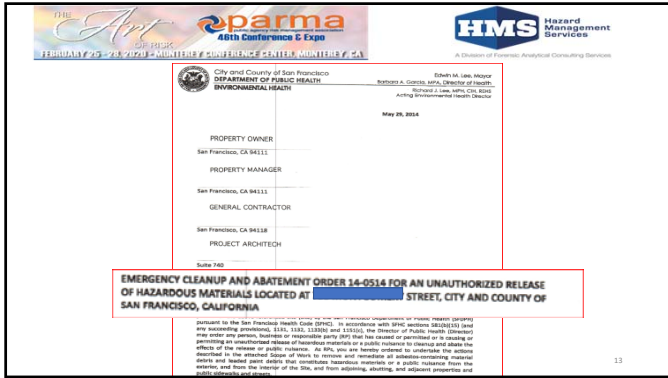
Each Contractor, Consultant, and Project Management Team Member On A Project, **Including the Architect**, Is Liable If The Haz-Mat Contractor Screws Up

50% 1. True
 50% 2. False

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As long as you do not tell a Haz-Mat remediation contractor "how" to do his job – you are not regulatorily responsible/liable for the work they do.

50% 1. True – you never tell a contractor "how" to do his job!

50% 2. False – that would leave you exposed to major liability

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1	2	3	4	5	6	7	8	9	0
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6	6	6	6	6	6	6	6	6	6
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A Building Owner Hires A Construction Manager To Assure A Renovation Project Goes Smoothly.

The Construction Manager Hires A Contractor To Conduct The Renovation Work.

The Contractor Starts Demolition And Trouble Soon Follows!

In August 2000, Cheng, Chow and Chu hired Sincere Construction to remove regulated asbestos-containing materials such as acoustic ceiling, tiles, linoleum, insulation, fire-proofing, and stucco from the former Hayward Chiropractic College located on Maple Court and Main Street in Hayward. Timothy Chu Construction Consulting Services was hired to oversee the work. Ultimately, more than 31,000 square feet of asbestos-containing material was removed from the building.

In September 2000, Bay Area Air Quality Management District investigators inspected the facility and saw workers using wheelbarrows to dump dry construction debris in open containers, creating clouds of dust and leaving wheelbarrow tracks. Sampling showed the debris was friable asbestos.

RPA and Bay Area Air District investigators uncovered numerous asbestos emission and disposal violations in the building.

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The Building Owner May Be Least Knowledgeable Concerning Applicable Regulations and Thought He'd Protected Himself By A Hiring A Construction Manager

The Construction Manager Should At Least Be Aware of Local, State and Federal Rules That Apply to Projects They Manage – Tired To Protect Himself By Hiring A Contractor

The Contractor Should Be The Most Knowledgeable And Not Only Be Aware, But Understand The Regulations That Apply To The Work They Do!

The construction company, Sincere Construction, is paying a penalty of **\$1,500**.

The construction consultant, Timothy Chu Construction Consulting Services, is paying a penalty of **\$20,000**.

The building owner is paying a penalty of **\$149,000**.

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So - What's Up With Lead

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Lead-Based Paints Are Regulated By The EPA But Non-Lead-Based Paints Area Not. That Means Non-Lead-Based Paints Are Safe.

1. True

2. False

3. It Depends on how much lead is in the paint

33% True, 33% False, 33% It Depends...

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The level of lead in a paint or coating that determines whether it is lead-based or not was based on health concerns.

50% 1. True
50% 2. False

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Paint That Contains Lead Is No Longer Available At Retail Outlets

50% 1. True
50% 2. False

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Lead In Paint

- 1978 – LBP is defined as 5000 ppm, 0.5% by weight or 1.0 mg/cm²
 - This was based on the accuracy of an XRF in 1978 – not on health issues
 - Plus lead in paints sold to the public was limited to no more than 600 ppm
- 2009 CPSC reduces the amount of lead in paints sold to the public to no more than 90 ppm – this is the level available to this day.

