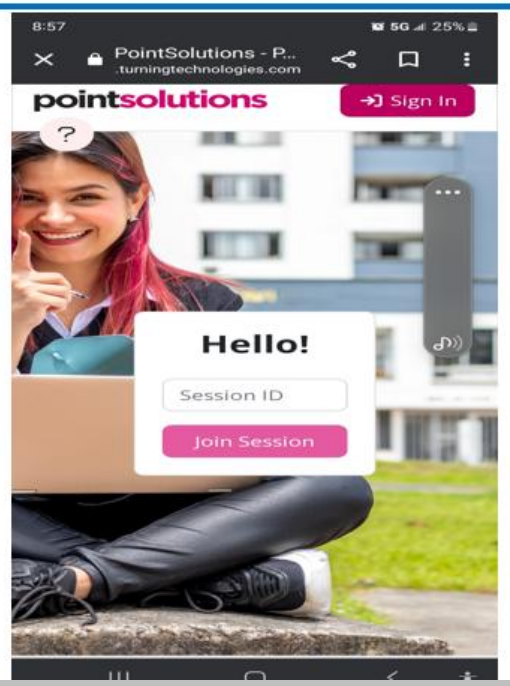
Lead And Healthy Homes
Kansas City, MO
August 4 – 6, 2025

1. On computer or cell phone

Go To www.ttpoll.com

"pointsolutions" website will come up



2. Enter

"janus1"

as the Session ID

Then hit "Join Session"

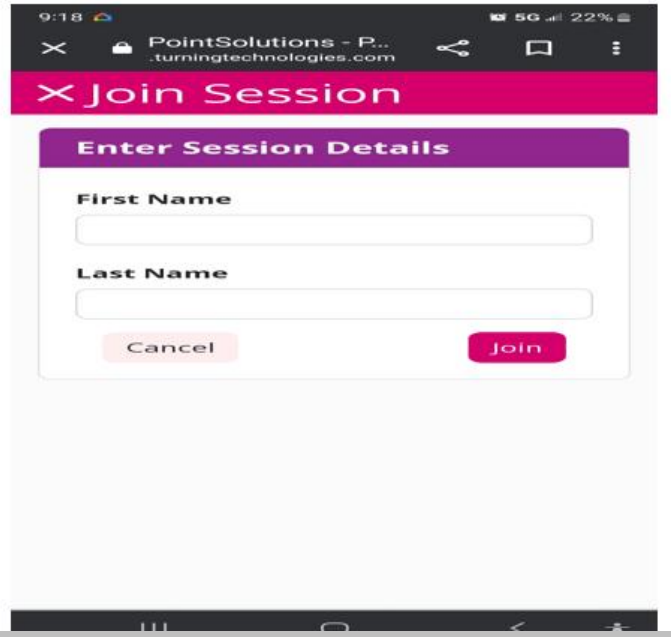
3. Enter

Your Name

(Does Not have To Be Your Real Name!)

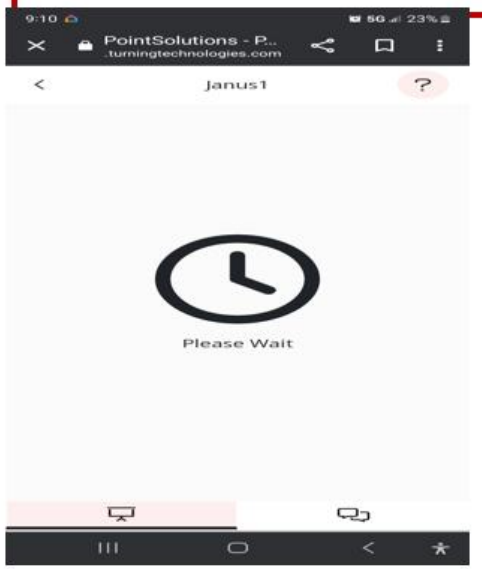
Just One You Are Willing to Admit To, When you Win a Fabulous Prize!

Then hit "Join"



4. You Are In!

Wait For The Game To Start!



Or you might see this entire slide.

If you are having trouble signing in with your phone – I have a few "Clickers" that can be borrowed!

Lead And Healthy Homes
Myths, Mysteries, and Mistakes

Rules, regulations, guidelines, and beliefs that can lead you astray.

Sometimes, you must pick between the lesser of two evils to get things done.

Lead is a healthy homes issue, so we'll talk about lead, along with as many healthy homes issues as we have time for.

Presented By Michael Sharp

Senior safety Officer, Janus Corporation

mikes@januscorp.com

Lead And Healthy Homes
Kansas City, MO
August 4 – 6, 2025

Mikes' Experience – 42 years in the industry

Janus Corporation
Senior Safety Officer

CERTIFICATIONS & REGISTRATIONS
Cal/OSHA Director of Training and Accredited Instructor
CDPH Director of Training and Certified Instructor
US EPA Director of Training and Certified Instructor
AHERA BI/MP, CS, PD
Cal/OSHA Certified Asbestos Consultant
CDPH Inspector/Risk Assessor, Project Manager, Supervisor
NIOSH 582

PROFESSIONAL EXPERIENCE
Janus Corporation 2021 to Present
Responsible for Janus Corporation IIPP policies and training.
Ensure Janus Corporation projects are conducted legally, safely, and efficiently.
Regulatory Agency Liaison – for upcoming regulations (Cal/OSHA, CDPH, and Federal EPA)

Hazard Management Services, Inc. - 1984 to 2018
Conducted abatement work for two years, then, when the asbestos consulting field was created by the EPA's AHERA Regulation, became an asbestos consultant. Since 1986, consulted on asbestos, lead, mold, and other hazards surveys, written project specifications, monitored, cleared, and documented remediation projects. Represented HMS, Inc. at conferences, regulatory agency meetings, and with industry organizations. Purchased HMS, Inc. and became President in 1999. Have been CEO and Director of Training since 2007.

As a former business owner, I have in-depth knowledge and experience in the oversight of areas such as health and safety compliance, workers' compensation, general liability, employment practices liability, principles of insurance, and data analysis Clients range in in size from a single School District to the State of California.

UC Berkeley Extension and Center for Occupational and Environmental Health - 1994 - 2017
Started as a guest instructor at the UC Berkeley Extension in 1994. Continued as a full instructor with the program when it moved from the UC Berkeley Extension to the UC Berkeley Center for Occupational and Environmental Health in the early 2000s.

Took over as Director of Training for Asbestos and Lead Courses at UC Berkeley's Center for Occupational and Environmental Health in 2015.

Forensic Analytical Consulting Services / Hazard Management Services Training (FACS/HMS) 2018 – 2021
Director of Training

Work with Regulatory Agencies and Politicians

Assisted California State Licensing Board with establishing the C-22 asbestos abatement contractor's trade license.

Coordinated efforts, and helped resolve disputes, between Cal/OSHA and Federal EPA, ultimately obtaining permission from US EPA for Cal/OSHA to approve Asbestos Hazard Emergency Response Act (AHERA) Accredited Training Providers in California.

Advised Cal/OSHA concerning proposed changes to the lead in construction (8 CCR 1532.1) and general industry (8 CCR 5198) standards. Changes to 1532.1 and 5198 set to go into effect on January 1, 2025.

2018 Conducted informative presentation on the upcoming lead regulation changes for California Department of Public Health's Lead Related Construction Department's "Train the Trainer" workshop.

2021 presented at CDPH's "Train the Trainer" workshop on the varied regulatory dust hazard and clearance levels within the lead industry within California and the on a federal basis.

Assisted with formulations of questions the Government Accountability Office (GAO) developed for industry professionals and the public when the GAO reviewed potential budget allocations for the office of Housing and Urban Development's (HUD's) potential new mandated lead risk assessments. I was also asked to respond to the finalized questions asked of industry professionals concerning cost effective approaches for conducting HUD lead risk assessments.

Worked with CA Senator Monning's legislative staff on bringing the Federal EPA's Lead Renovation Repair and Painting rule into California jurisdiction. This initial effort, ultimately, was unsuccessful but a current version of this (SB 1076) has passed the CA Senate and Congress is awaiting the Governor's signature.

Presented remotely on Lead Hazards for EPA's Nationwide In-House Employee Safety Training Brown Bag Lunch program.

Presented on "Regulatory Compliance" at EPA Region X's Renovation, Repair, and Painting "Train-The-Trainer" seminar for accredited RRP training providers.

