



**CITY OF BURLINGTON  
BOARD OF HEALTH**

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**BOARD OF HEALTH**

Austin Sumner, Chair • Mary D. Hart • David Casey • Ian C. Galbraith • Caroline Tassej

**HEALTH ADMINISTRATOR**

Linda Ayer

**HEALTH OFFICER**

William Ward

**INTERNS:**

Emma Hevey – Grace Hevey

**MINUTES FOR SPECIAL MEETING OF  
BURLINGTON BOARD OF HEALTH  
CONTOIS AUDITORIUM – CITY HALL  
THURSDAY, NOVEMBER 27, 2012 5:45 PM**

Attending: *Austin Sumner, David Casey, Mary Hart, Ian Galbraith, Emma Hevey, Grace Hevey, Caroline Tassej, William Ward, Linda Ayer*  
Burlington Residents: *Lt. Col. Luke Ahmann, Jean Cass, Peggy Luhrs, James F. Palmer, David Schein, Laurie Larson, Spencer Smith, Robin Lloyd, Jay Vos, Paul Fleckenstein* Area residents: *Bridget Ahren, Eilene Andreioli, Roger Bourassa, Scott Crady, Sydney Crady, Eva Diner, Kim Hier Chris Hurd, Richard Joseph, Katherine Kirby, Michael Mahoney, Jaquelline A. Robertson, Jean Saysani, Ephram Schultz, Alana Shaw, William Stuono, Jean Szilva, Adam Wright, Barbara Wynroth,*  
Testimony: *Lt. Col. Luke Ahmann,; Les Blomberg; Mark Gorman, MD; John Reuwer, MD*  
Media: *David Charns, WCAX/BF; Kevin Kelly, 7-Days*

Meeting called to order by Chair, Austin Sumner at 5:45 PM

ITEM	DISCUSSION	ACTION
1. Approval of	Confirmed Expert Testimony Speakers:	Approved Agenda of Speakers for

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<p>Agenda</p>	<p>a) Les Blomberg – Director, Noise Clearinghouse  b) John F. Reuwer, MD  c) Mark Gorman, MD  d) Lt. Col. Luke Ahmann</p> <p>Ground Rules: Invited speakers who are not currently on record or have something new to say re: public health impact of F-35 basing; keep comments to 3 minutes.</p>	<p>Testimony</p>
<p>2. Public Forum</p>	<p>Richard Joseph – Winooski</p> <ul style="list-style-type: none"> <li>- <i>Emphasized that children are especially vulnerable; studies offered:</i></li> <li>- <i>LINK: October 11, 2012 Addendum A: WHO Children &amp; Noise</i>  <a href="http://www.burlingtonvt.gov/CodeEnforcement/Board-of-Health/Special-Committee-Meetings/">http://www.burlingtonvt.gov/CodeEnforcement/Board-of-Health/Special-Committee-Meetings/</a></li> <li>- <i>Due to loud noise: 65% children studied showed cognitive impairment, hearing loss, neurotransmitter disturbances, neg. psychological impact.</i></li> <li>- <i>Must consider impact of benign air pollution, and link to high cancer rates/respiratory diseases</i></li> </ul> <p>Janice Swartz – So. Burlington</p> <ul style="list-style-type: none"> <li>- <i>As stated in Air Force EIS - 2000 homes over 65 decibel range and not suitable for residential use. Jets will have negative impact on lives of people living in homes, students in schools.</i></li> </ul> <p>Jacequelline A. Robertson – Burlington</p> <ul style="list-style-type: none"> <li>- <i>air quality in VT is more pristine than other places; practice of ecological racism. If people of Burlington kept Lockheed Martin out, they can keep the basing of F-35 out.</i></li> </ul> <p>Jean Saysani – Winooski</p> <ul style="list-style-type: none"> <li>- <i>Impact of noise on children, in utero is well studied. Airport noise is a hazard to health.</i></li> <li>- <i>DEIS in 1980's over 1 million homes in 65 decibel range and have reduced houses in zone to 300,000 by eliminating the noise of the older vehicles.</i></li> <li>- <i>Air Force had decided to change path, to look at how it impacts Burlington. There are ways to mitigate impact.</i></li> </ul> <p>Eileen Andreoli – Winooski</p>	<p><b>BOH</b> suggests that VT Dept. Health be petitioned to conduct an investigation into the public health hazards and provide a . full scale health assessment.</p> <p>BOH thanks all participants in these forums.</p>

