

LINDA LINGLE
GOVERNOR OF HAWAII



CHIYOME LEINAALA FUKINO, M.D.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. Box 3378
HONOLULU, HAWAII 96801-3378

LATE

In reply, please refer to:
File:

**JOINT HOUSE COMMITTEES ON TRANSPORTATION AND TOURISM &
CULTURE**

HB 2919 HD 1, RELATING TO AIR POLLUTION CONTROL

**Testimony of Chiyome Leinaala Fukino, M.D.
Director of Health**

**February 27, 2008
9:30 a.m.**

1 **Department's Position:** The Department of Health (Department) understands the intent of the bill but
2 has concerns because efforts are already being taken to address the issue.

3 **Fiscal Implications:** None

4 **Purpose and Justification:** The purpose of this bill is to reduce air emissions from cruise ships by
5 requiring the burning of fuel with a sulfur content of less than 5000 ppm (0.5%) or installing a control
6 technology with an equivalent reduction of emissions.

7 The Department generally supports the reduction of air pollutant emissions. Cruise ships employ
8 large diesel engine generators and boilers that may result in significant amount of air emissions.
9 Currently, cruise ships burn fuel with a sulfur content typically ranging from 1.4% to 2.5%. The
10 international limit under MARPOL is 4.5%. Land-based power plants in Hawaii burn mostly 0.5%
11 sulfur fuel. Limiting the fuel sulfur content to 5000 ppm (0.5%) will result in a significant decrease in
12 sulfur dioxide emissions. However, we caution that even with the cleaner fuel, the diesel odor problem
13 may be reduced but not eliminated because people have very different sensitivities to smells.

1 The Department has been investigating the complaints of odors from the communities
2 surrounding the Nawiliwili Harbor and the possible causes. For a couple of years, preliminary air
3 monitoring was conducted with a variety of methods to assist in identifying the source as well as the
4 level of impact. Although the results were low, inconclusive, and well within the National Ambient Air
5 Quality Standards, the Department has not ruled out Nawiliwili Harbor as the source of odors, as the
6 harbor is typically upwind of the Niimalu community. To address the issues, the Department in January
7 2008 met with representatives of the various cruise lines and staff from the Harbors Division,
8 Department of Transportation. As a result of the meeting and cooperation from the Harbors Division,
9 the Department will set up a temporary continuous monitoring station on Harbors' property which is
10 downwind from the ports and provides the necessary security and utilities. The monitoring station will
11 be fitted with more sensitive equipment that will measure several pollutants on a continuous basis.
12 Essential spare equipment is being used and technical staff is traveling weekly for service and
13 maintenance.

14 One cruise line has proposed a test where it would reduce its air emissions by using a
15 smokestack "scrubber." The Department is open to this proposal and is investigating the potential water
16 quality effects from discharging the pollutants removed from the stack into the water.

17 On a technical level, the Department recommends that the bill not amend the definitions of "air
18 pollutant" and "source" because it is not necessary and would cloud rather than provide clarity to the
19 definitions. The amendment to "air pollutant" to include bunker fuel oil emissions is not necessary as
20 this term already includes bunker fuel emissions. The amendment to "source" to include any cruise ship
21 is also not necessary and will cause cruise ships to be subject to other requirements beyond the intent of
22 this bill. The term "source" is used throughout HAR, Chapter 11-60.1, Air Pollution Control where this
23 amendment may require cruise ships to obtain air permits and be subject to other air pollution
24 requirements.

1 We also recommend that the definition of “cruise ship” be changed to match the definition of
2 “commercial passenger vessel” in HRS 342D-101, for consistency. We note that we are proposing to
3 move the air pollution laws on cruise ships out of the water pollution control law, HRS Chapter 342D,
4 into the air pollution control law, HRS Chapter 342B, through administration bills, HB 3160 and
5 SB 3082.

6 Thank you for the opportunity to testify on this bill.

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The Honorable Joseph M. Souki, Chair
Committee on Transportation
The Honorable Ryan I. Yamane, Chair
Committee on Tourism & Culture
Hawaii House of Representatives State of Hawaii
State Capitol
415 South Beretania Street, Room 309
Honolulu, HI 96813

Re: HB2919 HD1 (Relating to Air Pollution Control)

Chair Souki and Chair Yamane and committee members, I am Alan Yamamoto, vice president of Hawaii Operations for NCL America Inc. I am here today to offer comments on HB2919 HD1.

We take seriously the issue of health and safety as it relates to our operations both onboard NCLA vessels and in all local communities where we operate. We are sensitive to the concerns raised by the Niumalu community.

NCLA has been working with the Niumalu community and the State Department of Health, Clean Air Branch since 2006 when we first became aware of odor complaints.

At first the complaints focused on garbage odors and we voluntarily agreed to stop operating the digester onboard the Pride of Hawaii after we concluded that was the source of the odor.

Since then the complaints have centered around issues of air quality.

While we remain responsive to the concerns of the community, we believe that HB2919 HD1 as currently drafted is premature and raises a number of issues which must be resolved before the bill can be implemented.

First, the Department of Health, Clean Air Branch has yet to identify the source of the odors and particulate matter. While screening and sampling of sulfur dioxide and volatile organic compounds have taken place, they have not resulted in any significant finding and may in fact originate from a number of sources.

Second, we respectfully request that a fuel availability study be conducted as part of the analysis on the legislation to determine what fuel products are currently produced and available in Hawaii and the cost of these products. NCLA anticipates the cost to convert over to this fuel would be significant possibly adding thousands of dollars to each voyage. The option of converting to other fuels should be evaluated.

Finally, we may also want to see how this issue is being addressed at the federal and international levels so we can deal with it in a comprehensive manner.

Please be assured, we are committed to working with the state and regulatory agencies to achieve an equitable, realistic and cost effective solution.

Thank you for this opportunity to testify.

LATE

**Testimony on HB 2919, HD 1, Relating to Air Pollution Control
February 27, 2008
Joint House Committee on Transportation and Tourism and Culture**

Chairs Souki and Yamane, Vice Chairs Nishimoto and Manahan, Members of the House Committees on Transportation and Tourism and Culture:

Thank you for the opportunity to provide comments on HB 2919, HD1, Relating to Air Pollution Control, which would prohibit cruise ships from burning bunker fuel while berthed in Nāwiliwili Harbor.

My name is Dale Hahn, representing Princess Cruises and Holland America Line.

Princess and Holland America have been made aware of the Niʻimalu community's concerns about odor and soot and believe it is important to take meaningful action to begin the process of addressing these concerns. While we believe, and the state's monitoring to date has confirmed, that our emissions do not exceed any established Federal or State air emission standards, we believe it is important to acknowledge the complaints and work together to resolve this problem even if the emissions do not pose an actual health hazard.