EDUCATION
BA of Communications, California State University, Chico, 1988

Author
Lead Author of:
ARCHITECT'S AND DESIGN PROFESSIONAL'S HIDDEN LIABILITY: HAZARDOUS MATERIALS IN CONSTRUCTION Published by American Institute of Architects
PROFESSIONAL AFFILIATIONS
Lead and Environmental Hazards Association – Past President
Association of Northern California Environmental Consultants – Founding Executive Board Member
Member of California Healthy Housing Coalition
Member of National Center for Healthy Homes
Treasurer/Secretary – Environmental Information Association – Nor/Cal Chapter
PRESENTATIONS
Represented the United States at Japan's International Symposium on Asbestos, January 2020 Presented on the practice of conducting asbestos inspections and monitoring asbestos abatement projects.
Lead and Healthy Homes Conference – Presenter and Moderator
Lead Paint Regulations, Silica, Mold, Asbestos, Asthma, Healthy Homes, Hazardous Materials Legal Liability, HVAC, and other Issues:
Orlando, Florida, Virtual Conference 2020, 2021, 2022, Washington D.C., Los Angeles, California, New Orleans, Louisiana, Minneapolis, Minnesota, Downey, California, Indianapolis, Indiana
Albuquerque, New Mexico Saint Louis, Missouri
California/Nevada Water Environment Association – Transite Pipe, Soil Contamination, Hazardous Materials Risk and Liability Reduction
San Leandro, California, Santa Clara, California, Reno, Nevada, Las Vegas, Nevada
North American Hazardous Materials Management Association National Conference – Myths Concerning Lead Based/Containing Paint; Hidden Hazards to Haz-Waste Handlers and their Families.
Portland, Main 2019. Denver, Colorado 2020, Virtual Conference 2021

Public Agency Risk Management Association – Hidden Liability and Regulatory Changes Concerning Hazardous Materials
Monterey, California 2020, Virtual Conference 2021, Los Angeles, California 2022

Let's Go Through some Basic Issues

Good speakers (I am an instructor at heart) give you information and then ask you questions about the given information.

I have never been accused of being a good speaker/presenter/instructor!

I ask you questions first!

Then base our discussion on the answers received from the audience.

Please feel free to ask your own questions as we go.

Asking questions won't extend the session – and you'll get info you wanted, not just information I put together before I knew who all was in the class.

It is okay to disagree with what I say, as I will likely appear to conflict (or actually conflict) with what you have been taught in the past.

Feel free to challenge me on my information – though I do not have time to offer citations for the information behind my statements during the session, I can send that information to you:

Just e-mail me at mikes@januscorp.com

Many people rely on what they have always believed, what they have read recently, or what they have been taught by someone claiming to be an expert.

I try to rely on 42+ years of experience in the filed and "common sense."
(However, I don't have a lot of common sense, so that does not always work out for me…)

I am not a Scientist, Not an MD, Not a PhD, Not a Researcher, Not even a Scholar - However:

I have been in the Hazardous Materials Remediation Industry for over 40 years!

Fair Warning – I do not think like other people do! I respect science – sometimes, in my opinion, more than scientists do.

I am a college graduate (BA in Communications – Chico State 1988) – but I subscribe to this type of philosophy on life:

https://www.youtube.com/watch?v=kkPA7La8XvY

Before we get started – let me tell you a quick personal story!

How an eclipse can cause a Heathy Homes Issue:

In My Town, Animal Control Won't Come Out for Birds, Dogs, Cats or Racoons!
Pest Control Won't Respond After Hours – what do you do?
Play talk radio, open a jar of ammonia, and offer them a way out.
Hope they don't come back!

May 1st – 3:00 AM (as we are leaving for the airport for the New Hampshire LAHH Conference. Dang!)

After this presentation in New Hampshire – a Healthy Homes Expert suggested replacing the ammonia with peppermint oil…

Rules of the game:

One person at each table needs to do something for me – what is that?

Stay awake the entire time! (though you can rotate that person).

Blank Looks and Dumb Stares, after I ask a question, mean want?

You totally understand what I just said.

And then there is the TYPO game:

See a typo – call it out. You get the "Shark Pirate" until the next typo is called out. Last person to find a typo – gets to keep the Shark!

Improper Capitalization, and punctuation, do not count as typos for our game.

Let's Start At The Beginning For Lead

Not the beginning of allowable lead in dust levels, but rather where lead in dust actually comes from:

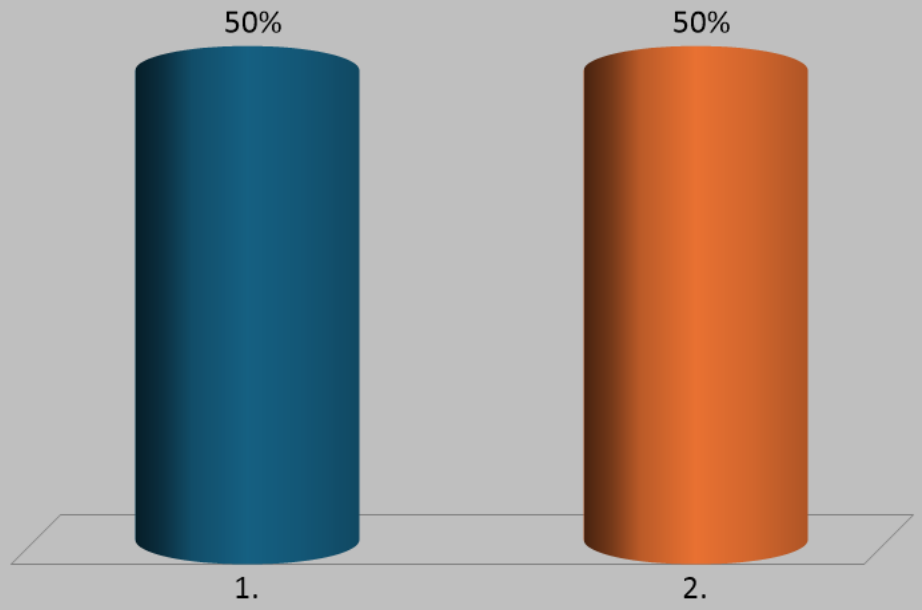
- Deteriorated paint in, or on, homes and child occupied buildings.
  - Paint chips falls to ground, gets ground into dust on floors, other surfaces and into soil.
  - Friction surfaces painted with lead containing paint
- Vinyl (almost all vinyl has lead in it, to this day).
- Soil
- Parents work clothes
- Airplane fuel

