



# Do's and Don'ts of spray foam

Brian Cote

**ICAA** Spray Foam Task Force Chair



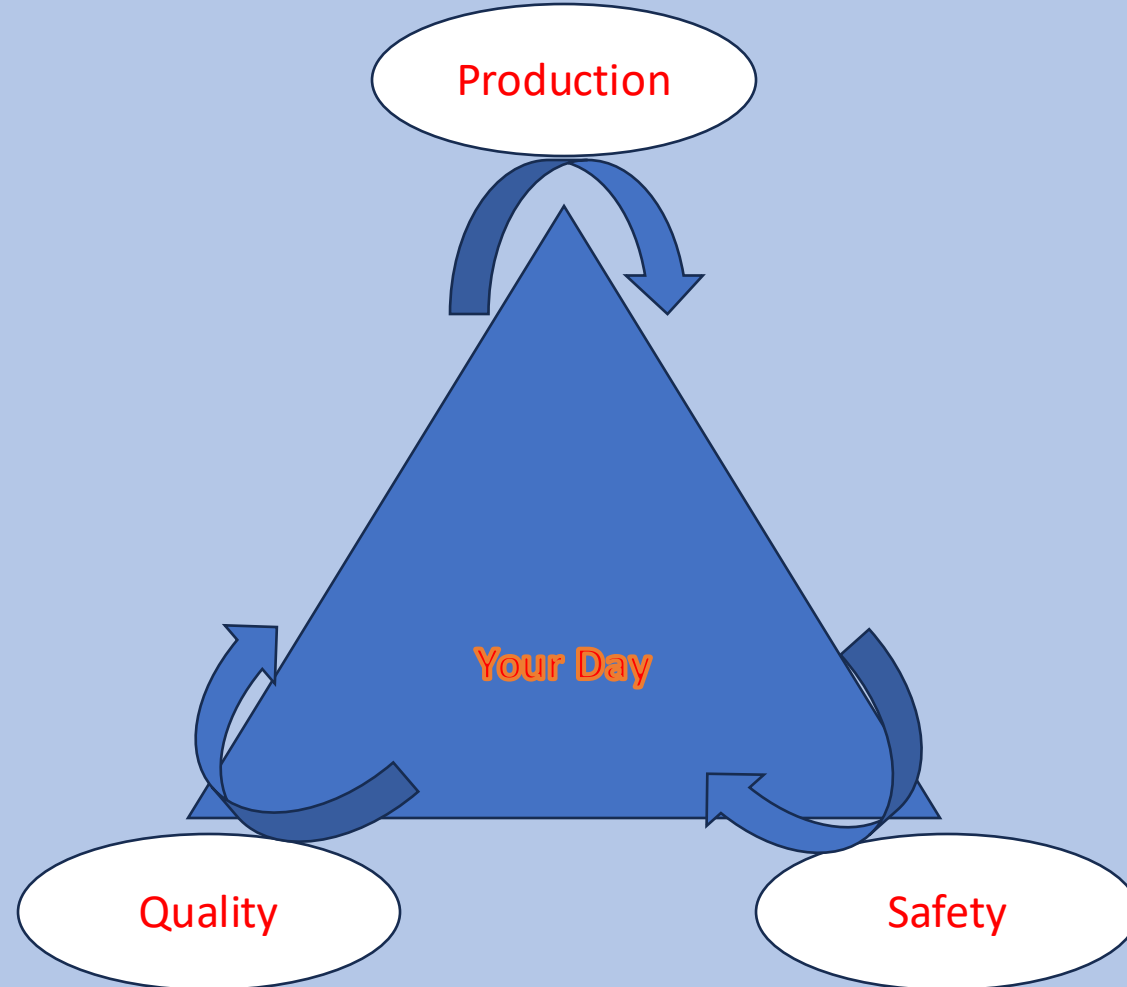
# Spray Foam 101



- ALWAYS WEAR THE CORRECT PPE for the environment you are in.



# Spray Foam





# ICAA STANDARD CONTRACT TERMS FOR SPF INSULATION JOBS



- **Design Responsibility.** Purchaser accepts design responsibility. Insulation contractor is not responsible for design flaws.
- **Compliance.** Compliance with applicable federal, state, county, and local laws, building codes, rules, regulations, ratings, and permitting costs, fees, and taxes are the responsibility of the purchaser.
- **Certificate.** Insulation contractor shall provide an R-value certificate as required by code or law. Services provided shall meet the requirements of Federal Trade Regulation 460.



# ICAA STANDARD CONTRACT TERMS FOR SPF INSULATION JOBS



- **Re-occupancy.** Occupants and trade workers in structure where work is to be performed must evacuate before, during, and after the completion of the SPF application for \_\_\_\_ hours.
- **Re-Entry.** The amount of time Trade workers need to wait before they are allowed to re-enter the structure to work.
- **Back charge Claims.**
  - a) No back charge or pro-rata expense charge against insulation contractor shall be valid except by an agreement in writing by insulation contractor before the work is executed, except in the case of insulation contractor's failure to meet any requirement of the contract.
  - b) In such event, Purchaser shall notify insulation contractor of such default, in writing, and allow insulation contractor reasonable time to correct any deficiency before incurring any costs chargeable to insulation contractor.
  - c) No back charge shall be valid unless billing is rendered no later than the 15th day of the month following the charge being incurred.
  - d) Furthermore, any payments withheld under a claim of insulation contractor default shall be reasonably calculated to cover the anticipated liability and all remaining payment amounts not in dispute shall be promptly paid.



# ICAA STANDARD CONTRACT TERMS FOR SPF INSULATION JOBS



- **Job Ready.** Purchaser will be responsible for actual expenses incurred by insulation contractor as a result of Buyer's failure to have the contracted job ready for work when ordered for a specific date.
- **Ignition and Thermal Barriers.** Insulation contractor shall subscribe to the code requirements for ignition and thermal barriers.
- **Overspray.** It is expressly understood that as a normal part of installation there may be some overspray and splattering of material on surfaces in the attic areas including, but not limited to wiring, plumbing, mechanical equipment or ductwork. These areas are not subject to cleanup by the contractor.



# ICAA STANDARD CONTRACT TERMS FOR SPF INSULATION JOBS



- **Attic Conditions.** Attics must be accessible, clean, and free of loose equipment, materials or other debris.
- **Wires.** All wires must be fastened into place per code, as expansion of the foam and trimming may damage incorrectly fastened wires. Contractor is not responsible for repairs required due to this condition.
- **Inaccessible Work.** Contractor is not responsible for incomplete coverage due to work areas that are inaccessible, blocked, or obstructed prior to our installation



# Gotta Have!



Your employer is required under OSHA Standard 1910.134 to ensure that you are medically certified to wear a respirator as part of your job. Based on the responses you have provided, the following describes the respirator use conditions and the physician's evaluation of your ability to wear the respirator.

#### MEDICAL CLEARANCE FOR RESPIRATOR USE

Employee Name: Brian, Cote Date Tested: 5/10/2013 10:16:42 AM  
Employee ID: 911-01

#### Respirator Use Conditions

Respirator Profile	Foam Insulation		
Respirator Type	Full Face	Temp < 50 F	Yes
Work Effort	Light	Temp > 77 F	Yes
Extent of Use	Over 4 hours per day	Permit Required Confined Space	No
Oxygen Deficient	No	Humid Conditions	Yes
Protective Gear	Eye Protection (goggles, faceshield), Skin Protection (apron, coveralls, Tyvek suits), Gloves	Hyperbaric	No
Toxic Substances	Acids - Alkalis - Mists (ammonia, bleach etc)	High Altitude	No
Work Description	Spray foam insulation		

#### PHYSICIAN'S EVALUATION


No restrictions on respirator use in the use conditions listed above.  
Recertify: Per Company Policy  
or when there is a change in health or work conditions.

William H. Lehman, MD  
Reviewing Physician

5/10/2013 10:32:11 AM  
Date

Damarco Solutions, LLC  
1807 Market Blvd #281  
Hastings, MN 55033  
Phone: 1-800-383-3393 Fax: 612-617-0990



**American  
Chemistry  
Council**

**Center for the  
Polyurethanes Industry**


PLEASE LOGON

**Logon ID**

**Password**

(4-8 Characters)