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	<ul style="list-style-type: none"> <li>- <i>Burlington, as owner and operator of BTV, has only 20% of population impacted.</i></li> <li>- <i>As stewards, BOH needs to ask for information about the impact of basing this jet on others in the county.</i></li> </ul> <p><b>Paul Flenkinstein- Burlington</b></p> <ul style="list-style-type: none"> <li>- <i>Worked under flight path in Williston and knows the noise level.</i></li> <li>- <i>City of Burlington needs to take a strong stand in regard to basing this first strike bomber that is used in Iraq &amp; Afghanistan.</i></li> <li>- <i>States that Burlington has a financial and legal obligation along with the BOH to provide strong guidance on this matter.</i></li> </ul> <p><b>Catherine Kirby - Professor at St. Mikes Winooski</b></p> <ul style="list-style-type: none"> <li>- <i>Research shows that noise at 65 decibels causes hearing loss, cardiovascular diseases, negatively impacts cognitive development of children.</i></li> <li>- <i>Suggests that there is a full investigation as to impact on the 9000 people in the flight path which is a huge minority.</i></li> <li>- <i>To wait until second round of basings for the studies is too late.</i></li> <li>- <i>Honor at what cost?</i></li> </ul> <p><b>Chris Hurd – So. Burlington</b></p> <ul style="list-style-type: none"> <li>- <i>With a first strike weapon capable of carrying a nuclear weapon need to look at this positioning BTV in an adversarial geopolitical position.</i></li> <li>- <i>Need to address issues of storage, accident protocol.</i></li> <li>- <i>Review the facts not politics.</i></li> </ul> <p><b>Jean Szilva, MD – So. Burlington</b></p> <ul style="list-style-type: none"> <li>- <i>Environmental health concerns: cited studies at Heathrow airport, elevated trains, this kind of noise isn't good for people, covered up by parasympathetic response. Chronic exposure to noise; there is enough evidence that this is bad. Is BOH going to be ahead of the curve or behind.</i></li> </ul> <p><b>David Shein - Burlington,</b></p> <ul style="list-style-type: none"> <li>- <i>Decision makers, please go listen to the planes before you make your decision.</i></li> </ul> <p><b>Bill Stuono – So. Burlington</b></p> <ul style="list-style-type: none"> <li>- <i>Urges planning commission to vote against the F-35.</i></li> <li>- <i>Personal experience of having to use earplugs for F-16, hearing</i></li> </ul>	
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	<p><i>affected for several days afterwards.</i></p> <ul style="list-style-type: none"> <li>- <i>Deafens the elderly and children, ridiculous amount of money spent on equipment could be used to take care health issues.</i></li> <li>- <i>Need to address issue of pollution from military aircraft.</i></li> </ul> <p><b>Barbara Wynroth - Burlington</b></p> <ul style="list-style-type: none"> <li>- <i>Understands that when F-35&amp; F-16. return from flights, the excess fuel dumped in the lake and that there are many toxins in the fuel.</i></li> </ul> <p><b>Laurie Larson – Winooski –</b></p> <ul style="list-style-type: none"> <li>- <i>Noise is a health issue.</i></li> <li>- <i>Need to address impact of increased noise on hard of hearing and disabled children.</i></li> <li>- <i>Impacts environmental health negatively as stated in Environmental Impact Statement – crash zone is in residential area.</i></li> <li>- <i>Issues are about noise, safety, air quality, environmental justice and children, decline in safety and air quality.</i></li> <li>- <i>Traumatic for refugees and veterans – health concern</i></li> <li>- <i>With increase in noise pollution, studies show elevated levels of stroke and heart attack.</i></li> <li>- <i>Increases in fuel consumption of these jets produces greater amounts of benzene which are carcinogens.</i></li> <li>- <i>Lower scores on memory and reading: - Munich Airport – relationship... noise. Stress hormones – raised affect health: suppresses immune response, slow healing, stop healing. Breast cancer/leukemia development due to hormonal.</i></li> <li>- <i>First strike and defense machine; basing them here will make us a primary target.</i></li> <li>- <i>Concerned citizens have petitioned City Council.</i></li> </ul> <p><b>Richard Joseph – Montpelier</b></p> <ul style="list-style-type: none"> <li>- <i>Aircraft noise and disease:</i> <ul style="list-style-type: none"> <li>o <i>No study shows that living with plus 65 decibels is healthy.</i></li> <li>o <i>1980's study shows a range of diseases from noise : WHO Burden of disease from environmental noise:</i>  <a href="http://www.euro.who.int/data/assets/pdf_file/0008/136466/e94888.pdf">http://www.euro.who.int/data/assets/pdf_file/0008/136466/e94888.pdf</a></li> </ul> </li> <li>- <i>Summarized study:</i></li> </ul>	
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	<ul style="list-style-type: none"> <li>○ Insurance records of 1 million German people living close to airports indicate that 172% of population is more likely to suffer stroke as a result of increased cardiovascular disease.</li> <li>○ That acute/sharp noise equals stress on body and there was a 70% chance of population developing high blood pressure</li> <li>- With Chamberlin School in fly zone, potentially 50% of children could develop cognitive impairment due to noise disruption, thus imposing suffering on this segment of the population.</li> <li>- F-35 would dramatically increase noise and poses public health threat. Requesting statement from the BOH.</li> </ul>	
<p>3. Expert Testimony</p>	<p>Les Blomberg: Specializes in noise and the science of acoustics and health effects such as hearing loss, annoyance, sleep and communication interference, and reduced performance.</p> <p>What are the health effects in Burlington of basing F-35 here? According to DEIS evidence is in question.</p> <ol style="list-style-type: none"> <li>1. Statement that hearing loss impacts fewer than 7 people with non-occupational hearing loss. Noise as annoyance - the document doesn't tell who or where or to what degree.</li> <li>2. Sleep interference, DEIS talks about awakening from noise from civilian aircraft flights (not military).</li> <li>3. Looked at 16 representative locations: counted instances but no duration or intensity.</li> <li>4. Evaluated 6 schools but did not indicate duration or intensity nor analyze degradation of performance in homes or at work.</li> <li>5. Impacts on learning are not examined in the DEIS.</li> </ol> <p><b>Blomberg graphic presentation:</b> <a href="http://www.burlingtonvt.gov/CodeEnforcement/Board-of-Health/Special-Committee-Meetings/">http://www.burlingtonvt.gov/CodeEnforcement/Board-of-Health/Special-Committee-Meetings/</a></p> <p>Summary:</p> <ul style="list-style-type: none"> <li>• DEIS data is not current or comparative. The military has not provided for current and relevant data as requested. “median” and “average” are two different statistical data with different implications.</li> <li>• Literature WHO and others research shows that there will be impacts based on information on noise that has been gathered in Europe.</li> </ul>	<p>Austin Sumner to request of Air Force data before the EIS is released before January.</p>