Princess and Holland America are unsure to what degree odors and soot can be reduced by a change in fuel. Therefore, rather than mandate a change in fuel that may not address the community's concerns, we believe a reasonable first step in addressing this matter is to get good information about what might be done to reduce odors and soot. To accomplish this, we propose to engage in a test program with the Department of Health and the Niʻimalu community to monitor stack emissions during our calls while we are using Intermediate Fuel Oil (IFO) as a baseline followed by a monitoring period when we will switch to .5% sulphur fuel while we are alongside in Nāwiliwili Harbor.

In addition, we propose that the Holland America ship, Zaandam, be allowed to test its seawater scrubber which is designed to reduce stack emissions to a level approximately equivalent to emissions from the proposed low sulphur fuel. Discussions have begun with the State Department of Health to get permission to operate the scrubber in Hawaiian marine waters and we hope we will receive permission in time to conduct the testing this spring.

If the legislature decides to move this measure forward, we ask for your consideration of one amendment to this bill:

1. Proposed §342B(b) be amended to read as follows:

LATE

(b) Notwithstanding subsection (a), the director may provide for an alternative mechanism of compliance with this section for any cruise ship if the director determines that it employs a control technology that reduces its air emissions of sulphur dioxides to at least the same degree as the reduction that would be achieved by the vessel through compliance with the applicable fuel sulphur content under this section.

Since particulates are largely a function of sulphur dioxide level, we feel that the current language is somewhat redundant and may limit the State's ability to consider technologies that may offer compensating benefit even if particulate levels are not reduced to the same degree as would be achieved by the lower sulphur fuel.

Thank you for the opportunity to present this testimony. Princess and Holland America look forward to working with the state and the residents of Niumalu to resolve these issues and improve the quality of life of the Niumalu community.

LATE**nishimoto2-Bryce**

From: Bruce Raymond [bruce@r-elect.com]
Sent: Tuesday, February 26, 2008 4:33 PM
To: TRNtestimony
Cc: Rep. James Tokioka; Sen. Ron Menor; Sen. Russell Kokubun; Sen. Gary Hooser; Sen. Gordon Trimble; Sen. Carol Fukunaga; Sen. Roz Baker; Sen. Paul Whalen; senige@Capitol.hawaii.gov; Rep. Hermina Morita
Subject: RE: HB2919HD1 - RELATING TO AIR POLLUTION CONTROL

RE: HB2919HD1 - Relating to Air Pollution Control
 SB 2526 - Relating to Air Pollution
TO: Committee on Transportation and Committee on Tourism & Culture

From: Bruce Raymond
 Nawiliwili Yacht Club Lifetime Member
 20-year Kauai resident

Residence located at:
 2347 Niunalu Road
 Lihue, Hawaii 96766

Testimony to support HB2919HD1

DATE: Wednesday, February 27, 2008
TIME: 9:30 A.M.
PLACE: Conference Room 309
State Capitol, 415 South Beretania Street

Aloha and mahalo for your time and careful consideration of the important bill before you. Thank you for allowing me to testify.

I strongly support HB2919 and urge you to understand how detrimental the burning of bunker fuel by cruise ships docked at Nawiliwili is to everyone who has the misfortune of residing downwind from their emissions. I live in Niunalu with my wife, three sons, a daughter-in-law and two grandsons. My family and I breathe the fumes of the bunker fuel emissions 24/7.

Our home is a two story duplex. My wife and I live upstairs and our children and grandchildren live in the ADU downstairs. We enjoy living in this once pristine part of the island. Unfortunately, our house is being constantly bombarded with black SOOT from the cruise ships. The island residents have been passionately protesting the Super Ferry. Unfortunately, they are missing the biggest environmental terrorists of all, the cruise ships. A good friend of ours was snorkeling off the beach and noticed toilet paper floating in the water. He also noticed the cruise ship on the horizon leaving our beautiful island with it's waste floating in our once pristine waters. The cruise ships have no regard for the environment or the people who live on the islands. NCL invited members of our neighborhood to dinner on the cruise ship. They assured us that they were cognizant of the problem and were in the process of conducting their own environmental study. One of the neighbors asked if we could get a copy of the report. NCL informed our neighbor that it was their own personal study and would not be available to us or our neighbors.

2/27/2008

I am a licensed contractor in Hawaii. We have strict laws that prohibit us from dumping hazardous waste on the land, in the sea, or in the air. These floating cities seem to be above the law and making money is more important than doing what is right. I urge you to pass this bill and take other drastic measures to correct this horrible injustice to the people of Hawaii and our beautiful islands.

Thank you for considering my testimony

Bruce A. Raymond
2347 Niunalu Road
Lihue, Hawaii 96766

LATE

testimony

LATE

From: Linda Soltysik [lindastevekauai@hotmail.com]
Sent: Sunday, February 24, 2008 7:17 PM
To: testimony
Subject: FW: RE HB2919 Relating to Air Pollution Control

From: lindastevekauai@hawaiiantel.net
To: testimony@capitol.hawaii.gov
CC: lindastevekauai@hotmail.com
Subject: RE HB2919 Relating to Air Pollution Control
Date: Sun, 24 Feb 2008 19:11:05 -1000

To: Committee on Transportation, and Committee on Tourism & Culture.

My name is Steven Soltysik, a resident of Kauai for 22 years.

I am writing in support of HB 2919.

I have worked aboard the Cruise ship SS Independence as a Wiper (engine room), Able Bodied Seaman - Watch (on the bridge) and also taught Life Boat and Water survival. I have also worked a rotation as carpenter aboard the Pride of Aloha with NCL.

I drive through Nuimalu daily for paddling and swimming at Kalapaki Beach, next to Nawiliwili Harbor. I have witnessed first hand, on shore and when I worked aboard the ships, how toxic the emissions are when burning bunker fuel.

One of my duties aboard the ships was to crawl into the boiler, (during maintenance shut down) and chip black particulate matter that had built up to 3 inches thick, caused from the combustion of heavy bunker fuel oil. This build up is an indicator of the dreadful material that I have seen settling over Nuimalu!

I am not in favor of losing the ships visiting Kauai or the revenue they provide for the islands. I do support HB2919 and feel we should do everything possible to safe guard the health of the land, the water and the people of Kauai.