OK

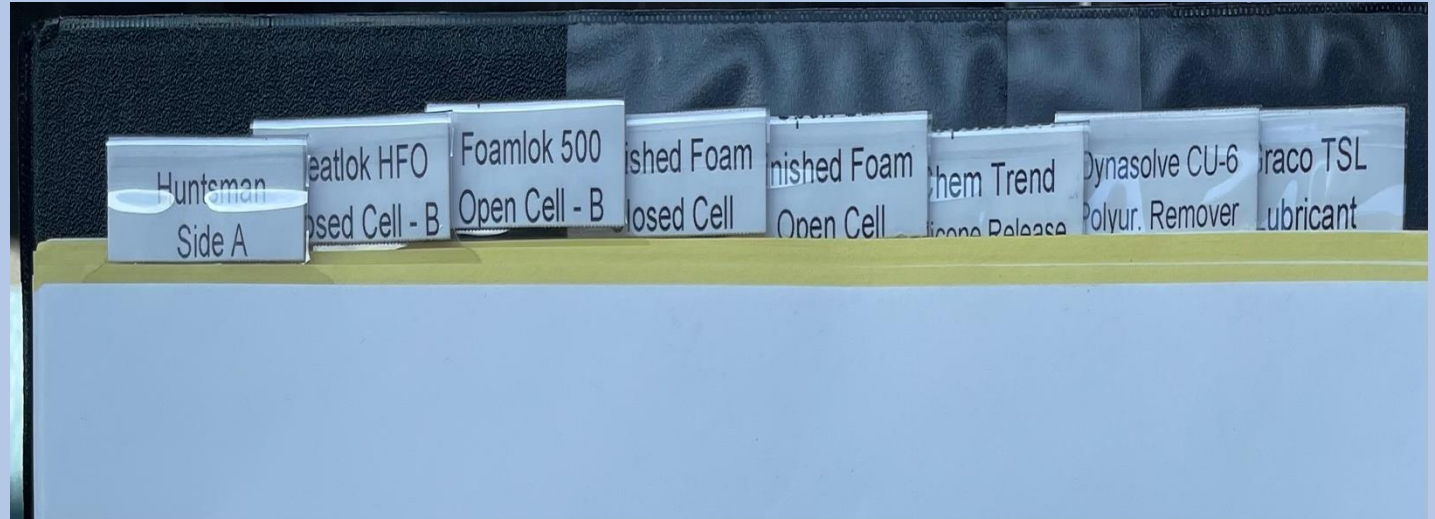
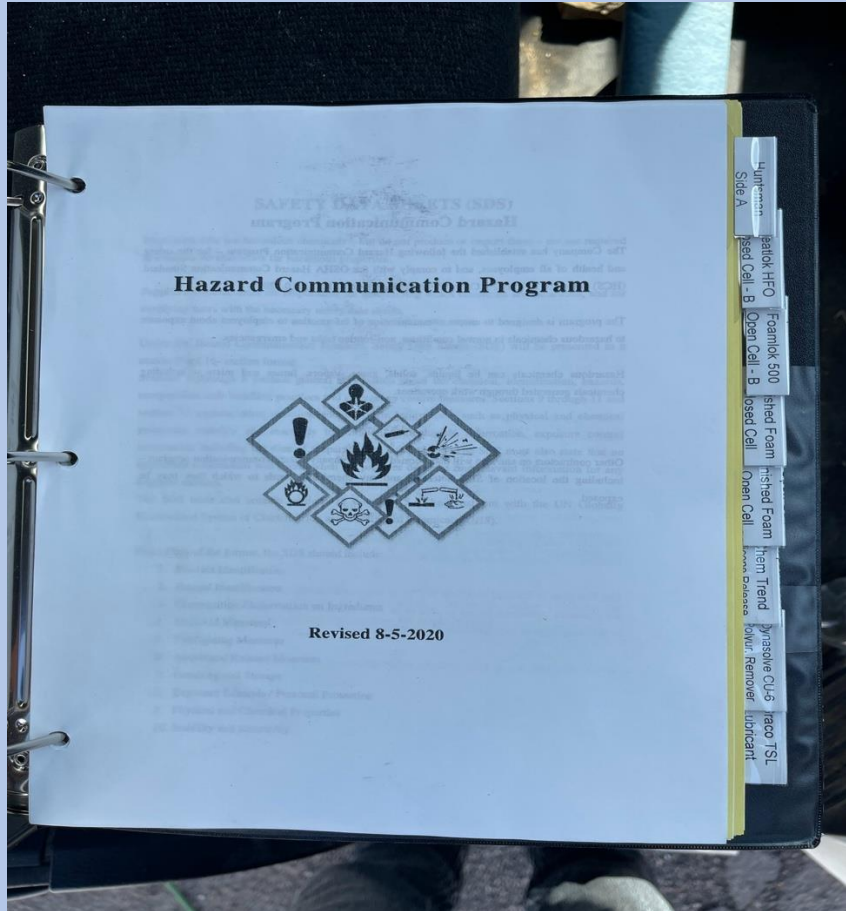
  
**ICAA Model**  
Written Respiratory  
Protection Program

This is a model written respiratory protection program. The Occupational Safety & Health Administration (OSHA) Respiratory Protection Standard requires employers to establish and implement a written respiratory protection program with required worksite-specific procedures whenever respirators are required. This document shall be edited and completed by each company so that it addresses company-specific operations.



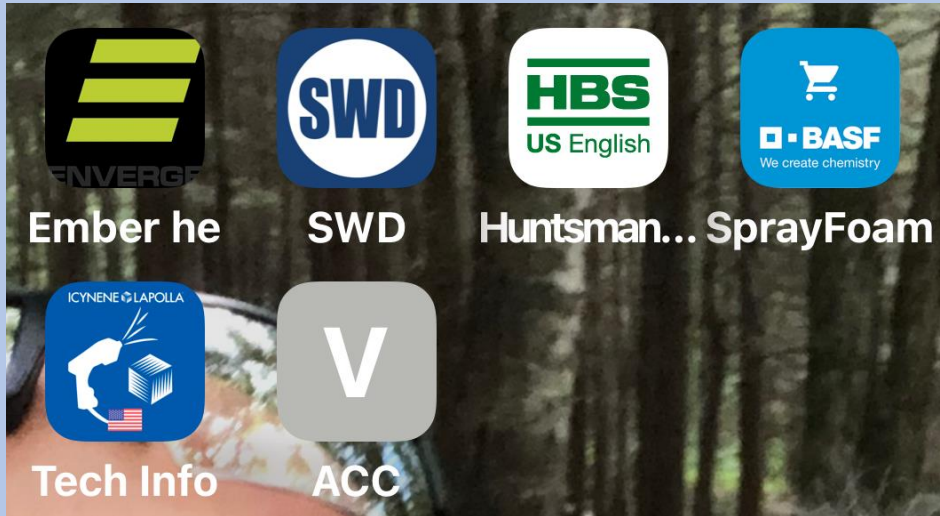


Gotta Have!





“App” to need



### ICAA Gateway Online Training for SPF Helpers – Module Details

MODULE 1 MATERIAL HANDLING	MODULE 2 JOBSITE PREPARATION	MODULE 3 CLEAN UP & SHUT DOWN
<ul style="list-style-type: none"><li>★ Basic chemistry of A &amp; B side components</li><li>★ Open Cell vs. Closed Cell</li><li>★ Safety Data Sheet (SDS) Review</li><li>★ Personal Protective Equipment (PPE)</li><li>★ Do's &amp; Don'ts of Material Handling</li></ul>	<ul style="list-style-type: none"><li>★ Pre-job checklist</li><li>★ Exploring the SPF rig</li><li>★ Controlling the Spray Work Zone</li><li>★ Proper use of jobsite signage</li><li>★ Drum changeout procedures</li><li>★ Do's &amp; Don'ts on the Jobsite</li></ul>	<ul style="list-style-type: none"><li>★ Trimming &amp; disposal of excess foam</li><li>★ Chemical spill containment</li><li>★ Chemical waste &amp; drum disposal</li><li>★ Locking down the rig</li><li>★ Do's &amp; Don'ts of Clean Up &amp; Shut Down</li></ul>