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	<ul style="list-style-type: none"> <li>• Mitigation techniques are not feasible. Those living near a major airport who have the means, escape the environment. There is a shift from residential communities to commercial communities and a general economic decline.</li> <li>• Wealthy (more healthy) leave area, leaving behind a less healthy population more vulnerable to health effects from noise.</li> <li>• Is it better to be vaguely right or precisely wrong?</li> </ul> <p>Considerations:</p> <ul style="list-style-type: none"> <li>• Airport employees are also city employees and hearing loss is occupational in nature.</li> <li>• Noise impact on civilian employees presents a long-term liability at the airport.</li> <li>• Hearing conservation measures are not consistently practiced.</li> <li>• OSHA standards are not protective enough and need to address the conditions of 8 hours at 75 decibels resulting in hearing loss.</li> <li>• Federal government has not made hearing conservation a priority.</li> </ul> <hr style="border-top: 1px dashed black;"/> <p>BOH:</p> <p>David Casey: Are noise levels measured in different environments? i.e. temp, humidity, wind.</p> <p>Reply:</p> <ul style="list-style-type: none"> <li>✓ Noise modeling works off of an average. Modeling is not perfect – there is a need to check some of the assumptions that AF made. *****</li> </ul> <p>John Reuwer,MD</p> <p>The noise factor with F-35 is bad for health in many ways. Nation spends lots of money testing and protecting hearing. FAA and military standards indicate noise at 65 decibels is harmful and not fit for residential occupation.</p> <ul style="list-style-type: none"> <li>• 2006 study of 4,000 people analyzed data annoyance factor to actual noise exposure.</li> <li>• Questions where the data used in DEIS came from about the air pollution particulars in regard to F-16 thrust of 30,000 lbs using 15,000 gallons of fuel.</li> </ul>	
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	<ul style="list-style-type: none"> <li>• And DEIS shows that aviation aircraft emissions are increasing vs. decreasing in the 2003 study.</li> <li>• No studies found about unpurified fuel.</li> <li>• Air pollution is on list for risk factors for heart attacks and cancers.</li> <li>• Scientific view indicates air pollution (sound and fuel particles) is bad for our health.</li> </ul> <p><b>BOH:</b></p> <p><b>Austin Sumner: It is important to address precautionary prevention. Carcinogens are present with commercial aviation; is exposure greater with the F-35?</b></p> <p>Reply:</p> <ul style="list-style-type: none"> <li>✓ There is less incentive for pollution controls for the military.</li> </ul> <p><b>Did heart attack rates increase by “measured” noise v. perception (annoyance)?</b></p> <p>Reply:</p> <ul style="list-style-type: none"> <li>✓ Yes, 1.1 – 2.16 (10% to double that).</li> </ul> <p><b>What are some effective means of mitigation?</b></p> <p>Reply:</p> <ul style="list-style-type: none"> <li>✓ Insulate houses to lower noise 5-10% , technology, fly less, engineer to the hazard so that that reduces the noise factor.</li> </ul> <p style="text-align: center;">*****</p> <p><b>Mark Gorman, MD: Addressed noise and risk of stroke. Stated that data is murky regarding health risks related to noise. Found only a single study related to “traffic” noise excluding aviation as it relates to stroke. Association doesn’t necessarily mean causality. Biological plausibility (animal studies) and human studies found noise does elevate cortisol, hormones (instantaneously and gradually).</b></p> <ul style="list-style-type: none"> <li>• 2011 study Road Traffic Noise and Stroke: Denmark – Copenhagen 165,000 residents</li> <li>• Modeling: noise exposure – no sampling of noise in the individual space. Not a transient population.</li> <li>• For the 64-1/2 age and older segment of subjects, there was a 27% increased probability of a stroke for those subjected to noise 60 decibels or more. Road traffic only, (not train or aviation traffic).</li> </ul>	<p>Video Link and Story: Courtesy WPTZ:</p> <p><a href="http://www.wptz.com/news/vermont-new-york/Board-seeks-information-about-jet-and-health-/8869914/17573004/-/151hug0z/-/index.html">http://www.wptz.com/news/vermont-new-york/Board-seeks-information-about-jet-and-health-/8869914/17573004/-/151hug0z/-/index.html</a></p>