If you have any questions, please feel free to contact me @ 808 246-0844

Thank you for your time and attention,

Sincerely yours, Steven R Soltysik

2/27/2008

LATE**testimony**

From: Estelle [sgponte@yahoo.com]
Sent: Sunday, February 24, 2008 1:58 PM
To: testimony
Subject: HP 2919 Relating to Air Pollution Control

I highly support HB2919

While I do not reside in the quaint haven of Niualu, I do have friends there and have been to their residence when there is a noxious odor in the vicinity that smelt like fuel. Needless to say, we seldom visit them these days because I refuse to have my 3 yr old child exposed to the air quality there. If we do want to stop by for a visit, we have to "plan" on the "non-scheduled" ship days. So although I do not live there, I have grown aware of the ships' schedules. It has become part of the lifestyle in Niualu. How sad to not be able to have BBQs in people's yards there. I feel sorry for the residents there and feel all the more grateful that I live in the clean air mountains of Kalaheo. Please support this Bill for our island "ohana".

Sincerely,
Estelle Reonte
Kauai

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testimony

From: manule'a [jtluvmw@lava.net]
Sent: Monday, February 25, 2008 3:54 PM
To: testimony
Subject: transportation - HB2919 HD1-RELATING TO AIR POLLUTION CONTROL

RE: HB2919 HD1- RELATING TO AIR POLLUTION CONTROL

aloha transportation committee members,

greetings from the garden island. please accept this correspondance in support of HB2919 HD1, relating to air pollution and cruise ship emissions. this important piece of legislation is crucial in establishing safe levels of particulate matter for residents close to cruise ship exhaust plumes.

the obvious fact of air pollution caused by the exhaust of docked vessels has been well documented by local DOE staff and residents of the niunalu area. local DOH staff have attempted to monitor the impacts of the plume and its airborne carcinogens but have inexplicably failed to act in a prudent or cautious manner.

newer standards for cleaner burning fuels are being developed and implemented around the globe. navigational and maritime services are being asked to meet these new standards. cruise ships overnighing in harbor should not subject their neighbors with potentially carcinogenic exhaust. HB2919 HD1 and its companion bill sb 2526 address the harmful impacts of cruise ship exhaust and attempts to raise the bar for environmental justice on kauai and throughout the state. please pass HB2919 HD1 out of committee and to the floor for a vote. mahalo for your consideration of HB2919 HD1.

malama pono,.....james g trujillo po box 33 kapaa, HI

LATE

testimony

From: Glass [sglass@hawaiiantel.net]
Sent: Monday, February 25, 2008 11:44 AM
To: testimony
Subject: HB 2919

**Testimony relating to HB 2919
Relating to Air Pollution Control**

COMMITTEE: TRN/TAC
DATE: Wednesday, February 27, 2008
TIME: 9:30 A.M

I fully support this bill, but believe that it should apply to all harbors, statewide.

I worked as a kayak river guide for many years on the Huleia Stream (which flows into Nawiliwili Harbor) and will attest that on any day a cruise ship was in harbor and the wind was out of the NE, the exhaust fumes blanketed the Small Boat Harbor, the Niumalu area, and carried upstream past the Menehune Fish Pond. Many of our customers would comment on it, and it was always very irritating to me.

Stephen Glass
Kapaa, Kauai

LATE

testimony

From: EAWTAMSAUST@aol.com
Sent: Saturday, February 23, 2008 12:33 PM
To: testimony
Subject: RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL Committee on Transportation an

HB 2919 - RELATING TO AIR POLLUTION CONTROL Committee on Transportation

Testimnony supporting HB2919

From Michael Austin
Niumalu

Dear House Committee on Transportation,

I am writing in favor of HB2919. The cruise ships that dock at Nawiliwili harbor have become a nuisance to the Niumalu community. Pumping out smoke that when the wind is right contaminates our beautiful community. If the winds are not right the smoke travels as far as Kauai High School, thus endangering our young people with their highly noxious smoke.

There is a solution to the problem and that is for the Cruise ships to burn less polluting diesel while in port. This solution already has precedence in Alaska and California, so why not Hawaii ?

Don't be misled by the cruise ship representatives that the island(s) need their business. Quite the contrary, they need us and therefore we have leverage on this issue.

Please support HB2919 as it passes through committee and crosses over to the Senate.

Thank You

M.T. Austin
Niumal

Delicious ideas to please the pickiest eaters. [Watch the video on AOL Living.](#)

LATE

testimony

From: Andy Parx [andyparx@yahoo.com]
Sent: Saturday, February 23, 2008 10:16 AM
To: testimony
Subject: RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL-Committee on Transportation and
Committee on Tourism & Culture

Please allow us to once again enjoy Nawilwili and Niumalu without choking on noxious fumes from the Cruise ships and pass this bill in it's original form

Thank you,
Andy Parks,
Kaua`i

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testimony

From: Juan Wilson [juanwilson@earthlink.net]
Sent: Monday, February 25, 2008 9:04 AM
To: testimony
Subject: STRONG SUPPORT FOT HB2919

Committee on Transportation (TRN) - Rep. Joe Souki, chair; Rep. Scott Nishimoto, vice chair

As a resident of Kauai I am distressed by passenger ships burning polluting bunker fuel while they are moored in Nawiliwili Harbor and polluting Niimalu and the surrounding environment. This is an easy problem to fix. Please act to pass this legislation.

Juan Wilson: Architect-Planner
PO Box 949
Hanapepe HI 96716
(808) 335-0733

testimony

LATE

From: Lisa [lisa@saveourseas.org]
Sent: Sunday, February 24, 2008 10:37 PM
To: testimony
Subject: Support HB2919

RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL

Committee on Transportation and Committee on Tourism & Culture

From: Lisa Lucas

DATE: Wednesday, February 27, 2008

TIME: 9:30 A.M.

PLACE: Conference Room 309

State Capitol, 415 South Beretania Street

Testimony to support HB2919

Dear Honorable Senate Members,

I am writing to state my support for Senate Bill 2526. I believe it is every citizen's right to breathe clean air. I feel so bad for all the people who have to suffer in their own homes due to the burning of this cheap fuel. The toxic emissions are affecting our high school students and teachers as well.. Please don't waste any more time on this matter as people are suffering. Health is more important than corporate money.

Please have compassion on these people who have to leave their homes and school because of a hard time breathing.