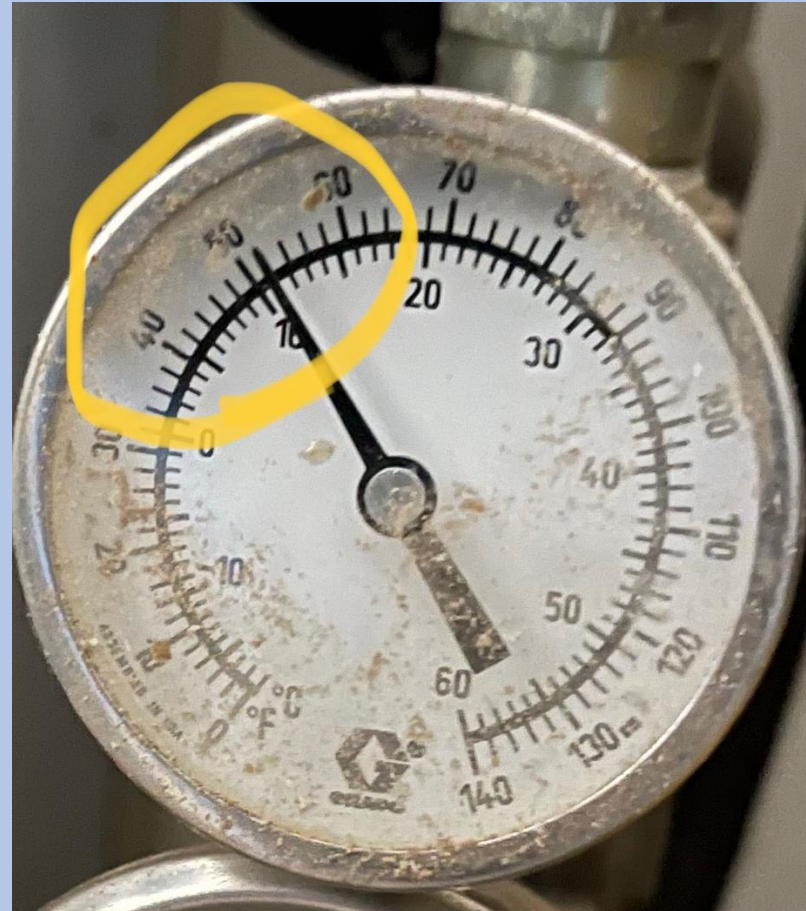


# Storage Wars



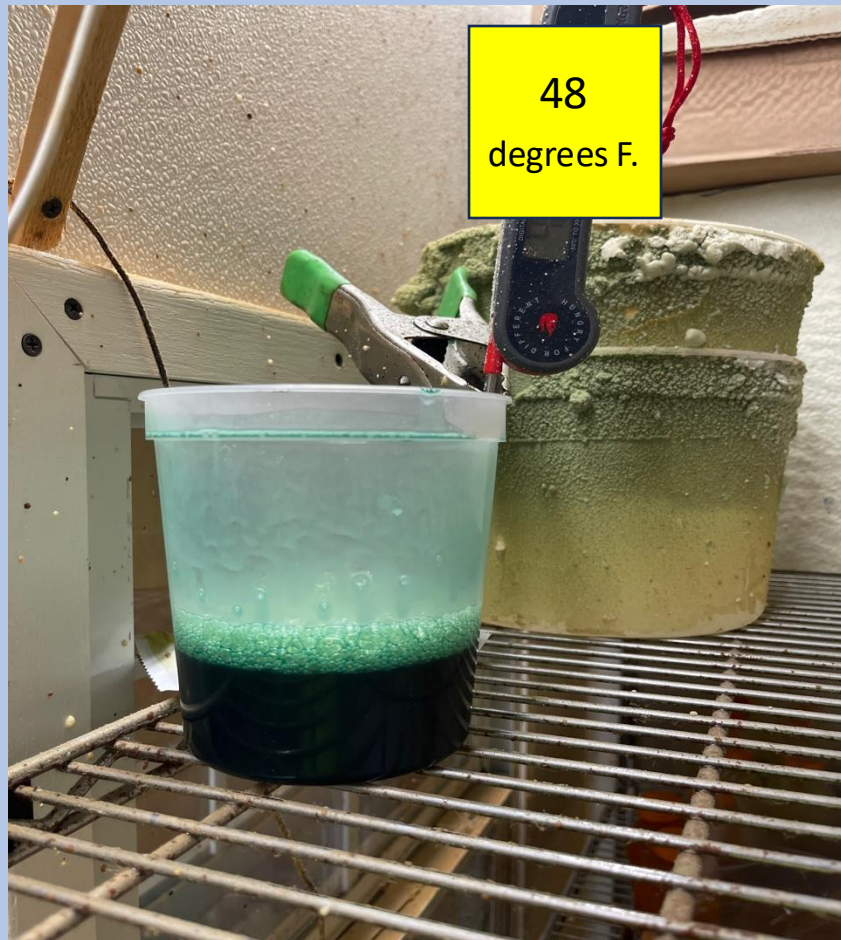


# The importance of Temperature



Know the Delta T  
of your  
equipment

# Are you think you're under pressure





“Tick Tock”





You will need





# Disposal







# Pour Up





# Disposal





# Things to DO when bidding



- Make sure homeowner/builder understand Re Occupancy and Re Entry times
- Right Sizing the HVAC system
- Thermal Barrier requirements
- Combustion Air



# Things to DO when bidding



- Vents
- Odor
- Removal of existing Insulation
- Thickness



# Things to DO when bidding



- Access
- Wiring
- Plumbing
- Lights and Heat source clearance



# Things to DO when bidding



- Costs if the job is not ready upon arrival
- Parking
- Surfaces must be clean
- LVL's



# Things to DO when bidding



- Concrete, (Cured for at least 30 days)
- Substrate temperatures and Moisture
- Humidity
- Heat



# Things to DO when bidding



- Walk the job
- Identify and evaluate Substrate, transition membrane and window opening details
- Review the plans with the GC
- Contact through an RFI to point out issues, concerns or clarify work





