



May 11, 2018

Governor David Y. Ige
Executive Chambers
State Capitol
Honolulu, Hawai'i 96813

***Volcano Cleanup Resources, Assistance, and Recommendations for Protecting
the Health and Safety of Residents and Recovery Workers***

Dear Governor Ige:

On behalf of the American Industrial Hygiene Association's® (AIHA) members, allow me to offer you AIHA's assistance as your state responds to and recovers from the volcanic eruptions.

In addition to the many heat and gaseous hazards present at the site of the eruption, the impacts to public health, property, and the environment can be felt by those several hundred miles away. Communities downwind from the eruption may be affected as feather-light ash, gas, and other smoke components produced by the intense heat of the combustion are lofted into the air and travel great distances by prevailing winds. These potentially hazardous materials remain in and traverse the atmosphere for varying lengths of time, resulting in possible widespread and prolonged public exposures.

Volcanic ash and other particles can both migrate and infiltrate into the built environment through open doors and windows, on shoes and clothing, through the ventilation system and unperceived gaps in the building envelope. Studies have shown that penetration rates can be highly influenced by building characteristics, meteorology, and particle size/composition. Settled ash and other combustion particles on building surfaces or personal property can emit volatile materials, which may be the source of persistent odors and/or result in an alteration in appearance or value. Homeowners returning to burned-out residential areas may be exposed to ash which contains toxic materials, in addition to potential exposures to asbestos and decomposition products from pesticides and other hazardous materials which may have been stored in the area.

AIHA's members – industrial hygienists – apply scientific principles to anticipate, recognize, evaluate, and control chemical and other health and safety hazards that may

arise in or from the workplace. They unite management, workers, and the community in the common goal of protecting worker health and safety¹.

It is often the case that the greatest number of injuries and illnesses occur not just when a disaster strikes, but during cleanup and recovery. The greatest threats are the unknown hazards² facing residents and recovery workers. Industrial hygienists have the technical knowledge and professional experience to save lives and help people stay safe and healthy during these perilous times.

Recommendations

Ensuring that the proper personnel are in place both on the ground and in planning arenas is crucial to safe recovery efforts, and this extends into the procurement of goods and services. As such, AIHA recommends the following³:

- Workers and others sifting through the ash of burned homes and other structures are at an increased risk of skin, lung and eye damage, and as such these individuals should take extra steps to protect themselves, including wearing N95-rated masks, long sleeves, boots, and glasses.
- Explicitly include industrial hygienists in the pre-planning, emergency response, and management phases associated with disasters. Encourage the use of Certified Industrial Hygienists (CIH®), as the CIH is known around the world as the “gold standard” for certification in industrial hygiene, and those who have earned the CIH professional designation adhere to a high standard of ethical conduct, and have demonstrated skills and knowledge in a number of different areas that are directly applicable to disaster planning, response, and recovery⁴.
- Consider the following as positive factors when evaluating prospective contractors:
 - Existence of an adequate written health and safety program
 - An Experience Modification Ratio (EMR) less than 1.0
 - Injury and illness statistics less than industry average
 - Participation in voluntary health and safety programs

¹ For additional information on the field of industrial hygiene and the work of AIHA, please visit

<https://www.aiha.org/about-aiha/Pages/default.aspx>.

² Types of unknown hazards include, but are not limited to carbon monoxide, electrical shock, heat/cold stress, biological hazards and infectious agents, mold, asbestos, and lead.

³ American Industrial Hygiene Association: “AIHA's View of the Use of OHS Performance Criteria in Contracting and Procurement Position Statement”. August 31, 2001. https://www.aiha.org/government-affairs/PositionStatements/position01_OHS-PerformanceCriteria.pdf

⁴ For additional information on the Certified Industrial Hygienist professional designation please visit <http://www.abih.org/about-abih/cih-caih>.

- A well-defined and adequately resourced management system
- Client assessments of safety and health performance on previous contracts
- Conversely, those contractors with a poor health and safety performance track record should be given negative consideration. Several criteria can be considered in this regard:
 - A record of OSHA citations
 - A record of civil/criminal penalties
 - Unfavorable EMR or assessments of health and safety performance on previous contracts
 - The absence of a formalized health and safety program

Resources

AIHA has a large number of free resources and services – as well as those available through our bookstore – that are immediately deployable. During your time of great need, we stand ready to help. Our free resources include:

- ***Health and Safety Issues in Natural Disasters*** ([PDF](#)), an AIHA guidance document published in 2017, provides a list of resources for addressing potential hazards during and after floods, tornadoes, and wildfires.
- AIHA's [Wildfire Specific Hazards](#), which serves as a hub for a number of resources from AIHA and our partners on what to do before, during, and after a wildfire has occurred.
- AIHA's [Earthquake Hazards](#), which serves as a hub for a number of resources from AIHA and our partners on what to do before, during, and after an earthquake has occurred.
- AIHA's [Consultants Listing](#), the leading directory of industrial hygiene (IH) and other occupational and environmental health and safety (OEHS) consultants. Government agencies such as EPA, FEMA, and OSHA regularly refer consumer inquiries to our consultants for assistance. AIHA's *Consultants Listing* is also frequently referenced as a source by the media for consumers when searching for an IH or OEHS consultant.
- ***Industrial Hygienists' Roles and Responsibilities in Emergency Preparedness and Response White Paper*** ([PDF](#)).

Our resources available for purchase through our bookstore include:

- ***Technical Guide for Wildfire Impact Assessments for the OEHS Professional*** ([PDF](#)).

Next Steps

AIHA and its members are ready now, and we will remain ready to assist you in recovery efforts throughout the days to come. For additional information, please contact Mark Ames, AIHA's Director of Government Relations, at mames@aiha.org or 703-846-0730.

Sincerely,



Deborah Imel Nelson, PhD, CIH
President
AIHA

Background on AIHA

AIHA and our members have the expertise to help mitigate the impacts of the myriad of hazards associated with the aftermath and cleanup from wildfires. Our expertise is based upon solid credibility built from 79 years of service to the industrial hygiene and occupational and environmental health and safety (OEHS) communities. We also have a reach that extends to help protect millions of people. Specifically, AIHA has 8,500 members throughout the United States and its territories who represent a cross-section of industry, private business, labor, government, and academia. We have Local Sections throughout the United States – including in Hawai'i – and more than 50 volunteer groups. We also have formal and informal partnership agreements with governmental and nongovernmental organizations that represent the full spectrum of worker health and safety vocations.