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A Little Lead Can Be In Today's Paint But: **Lead-Based Paint** Has Been Banned From All New Construction And Renovation Work In The USA.

50% 1. True
50% 2. False

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Lead Is The Worst Thing Ever Put Into Paint.

50% 1. True
50% 2. False

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Why the concern for lead, but not for:

Arsenic	Barium
Beryllium	Cadmium
Creosote	Cyanide
Magnesium	Mercury
PCBs	Zinc
Silica	Asbestos

And, and, and....

- When you think about it – can you name any paint that is not harmful to swallow!
- And yet, we test paint for lead and if low levels are found, most (but not all) regulations go away,
- if **no** lead is found, we basically do not concern ourselves with any of these other materials that are often found in paints.
- Those materials highlighted in yellow – all have regulations that were issued or revised in the past couple three years.

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- Paint manufacturers recently lost a lawsuit to 10 Cities and Counties in CA because they advertised that Lead-Based Paint made the interior of homes safer.
- Today, latex paint is being marketed/sold as a safe alternative to lead-based paint. However, to my knowledge, today's latex paints are allowed to contain up to 300 ppm mercury in interior paints and 3000 ppm in exterior paints.
- I am not a Doctor – but that does not sound all that safe to me.
- As a Risk Manager – knowing that virtually all paints are potentially hazardous, how would you suggest your organization or clients best protect their future liability associated with exposures to paint?

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I Tell My Clients That They Should Treat All Paints As If They Contain Lead

This protects both their health and liability
(Owners of hazardous materials are liable if/when others are exposed to them)

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The EPA's Renovation, Repair, Painting Rule for lead.

New Enforcement Styles

1. Go After Owners That Hire Non-RRP contractors
2. Site Contractors that bid RRP projects without being RRP certified

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With Lead – What Is Cal/OSHA Going To Do?

- Cal/OSHA is in the process of revising 8 CCR 1532.1 and 5198
(They have been at it for about 8 years now – not quite as long as the paint manufacturer's lawsuit – but far longer than it should take!)
- **How will they revise 1532.1 AND 5198?**

Cal/OSHA Is Going to Reduce the PEL and Action Levels
These are the biggest of the changes – but there are numerous other changes that will affect every contractor and maintenance crew out there! (Medical Removal, Lunch Area Wipes, Revised Trigger Tasks, etc.)

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NEW LEAD RULES RECENTLY IMPLEMENTED AND ON THEIR WAY!

AB 35 has just this month made blood lead levels above 20 micrograms of lead in a deciliter of blood (20 ug/dl) an issue for every contractor in the construction world and every maintenance worker in any type of facility to be concerned with.



SB 83 (Section 12) Requires Cal/OSHA to “implement(?)” the remaining changes that Cal/OSHA has been working on for the last 8 years this coming September 30th

I advise contractors (and others exposed to lead during their job) to do air sampling before these changes go into effect.

This gives them time to change their processes if they cannot stay below 2 ug/m3 without triggering the Action Level requirements for lead.
(Training, regular Blood Testing and Increased Air Sampling)

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A symptom of lead poisoning is an overall sense of confusion – get ready for a little lead poisoning:

2017 – HUD Lowered lead in dust hazards and post abatement clearances for floors from 40 ug/sf to 10 ug/sf.

As of 1/6/20 – The EPA lowered the lead hazards level from 40 ug/sf to 10 ug/sf – BUT LEFT POST ABATEMENT CLEARANCE LEVELS AT 40 ug/sf!

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California Has Until 2022 To Match or Exceed The EPA Numbers. . . But I Had To Ask. . .

From CDPH:
Updating regulations is a long process. It is likely that the federal levels will be in place prior to CDPH being able to update its current regulations. In that case, the more stringent standard should be followed.