# Things to DO when bidding



- Spraying on Sheetrock
- Spraying on Metal
- Termites and other insects

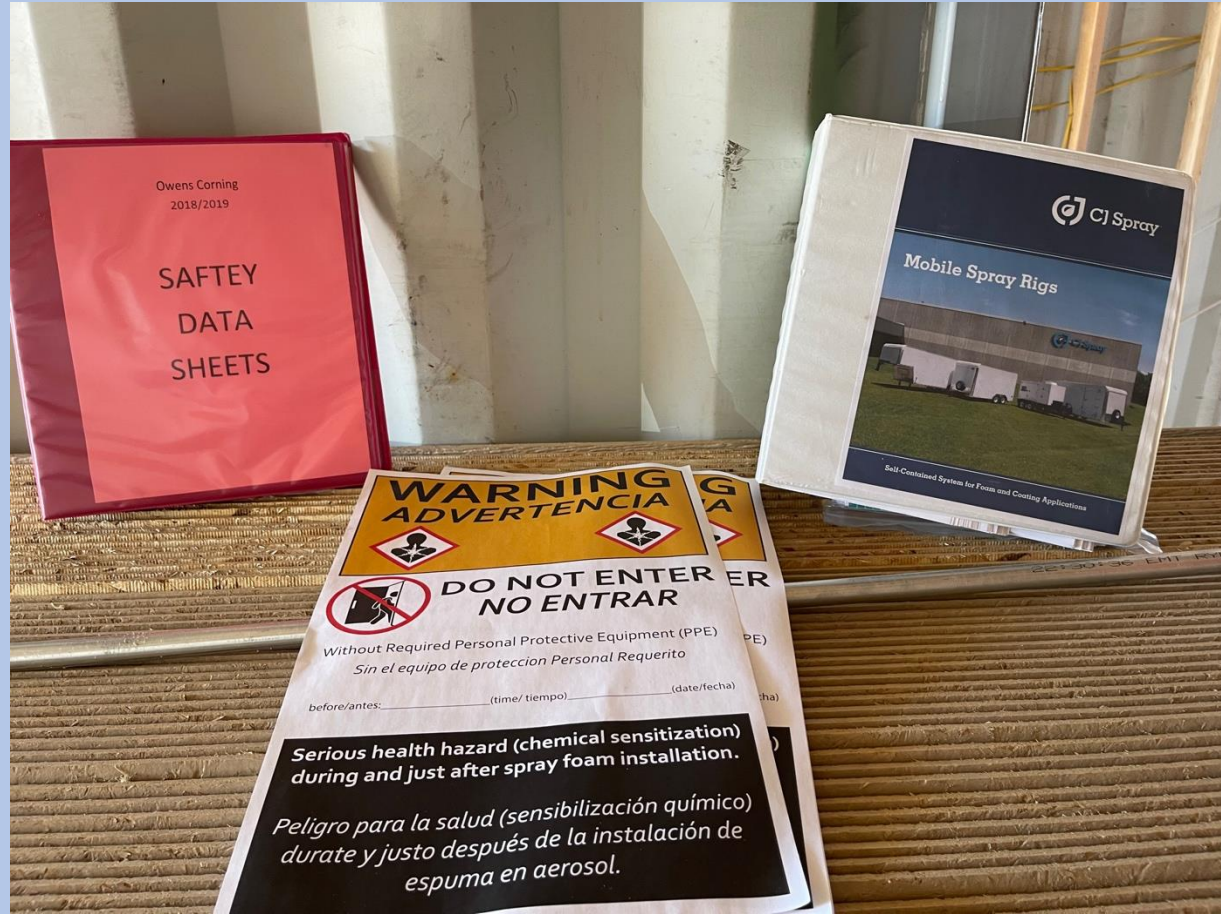


# The Truck





# Rig stuff



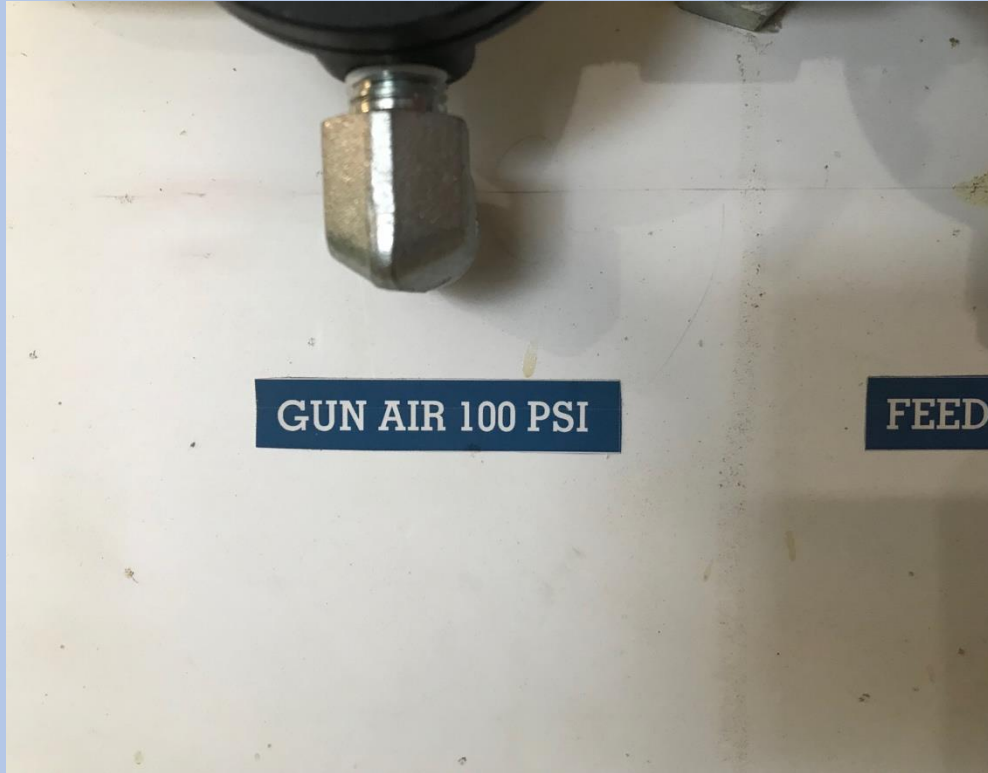


# Rig stuff



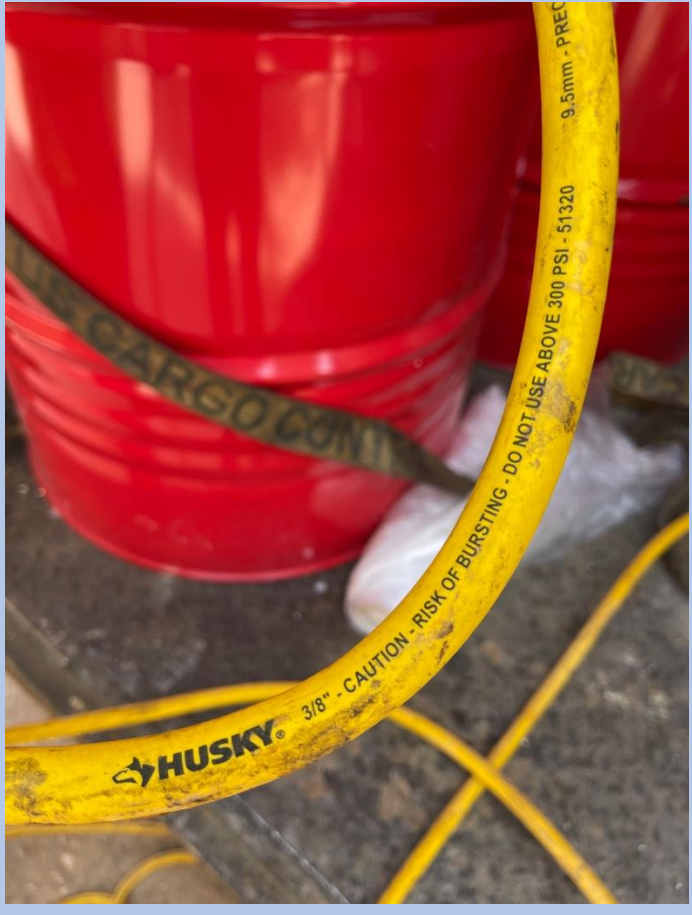
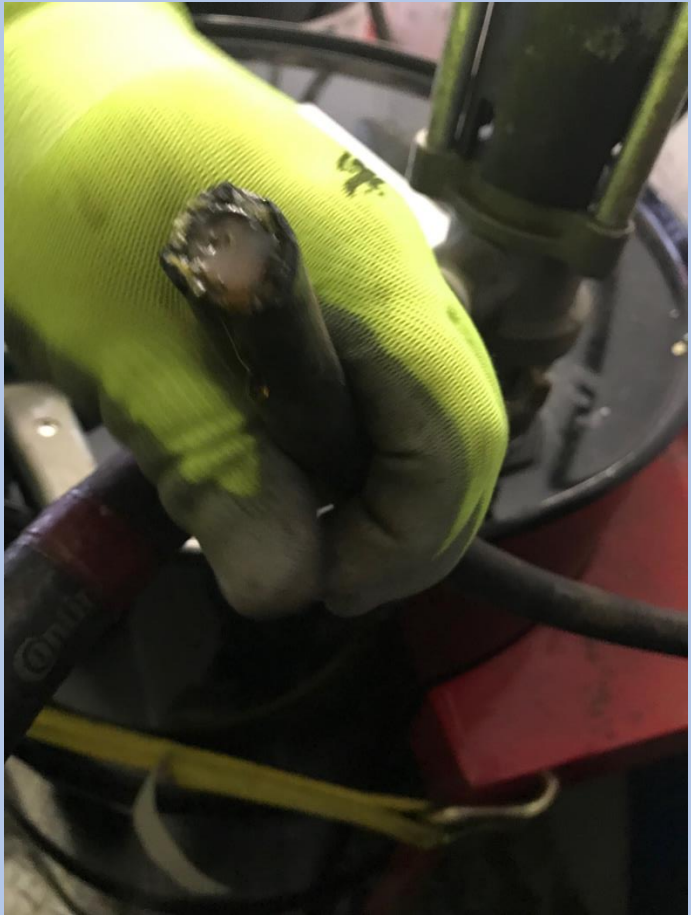