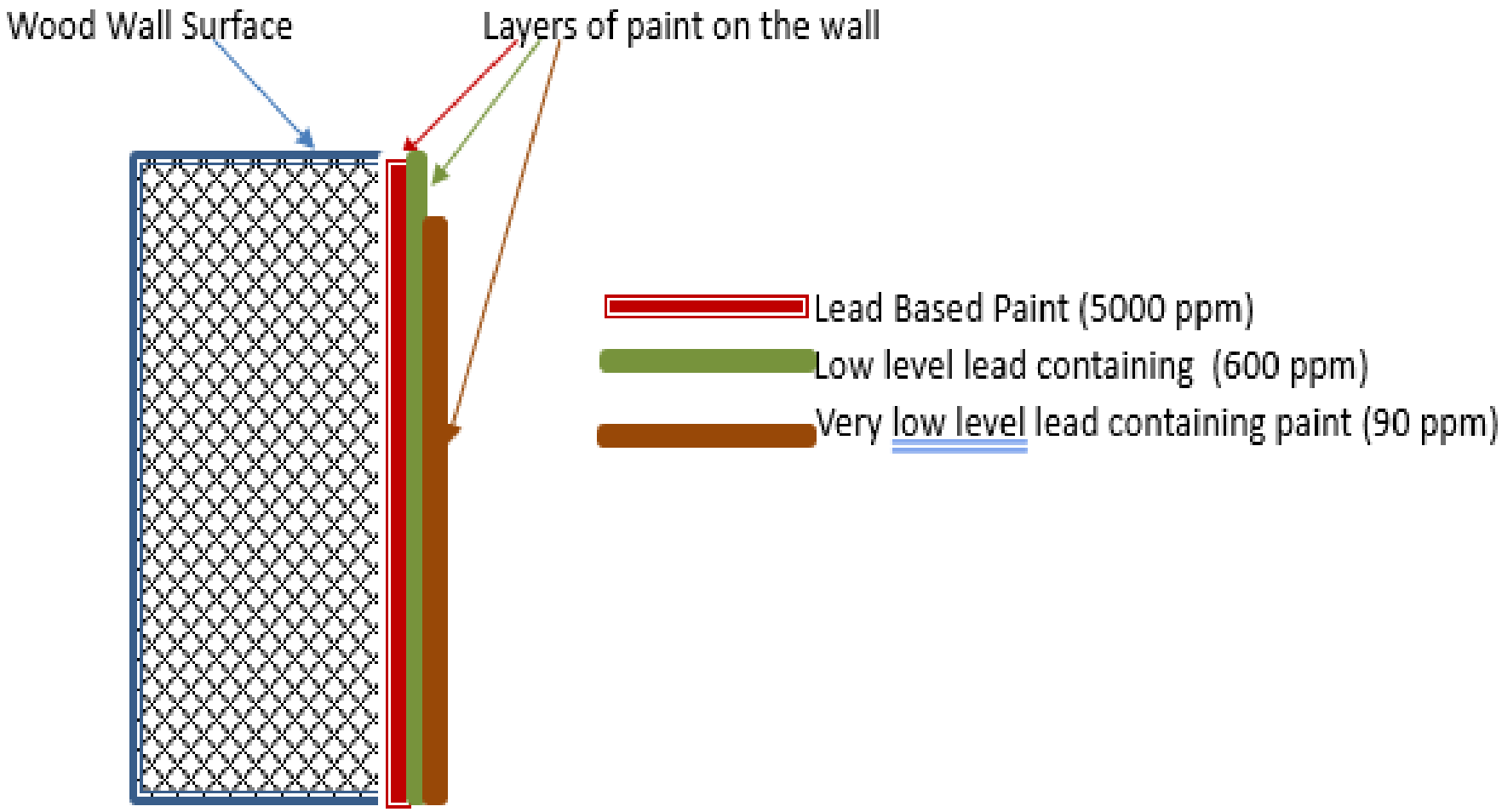
- Recasting bullets, reloading shotgun shells, cleaning guns after shooting.
- Stain Glass Artwork, Lead Fishing Sinkers, Car brake pads, Solder
- And many other sources

Which Type of Result You Want, When Testing Paint For Lead Content ("Percent By Weight" versis "Lead Per Area") Affects Whether You Find LBP or Not.

✓ 1. True

2. False

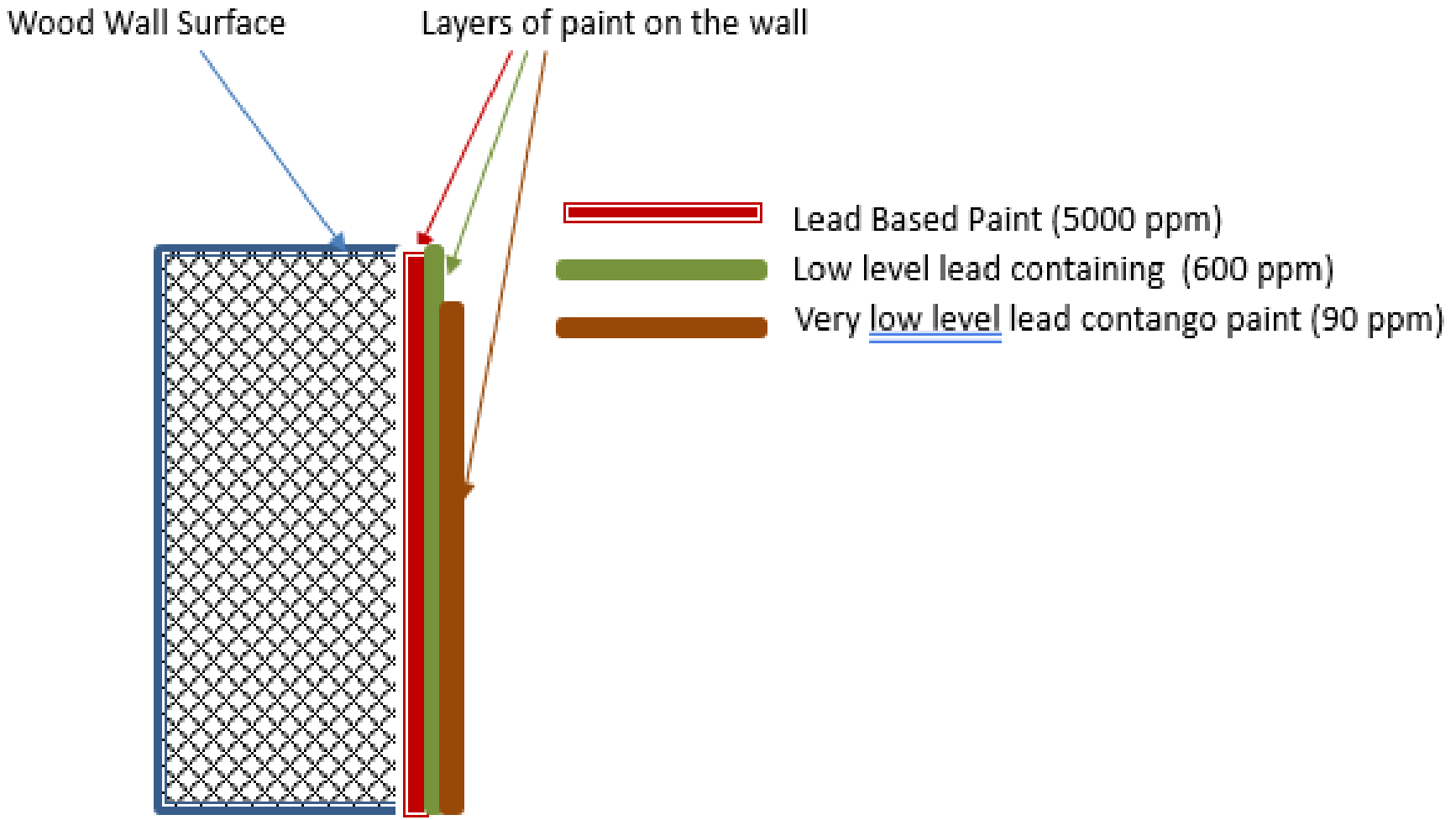




If we collect a paint chip sample that includes all three layers of paint (no substrate is collected with the paint) and ask for analysis by TTLC, Flame AA or simply ask for analysis for lead content, the results will use "ppm" or "percent by weight," as the reporting units.

This sample would almost never come back as LBP despite the fact that one layer of the paint is lead-based paint.

Use of an XRF would find LBP in this instance as well.



HUD recommends (but does not require) the use of measured paint chip samples as a means to avoid this "dilution of lead content" issue.

If we collect a paint chip sample and measuring the sample size, assuring we collect 100% of the paint from the measured area (substrate in this sample is acceptable as it will not affect results), the result of the analysis will be in milligrams of lead per square centimeter (lead per area).

This result will always come back at Lead-Based Paint levels.

How XRFs Find More LBP Than Actually Exists

If you have two layers of paint at 0.5 ug/cm2, and you use an XRF to test for paint (or use a measured paint chip sample) – you would find LBP despite the fact that none exists.

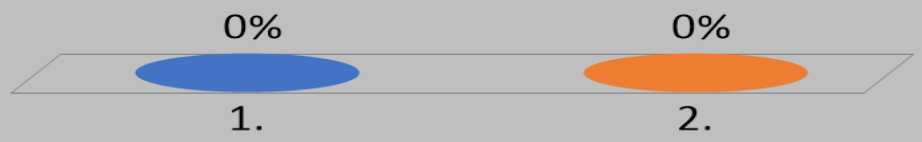
Using Flame AA, without measuring the sample, these two layers of paint would likely never come back as LBP.

<u>Disclaimer:</u>

(PPM of lead in these two layers of paint being below 5000 while containing 0.5 ug/m2 lead is based on both layers being the standard thickness and density paints)

When you put in new copper pipes – you want to use solder that is labeled as "lead free."