Dang It!
These EPA levels now apply in CA in residential and child occupied buildings

William C. Hale, R.E.H.S., Chief
Lead Hazard Reduction Section
California Department of Public Health

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The belief that pre-1978 paint is something to worry about, but post 1978 paint is not, is totally wrong – and misleads many people, and regulatory agencies, into handling newer paints inappropriately.

100% 1. True

I am looking for 100% on this one!

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What's Up With Asbestos

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Use of Asbestos In Construction Has Been Banned in The United States



33% 1. True, from all construction materials

33% 2. True, except for a few construction materials

33% 3. False, except for a few construction materials

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And then, along came the **Asbestos SNUR!**

SNUR = Significant New Use Rule

Yes, you heard that correctly – significant new uses for asbestos!

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New Asbestos Portion of 8 CCR 1529 (Section S) to be added

This will address **Naturally Occurring Asbestos**

Most requirements to be issued in 1529 Section S are already required under APCD/AQMD, CARB, NESHAP, SWPPP, SWSLPP, and other construction site rules and regulations.

May be some new air sampling requirements, and some new PPE requirements for both the soil disturbance contractor and others on site during soil disturbance.

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For School Districts – a fibrous blast from the past!

The EPA has recently restarted enforcing the Asbestos Hazard Emergency Response Act!

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What's Up With Mold

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Toxic Black Mold Is The Worst Type Of Mold To Find In Your Building

25% 1. True

25% 2. False, it may be toxic but there are other molds more deadly



25% 3. There is no such thing as toxic mold.

25% 4. Only if you touch or eat it.

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COPIED FROM THE CDC'S WEBSITE:
TOXIC MOLD

Question:
I heard about "toxic molds" that grow in homes and other buildings. Should I be concerned about a serious health risk to me and my family?



Answer:
The term "toxic mold" is not accurate.

Hazards presented by molds that may produce mycotoxins should be considered the same as other common molds which can grow in your house.

There is always a little mold everywhere - in the air and on many surfaces.

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Typically, The Biggest Mistake With Mold?

- Not realizing it could be growing in asbestos and lead containing materials!
- You must document materials disturbed during mold remediation are both asbestos and lead free, regardless of the installation date of those materials! **Oh, and watch out for that silica exposure!**
- There may not be actual "Toxic Mold" – but that does not mean there is no such thing as "Toxic Mold Lawsuits!"

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SB 655 (A few years back):

Well, it started off as a good idea. . .

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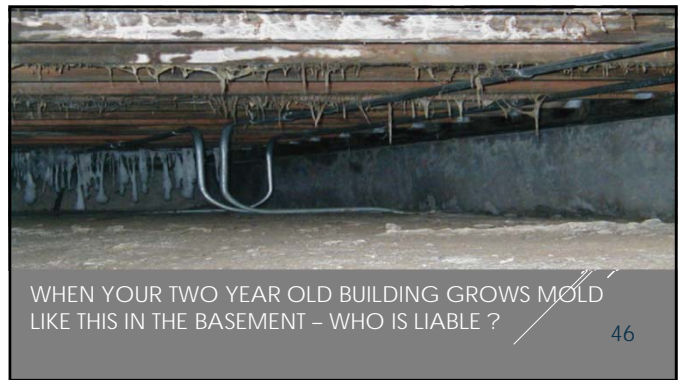
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So – Who Is Potentially Liable For The Mold Growth And Resulting Damage We Just Saw?

- 12% ✓ 1. Architect
- 12% ✓ 2. Contractor
- 12% ✓ 3. IOR
- 12% ✓ 4. DSA
- 12% ✓ 5. Mechanical Engineer
- 12% ✓ 6. Geo-Technical Consultant
- 12% ✓ 7. Any/All of the above
- 12% 8. None of the above

7

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eparma 48th Conference & Expo



HMS Hazard Management Services

What's Up With Silica

A quick note – as we hurtle recklessly towards the end of this session, we need to move a little faster – so no more clickers for a while

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Cal/OSHA Regulations
8 CCR 1532.3 for Construction and
8 CCR 5204 for General Industry

Requires contractors and others to have, and to evaluate the effectiveness of, a Silica Exposure Plan



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Only way, I can think of to evaluate the effectiveness of a control plan designed to protect you from a microscopic particulate?

