

Health Hazard Evaluation Program

2019 Annual Report



Photos by NIOSH



International Presence

Location: Medellin, Colombia — Corporacion de Salud Ocupacional y Ambiental (Corporation of Occupational and Environmental Health)

Topic: 1) Exposures to mercury during mining and 2) Hazardous noise exposures across multiple industries

Impact: Presented HHE and NIOSH work at this internationally renowned conference — over 2,000 professionals in attendance

274 HHE Requests

&

32 Site Visits



27
Workplaces



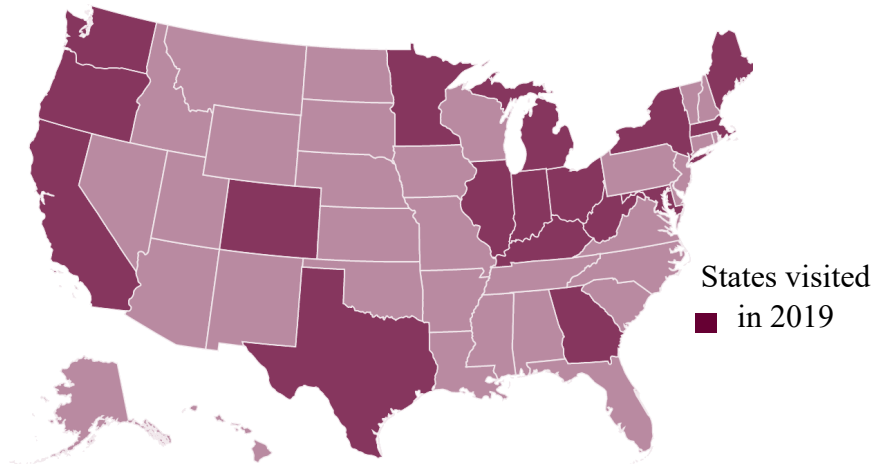
17
States



26
Cities



approx. 25,700
Miles Traveled



Outreach



HHE webpage viewed **49,804** times

HHE Reports downloaded **18,271** times



36 New HHE reports



205 Facebook posts



Reached **125,224** people



32,155 Page "likes"



From **49** different countries



67 Presentations



27 Peer-reviewed publications



New redesigned Occupational Medicine Rotation webpage viewed **2,879** times

Evaluation of Exposures to Styrene During Ultraviolet Cured-in-place Pipe Installation

Findings

- Tasks with the highest exposure risks were grinding cured pipe and cutting and taping the liner.
- Levels of styrene were higher when the manhole ventilator blower fan was not used.



Photo by ©2020 iStock/Getty Images

Recommendations



Continue to immediately bag excess liner material and contaminated gloves.



Continue to ventilate the manholes at all times during tasks that could increase employees' exposure.



Educate employees on potential hazards such as styrene exposure.



Report work-related health and safety concerns to your doctor and health and safety officer.

HHE report available here: https://www.cdc.gov/niosh/hhe/reports/pdfs/2018-0009-3334_revised032019.pdf

Evaluation of Waste Anesthetic Gas Exposures and Miscarriages at a Veterinary Hospital

Findings

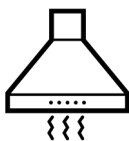
- One of six employees was exposed to high levels of isoflurane.
- Seven of 34 employees reported 12 miscarriages while employed at the veterinary hospital.
- Our evaluation could not link the reported miscarriages to work at the veterinary hospital.



Photo by ©2020 iStock/Getty Images

- Other potential reproductive hazards should be evaluated at this workplace.

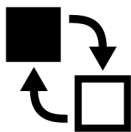
Recommendations



Replace the passive scavenging systems with active scavenging systems.



Consult with a ventilation engineer.



Consider alternatives to ethylene oxide sterilization.



Store misoprostol and other drugs that pregnant women should not handle in separate areas which are well-marked.

HHE report available here: <https://www.cdc.gov/niosh/hhe/reports/pdfs/2017-0077-3336.pdf>

Investigators Work to Improve Firefighter Health and Safety

Take a look at some of the firefighter related HHEs from 2019!

Evaluation of Fire Debris Cleanup and Employees' Exposure to Silica, Asbestos, Metals, and Polyaromatic Hydrocarbons



Employee using a boot wash. Photo by NIOSH.

HHE report available here: <https://www.cdc.gov/niosh/hhe/reports/pdfs/2018-0094-3355.pdf>



Two employees working inside the lot footprint with no dust suppression, surrounded by dust that may contain silica. Photo by NIOSH.

Evaluation of Rhabdomyolysis and Heat Stroke in Structural Firefighter Cadets

HHE report available here: <https://www.cdc.gov/niosh/hhe/reports/pdfs/2018-0154-3361.pdf>

Evaluation of Wildland Firefighters' Exposures to Asbestos During a Prescribed Burn



Firefighters using tools to construct a fire line by digging into the forest floor to create a break in the fuel. Photo provided by employer.

HHE report available here: <https://www.cdc.gov/niosh/hhe/reports/pdfs/2017-0076-3352.pdf>



Fire moving along the planned burn area along the fire line. Photo provided by employer.

Evaluation of Wildland Firefighter Exposures during Fuel Reduction Projects

HHE report available here: <https://www.cdc.gov/niosh/hhe/reports/pdfs/2015-0028-3330.pdf>



Sawyer cuts slices from logs while the vibration is measured at the hand-handle interface. Photo by NIOSH.

