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# BAGDAD EW TANK HOUSE LEAD HANDLING TRAINING

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# AGENDA

- TRAINING
- HEALTH EFFECTS OF LEAD EXPOSURE
- LEAD ACTION LEVELS
- LEAD POISONING SYMPTOMS IN CHILDREN
- LEAD POISONING SYMPTOMS IN ADULTS
- TYPES OF EXPOSURES
- PPE REQUIREMENTS
- TAKING LEAD HOME / HYGIENE
- MONITORING

# Who Needs Lead Awareness Training



- According to the OSHA lead standard for general industry, lead awareness training is mandatory for any worker who may be exposed to harmful levels of lead on the job.
- General industry workers at risk for lead exposure are also required to retake lead awareness training annually. This helps ensure workers remain up to date on the dangers of lead poisoning and important safety controls. The date that you completed your training or annual retraining will be printed on your digital Certificate of Completion.
- OSHA's lead action level is 30  $\mu\text{g}/\text{m}^3$ , or 30 micrograms of airborne lead per cubic meter of air averaged over an eight-hour period. If a jobsite exposes workers to this level of airborne lead, regardless of respirator use, OSHA requires worker training and additional compliance activities.
- <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1025>

# Health Effects of Lead Exposure

- Lead poisoning can occur when a person is exposed to air, soil, water or substances that are contaminated with lead. Workers may develop lead poisoning after workplace exposures to lead found in paint, soil, dust, batteries, solder, pipes and a variety of other materials.
- Lead poisoning occurs when lead builds up in the body, often over months or years. Even small amounts of lead can cause serious health problems. Children younger than 6 years are especially vulnerable to lead poisoning, which can severely affect mental and physical development. At very high levels, lead poisoning can be fatal.
- There is treatment for lead poisoning, but taking some simple precautions can help protect you and your family from lead exposure before harm is done.

## Symptoms

- Initially, lead poisoning can be hard to detect — even people who seem healthy can have high blood levels of lead. Signs and symptoms usually don't appear until dangerous amounts have accumulated.

# LEAD ACTION LEVEL

- The lead action level is 30  $\mu\text{g}/\text{m}^3$ , or 30 micrograms of airborne lead per cubic meter of air averaged over an eight-hour period.
- When lead concentrations reach this level at a jobsite, OSHA requires employers to train workers on lead hazards and perform specific compliance activities
- The permissible exposure limit of lead is 50  $\mu\text{g}/\text{m}^3$ , or 50 micrograms of airborne lead per cubic meter of air averaged over a 8-hour period.
- The permissible exposure limit of lead is 40  $\mu\text{g}/\text{m}^3$ , or 40 micrograms of airborne lead per cubic meter of air averaged over a 10-hour period.
- According to OSHA regulations, this is the maximum concentration of lead that workers can be exposed to on the job.

# Lead poisoning symptoms in children



## Signs and symptoms of lead poisoning in children include:

- Developmental delay
- Learning difficulties
- Irritability
- Loss of appetite
- Weight loss
- Sluggishness and fatigue
- Abdominal pain
- Vomiting
- Constipation
- Hearing loss
- Seizures

## Babies exposed to lead before birth might:

- Be born prematurely
- Have lower birth weight
- Have slowed growth

# Lead poisoning symptoms in adults

Although children are primarily at risk, lead poisoning is also dangerous for adults.

## Signs and symptoms in adults might include:

- High blood pressure
- Joint and muscle pain
- Difficulties with memory or concentration
- Headache
- Abdominal pain
- Mood disorders
- Reduced sperm count and abnormal sperm
- Miscarriage, stillbirth or premature birth in pregnant women





# TYPES OF EXPOSURE (BIOACCUMULATION)

Absorption through direct contact



Inhalation



**WARNING**  
**LEAD WORK AREA**  
**POISON**  
**NO SMOKING OR EATING**

Ingestion





# PPE REQUIREMENTS AND CONTAMINATED PPE DISPOSAL

## PRIOR TO WORKING



### NITRILE GLOVES



### YELLOW TYVEX SUIT



### KEVLAR GLOVES with taped wrists



# PPE REQUIREMENTS AND CONTAMINATED PPE DISPOSAL



## RESPIRATOR

**FULL FACE RESPIRATOR**

**Or PAPR (forced air)**

**required as of January 1<sup>st</sup>, 2023**



# PPE REQUIREMENTS AND CONTAMINATED PPE DISPOSAL

## BOOT WASHING STATION



Everyone is required that enters the Tank House to wash their boots off as they leave the Tank House.

Whether you are on the cell line for a Harvest / press day or working on the Tank house floor. Not even working with lead. You still need to wash off your boots.

# PPE REQUIREMENTS AND CONTAMINATED PPE DISPOSAL



# TAKING LEAD HOME / HYGIENE



- Practice good hygiene
  - Wash hands and face every time you get something to drink or eat. Even before going to the restroom.
  - There is to be NO eating or drinking inside of the tank house. There is a wash station just outside of the tank house, by the 3-man station to wash hands and get a drink.
- Change uniforms before going home.
  - Yes, you had on a Tyvex suit, But there is a possibility some lead may get on your uniform. So, make sure to change before going home.
- Have spare lead rubber boots, hard hat and gloves for lead specific areas.
- Keep all contaminated items out of the lunchrooms and restrooms.
- Keep lunch boxes off the floor and table.
- No PPE in lunchrooms.

# MONITORING

- Blood work part of annual physical.
  - Everyone that is going to be working in the tankhouse is required to have a baseline blood sample taken.
  - Every six months you will have to do another blood sample.
  
- Periodical lead sampling of Tank house and lunchroom.
  - Sampling will be conducted monthly and will be adjusted according to sample results.

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ANY QUESTIONS ?