1. True
2. False ✓



On an XRF Report Table – "Negative" Means No Lead Was Found By the XRF

1. True
2. False ✓

JANUS CORPORATION
Hazmat Removal and Demolition
mikes@Januscorp.com

Problems With XRF Lead Result Charts

- **The issue with the first chart is that is has "positive" and "negative" results showing – this is often misinterpreted as meaning "Lead or No-Lead."**

	Sample Location	Component	Substrate	Color	Condition	xrf Result* (mg/cm2)	Lead-Based Paint
	UNIT G - EXTERIOR (Unit I per blue prints)						
	CLASSROOMS (continued)						
797	West Side - Upstairs at Classroom 22	Eve	Wood	Brown	F	2.4	Positive
798	Hazardous Materials Storage at SE End	Wall	Transite	Cream	F	0.2	Negative
799	Hazardous Materials Storage at SE End	Door	Metal	Cream	F	0.0	Negative
800	Hazardous Materials Storage at SE End	Eve	Wood	Cream	F	0.4	Negative

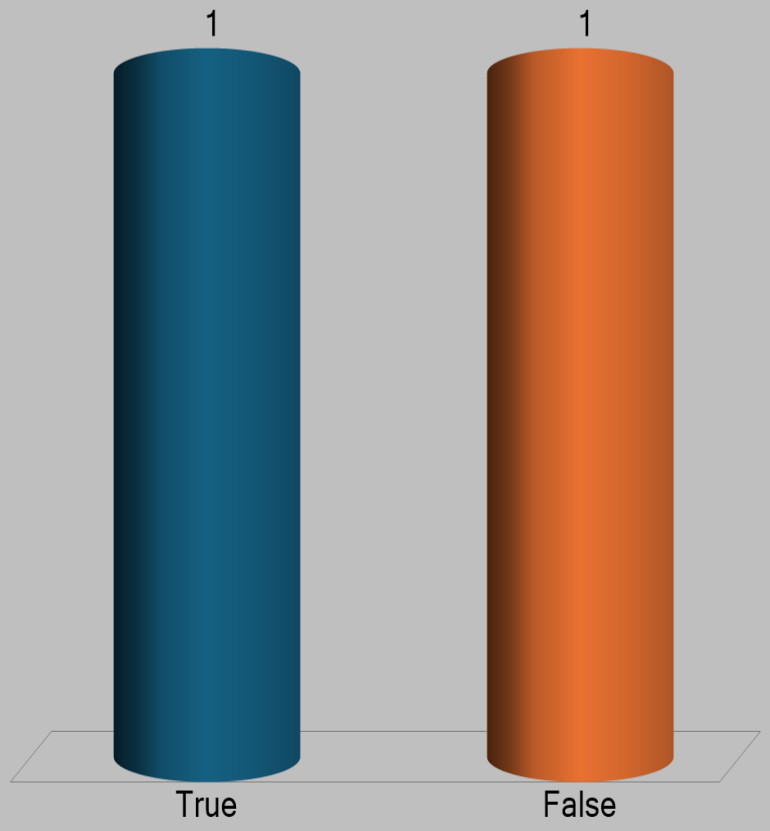
- **The second chart has that column removed – but still fails to explain that a 0.00 by XRF can be used to indicate there is no LBP present, but cannot be used to show that no lead is present in the tested paint/coating.**

Sample Location	Color	Substrate	Com ponent	Condition	XRF Result* (mg/cm²)	Comment
Interior						
Calibration					1.0	Within Range
Calibration					1.1	Within Range
Calibration					1.1	Within Range
Office/ Library Interior	White	Drywall	Wall	Intact	0.00	
Office/ Library Interior	Grey	Wood	Baseboard	Intact	0.00	
Office/ Library Interior	Grey	Wood	Door Frame	Intact	0.00	
Office/ Library Interior	Blue	Wood	Door	Intact	0.00	

OSHA Regulations apply to work conducted in single family homes.

✓**A. True**

B. False



There is an exception for sole proprietors, but if a single employee workes on, a project OSHA applies!

Which is a "testing combination" per HUD Guidelines?

1. Blue painted wood in bedroom
2. Blue painted wood windows
3. ✓ Blue and red painted wood bedroom windows
4. All above are testing combinations
5. None of the above are testing combinations
6. I have no idea what a testing combination is – I think this question is unfair! I came here to be taught this type this stuff, man. . . Just where do you get off asking a questlon like this!

0 0 0 0 0 0

1. 2. 3. 4. 5. 6.

Those Questions Were Just To Check The Knowledge Base In the Room

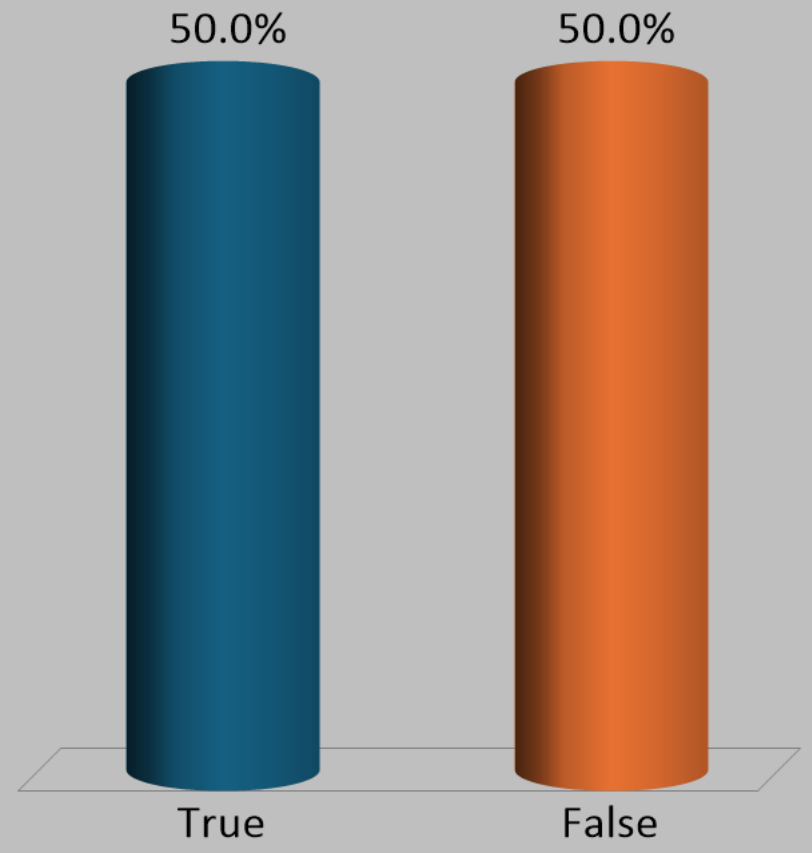
- Testing combinations are:
  - Room Equivalent
  - Building Component
  - Substrate

Different colors of paint on the same testing combination is not considered a separate paint history qer HUD Guidelines.

If something is done legally (per applicable regulations), it is done safely.

A. True

✓B. False



Respirator protection factors are not based on the workers health – they are based on a lab's ability to measure a contaminate, and the believed cost of compliance for workers to work at those levels.

When someone works at the PEL level inside their mask, they are working legally, but they are not necessarily working safely.

From Fed/OSHA:

“OSHA recognizes that many of its permissible exposure limits (PELs) are outdated and inadequate or ensuring protection of worker health.”

“Most of OSHA's PELs were issued shortly after adoption of the Occupational Safety and Health (OSH Act in 1970) and have not been updated since that time.”

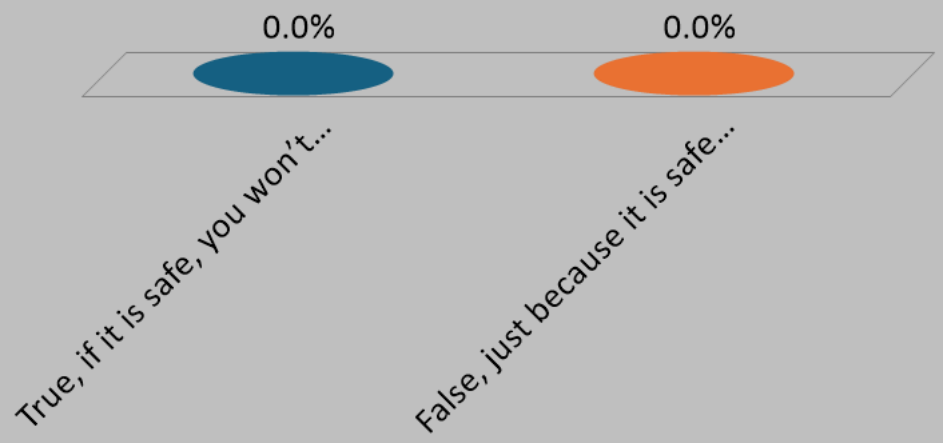
If something is done safely, it is done legally.

A. True, if it is safe, you won't get cited by regulatory agencies (or if you do get cited, you can fight it and win in court).