Air Samples!

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It sounds like air samples are unavoidable – but some people just never trust a consultant . . . So – let's ask Cal/OSHA:



Dear Cal/OSHA:

I am wondering if you can help me clarify some questions I receive when conducting training on employee requirements for disturbing silica containing materials. The most common questions I get on silica is about the annual review of the silica handling policies and requirements for air sampling.

In 1532.3 it states under section (c):
(c) Specified exposure control methods. (1) For each employee engaged in a task identified on Table 1, the employer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified for the task on Table 1, unless the employer assesses and limits the exposure of the employee to respirable crystalline silica in accordance with subsection (d).

This portion of 1532.3's requirements has many people believing that if they implement the engineering controls, follow the work practice requirements and use the proper respirator (which is often none) listed in Table 1, that they do not need to do any air sampling. I do not agree with that position, as I explain below, but your opinion is more important than mine.

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CAL/OSHA's RESPONSE:



Dear Mr. Sharp:

How stupid can you be?

Love,

Cal/OSHA.

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CAL/OSHA's RESPONSE:

As usual your industrial hygiene instincts are top notch. However, federal OSHA does not agree with you — perhaps in part this is a result of the negotiating art around rulemaking. I explain below, but don't let the bare minimum of what's required in the regulation prevent you from giving advice to contractors to the effect that more effective application of the art of industrial hygiene requires quantitative exposure assessments beyond the limitations of the regulation—from IH theory, exposure assessment is always a prudent check on effectiveness of procedures limiting chemical exposures.

During the long federal silica rulemaking process, federal OSHA had long exchanges with stakeholders on exactly the issues you raise. In response to stakeholders' views on exposure assessment for Table 1 tasks, federal OSHA changed Table 1 tasks. In the end, stakeholders such as NIOSH, the AIHA, ASSE, and assorted unions endorsed the approach of relying on Table 1 w/o additional monitoring. Said a safety representative of the Laborer's union, the Table 1 approach "not only makes compliance . . . easier to determine, enforce, and teach, it also assures acceptable levels of healthfulness."

Cal/OSHA sent me a copy of the complete Federal Regulation – including the Preamble, it is 1772 pages long . . . And requires the vocabulary of a PHD to understand . . .

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Cal/OSHA Continues:

To me, these examples (and the overall answer to your question) mean that the silica exposure control plan addressing some Table 1 tasks will have to be very detailed and specific.

It may have to include checklists and tool manufacturers' specifications for proper use and checklists to document the implementation of these specifications.

If I was doing a Cal/OSHA inspection review of such a silica exposure control plan addressing Table 1 tasks, I would look for inclusion of such specific behaviors, repair frequencies, checklists and the like and I would need to see documentation that these oversight functions are indeed being carried out on a daily basis. Without all of that, I'd likely find a violation.

So you should tell your students that following Table 1 may obviate the need for industrial hygiene exposure monitoring, following Table 1 is NOT A TRIVIAL TASK. Daily attention to detail and good documentation is necessary for the workers to be successfully protected using Table 1.





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Do We Really Want To Know What's Up With PCBs?

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Anywhere you may run into PCBs, the EPA is going to require you to handle them in some fashion.

If you work in the San Francisco Bay Area – run and hide as fast as you can! The situation there is a complete mess, unless you live in City or County of SF – then you are mostly fine (just have to follow the EPA stuff).

BASMAA guidelines that were supposed to protect the SF Bay from PCB contamination, when followed can add tens of thousands of dollars to a Building Inspection, and millions of dollars to a building demo!