Evaluation of Metal and Noise Exposures at an Aircraft Powerplant Parts Manufacturer

Findings

- One of seven employees was exposed to high levels of airborne nickel.
- Employees were exposed to high noise levels.
- Work practices and conditions contributed to noise exposures.



Photo by ©2020 iStock/Getty Images

Recommendations



Reduce welders' exposures to noise from compressed air.



Include welders and welding supervisors in the company hearing conservation program.



Install local exhaust ventilation systems in the welding booths.



Include welders in the company respiratory protection program.

HHE Report available here: <https://www.cdc.gov/niosh/hhe/reports/pdfs/2018-0001-3349.pdf>

Evaluation of Push and Pull Forces and Musculoskeletal Symptoms Among Employees at an Automobile Manufacturer

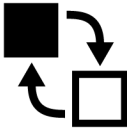
Findings

- The prototype aluminum dolly decreased push and pull force requirements by 48% when fully loaded.
- Handholds were not within recommended guidelines.
- More than half of interviewed employees reported work-related musculoskeletal pain.
- On average, employees reported a moderate level of job stress.



Photo by ©2020 iStock/Getty Images

Recommendations



Replace steel dollies with aluminum dollies where they are used to transport panoramic roofs.



Require employees to use the provided air assist to help start movement of the dolly.



Improve communication between managers and employees.



Include team members in decisions regarding changes to work processes and procedures.

HHE Report available here: <https://www.cdc.gov/niosh/hhe/reports/pdfs/2019-0004-3363.pdf>

Indoor Environmental Quality (IEQ) Concerns

In 2019, HHE investigators completed 115 remote and three in-person HHEs related to IEQ issues in 36 states.

General Findings

- Thousands of workers were employed at the facilities.
- Indoor dampness and visible mold were frequently reported.
- Common complaints included headache and respiratory symptoms while at work that improved when away from work.

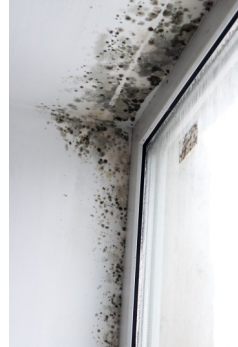


Photo by ©2020 iStock/Getty Images

- Lack of communication about IEQ issues between management and staff occurred frequently.

General Recommendations



Perform visual inspections to identify any potential sources of dampness or mold.



Clean or remediate water-damaged and mold contaminated materials.



Make proper repairs to prevent further indoor dampness and mold problems.



Encourage employees to report work-related health and safety concerns to their doctor or health and safety officer.

Visit the NIOSH IEQ page <https://www.cdc.gov/niosh/topics/indoorenv/mold.html>

Coffee Roasting HHEs

In 2019, HHE investigators completed HHEs at three coffee roasting and packaging facilities.

General Findings

- Roasted coffee is known to emit volatile organic compounds and carbon monoxide.
- Roasting, grinding, flavoring, and packaging roasted coffee are sources of diacetyl and 2,3-pentanedione exposure.



Photo by ©2020 iStock/Getty Images

- Employees commonly reported eye and nose symptoms. These symptoms were sometimes caused or aggravated by coffee dust.

General Recommendations

- Use local exhaust ventilation to remove diacetyl and 2,3-pentanedione where they are produced or released.
- Consult a qualified ventilation engineer.
- Enclose and automate processes as much as possible.

Reports available here:

<https://www.cdc.gov/niosh/hhe/reports/pdfs/2016-0164-3341.pdf>

<https://www.cdc.gov/niosh/hhe/reports/pdfs/2018-0071-3342.pdf>

<https://www.cdc.gov/niosh/hhe/reports/pdfs/2016-0109-3343.pdf>

Visit the NIOSH Coffee Roasting and Packaging Facilities page
<https://www.cdc.gov/niosh/topics/flavorings/intervenions.html>

New Specialty Publications

New Workplace Solutions document:

⇒ Preventing Occupational Exposure to *Legionella*

View online: <https://www.cdc.gov/niosh/docs/wp-solutions/2019-131/>

WORKPLACE SOLUTIONS

From the National Institute for Occupational Safety and Health

Preventing Occupational Exposure to *Legionella*

New Scientific Journal Article:

⇒ American Journal of Industrial Medicine - “Severe lung disease characterized by lymphocytic bronchiolitis, alveolar ductitis, and emphysema (BADE) in industrial machine-manufacturing workers”

View online: <https://doi.org/10.1002/ajim.23038>

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RESEARCH ARTICLE

AMERICAN JOURNAL
OF
INDUSTRIAL MEDICINE | WILEY

Severe lung disease characterized by lymphocytic bronchiolitis, alveolar ductitis, and emphysema (BADE) in industrial machine-manufacturing workers



Health Hazard[®]
Evaluation Program

-Our Mission-

The mission of the NIOSH Health Hazard Evaluation Program is to respond to requests from employees, employers, and union representatives to evaluate potential health hazards in their workplace.

These evaluations are done at no cost to the requestor. Once the evaluation is complete, recommendations are made on ways to reduce or eliminate identified hazards. Health Hazard Evaluations can help reduce hazards and create healthier workplaces.



cdc.gov/niosh/hhe/



HHERequestHelp@cdc.gov



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health.hazard.evaluation.program/](https://www.facebook.com/health.hazard.evaluation.program/)



1-513-841-4382
Monday—Friday
9 a.m. — 4:30 p.m. EST



NIOSH Health Hazard Evaluation Program
1090 Tusculum Ave, Mail Stop R-9
Cincinnati, OH 45226-1998