✓ B. False, just because it is safe, does not mean it is legal.

Work done by improperly certified, or Non-Certified Contractors or Non-Certified Workers (when certification is required) is not legal, no matter how safely it is conducted.

More common, is the requirement to use both HEPA Filtered Local Exhaust and Wet Methods – ether will protect you, if used properly,, but both are sometimes required.



The Misconception of Regulations

Most people believe that regulations are designed to protect people from hazards.

Even when the regulation claims to be designed to protect workers or others, this is often a myth.

By providing a false sense of security, the belief that following regulation makes things safe, often makes exposures to hazardous materials worse than they need to, or chould, be.

- **Never let the lack of a "study" convince you that a hazard does not exist.**

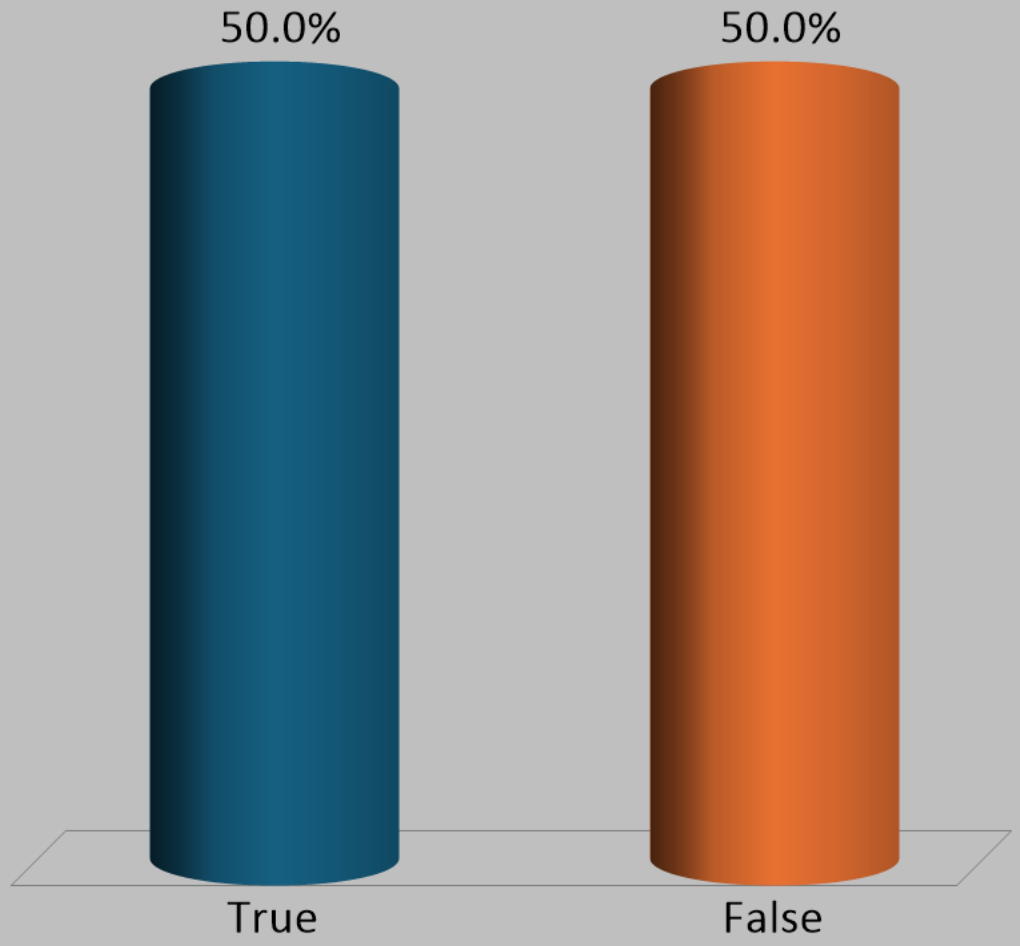
- **The statement, "There is no evidence that this condition causes harm" is neither good science nor allowed, any longer, as an argument by the EPA to ignore potential lead hazards.**

- **When there is no evidence of harm and no evidence that there is no harm, maybe we should error on the side of caution?**

Lead-based paint was banned from use in the United States in 1978.

A. True

✓ **B. False**



Then, Their Are Haz-Mat Regulations That Lead People Astray Paint Problems:

Lead-based paint was banned from use in residential and public buildings in 1978, but **LBP** is allowed for use in several applications to this day.

Note: Lead-based paint is still legally sold to the public if, rather than a house paint, the paint is considered an “art supply,” or it is for “Agricultural Use,” or one of several other applications.

Let’s change the subject.

We’ll come back to lead in a little bit (time permitting).

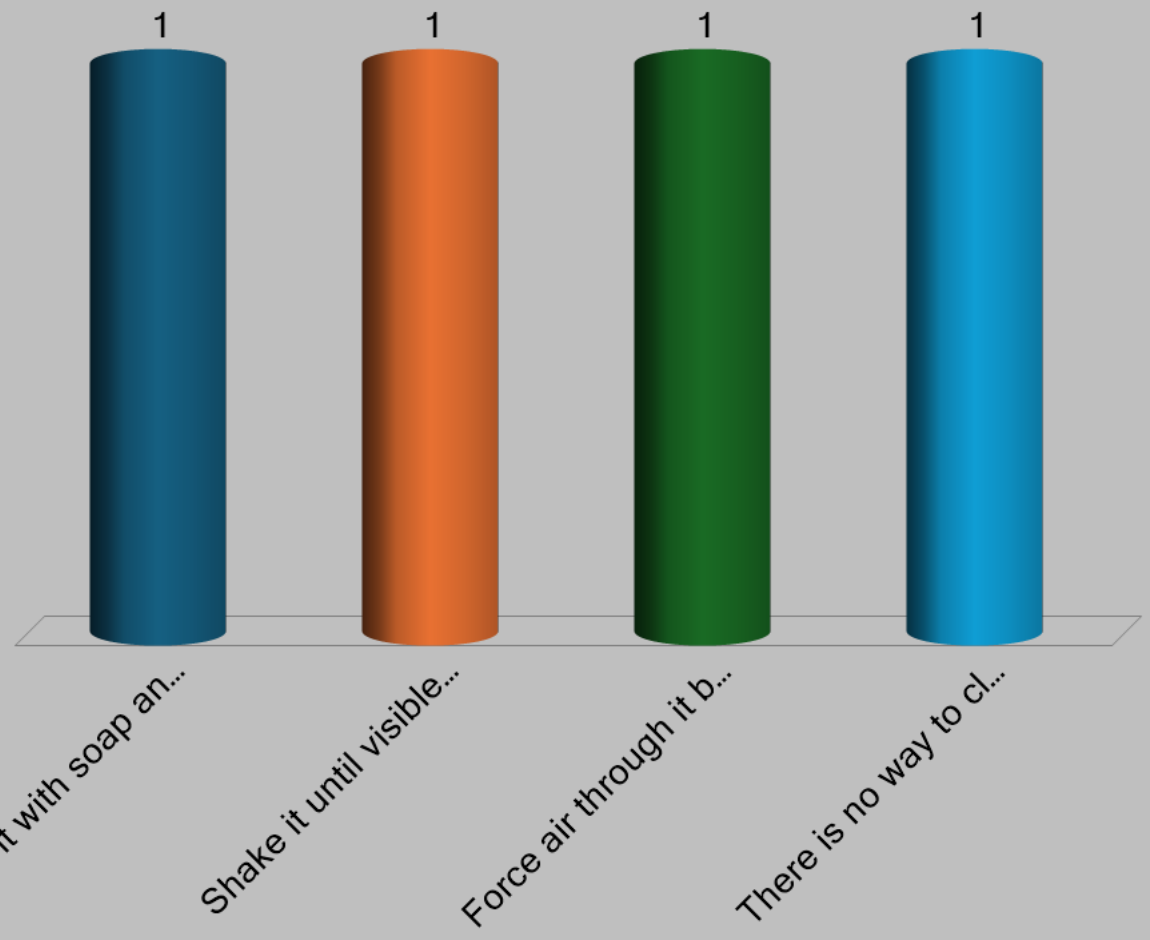
Of the choices below, which is typically the most efficient way to clean a particulate filter?

A. Wash it with soap and water.

B. Shake it until visible dust stops coming out of it.

✓ C. Force air through it backwards.