Mahalo for your time,

Lisa Lucas secretary Save Our Seas

LATE**testimony**

From: Dyani Fujita [dygur_kg@hotmail.com]
Sent: Tuesday, February 26, 2008 5:53 PM
To: testimony
Cc: dygur_kg@hotmail.com
Subject: RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL

RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL
Committee on Transportation and Committee on Tourism & Culture

From: Dyani Fujita
 PO Box 385755
 Waikoloa, HI 96738

DATE: Wednesday, February 27, 2008
 TIME: 9:30 A.M.
 PLACE: Conference Room 309
 State Capitol, 415 South Beretania Street

Testimony to support HB2919

I, Dyani Fujita, was born and raised on Kaua'i with family living in Niumalu, support Senate Bill 2919.
 Aloha,

My name is Dyani Fujita and I am writing to you in regards of bill 2919: the air pollution to Niumalu residents as well as visitors. I was born and raised on Kaua'i and majority of my family reside there. I now live on the Big Island but frequently go back home to visit old friends, family and of course, the beautiful landscape. Majority of the time I stay over in Niumalu. My Aunt and Uncle who reside at 2342 Hulemalu Rd, has been living at this address for some time now. They have recently been blessed with my cousin who is now nearing 2 years old. During my stay there, I often smell gas emissions and as a result, we close all windows to avoid inhalation of the ships fumes. I am very concerned about the fact that if I can't handle the smell for a weekend, how can anyone stand to inhale this toxic smell 24/7?! I also don't think it's humane to take away my Aunt & Uncle's quality of life and for any family living there. My Aunt wants her child to be able to play outside without smelling any toxic exhaust. My cousin is still very young and needs a clean environment to help her grow into a healthy person. I don't think it would be fair to my family, especially my cousin to reap the benefits of a healthy life just because we weren't able to reduce the air pollution in her hometown.

I read senate bill 2526, and to my understanding bunker fuel is what the cruise ships use that "generate large amounts of air pollution from continuous burning, 24 hours/day, 7 days/week...ADVERSE HEALTH EFFECTS FROM INHALING FUMES FROM THE BURNING BUNKER FUEL....AIR POLLUTION from cargo ship exhaust has been linked to PREMATURE DEATH OF 60,000 people worldwide in 2002...in effect, a cruise ship is a VIRTUAL FLOATING POWER PLANT."

Senate Bill 2526 has studies proving the health effects cruise ships cause-DEATH! Although the studies didn't explain the distance the unfortunate lived from the ports for cruise ships, I don't think we should have the residents of Niumalu wait to find out.

I hope you support my testimony for Senate Bill 2919 for the sake and future of the Niumalu residents.

Hoping for the best,

Dyani Fujita
 dygur_kg@hotmail.com

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2/27/2008

testimony

From: Paul_Zina/KAUAIH/HIDOE@notes.k12.hi.us
Sent: Sunday, February 24, 2008 10:58 AM
To: testimony
Cc: Gary_Craft/KAUAIH/HIDOE@notes.k12.hi.us
Subject: RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL

LATE

RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL
Committee on Transportation and Committee on Tourism & Culture
 From:

DATE: Wednesday, February 27, 2008
TIME: 9:30 A.M.
PLACE: Conference Room 309
 State Capitol, 415 South Beretania Street

Testimony to support HB2919

Respected Senate Members,

I would like to speak in favor of limiting/controlling the harmful emissions from large cruise ships while near shore or in port. As a vice principal of a school whose location is in close proximity to a state harbor, I have on numerous occasions experienced first hand the physically unsettling effects of breathing cruise ship exhaust (sometimes referred to as "bunker smoke"). I have also received reports from the teachers and students at my school of dizziness and nausea associated with breathing fumes carried to the school from a cruise ship that was in port very near to the school. I am not a social opponent of the cruise ship industry nor do I oppose the economic benefit that the cruise ship industry brings to our community. But that benefit can not be at the expense of our health and safety.

Educating our children and keeping them safe is difficult enough when the whole system is working smoothly. The process becomes considerably more challenging when environmental conditions become unsafe for school employees as well as the children. It would be irresponsible of me not to speak up on this issue on behalf of my school. Please do your part to insure the safety of our children and those who serve them. Pass this law in a form that insures the air we breathe will support our health and well being.

Paul Zina
 Vice Principal
 Kauai High School
 3577 Lala Road
 Lihue, HI. 96766
 Office: (808)274-3173 ext.105
 Fax: (808)274-3160

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2/27/2008

testimony

From: Katie and Garrett Johnson [ktngarrett1@hotmail.com]
Sent: Monday, February 25, 2008 11:24 AM
To: testimony
Subject: RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL
Attachments: House committee.doc

RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL
TO: Committee on Transportation and Committee on Tourism & Culture
Testimony to support HB2919

Dear House Committee,

As a graduate of the United States Merchant Marine Academy and a Deck Officer (Mate) with over 10 years of experience on various US Flag ships I implore you to stop NCL from using high sulfur Bunker fuel in Nawiliwili bay. I fully support Bill HB2919 and any bill that is stringent in protecting the health of the residents of Kauai. I have been a resident of Niumalu for almost 5 years and remember a time before NCL's new ships; when we wouldn't have to close all of our windows or even leave our home for hours in order to avoid the dangerous exhaust from ships. We have a young child and are especially concerned for her safety while NCL is quoted recently in the Garden Island paper saying that their bottom line is more important than people's health. *"NCL anticipates the cost to convert over to this fuel would be significant possibly adding thousands of dollars to each voyage and impacting bottom line,"* (Quote from Feb 11 2008 edition of the Garden Island Newspaper from Alan Yamamoto, vice president of Hawai'i Operations for NCL America Inc.)

I worked on a supertanker for Exxon soon after the Valdez oil spill and remember the intense international press and pressure around that "disaster". As a nature and animal lover, I was also saddened by the death of so many animals/mammals. Yet not one person was hurt from that spill. Waking up in Niumalu with my lungs burning is proof that people are being hurt by NCL. The cavalier attitude NCL has expressed, that the cost to change to a low sulfur bunker fuel isn't cost effective, is absolutely preposterous. This is a situation when Government must step in and legislate what is right for the health of the people of Hawaii and not what is good for a particular business.

Thank you for your time,

Garrett Johnson
Lihue, HI
808-652-3826

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Re: HB 2919 HD1 Relating to Air Pollution Control

To: Committee on Transportation and Committee on Tourism & Culture

Date: February 27, 2008

Time: 9:30 am

Place: Conference Room 309

415 South Beretania Street, State Capitol

**Testimony of Lisa C. Otoman-Murayama to Support HB 2919 HD1
2342 Hulemalu Road, Niumalu, Kauai**

Unless one lives and experience the effects of breathing noxious fumes from the cruise ship industry one will not be able to understand the impact of the cruise ship emissions onto the Niumalu community. Prior to a ship coming into Nawiliwili Harbor we "shelter-in-place" by closing our windows in our home and turn on our air conditioner and or ceiling fans to prevent the odor from entering our home. On trade wind days, the winds are blowing from the harbor into our community and we are inundated with the emissions from the smokestacks from the ship/s. Being exposed to these emissions will give you a headache, itchy/scratchy throat, just to name a few.