# Rig stuff



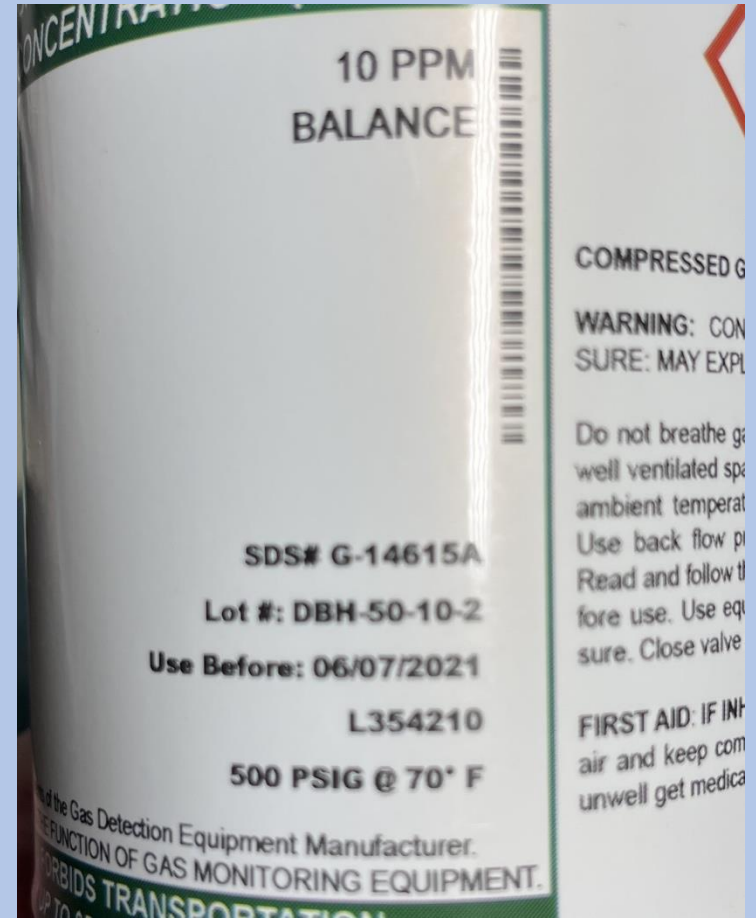


# Rig stuff





# Rig stuff, Do



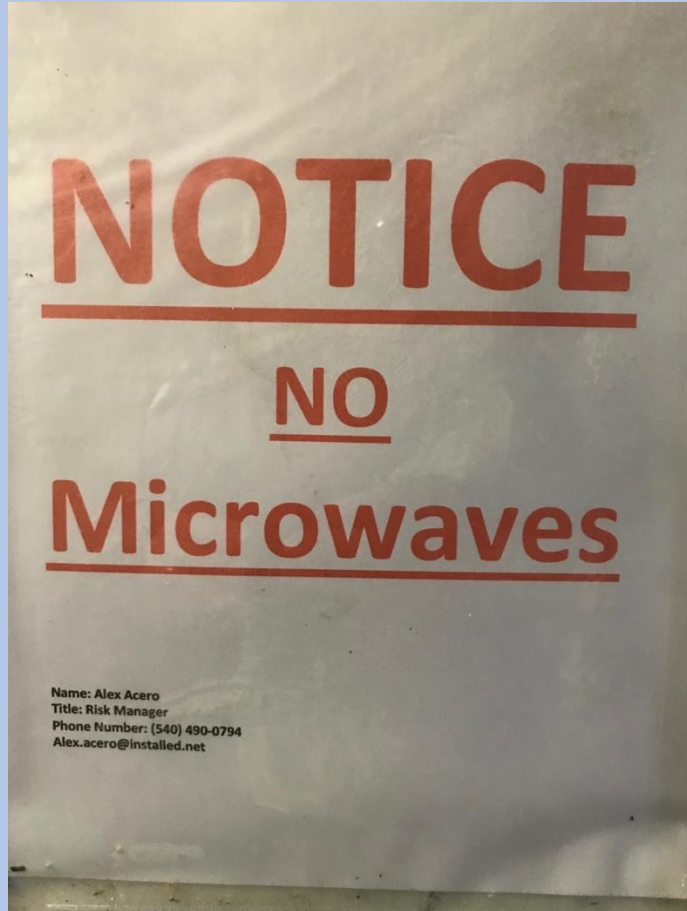
# Rid Stuff Don't







Rig stuff





Rig stuff, Here's your sign





# Rig stuff





Home made, Just like Grandma  
used to make

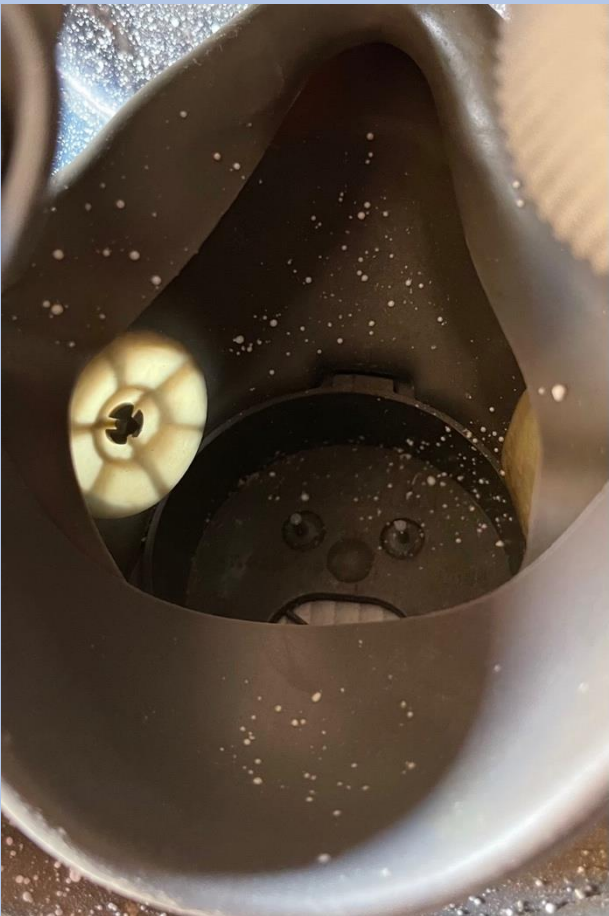




# Rig stuff



# What goes on in your mask

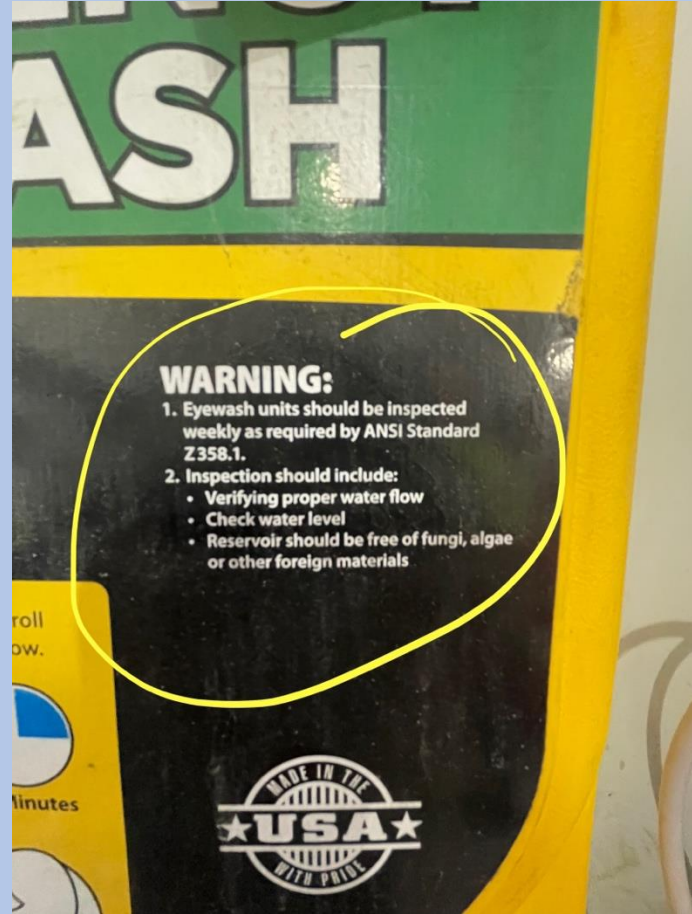




# Rig stuff



# Rig stuff, Eyewash







# Rig stuff, Spills





# Rig stuff, Spills



# Rig stuff, Spills



# Rig stuff, Heat



# Rig stuff



# Rig stuff, Extra, Extra!!



# Rig stuff





# Rig stuff, outside the box







# Rig stuff





# Rig stuff

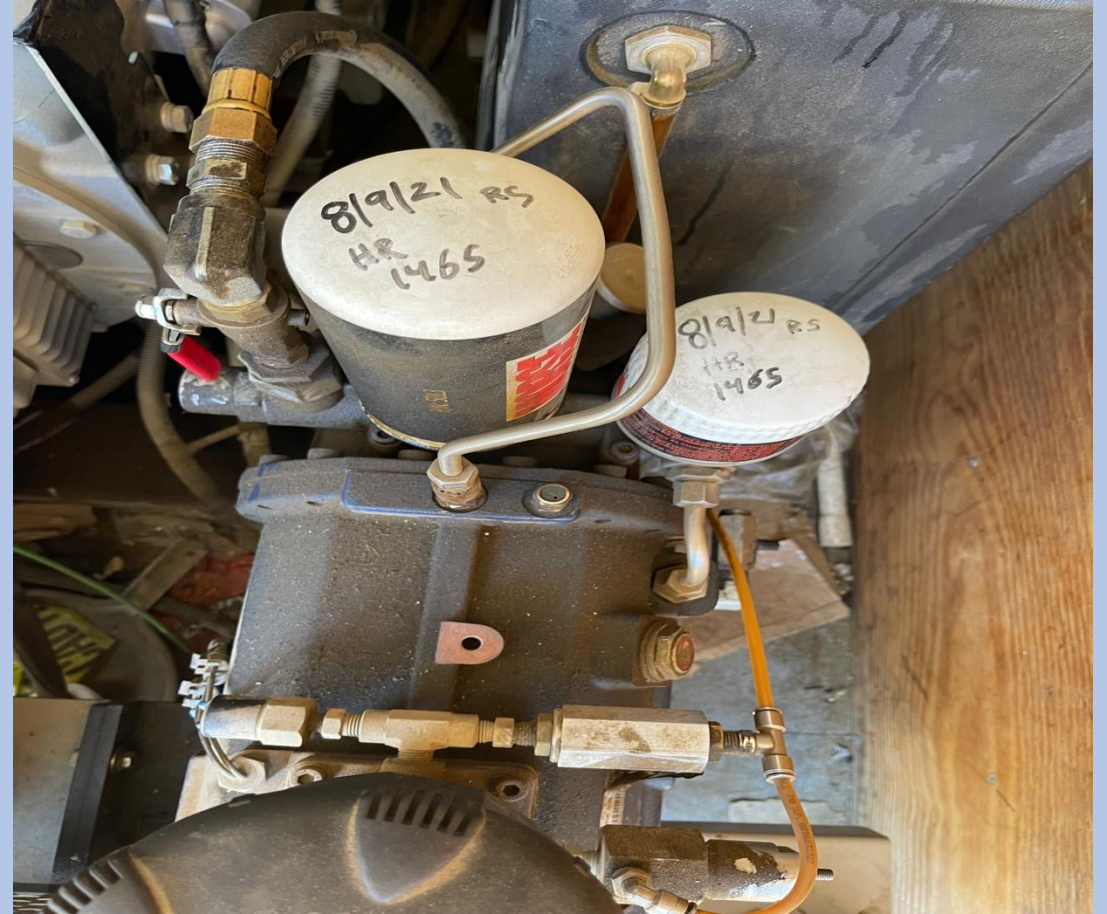
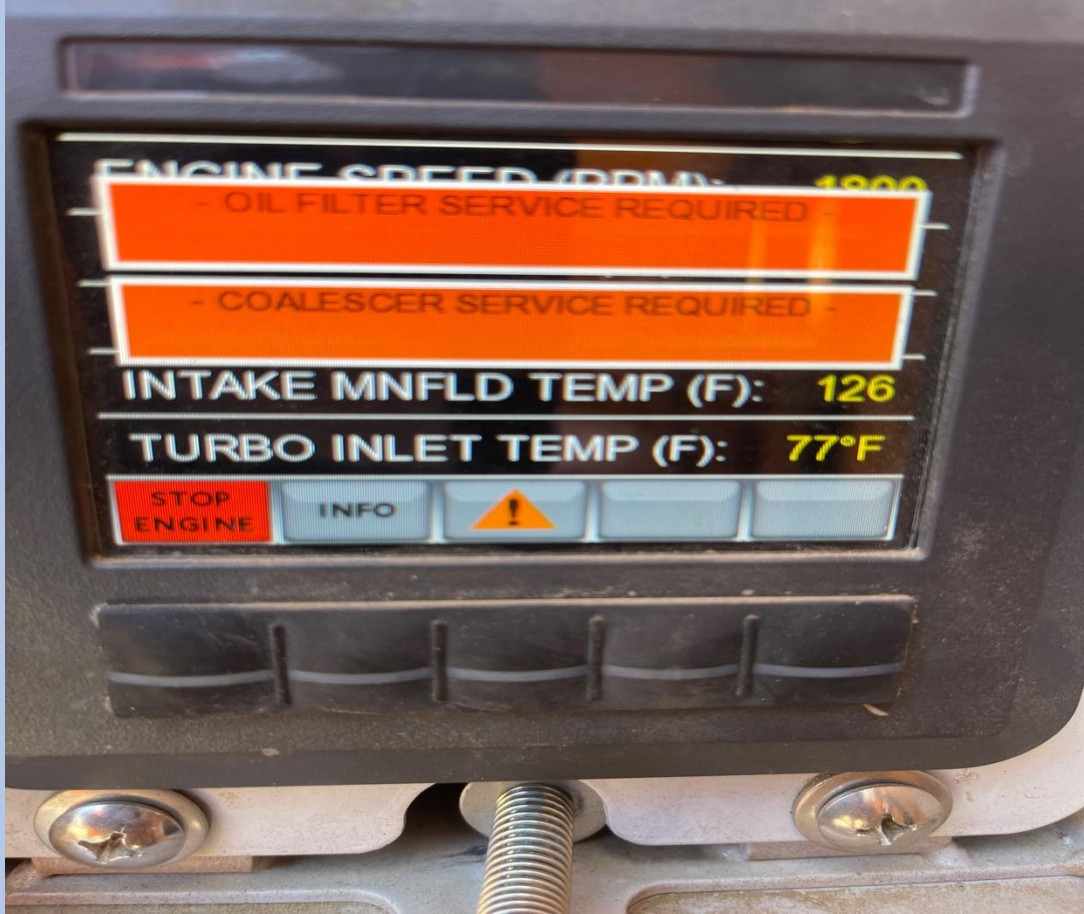