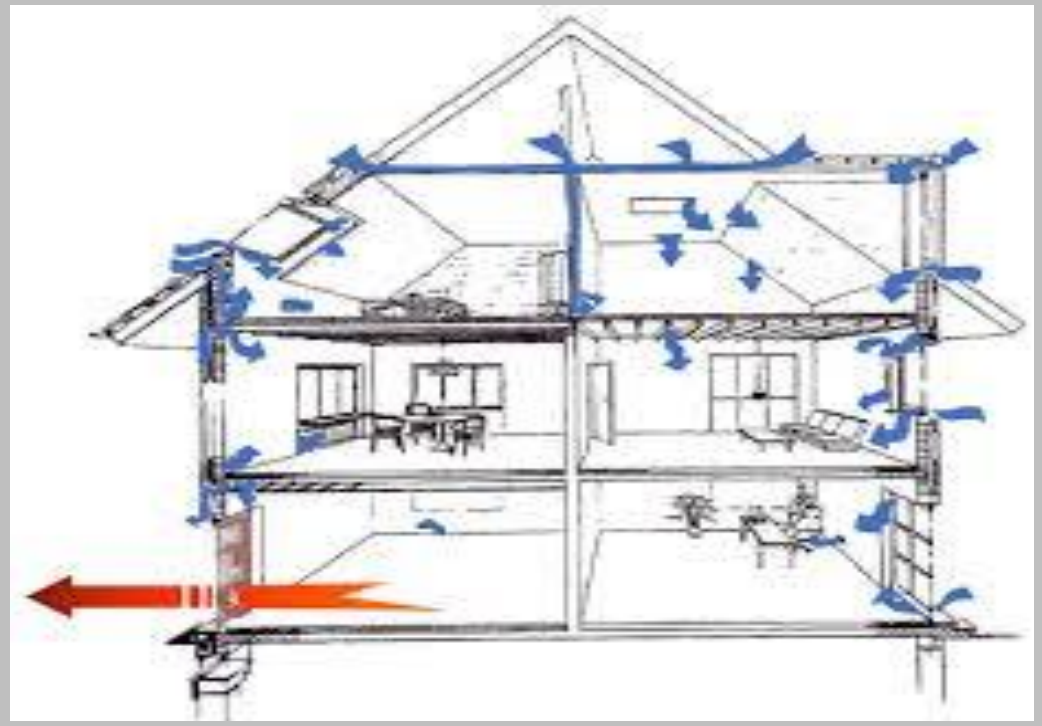
D. There is no way to clean a particulate filters – you must replace them.

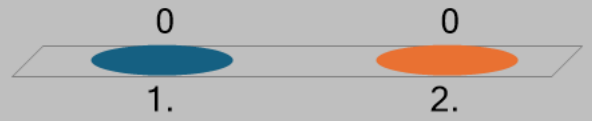


Blower door tests (looking for leaks in a home's exterior envelope) are a good idea to help assure a home is a healthy home.

(Doors, windows, HVAC vents, exhaust fams in kitchens and restrooms, chimneys, etc. are sealed air-tight and air is pulled out of the home though a doorway.)

1. True
2. ✓ False





In My Opinion, Blower Door test for occupied homes **are not a good idea** for the following reasons:

- **They require some air sources (chimney, kitchen hoods, ventilation system, etc.) to be sealed off in order to work – this does not test a home's true ventilation.**

- **Because the air is being pulled out of the house faster than it can enter the home and the normal ventilation pathways for air to enter the house are sealed – it pulls air backwards through nooks and crannies that would never be stressed in that fashion when the normal make up air pathways are not sealed. Works the same as forcing air backwards through a filter.**

- **It pulls air and particulate matter from interstitial spaces (walls, attics, basements) that would never have entered the home under normal circumstances.**

- **This can pull dust into the home that would never otherwise settled on the surfaces of the home, and worse – it can create ventilation leaks that would ever have existed, or which had long since been clogged with particulate.**

Indoor Air Purifiers Help Improve Indoor Air Quality

1. True, it is what they do!
2. ✓ False, as used by most people they typically make indoor air quality worse.

INDOOR AIR PURIFIERS MAKE AIR IN YOUR HOME WORSE NOT BETTER (MOST OF THE TIME).

- **Even the EPA, when publishing their studies promoting the use of Indoor Air Purifiers, includes a study that explains these units cannot work unless the particulate matter they are cleaning from the air remains airborne.**

- **Indoor air purifiers blow air all over the room, but only pull air from a few inches out from their intake. A 2000 CFM unit will only clean the air within about three feet from the intake. This is a major mistake made by Cal/OSHA for the asbestos abatement indus try.**

- **I hear this statement all the time:**
- **"But when my house gets smokey – either because I burnt something I was cooking, or from outside air when a fire is burning nearby – the indoor air purifier clears the air faster than just letting the smoke float in place until it settles."**
  - **While this is true – it is not because the air purifier pulled the smokey air through its filter and cleaned the smoke from the air. it simply pushed the smoke to different areas, moving it around until the smoke is diluted enough in the area of concern for you to think the air is clean.**
  - **Truth is, more air in more spaces in your home now have dirtier air than they did before the air purifier was turned on.**

For In-Door Air Purifiers to work best:

- Be in the stream if air coming from the unit.
- Don’t place units at edge of room, near a wall or a curtain.
- Air must pass through the filter to be cleaned – but you push air much farther from the fan than you pull it.
- Point stream of air at another filtered in-door air purifier.
- For gases and vapors – dilution solution can work (especially if “clean” outside air is introduced). For particulate mater, you do not achieve dilution solution by adding clean air, you reduce hazards/exposures by removing particulates or increasing the space those particulate inhabit.

All that particulate pushed around away from the fan, will stay airborne, until the fan is turn off, or it is pushed far enough to get out of the moving/turbulent air.

Eventually it settles on surfaces within the house, unless you breath it in.

Most insects enter a home looking for food.

1. True
2. False ✓

- **Most Insects enter a home looking for a source of water, that is why they are most commonly found in the restroom and kitchen areas.**

- **Cockroaches can be an exception to this rule. The best way to prevent an infestation of roaches is to clean up thoroughly as they often find the water they need in the foods they eat. Hint – it is better to use a roach coach sticky trap (or duct tape) than to spray for cockroaches. Roach Coaches prevent eggs from being laid in he home.**

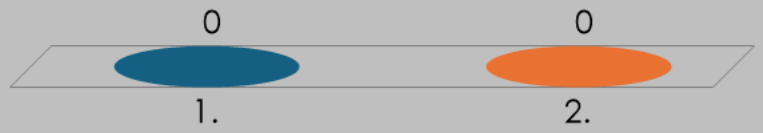
- **Unfortunately, a clean, dry house is not always proof against insect infestation, if grounds surrounding the house, or under it, are damp. The insects will find their water there and enter your home looking for a safe place to nest.**

- **Bed Bugs are an issue all their own and can be found anywhere, even in the cleanest of environments. They typically spread by hitching a ride in a suitcase, on the clothes of a person or in the hair of a pet. Pesticides can kill then but are not as effective as heat.**

Bug Bombs are a good way to get rid of all the bugs in your basement or attic – But they have dangers to occupants and the home itself as well.

✓1. True

2. False



Not to mention they can make the air in the home toxic for the people in the home a swell.

Properly trimmed trees will help prevent rodent and insect intrusion into a home.

✓1. True

2. False

Trees are good for shade - but…

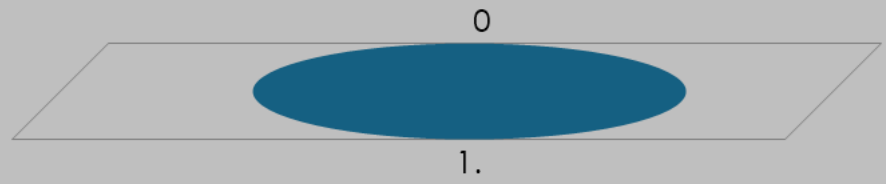
- Trees with limbs that brush against or overhang the roof of the house can provide access to the home to rodents and insects, where they can then find (or make) access to the interior of the home.

- And that's not all . . .

Leaves from a tree can cause water intrusion into a home

(I am looking for 100 percent Correct on this one!)