I have a two year old daughter who is being robbed of her "playtime" in her yard because of fear that her health will be compromised when being exposed to emissions from a ship/s is in the harbor. She is allowed to play in the yard when a ship/s has left Nawiliwili Harbor or when there is no ship scheduled to be on Kauai.

Also, per NCLA's testimony, "the cost of converting to a cleaner fuel would add thousands of dollars to each voyage and impact bottom line" is an unacceptable reason when it affects our health in Niumalu. NCLA was told in 2006 that they should consider changing their fuel; during a community meeting on board the Pride of Hawaii in 2007 their same answer was "converting to a cleaner fuel would be to costly." This is 2008; you would expect a large company to have done their homework and looked into improving their ships engine and have converted to cleaner fuel by now. PASHA Hawaii Transport Lines has upgraded and did improvements to their ship, Jean Anne, to reduce emissions into the air because of their concern for the environment and because of stricter California laws.

Please pass HB 2919 HD 1 so we will be able to enjoy a better quality of life in Niumalu.

Thank You for allowing me to testify.

LATE

RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL

Committee on Transportation and Committee on Tourism & Culture

From: Donald Greer, Ph.D.
PO Box 583
2403 Hulemalu Road
Lihue HI 96766
don@kauaichocolate.us

DATE: Wednesday, February 27, 2008

TIME: 9:30 A.M.

PLACE: Conference Room 309

State Capitol, 415 South Beretania Street

Aloha,

I support HB 2919 for the following reasons:

1) Several Niimalu Valley residents have complained of the smell of cruise ship plumes. Residents of the Niimalu Valley are beginning to develop respiratory problems such as coughing, head ache, and throat congestion due to the cruise ship plumes. I suspect that in the future, these respiratory problems will develop into more serious problems such as cancer and death. Research, *Mortality from Ship Emissions: A Global Assessment*^{ref 1}, has linked deaths to cruise ship plume emissions. The health and welfare of Hawaii's people must be paramount.

2) The cruise ships docking overnight at Nawiliwili Harbor are violating National Ambient Air Quality Standards (NAAQS). Specifically, the SO₂ 3-hour averaging time maximum exposure limit of **1300 µg/m³**.

The cruise ship plumes toxic concentration for SO₂ is **2,350 µg/m³**.^{ref 2}

It is important to understand that the prevailing trade winds blow from the Nawiliwili harbor into the Niimalu Valley. Second, the majority of Niimalu residences are between ¼ and ½ mile from the Nawiliwili Harbor. Last year there were over 150 cruise boats docking overnight at Nawiliwili.

That's 150 boats x 24 hours = 3600 hours.

Let's conservatively assume that only 5% of the time the cruise ship plume descends upon a house in the valley, a house on the hill, or Kauai High School (located on the hill about ¼ mile from the cruise ships).

That's 5% of 3600 hours = 180 hours the cruise ship plumes are violating National Ambient Air Quality Standards.

3) The residents have been ineffective in persuading the government to enforce the National Ambient Air Quality Standards. I suspect it is the old story, big cruise ship business dollars vs. the little Niimalu Valley guys. Unfortunately, the little Niimalu guys are suffering from the toxins contained in the cruise ship plumes.

To date, the Department of Health has not measured the cruise ship plume. Remember, in the Niimalu Valley, we are dealing with single source pollution, the cruise ship plume.

4) Lastly, there is a simple solution to this problem. The cruise ships currently burn residual oil (RO) "Bunker Fuel" in the harbor. Changing to Marine gas oil (MGO) will reduce pollution emissions by about 70%, protect the residents, and stop the cruise ship from violating National Ambient Air Quality Standards. This solution has been implemented in other states (California and Washington) and is easily accomplished.

-don

Ref 1. Mortality from Ship Emissions: A Global Assessment, J A M E S J. C O R B E T T, etal.

College of Marine and Earth Studies, University of Delaware, 305 Robinson Hall, Newark, Delaware 19716, Department of STS/Public Policy, Rochester Institute of Technology, 1356 Eastman, Rochester, New York 14623, Nicholas School of the Environment, Duke University, Box 90328, Durham, North Carolina 22708, and Deutes Centrum fuer Luft- undRaumfahrt (DLR) DLR-Institute fuer Physik der Atmosphaere, Oberpfaffenhofen, Wessling, Germany)

Ref 2. The SO₂ estimate was made from "Current Methodologies and Best Practices for Preparing Port Emission Inventories", Presentation by: Louis Browning, ICF International / Kathleen Bailey, U.S. EPA. May 17, 2006, and "Environmental Fluid Mechanics", Dr. E. Mastorakos, Hopkinson Lab, Engineering Department , Cambridge University.

LAI

RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL
Committee on Transportation and Committee on Tourism & Culture
From: Gary Craft – Niumalu Resident

DATE: Wednesday, February 27, 2008
TIME: 9:30 A.M.
PLACE: Conference Room 309
State Capitol, 415 South Beretania Street
Testimony to support HB2919

INTRODUCTION

Thank you for the opportunity to submit testimony in support of **HB2919- RELATING TO AIR POLLUTION CONTROL**.

THE PROBLEM

Residents of the Niumalu community have been filing complaints with the D.O.H. since before 2000, when the American Hawaii Cruise Line was operating in Nawiliwili on day trips. The substantial increase in complaints from Niumalu residents over the past few years is reflective of the increase in number and size of the visiting ships and particularly the practice of overnight stays by NCL since 2004. The only time the air pollution complaints are registered is when the ships are in port. I am a teacher at Kauai High School and have had several bad periods of ship emissions incidents during *Kona* (Southeast) winds at Kauai High School actually interfering with proper classroom activities. I have reported 5 of those incidents to D.O.H. and school administration and sent two students to the health room with headaches.

The enormous engines that power large vessels burn residual fuel oil or “bunker fuel”.¹ Bunker fuel contains far higher pollutant levels than other fuels, including higher levels of particulate matter, ash, sulfur, and nitrogen, as well as more heavy metals and other toxic substances such as aldehydes, benzene, and polycyclic aromatic hydrocarbons (“PAHs”).² Bunker fuel, the bottom of the barrel in the refining process, has the consistency of mud and must be heated so that it can flow through engine fuel lines.