# Rig stuff



# Rig stuff



# Rig stuff





# Rig stuff



- Ensure vehicles are properly marked per your state. (DOT, etc.)
- Fire Extinguisher, First Aid Kit and Warning triangles are a must have
- No Cell phones while driving
- Medical cards and valid license



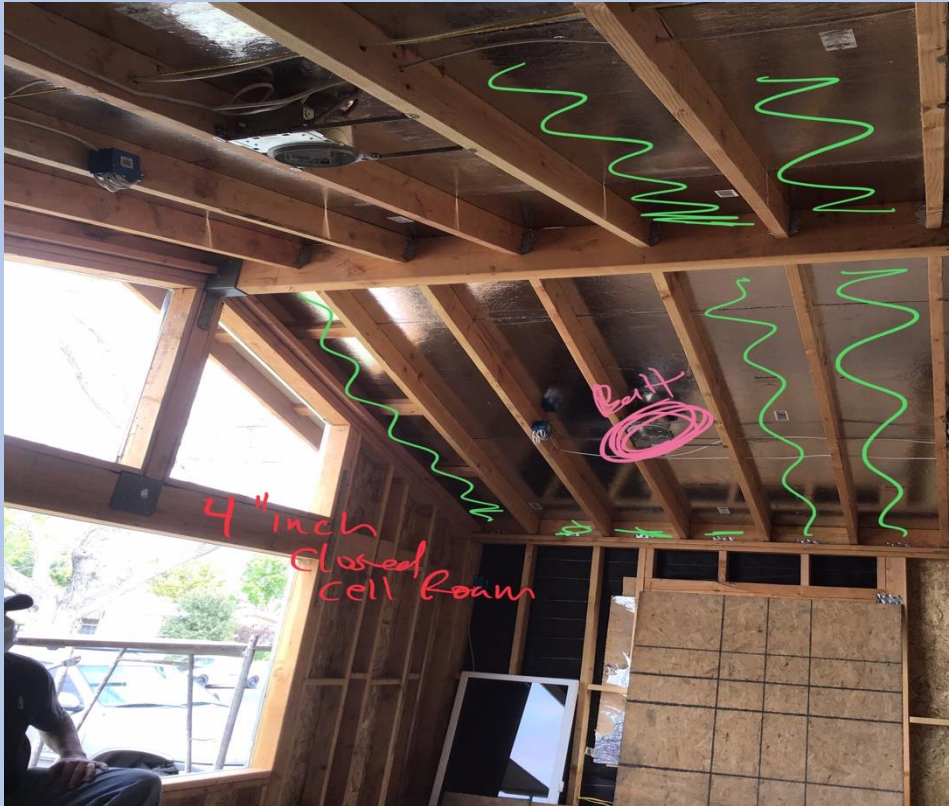
# Jobsite



LOCATION	RESPIRATOR
In spray area	Supplied-air respirator
Trimming SPF	APR or SAR*
Changing drums	Air-purifying respirator
In warehouse	None, if drums sealed

# The Jobsite

- PreCon Meeting







# Jobsite





Jobsite... a picture is worth a thousand wor... Dollars!



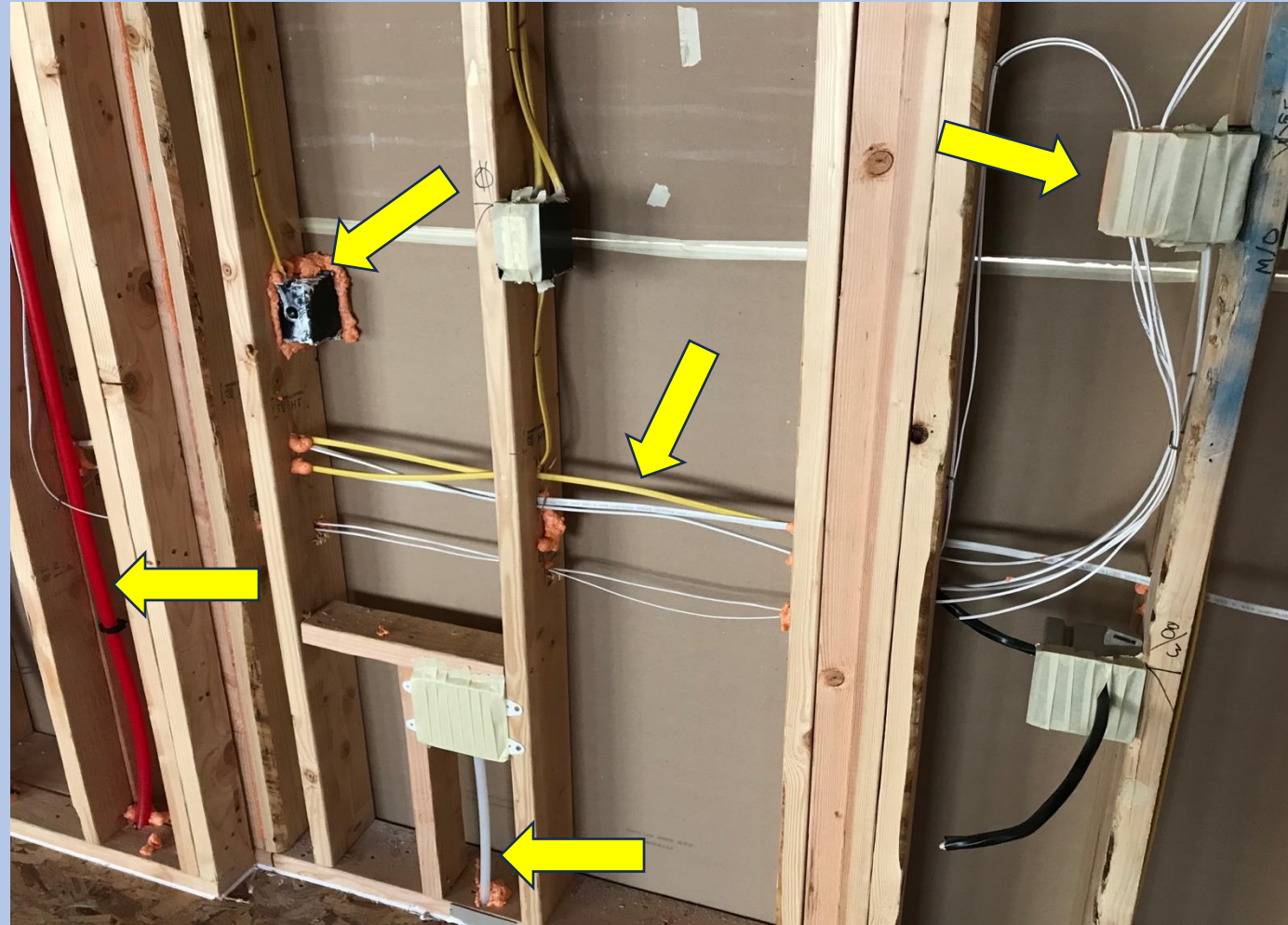




# Jobsite, pre work



# Jobsite... Prep





# Jobsite...Prep





# Jobsite...Prep





# Jobsite...Prep







# Jobsite...Prep





# Jobsite...Prep





# Jobsite...Prep





# Jobsite...Prep





Jobsite...Prep  
Own it!



# Jobsite Ventilation

- Establish a ventilation plan





# Jobsite Ventilation





Jobsite  
Good rule of thumb.., If you  
don't want to buy it,  
Cover it in plastic!