And, at times, require activities more likely to release PCBs than traditional demolition activities!!!

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PCBs – Materials the EPA is interested in – BASMAA too, for the most part.

Material Class	Building Material
Air system	Air handling system
Caulk/sealant/tape	Backer rod, caulking, grout, adhesives/mastic, adhesive tape, polyurethane foam, fillers
Coatings	Air-bulking compounds, fire retardant coatings, waterproofing compounds, surface coating, coal-tar enamel coating, glazing
Concrete/stone	Concrete, brick/mortar/concrete block, stone, asphalt
Electrical	Insulating material in electrical cable, plastics/plasticizers, electrical wiring
External nonstructural surface	Roofing/siding material
Gaskets/Rubber	Rubber gasket, wool felt gasket, foam rubber
Insulation	Thermal insulation, cloth/paper insulating material, foam rubber insulation, fiberglass insulation
Internal nonstructural surface	Cove base, flooring and floor wash/sealant, door frame, carpet
Light ballasts	Light ballast
Metal surfaces	Metal surfaces in contact with caulk/sealant
Expansive fluids	Hydraulic fluid/cutting oil/hydraulic fluid
Paints/pigment	Paint
Soil/dust	Soils/sediments/sand in close contact with building
Wood	Wood

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What's Up With Valley Fever?

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Valley Fever

Assembly Bill 203
Valley Fever, a non-contagious (sure, but isn't that what they said about the corona virus?) affliction caused by inhalation of a microscopic fungus known as *Coccidioides immitis* which lives in the top soil of desert areas of Arizona, California, and Nevada (and it is spreading!).

VALLEY FEVER
Coccidioides immitis or "coot"

Have you had a cough, fever, or painful breathing for more than two weeks?
ASK YOUR DOCTOR ABOUT VALLEY FEVER

Valley Fever is caused by a fungus that lives in soil or dirt in some areas of California.
You can get it by breathing in dust where the fungus grows.



ANYONE can get Valley Fever. Even healthy people and pets. People who spend time in dirt or dusty areas where the Valley Fever fungus grows may be at more risk of getting infected.

Some people have more risk of getting very sick if infected and they may need to be hospitalized, such as:

- Adults 60 years and up
- Pregnant women
- People with weak immune systems
- Diabetics
- African Americans, Filipinos, Hispanics

For more information, visit <http://valleyfever.org>

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Valley Fever Training

- Required training for all contractors, and employers of anyone working in soil, in central and southern CA to have training by 5/1/20 and annually thereafter.
- Valley Fever has had lawsuits filed over exposure to workers (worker compensation claims) and others exposed to the soils disturbed on construction projects).

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Per AB 203 - Valley Fever Occurs In

Counties where Valley Fever is highly endemic, **including, but not limited to**, the Counties of:

Fresno, **Kern**, Kings, Madera, Merced,
Monterey, San Joaquin, San Luis Obispo,
 Santa Barbara, Tulare, and Ventura

Highly Endemic means that the annual incidence rate of Valley Fever is greater than **20 cases per 100,000** persons per year.



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WILDFIRE SMOKE

- AQI of 150 PM2.5 requires N95 respirators to be issued by employers (8 CCR 5141.1) Must offer use of N95 respirators.
- AQI of 500 PM2.5 requires workers actually use P100 (HEPA) filtered respirators per 8 CCR 5144.



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New Style of Enforcement

One regulatory agency reporting to another.

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Is there time left to discuss these?

Lead and Copper Rule – I am so confused!
 There is both a Federal Lead and Copper Rule and a California Lead and Copper Rule – they change often enough that it is difficult to determine which is more stringent!

Water quality rules for drinking water and **storm water run-off**.


I can casually discuss these, but if you want great knowledge and specific details – I need to bring in others I work with, who know more than me!

Yeah, yeah, yeah – enough already – who won the game?

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Best Looking People In the Room . . .

Keypad ID	Score



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