Bunker fuel causes a wide array of harmful human health impacts. For instance, combustion of this fuel in a diesel engine produces fine particulate matter that leads to increased cancer risk and adverse health effects such as respiratory illness, impaired lung and heart function, and premature mortality. The negative health impacts of bunker fuel are magnified because large vessel emissions are concentrated in port areas where ships transit and dock, disproportionately impacting disadvantaged communities and communities of color,³ while also impacting coastal cities and towns along busy shipping corridors.⁴

¹ In 2007, 84 percent of fuel consumed by vessels above 400 gross tons was bunker fuel. *IMO panel gives new bunker consumption estimate*, SUSTAINABLESHIPPING.COM, Jan. 30, 2008, available at <http://www.sustainableshipping.com/news/2008/01/70558?gsid=f1f40e4c818411cfb42c353fad22bac1&asi=1>

² US EPA (2002), *Health Assessment Document for Diesel Engine Exhaust*, U.S. EPA, Office of Research and Development, National Center for Environmental Assessment, Washington Office, Washington D.C., EPA/600/8-90/057F (2002), at 1-1, available at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=29060>.

³ While the impacts from marine diesel emissions can affect all people, those most likely to live and work near pollution sources such as ports and their transportation corridors also confront the challenges of poverty, limited access to medical care, low rates of insurance coverage, and virtual exclusion from the public policy decisions that most affect them. Environmental justice communities often suffer from disproportionately high cancer, disease, and mortality rates as they are exposed to the highest levels of carcinogenic, toxic, and hazardous chemicals. Friends of the Earth International, “Air Pollution from Shipping Emissions – Environmental Justice: Public Health and Community Impacts,” submitted to the IMO’s Marine Environment Protection Committee, May 12, 2005 (“FOEI Environmental Justice Report”).

⁴ The Santa Barbara Air Quality Management District has determined that, if Category 3 marine engines are not regulated, by 2020 marine vessel pollution will constitute 75 percent of the District’s nitrogen oxide inventory and may cause the District to be classified as in nonattainment for the federal ozone standard. Complaint for Declaratory

Today, shipping accounts for about a quarter of the world's nitrogen oxide emissions, which causes smog,⁵ and shipping emissions are growing significantly (at a rate of 4.1 percent per year through 2040)⁶ as marine transportation increases.⁷ Smog causes harmful respiratory effects including shortness of breath, coughing, decreased lung function, inflammation of the lung tissue, aggravation of existing respiratory diseases, and may impair the body's immune system.⁸ Children and the elderly are most severely affected by these health effects. Exposure to smog leads to increased hospital admissions and emergency room visits and increases the use of medications.⁹

Ozone and PM_{2.5} emitted by large ocean-going vessels can also have severe public welfare effects. Exposure to fine particles can lead to aggravation of the respiratory system, cardiovascular disease, increased asthma, difficulty breathing, chronic bronchitis, and premature death.¹⁰ Particulate matter also causes soiling and erosion damage to materials, including culturally important objects, increases the corrosion of metals, degrades paints, and deteriorates building materials.¹¹ Emissions from large marine diesel engines also harm the environment by impairing visibility, contributing to haze, acid rain, eutrophication, and nitrophication, and reducing crop yields and productivity of forest ecosystems.¹²

Globally, the scope of the problem from ship air pollution is staggering. In 2002, marine vessel emissions resulted in 60,000 premature deaths, primarily due to the use of high sulfur bunker fuel.¹³ This peer-reviewed, published scientific study, supported in part by Clean Air Task Force, estimated that without new regulations, premature deaths from shipping-related emissions will increase by 2012, along with the projected growth in shipping traffic.

Proactive action can change this outcome, however. A new study has found that if shippers switch to marine distillate with a sulfur standard of 1,000 ppm within 200 miles of the world's coastlines, premature mortality could be cut in half, to 42,200 per year.¹⁴

For these reasons, it is critical that you pass HB2919.

THE SOLUTION

and Injunctive Relief, Santa Barbara County Air Pollution Control District, U.S. District Court for the District of Columbia, Filed Dec. 26, 2007, at 4.

⁵ A reaction of NOx and volatile organic compounds in the presence of heat and sunlight forms ground-level ozone, or smog.

⁶ Friends of the Earth International, "New Global and Regional Inventories of Air Pollution from International Shipping," submitted to the IMO subcommittee on Bulk Liquids and Gases, Jan. 12, 2007, BLG 11/5/5, BLG 11/INF.3.

⁷ Corbett, J.J., and Koehler, H. 2003. Updated Emissions from Ocean Shipping. *Journal of Geophysical Research*, Vol. 108 (as cited in the United States' proposal entitled "Development of Standards for NOx, PM, and SOx" submitted to the International Maritime Organization subcommittee on Bulk Liquids and Gases, Feb. 9, 2007) ("U.S. NOx, PM, and SOx Standards Proposal").

⁸ 68 Fed. Reg. 9751 (February 28, 2003).

⁹ *Id.*

¹⁰ *Id.*, at 9752 (February 28, 2003).

¹¹ *Id.*

¹² 72 Fed. Reg. 69534-69536 (December 7, 2007).

¹³ Corbett et al., "Mortality from Ship Emissions: A Global Assessment," *Environmental Sci. Technol.*, American Chemical Society, 42(24), p. 8512-8518, Dec. 15, 2007.

¹⁴ Corbett et al., "Mitigating Health Impacts of Ship Pollution through Low Sulfur Fuel Options: Initial Comparison of Scenarios," Jan. 23, 2008, annex to Friends of the Earth International, "Avoided Global Premature Mortality Resulting from Reduction of Sulphur in Marine Fuel," submitted to the IMO's Marine Environment Protection Committee, Jan. 25, 2008. Almost 70 percent of global shipping emissions occur within 250 miles of shore, where a majority of the world's population lives. Corbett, J.J., P. Fischbeck, and S. Pandis, (1999), "Global nitrogen and sulphur inventories for oceangoing ships," *Journal of Geophysical Research*, Vol. 104, No. D3 (Feb. 20, 1999), at 3465, 3469.

One of the primary methods of complying with HB2919 would be switching from bunker fuel to cleaner marine distillate fuel. This is a highly cost-effective, technically feasible way of lessening health impacts without causing economic harm to the shipping sector. The benefits in switching to cleaner fuel, when one considers environmental and public health factors, far exceed the costs. Although low sulfur fuel can cost from 50-72 percent more than bunker fuel,¹⁵ the cleaner fuel standard of HB2919 applies only to cruise ships within 5 miles of Nawiliwili Harbor. The 2005 CARB auxiliary engine rule which requires all ships visiting ports in California to use low-sulfur distillate fuel in their auxiliary engines while at berth and within 24 nautical miles of the California coastline and future legislation is asking for 200 miles. The CA auxiliary engine rule standard can also be achieved by way of alternative emission control technology. See Cal. Admin. Code tit. 17, § 93118 (g). Vessel operators will only be required to use cleaner marine distillate for a small portion of their Hawaiian Islands trip.