# Jobsite Ventilation



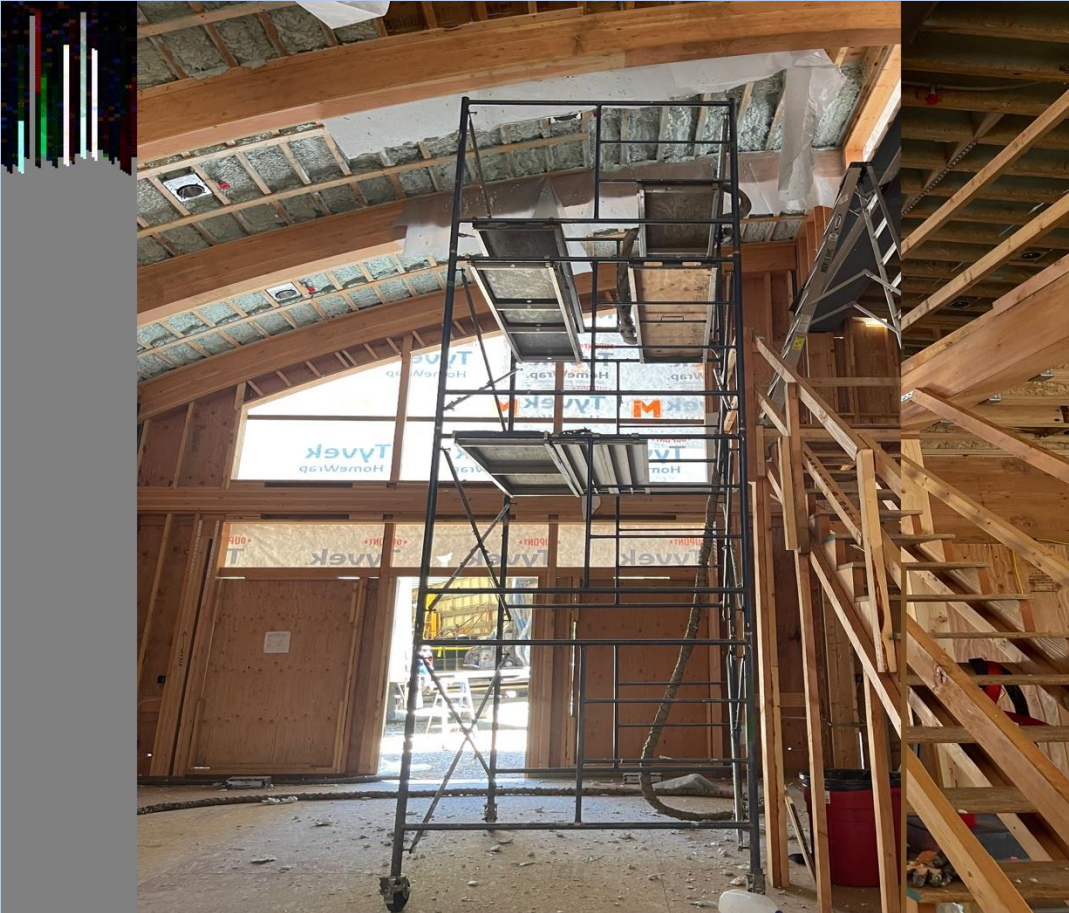


# Jobsite Grey matter Matters!





# Jobsite





# Jobsite



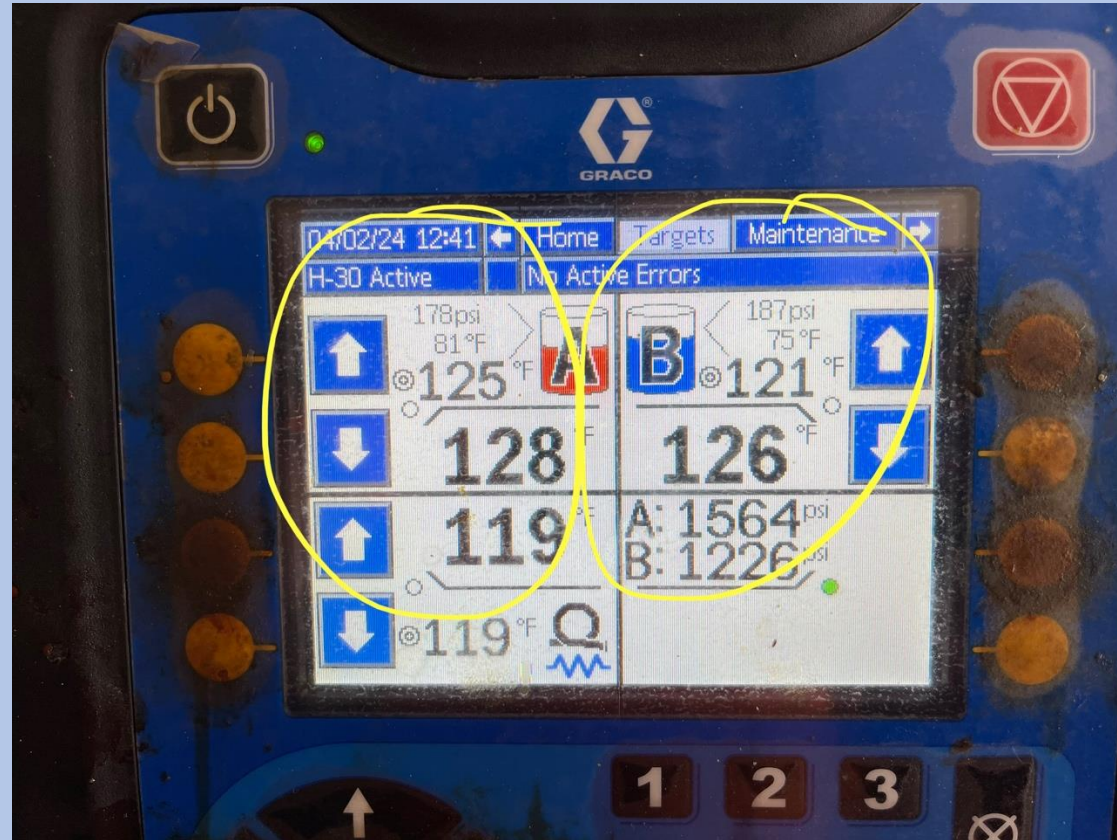


# Jobsite Have a plan





# Jobsite Understand the basic's



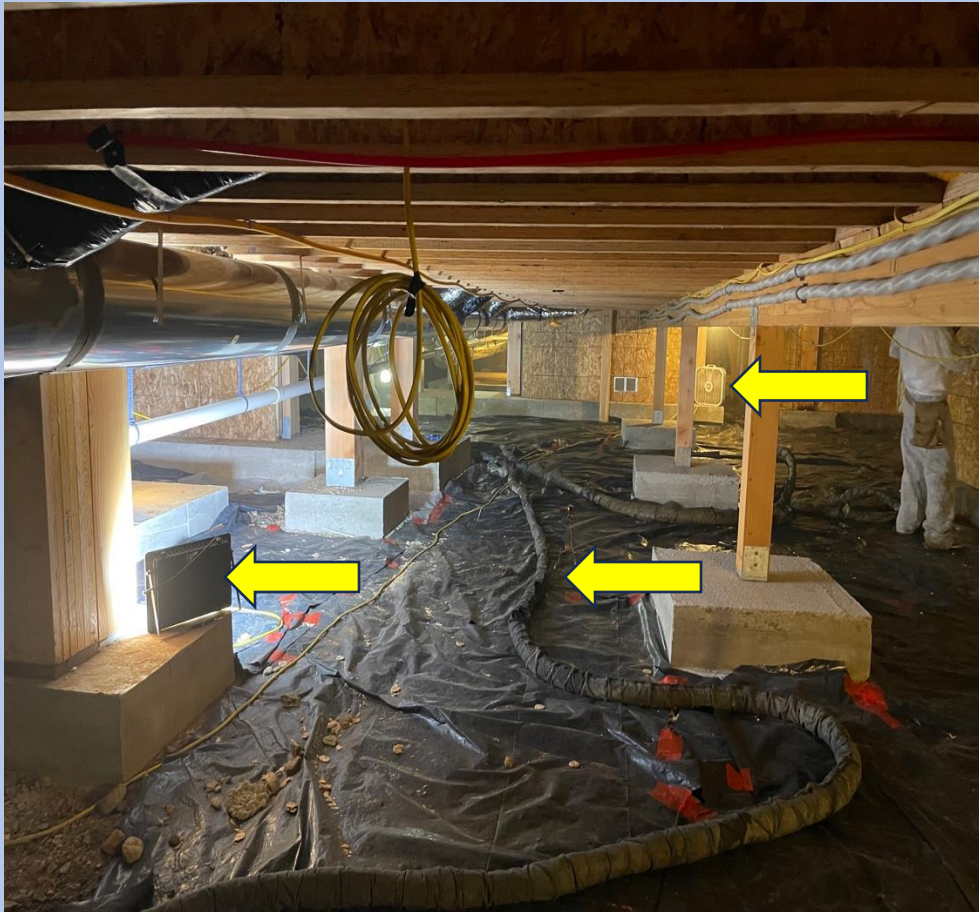


# Jobsite





# Jobsite







# Jobsite Understanding the basic's





# Jobsite Doing it correct



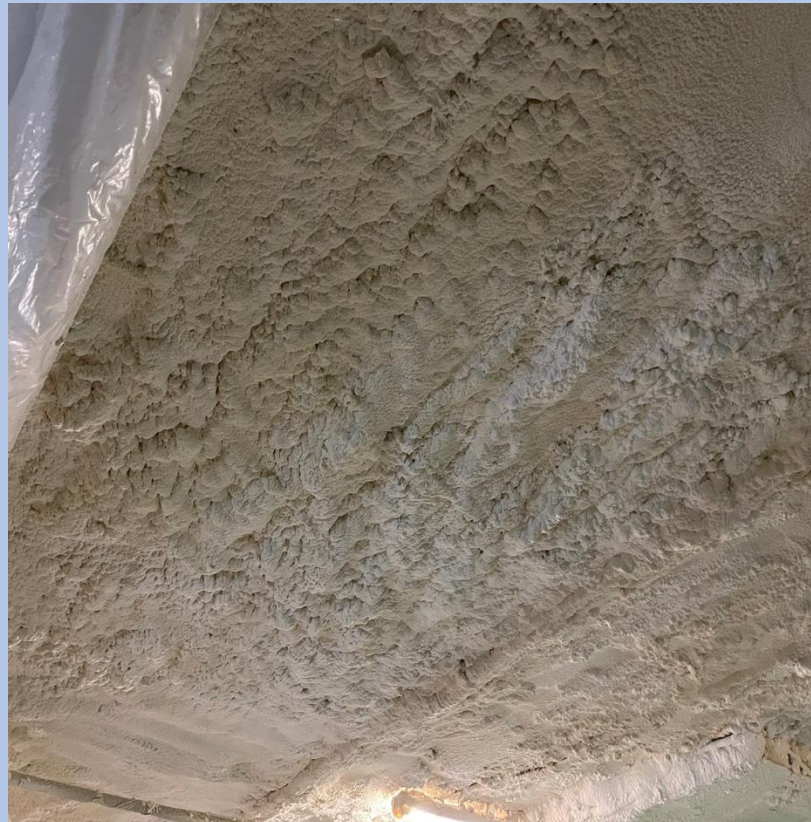
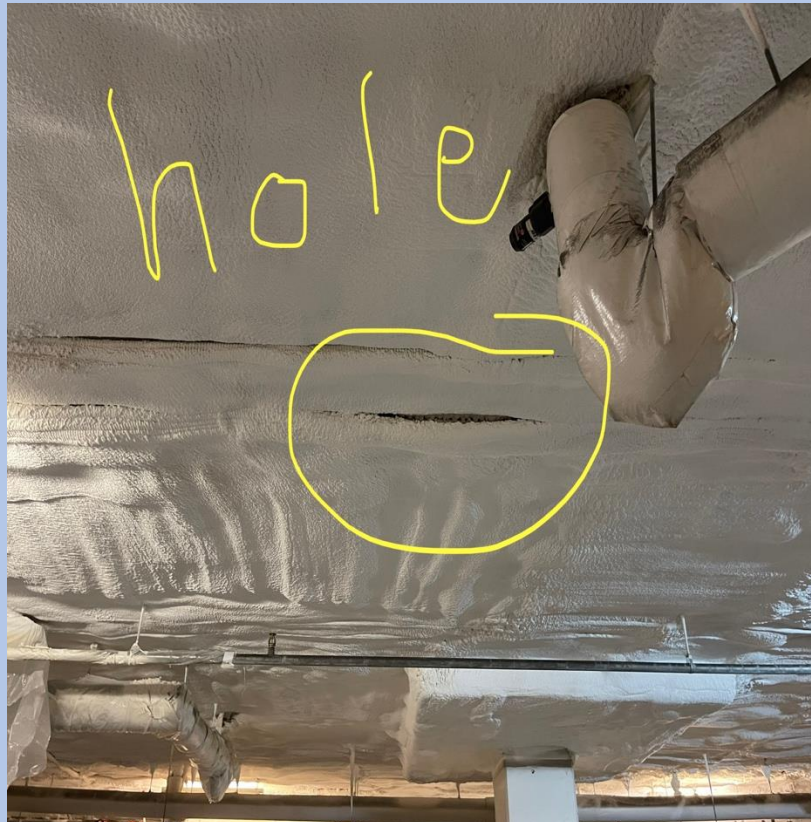


# Jobsite Doing it right





QC





QC

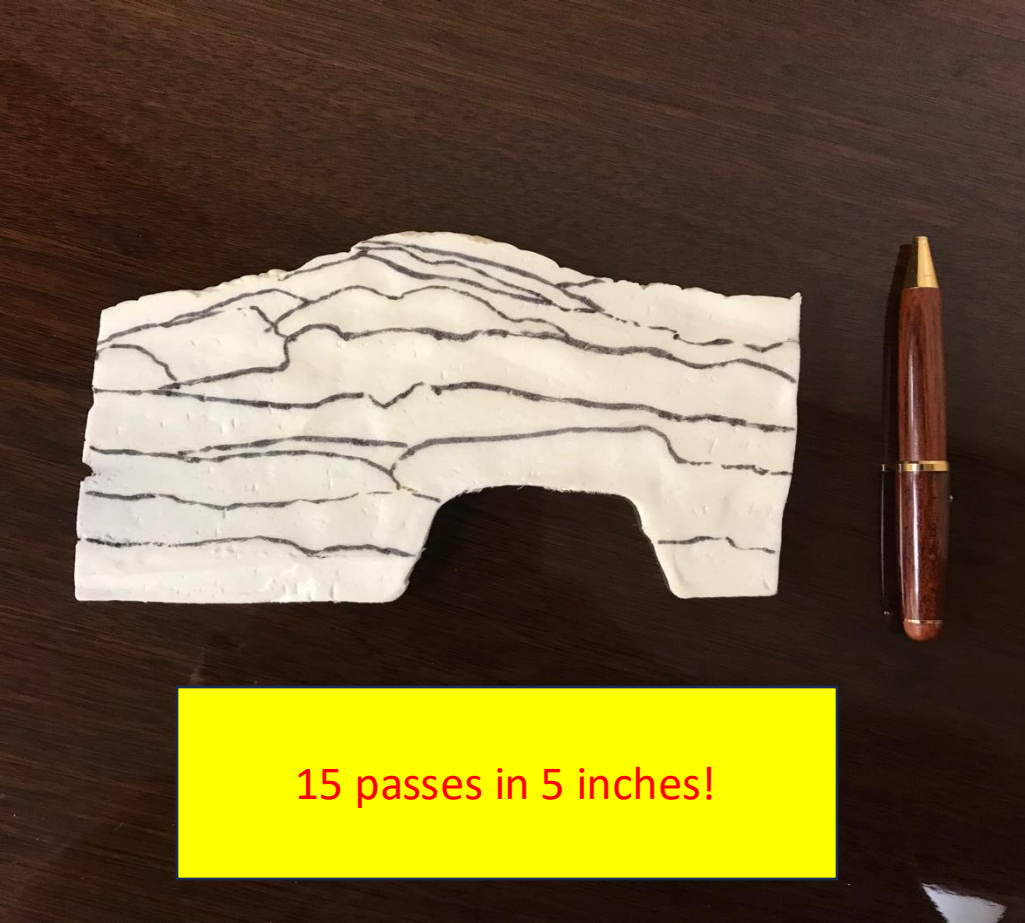




QC



QC





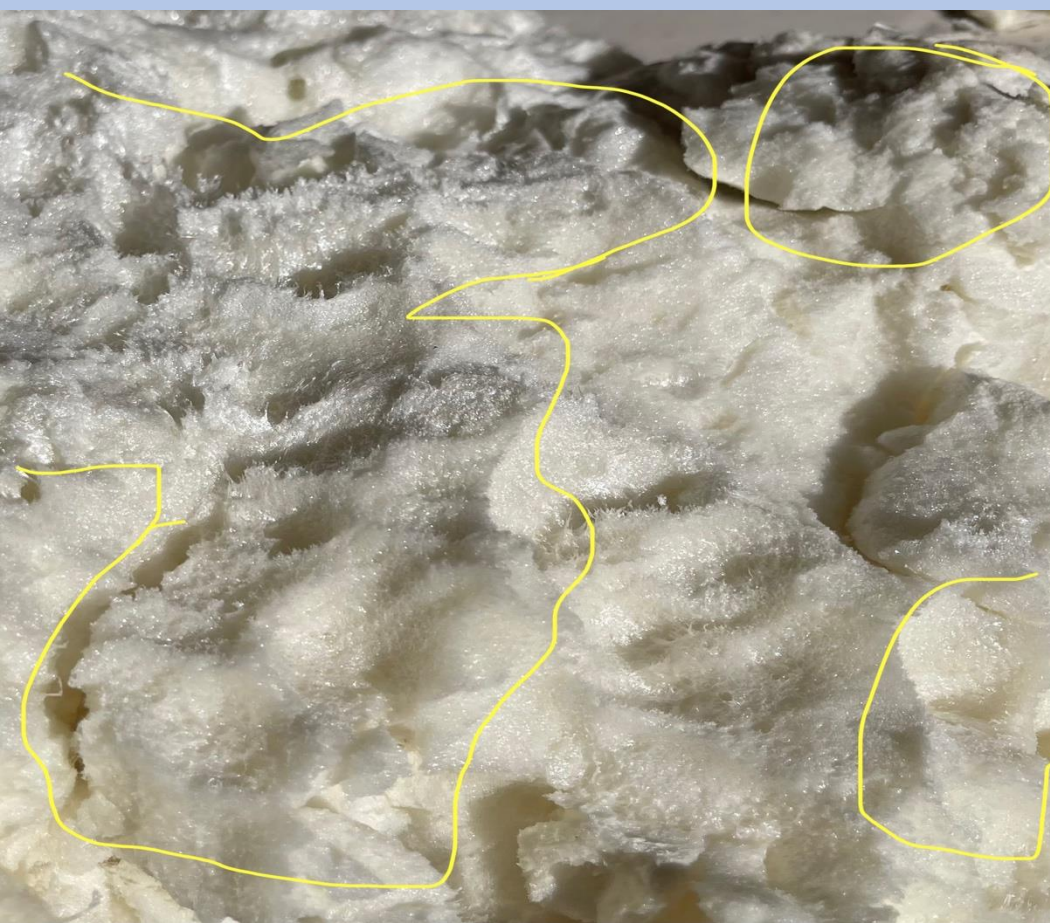
QC







QC





QC







QC





QC



- Keep Daily Job records
- Record pull and adhesion tests
- Use quality tools such as a Com-Ten Tool
- Record Substrate and environment temperatures/Humidity and Moisture



QC



- Calculate and compare your yield
- Check your density
- Only give homeowners and builders the finished product SDS



QC





Your worst day







# Manage Pass Thickness





# Manage your changeover





# Foam gets hot





Another version of a  
bucket of cash





Foam is cool.





Questions?



Stressed spelled  
backwards is  
DESSERTS