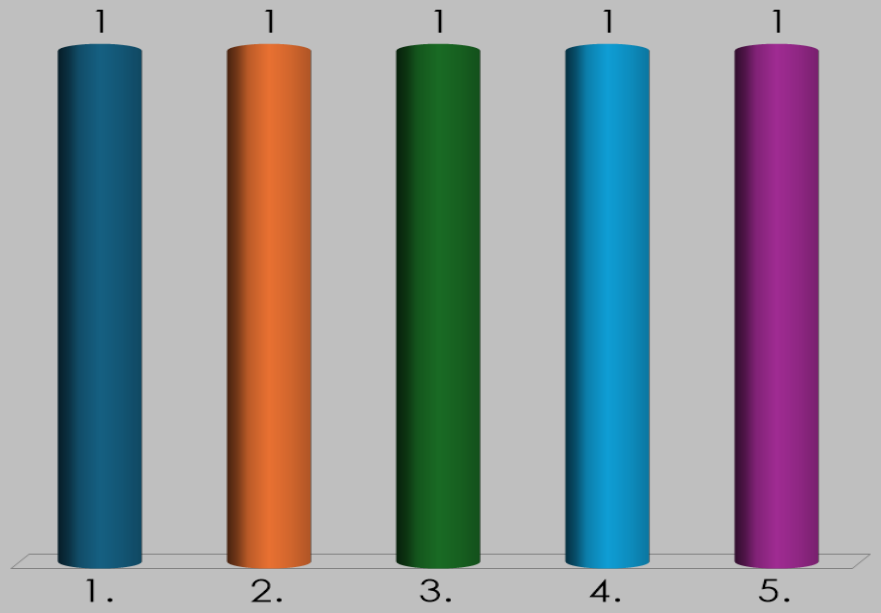
✓ 1. **True - If allowed to lay on the roof (even while still growing), build up in your rain gutters, or against the side of your home!**



What must a wooden post supported porch roof, a lattice work shade overhang, a wooden fence, and similar items have to protect against insect intrusion into the home?

(Mutilple Correct Answers - Pick best answer only)

1. ✓ A metal barrier between the wood and the house
2. ✓ An air space between the wood and the house
3. ✓ Pressure treated wood between the regular wood and the house
4. ✓ Any of the above is sufficient
5. All of the above is required



When removing soil from areas where it is piled against wood components of a house (siding, posts, pillars, trim, etc.) You must ensure you do not create a low spot for water to gather adjacent to the home/building.

✓ 1. True

2. False

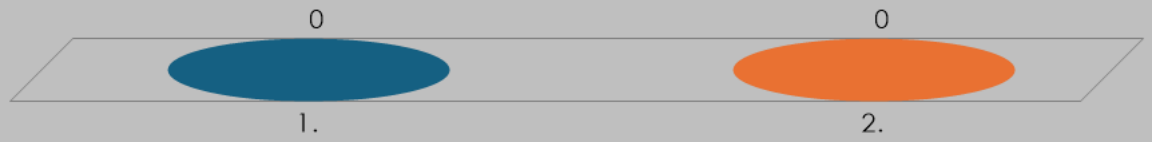
We all know Standing water (or un-kept pools) in a yard is a breeding ground for mosquitos – but this standing water will attract frogs as well.

1. False – Come on, really?
2. ✓ True – they like the water
3. ✓ True – they are looking for food (insects in the water)
4. ✓ Both 2 and 3 are true

When cleaning up trash/debris in the yard you must consider pest infestation within the trash/debris and, not only protect your self from it while cleaning , but also think about where those pest may go when the trash/debris is cleaned up

✓1. True

2. False – just kill the pests when you clean up the trash debris



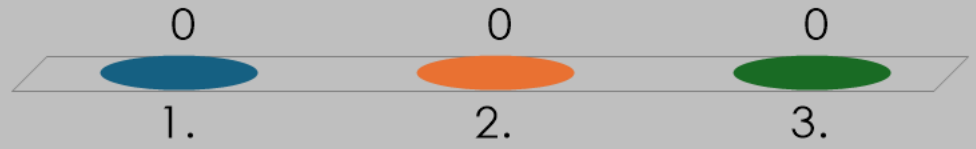
When putting out poison to kill rodents (often arsenic), you must think about unintended victims of the poison (dogs, cats, birds or worse – small children!). And you must think about where the poisoned varmints will die (and who might eat them).

✓1. True

2. False

When dealing with pest Control Which approach is better?

1. Get rid of one pest at a time – this prevents overwhelming the home with poisons and allows you to clean up small messes.
2. ✓ Address all pests at the same time, or the one you get rid of today will come back by the time you get rid of the next one.
3. Pest are a natural part of life – just learn to live with them.



Integrated Pest Management is the best approach

Let’s Go Back To Lead For A Little Bit.

When an inspector conducts a risk assessment – there is a set order for collection of the soil, paint and dust wipe samples.

✓1. **True**

2. **False, come on, really? What difference could it make?**

Always Collect **Interior Dust Wipes** first,
Then **Interior Paint,**
then **Exterior Wipes,**
Then **Soil,**
Then **Exterior Paint.**

You can change the order a little with the proper use of PPE – but never collect samples below painted surface after testing the paint!

If you do not collect samples in this order, you may actually be creating the hazards that you find!

Almost nobody bothers to pay attention to this issue, and it can get an inspector's or risk assessor's work thrown out as evidence is a lawsuit.

The CDC's Blood Lead:
"Level of Concern,"
"Level for Priority Intervention," and
which is now called "Reference Level"
(Currently 3.5 ug/dl) has never been based on health-based issues.

✓ **1. True**

2. False

The CDC's Blood Lead Reference Level is based on the number of children that fall within the highest 97.5 percentile of children with known levels of lead in their blood.

It has nothing to do with how harmful that level of lead is to those children.

Per CDC Website:

- The BLRV is a population-based measurement. It now indicates that 2.5% of U.S. children aged 1–5 years have BLLs at or above 3.5 µg/dL. **It is not a health-based standard or a toxicity threshold.** The BLRV should be used to guide to both determine recommended follow-up and prioritize communities with the need for exposure prevention.

- Per CDC Website: *In 2012, CDC adopted the blood lead reference value based on NHANES data.* ***This value helped to identify children with blood lead levels that are much higher than most U.S. children****. The blood lead reference value is equal to the 97.5th percentile of the estimated blood lead distribution in children 1-5 years.*

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

1. True
2. ✓ False

The Levels of Lead That Make A Paint "Lead-Based" was based on keeping the cost of inspection as low as possible.

- **The level an XRF was considered to be both accurate and precise in 1978 was 1.0 mg/cm2.**

- **.5% by weight and 5000 PPM were half the level of the previous lead hazard standard of 1% by weight or 10,000 ppm in paint set in 1973. AND PER THE EPA WORK LEAD PAINT WORKSHOPS (Dan Cox) - 5000 PPM was approximately the same level of lead as one layer of paint at 1.0 mg/cm2**

- **Does anyone believe these are "health based" standards?**

The current EPA levels of lead in dust level – that indicate a hazard exists – are based on health-related issues.

1. True
2. False ✓

The upcoming EPA levels of lead in dust level – that indicate a hazard exists – are based on health-related issues because a lawsuit required this.

1. True
✓ 2. False

Lead Levels (hazards & Action/Clearance) In Dust Are:

- **Based on the abilities of labs to analyze down to a certain level and be confident in their measurements, and**

- **Based on the ability of contractors to clean to certain levels after conducting abatement activities.**

We can't regulate people at levels below what we can measure.

Or can we….?

(think hazards based on "any detectable" lead, regardless of ability to quantify).

Nearly all lead regulations, except OSHA, do not apply to post 1978 Residences. This means Post 1978 residences are lead-safe.

1. True
2. False ✓

Post 1978 Homes are not lead safe!

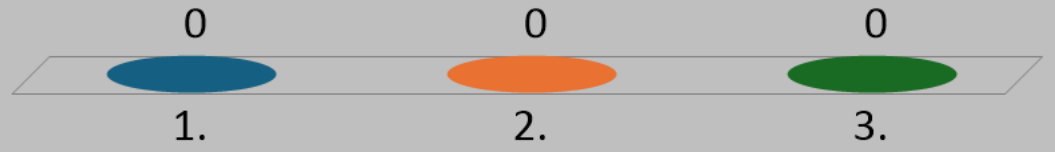
- **Especially since the lead in dust hazard levels have been lowered, homes built after 1978 are just as likely to contain lead hazards as pre-1978 homes, even though they are not as likely to contain paint at lead-based paint levels.**

- **Paints and other lead containing materials do not need to be LBP to create a lead hazard!**

- **The fact that few people look for lead hazard in post 1978 homes, and most regulations donot apply in post 1978 homes, does not mean post 1978 homes a re lead safe.**

Replacing faucets is a good way to reduce lead in the water in your home.

