

# LATE TESTIMONY

## **Committee on Labor & Public Employment**

Rep. Karl Rhoads, Chair

Rep. Kyle Yamashita, Vice Chair

February 7, 2009

Support of HB 315

Relating to Volcanic Emissions

My name is Jessanie Marques, I would like to submit testimony in support of HB 315 relating to volcanic emissions.

I am an asthmatic and live in Pahala on the Big Island of Hawaii, in the District of Ka'u. On July 27, 2008 I experienced a severe asthmatic attack when high levels of sulfuric dioxide, seeped through my jealousy windows, creating a "gas chamber" effect of which the sulfuric dioxide and particulates filled my parlor, kitchen and hallway. As a resident of Pahala for over 30 years, I had never experienced such distress.

I called my doctor, and he advised me to immediately evacuate the area. After leaving the area, I was examined by my doctor, he advised me to move out of Pahala, away from the hazardous environmental conditions created from Kilauea's newest vent at Halemaumau crater, .....or I would die. Moving away from our home and family, was not an option, we chose to remain in Pahala.

The health and public safety on human life, agriculture and economic impact on tourism is vital to our community. As a concerned citizen I can only imagine the impact on others who due to their work related duties or environments are exposed to dangerous levels of sulfur dioxide, and vog particulates.

Through my personal experience, I fully support the establishment of work safety standards specifically tailored to benefit the health and safety of all workers exposed to this type of hazardous environmental conditions.

Thank you for providing me this opportunity to share my comments and urge passage of HB 315.

LINDA LINGLE  
Governor



State of Hawaii  
DEPARTMENT OF AGRICULTURE  
1428 South King Street  
Honolulu, Hawaii 96814-2512

SANDRA LEE KUNIMOTO  
Chairperson, Board of Agriculture

DUANE K. OKAMOTO  
Deputy to the Chairperson

A handwritten signature in black ink, appearing to read "Duane K. Okamoto".

TESTIMONY OF SANDRA LEE KUNIMOTO  
CHAIRPERSON, BOARD OF AGRICULTURE

BEFORE THE HOUSE COMMITTEES ON PUBLIC SAFETY  
AND  
AGRICULTURE  
SATURDAY, FEBRUARY 7, 2009  
9:00 A.M.  
ROOM 325

HOUSE BILL NO. 316  
RELATING TO AGRICULTURE

Chairpersons Hanohano and Tsuji and Members of the Committees:

Thank you for the opportunity to provide testimony on House Bill 316 which directs the Hawaii Department of Agriculture (HDOA) to develop and implement a temporary reimbursement program to reimburse qualified tenants, operating on state-leased agricultural lands in vog-impacted areas, for costs incurred due to vog for repair, maintenance, or replacement of fencing and other infrastructure on the leased property. HDOA supports the intent of this bill and offers comments. We defer to the State Department of Defense as to the appropriateness of use of funds from the Homeland Security Grant Program for the proposed purpose.

We wish to point out that currently, the HDOA does not have any agricultural lands in the vog-affected areas under our management. There is one parcel, currently leased by a cattle rancher that is under consideration for transfer from DLNR to HDOA's Non-agricultural Park Lands program. Except for that one parcel, there aren't any others in the vog-affected areas that have been identified as suitable for transfer to

HDOA.

In these difficult economic times, we recommend that until there is a better understanding of the scope of the problem, some affordable recommendations for replacement materials are identified, and a dedicated source of funds is obtained, that we continue to monitor the situation rather than commit scarce resources in a very uncertain situation.

William P. Kenoi  
Mayor



William T. Takaba  
Managing Director

Walter K.M. Lau  
Deputy Managing Director

## County of Hawai'i

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February 7, 2009

The Honorable Ryan I. Yamane, Chair  
And Committee Members of the House Health Committee  
The Honorable Jerry L. Chang, Chair  
And Committee Members of the House Higher Education Committee  
The Honorable Karl Rhoads, Chair  
And Committee Members of the House Labor & Public Employment Committee  
The Honorable Joseph M. Souki, Chair  
And Committee Members of the House Transportation Committee  
The Honorable Faye Hanohano, Chair  
And Committee Members of the House Public Safety Committee  
The Honorable Clift Tsuji, Chair  
And Committee Members of the House Committee on Agriculture  
Hawai'i State Capitol  
415 South Beretania Street  
Honolulu, Hawai'i 96813

Re: House Bills 313, 318, 316, 312, 317, 314 and 315

Aloha, Chairpersons and Committee Members:

Thank you for this opportunity to provide comments in favor of these seven House Bills designed to cope with the health and economic effects from vog. We will provide more specific testimony on the individual bills, but please let me express my appreciation to members of the Legislature for addressing this serious problem that is affecting our people's lives and livelihoods.

As you know, sulfur dioxide emissions at the summit of Kilauea volcano began climbing in December 2007, and on March 12, 2008 increased sharply from the new vent at Halema'uma'u Crater. The trade winds have generally swept the gasses and acid rain southwest, causing major agricultural damage and particular hardship in communities such as Wood Valley, Hawaiian Ocean View Estates, Na'alehu and Pahala.