The reductions in fuel sulfur content achieved by switching from bunker fuel can dramatically reduce vessel emissions. The California Air Resources Board (CARB) expects that moving from bunker fuel (approximately 25,000 ppm sulfur content) to 1,000 ppm marine gas oil will reduce PM, SO_x, and NO_x by 83 percent, 96 percent, and 6 percent, respectively.¹⁶ Similarly, recent modeling of a container ship switch using 22,900 ppm bunker fuel (the average U.S. west coast sulfur content level) to 1,000 ppm marine gas oil found that PM, SO_x, and NO_x would decrease by 78 percent, 94 percent, and 6 percent, respectively.¹⁷ Finally, the U.S. proposal to the IMO, which would include coastal use of 1,000 ppm distillate, is estimated to reduce PM by 65 percent and SO₂ by 78 percent by 2020.¹⁸

The attendant health benefits of using marine distillate in lieu of bunker fuel are immense. The Clean Air Task Force study indicates that societal benefits of approximately \$225 billion per year will be realized from globally instituting a 1,000 ppm coastline standard, with annual mortalities reduced by approximately 40,000 [Corbett and Winebrake, 2008].¹⁹

EUROPEAN UNION AND THE INTERNATIONAL MARITIME ORGANIZATION

Several governmental entities, including the United States, have called for the use of low sulfur distillate. Executive officials representing the U.S. at IMO negotiations, including the U.S. EPA and Coast Guard, have as a central feature of their proposal a 1,000 ppm U.S. sulfur coastal zone.²⁰ In addition, the European Union (E.U.) has a marine gas oil limit of 2,000 ppm for vessels in port and, by January 2010, will reduce the fuel standard to 1,000 ppm²¹ for inland vessels and ocean-going vessels at berth in its ports.²² As discussed above, CARB also has set its auxiliary engine fuel limit at 1,000 ppm by January 2010. CARB believes that “[by] harmonizing with the 2010 EU requirements for low sulfur marine distillates, the staff’s proposal promotes international consistency and increases the availability of cleaner

¹⁵ Note by Secretary-General, “Report on the outcome of the Informal Cross Government/Industry Scientific Group of Experts established to evaluate the effects of the different fuel options proposed under the revision of MARPOL Annex VI,” submitted to IMO subcommittee on Bulk Liquids and Gases, Dec. 20, 2007, at 15.

¹⁶ Winebrake, J.J., and Corbett, J.J. Technical Memorandum – Total Fuel Cycle Analysis for Container Ships: A Comparison of Residual Oil, Marine Gas Oil and Marine Diesel Oil, prepared for Friends of the Earth, June 6, 2007, at 3-4.

¹⁷ *Id.*, at 6.

¹⁸ Note by Secretary-General, “Report on the outcome of the Informal Cross Government/Industry Scientific Group of Experts established to evaluate the effects of the different fuel options proposed under the revision of MARPOL Annex VI,” submitted to IMO subcommittee on Bulk Liquids and Gases, Dec. 20, 2007, at 35.

¹⁹ Friends of the Earth International, “Avoided Global Premature Mortality Resulting from Reduction of Sulphur in Marine Fuel,” submitted to IMO committee on Marine Environment Protection, Jan. 25, 2008.

²⁰ PM and SO_x standards in coastal zones would also be achievable through the use of seawater SO_x scrubbers. U.S. NO_x, PM, and SO_x Standards Proposal.

²¹ Several U.S. and foreign fuel producers have already begun production on grades of marine distillate with this level of sulfur. See e.g., *Polish player already offering 0.1% sulphur fuel*, SUSTAINABLESHIPPING.COM, Jan. 7, 2008, available at <http://www.sustainableshipping.com/news/2008/01/70274>.

²² Directive 2005/33/EC of the European Parliament and of the Council, July 6, 2005.

marine distillates at ports that refuel Pacific Rim vessels.”²³ These developments indicate the recognized benefits and feasibility of switching to low sulfur distillate in the near term.

The IMO NOx standards currently in place simply codify emission levels that had already been achieved by industry, and its current fuel standard allows the extraordinarily high level of 45,000 ppm sulfur. Second, it is commonly understood that the IMO is currently considering adoption of new emission standards primarily due to the proliferation of legislative and regulatory actions and proposals at the national and sub-national levels. Without sufficient impetus, the international process could easily fracture and become bogged down, reverting back to a glacial pace. History suggests that U.S. action can precipitate strong international standards. For example, after Congress adopted the Oil Pollution Act of 1990 – requiring all new tankers operating in U.S. waters to be equipped with double hulls – the international community quickly adopted the same requirement.

While some may seek to defer and wait for a national and international consensus to develop around an uncertain level of pollution protection, we believe that the most effective way of resolving the health harms associated with dirty bunker fuels is for Hawaii State Legislators to act now and demonstrate leadership.

TECHNICAL FEASIBILITY

Previously, some in the shipping industry have raised concerns about the technical feasibility of switching from bunker fuel to marine distillate. Those concerns have been allayed. At least one major shipping company, Maersk, has demonstrated the feasibility of this switch. It voluntarily switched from bunker fuel to distillate fuel (2,000 ppm) for ships operating within 24 nautical miles of certain California ports.²⁴ In addition, since the early-1990s, USS-POSCO has been making fuel switches from heavy fuel oil to ultra-low (less than 500 ppm) sulfur distillate prior to entering the Bay Area AQMD boundary on the regular routes between South Korea and Pittsburg, California. Ultra-low sulfur distillate was used to facilitate the use of on-board selective catalytic reduction (SCR) systems to further minimize air pollution.²⁵ Furthermore, cruise ships within 24 nautical miles of the California coastline have had to use distillate fuel since January 1, 2007.²⁶ No significant incidents have been reported. U.S. EPA asserts, “properly designed ships would be able to operate on distillate fuel either under a fuel-switching strategy or for extended use.”²⁷

CARB has also addressed several technical issues relating to the use of very low sulfur distillate. For example, in response to concerns from industry that low sulfur fuels with lower lubricity could cause damage to fuel pumps, CARB stated that those concerns were associated with landside diesel fuels having very low sulfur levels, lower than the proposed 1,000 ppm standard.²⁸ In addition, CARB summarized that concerns related to the low viscosity of distillate affecting pump leakage and engine performance could be resolved by minimum viscosity requirements or modifications such as the use of a fuel cooler, thereby lowering fuel temperature and increasing viscosity.²⁹ Moreover, the USS-POSCO’s experience with using ultra low sulfur diesel for over a decade demonstrates the capacity to use fuel of this nature in large ocean-going vessels. In sum, actual experience and agency opinion demonstrate that marine distillate switching, when performed by competent professionals according to recommended procedures,³⁰ is feasible.