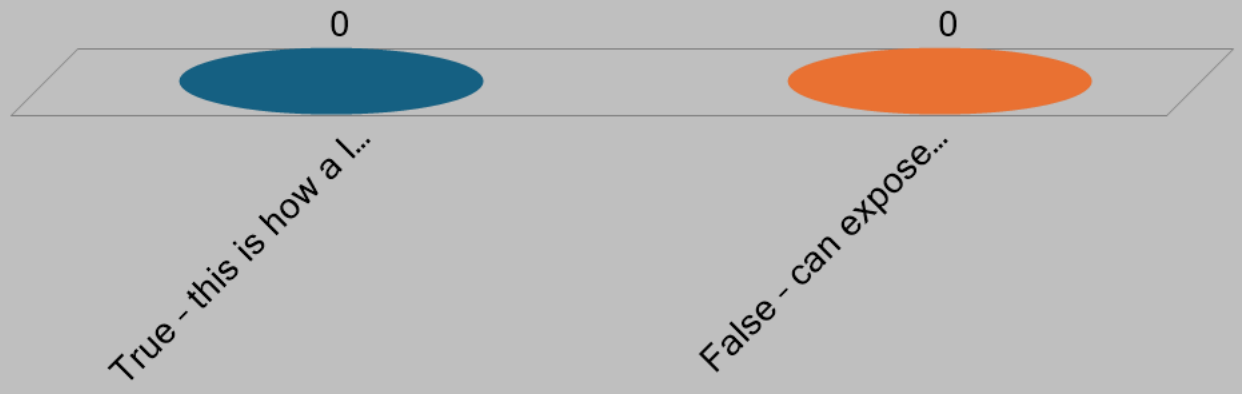
1. Yes, always, of course!
2. ✓ Well, maybe as long as the new faucets are free of brass.
3. No, this will never work.



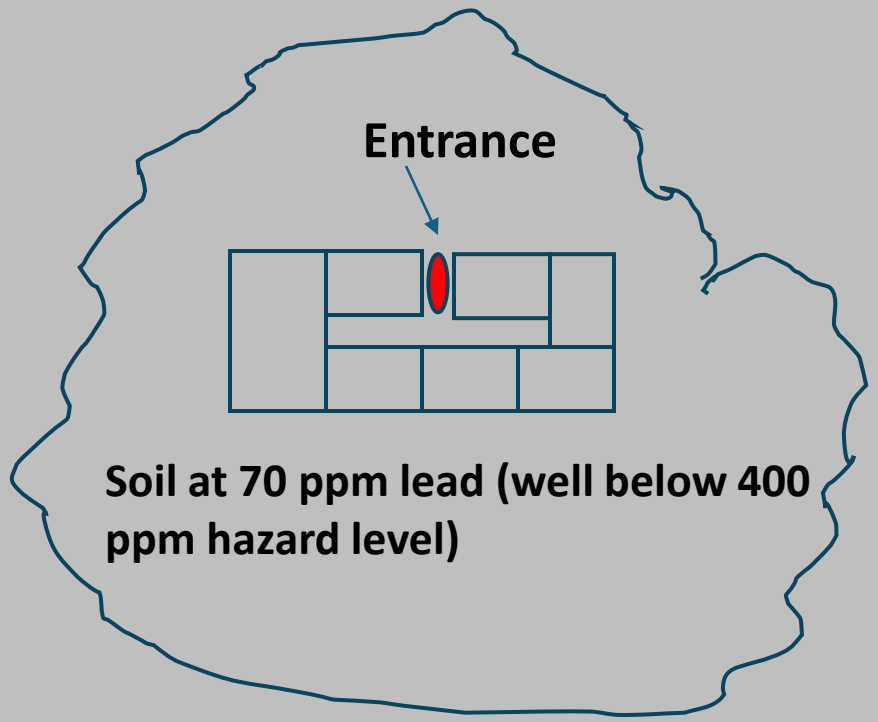
Soil with less than 400 ppm lead is safe for workers to work in without regard for lead.

A. True – this is how a lead hazard is determined for construction work.

B. False – can expose workers, the project site, and workers' families at home to excess levels of lead.



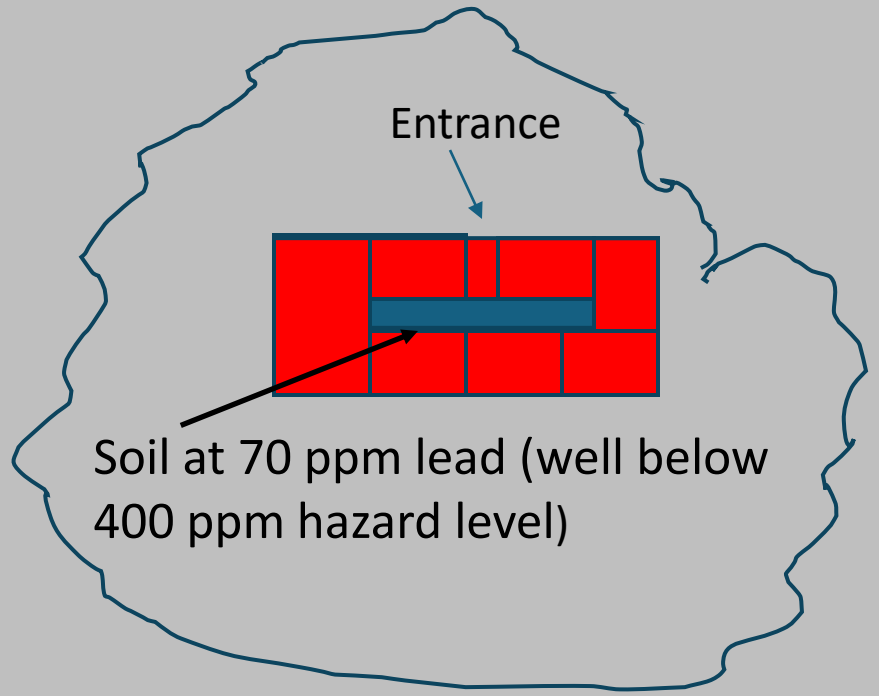
A Quick Example (from an actual project) on one way soil can cause problems



- Soil outside of an Elementary School has 70 ppm lead.
- Soil was thought to be a non-issue due to low levels of lead. Wipe samples collected inside the entry hallway during construction found to have more than 100 ug/sf.
- This was addressed by placing boot brushes and tacky mats at entry, and daily cleaning of entry hallway.

A Quick Example (from an actual project)

- How many worker took massive amounts of lead home on their clothes before this issues was addressed by the local health department?



CA Public Health and Safety Code 105255.
(a) No person shall perform lead-related construction work on any residential or public building in a manner that creates a lead hazard.

- **During the course of the project, interior hallway concrete was removed in order to access buried plumbing and drainage pipes.**
- **This exposed the soil from under the concrete. (later found to contain the same 70 ppm lead as exterior soil).**
- **Entire site was found to contain lead hazards (250-300 ug/sf) after this concrete removal (not just on floors but other horizontal surfaces as well – windows sills, firebreaks between studs, casework, etc.).**
- **This generated a local health department mandate to cleanup with clearances (both after clean up and after all remediation work was completed).**
- **CDPH required the site to be posted for abatement activities, and CDPH certified workers to conduct lead cleanup. Federal EPA required RRP certification for the contractor conducting work at the site as well.**

THINK ABOUT A CHILD PLAYING IN 400 PPM LEAD SOIL

Hands

Cloths

Hair

Toys

All could be covered with lead, and all could carry lead indoors!

(And what about the dog the kid is plying with!?!?!?)

Covering Lead Containing Soil with artificial turf is a good idea for schools and day cares

1. True
2. False ✓

Artificial Turf – Not A Healthy Choice or the lessor or worser of two evils?

- Lead in the artificial blades of grass

- Then you have to consider what they put in the grass surface to get the blades to stand up:

  - Ground up tennis-shoe soles
  - Ground up tires
  - Ground up pumice stone

Lead And Healthy Homes
Kansas City, MO
August 4 – 6, 2025

All the smartest, best-looking people in the room, and a couple luck guessers!

Points	Participant	Points	Participant

Do We Have Time For MOLD

Black Mold – that uses radiation like plants use sunlight.

Fungus that eats microplastics