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	<ul style="list-style-type: none"> <li>• For over 64 -1/2 - 20% of strokes during that time period (4 years) could be related to noise.</li> <li>• There is significant risk even corrected for high blood pressure of subjects.</li> <li>• Higher the sound level the higher level of stroke in older group.</li> <li>• Effect of pollution ( CO2 ) due to proximity to traffic did not show an association between pollution and actual stroke.</li> </ul> <p><b>BOH:</b>  <b>Ian Galbraith:</b> Did anyone look at other types of noise or stressors?  <b>Reply:</b>  ✓ No. It is important to recognize that the lack of evidence doesn't mean that it isn't there.</p> <p>.....</p> <p>Lt. Col. Luke Ahmann – Pilot VANG  Adam Wright - VANG Base Environmental Manager</p> <ul style="list-style-type: none"> <li>• Air Quality: with F-35 pollutants will decrease; fewer flights, less fuel being burned. 1 minute out of our local area, eliminates emissions.</li> <li>• F-35 uses same fuel as F16 and does not dump fuel.</li> <li>• F-35 used for homeland defense projected to arrive 2020.</li> <li>• VTANG Leadership can change the procedures, days, hours</li> <li>• As they learn more about the machine, VTANG can do more mitigation.</li> <li>• After burner is potentially louder. 20 of 22 measured locations no significant increase in noise.</li> <li>• 3 studies show negative impact: Land use, environmental justice &amp; noise.</li> <li>• F-35 will have 80% training above 23,000 ft. vs F-16 80% of training below 23,000 ft.</li> </ul> <p>See power point presentation:  <a href="http://www.burlingtonvt.gov/CodeEnforcement/Board-of-Health/Special-Committee-Meetings/">http://www.burlingtonvt.gov/CodeEnforcement/Board-of-Health/Special-Committee-Meetings/</a></p>	
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	<p><b>BOH:</b>  <b>Hazard mitigation: Engineer the machine to lessen engine noise? Civilian employees at greatest risk.</b>  Reply:  ✓ VTANG has no authority over occupational safety or to influence noise mitigation.</p> <p><b>Can BOH obtain integrated data of EIS of the modeling?</b>  Reply:  ✓ Air National Guard needs to get it from AF.  ✓ Final EIS will be released in January 2013.</p> <p><b>Can data be made available before then?</b>  <b>Is it possible for BOH to ask for data directly?</b>  <b>Caroline Tassey: Clarify showing the 22 sights and decibel projected to what it is now with the F-16.</b>  <b>David Casey: What are detailed strategies for mitigations?</b>  Reply:  ✓ Procedure – VTANG has control of operating the equipment.  ✓ Training in the future – will be simulated.  ✓ # of operations will go down – hifi simulations. 8000 to 6000 operations.  ✓ Structure at end of runway.  ✓ Ground base insulations: FAA process  ✓ Noise contingency Program. 6-10 year cycle (19 different noise mitigation measures).</p> <p><b>David Casey: What is the nuclear capability of the machine?</b>  Reply:  ✓ No nuclear payload .</p> <p><b>Austin Sumner: What is AF aviation accident rate?</b>  ✓ F-16 - 3.68/100,000 flight hours.</p>	<p><b>Austin Sumner, Chair,</b> to request from Air Force the current data prior to EIS final draft release in January 2013.</p> <p><b>BOH approved</b> concluding investigation and synthesizing the information gathered about the F-35 health effects. BOH will develop a resolution to send to City Council at next monthly meeting.</p>
4. Adjournment	8:45 PM	

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