CONCLUSION

The HB2919 is urgently needed. A recent study indicates that by 2012 nearly 84,000 people could die prematurely from global vessel emissions. Other health and quality of life impacts on the Niumalu

²³ CARB Auxiliary Rule, VI-10.

²⁴ 72 Fed. Reg. 69525 (December 7, 2007).

²⁵ CARB Auxiliary rule, VI-12.

²⁶ CARB Auxiliary Rule, ES-4.

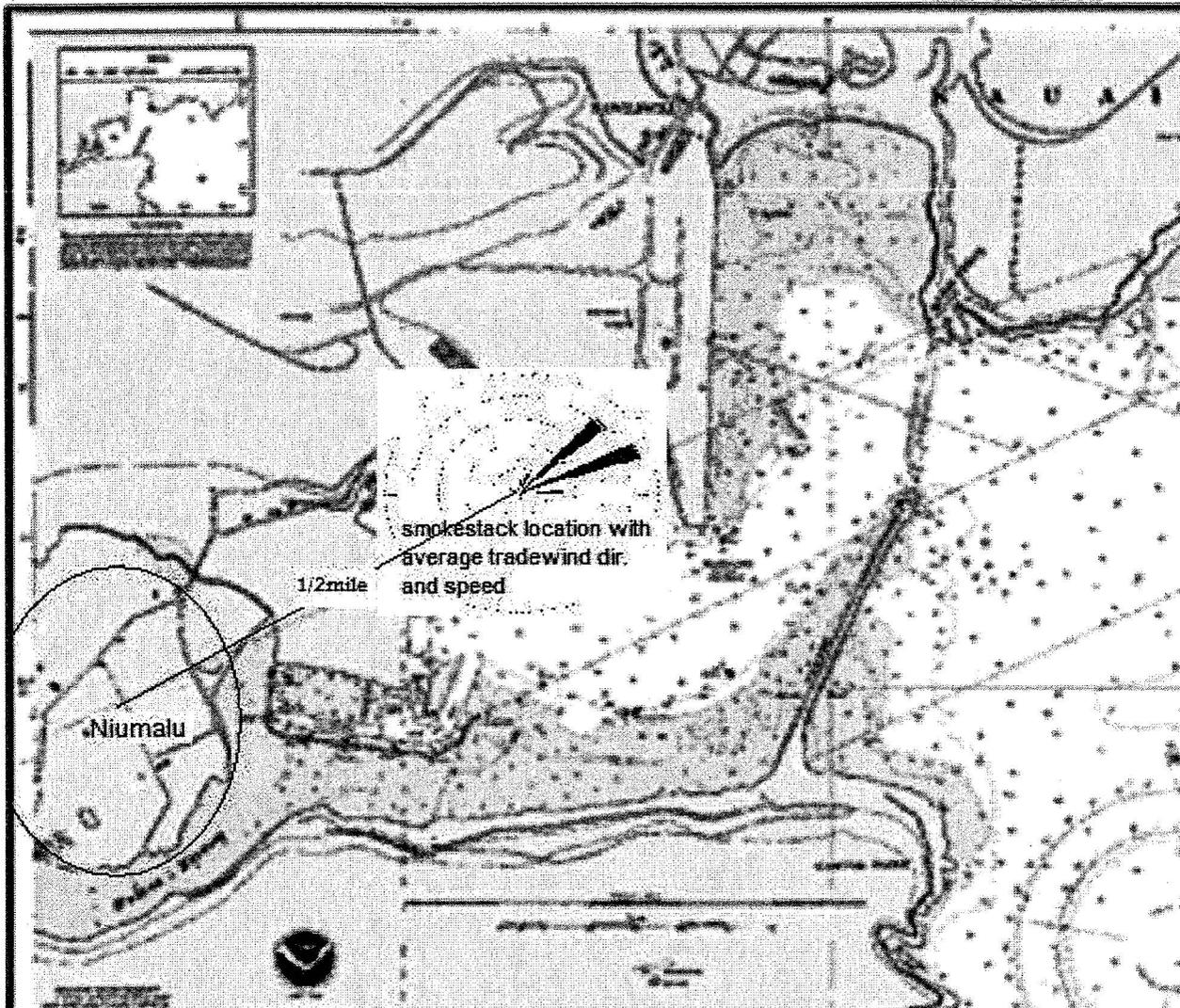
²⁷ 72 Fed. Reg. 69541 (December 7, 2007).

²⁸ CARB auxiliary rule, VI-16.

²⁹ *Id.*

³⁰ Engine manufacturers and marine equipment suppliers publish guidance for vessel operators that set forth recommended procedures. CARB Auxiliary Rule, VI-13.

community are acute. I have never voiced opposition to the cruise lines; only the fuel they are burning while in Nawiliwili. Trade winds support our islands national air quality 'attainment' status but, ironically, they are responsible for the 'direct-hit' by the cruise ships' Bunker Fuel Emission plume through the Niunalu community. No other state harbors have the unique and unfortunate geographical orientation of a residential community $\frac{1}{4}$ - $\frac{1}{2}$ mile directly downwind:



Please protect our health by passing HB2919.
Mahalo, Gary Craft

testimony

LATE

From: Don Greer [don@kuaichocolate.us]
Sent: Sunday, February 24, 2008 7:55 PM
To: testimony
Subject: Testimony HB 2919

Attachments: testimony HB 2919 word doc.doc



testimony HB 2919
word doc.doc...

RE: HB 2919 - RELATING TO AIR POLLUTION CONTROL

Committee on Transportation and *_Committee on Tourism & Culture_*

From: : Donald Greer, Ph.D.
PO Box 583
2403 Hulemalu Road
Lihue HI 96766
don@kuaichocolate.us

DATE: Wednesday, February 27, 2008

TIME: 9:30 A.M.

PLACE: Conference Room 309

State Capitol, 415 South Beretania Street

*Aloha,

I support HB 2919 for the following reasons:

1) Several Niimalu Valley residents have complained of the smell of cruise ship plumes. Residents of the Niimalu Valley are beginning to develop respiratory problems such as coughing, head ache, and throat congestion due to the cruise ship plumes. I suspect that in the future, these respiratory problems will develop into more serious problems such as cancer and death. Research, Mortality from Ship Emissions: A Global Assessment ref 1, has linked deaths to cruise ship plume emissions. The health and welfare of Hawaii's people must be paramount.

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Robinson Hall, Newark, Delaware 19716, Department of STS/Public Policy,
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