As you will hear today, crops have been damaged, agricultural infrastructure has deteriorated from the fumes, and people have become ill.

Ranchers, farmers and homeowners who have spent their lives building businesses and raising families in rural Ka'u, South Kona and Volcano have suddenly had to cope with completely unexpected economic losses and illnesses.

We deeply appreciate the efforts of Representative Herkes and all of the committee chairpersons and members in taking this time to search for the best methods of safeguarding the health of our Hawai'i Island residents, and the best ways to provide relief to businesses that are threatened by the increased emissions.

We particularly thank you for your willingness to address the problem in these difficult economic times, and welcome any assistance you can provide for our residents and for the many Hawai'i County agricultural operations that are trying to cope with this new threat.

Aloha,

Billy Kenoi

Testimony In Support of the Intent of  
HB 312  
Relating to Hazardous Substances  
HB 315  
Relating to Volcanic Emmissions  
HB 317  
Relating to Medical Mobile Care

**LATE TESTIMONY**

February 7, 2009  
9:00 am  
State Capitol  
CR 325

Rell Woodward, MD  
President  
Ocean View Community Development Corp.

HB 312

There are reliable sources for portable SO2 monitors that cost between \$300 to \$395 per unit. The units have a data storage capacity and datalink capability. Rick Ward, who heads the Community Emergency Response Team (CERT) has established a large network that advises the community in case of emergencies. A network of monitoring units should be in the possession of trained CERT members who could rapidly notify the citizenry of dangerous levels of SO2

HB 315

No one knows what the effects of long-term low dose exposures are. A study would help answer this question. It would require baseline and follow-up pulmonary function tests of the subjects to see if there is a significant decline over time with chronic exposure. Also, you would need to have SO2 monitoring equipment where the subjects live so you could really tell what levels of exposure they had over time.

For sensitive people (children born prematurely, asthmatics, those with respiratory or cardiac conditions, etc.) even fairly low levels of SO2 can cause problems. That is why Hawaii County's "color" coded system triggers the highest alert level (purple) at 2ppm (parts per million) SO2.

In May 2008, the SO2 level recorded in Ocean View was 15 ppm. A voluntary evacuation was in force, and called off two hours later when levels dropped off significantly. The levels have since remained under 2 ppm. I am including information from the National Institute of Health SO2 (see attached information.)

HB 317

A great idea.

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[The following is a synopsis of the raw data from the National Institute for Occupational Safety and Health (NIOSH) Department of Health and Human Services, a branch of the Centers for Disease Control.]

The IDLH "immediately dangerous to life or health air concentration values" concentration for Sulfur Dioxide is 100 ppm.

#### SULFUR DIOXIDE

LCLo (inhalation, human) = 3000 ppm/5 minutes

LC50 (inhalation, rat) = 2520 ppm/1 hour

LC50 (inhalation, mouse) = 3000 ppm/30 minutes

LCLo (inhalation, guinea pig) = 1039 ppm/24 hours

SHORT-TERM INHALATION STUDIES: Most studies indicate that high concentrations of Sulfur Dioxide effect the mechanics of respiration. A dose-related narrowing of the bronchiole tubes leading to bronchio-constriction was seen in guinea pigs exposed to concentrations of 0,2-100 ppm for 1 hour. Exposure of male mice for up to 72 hours to concentrations around 10 ppm produced nasal cavity injury (runny nose, ciliary loss, fluid accumulation, and tissue death). The effects became more severe as exposure time increased. Less severe effects were seen in the trachea and lungs. Other studies have not been reported any effects after 1-2 hour exposures to less than 1 ppm.

#### SULFUR DIOXIDE (continued):

LONG-TERM INHALATION STUDIES: Exposure to 5 ppm for 225 days produced pulmonary function changes in dogs. Increased swelling, secretions, and reddening of the trachea, as well as decreased mucosal flow was seen in dogs intermittently exposed to 1 ppm for 12 months. There was no apparent effect on pulmonary function. No adverse effects were seen in guinea pigs exposed for 22 hours day, 7 days a week, for 52 weeks to concentrations of 0.13-5.72 ppm. No adverse effects were seen in monkeys exposed for 78 weeks to 0.14 - 1.28 ppm.

#### Definitions

An LC50 value is the concentration of a material in air that will kill 50% of the test subjects (animals, typically mice or rats) when administered as a single exposure (typically 1 or 4 hours). Also called the median lethal concentration and lethal concentration 50, this value gives you an idea of the relative acute toxicity of an inhalable material.

This is closely related to the LCLo value which is the lowest concentration reported to have killed animals or humans.

This value applies to vapors, dusts, mists and gases. Solids and liquids use the closely related LD50 value (50% lethal dose).

# LATE TESTIMONY

AGR-HED-HLT-LAB-PBS-TRN Hearing  
Saturday, February 7, 2009  
9:00 am  
State Capitol  
CR 325

Testimony in support of:

HB 312  
HB 313  
HB 314  
HB 315  
HB 316  
HB 317  
HB 318

We are 100% on Bills 312,313,314,315,316,317 and 318.

Thank you for your time and efforts.

Don and Martie Nitsche  
Ocean View Residents