THE HONORABLE THOMAS S. ZILLY

UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF WASHINGTON
AT SEATTLE

CITIZENS OF EBEY'S RESERVE FOR A HEALTHY, SAFE & PEACEFUL ENVIRONMENT, Plaintiffs, v. U.S. DEPARTMENT OF THE NAVY; ADMIRAL BILL GORTNEY, in his official capacity as the Commander, Fleet Forces Command; and COMMANDER MIKE NORTIER, in his official capacity as Commander Naval Air Station Whidbey Island, Federal Defendants.	NO. 2:13-cv-01232-TSZ DECLARATION OF JERRY G. LILLY

I, JERRY G. LILLY, declare as follows:

1. I am over the age of 18 and competent to testify in this matter. The information in this declaration is based on my personal knowledge and professional opinion.

2. I am an acoustical consultant with a Master's Degree in Engineering Acoustics from The Pennsylvania State University (1975). I have been providing

GENDLER & MANN, LLP
936 N. 34th Street, Suite 400
Seattle, WA 98103
Phone: (206) 621-8868
Fax: (206) 621-0512

acoustical consulting services to private businesses and the general public for over 30 years, specializing in noise assessment and noise control. I am a Board Certified member of the Institute of Noise Control Engineers, an elected Fellow of the Acoustical Society of America, and I have a Professional Engineering license in Acoustical Engineering (1983) in the State of Oregon (the only state with such a license).

3. I have testified multiple times as an expert witness in acoustical analysis before state and county courts as well as hearing bodies.

4. A true and correct copy of my current CV is attached as Exhibit 1.

5. In preparing this declaration I have reviewed the October 2004 report prepared by Wyle Laboratories titled "Aircraft Noise Study for Air Station Whidbey Island and Outlying Landing Field Coupeville, Washington" ("2004 Wyle Study"). I understand that the 2004 Wyle Study was used as the basis for the U.S. Navy's 2005 Environmental Assessment for Replacement of EA-6B Aircraft with EA-18G Aircraft at Naval Air Station Whidbey Island, Washington; the 2012 Environmental Assessment for Expeditionary Transition of EA-6B Prowler Squadrons to EA-18G Growler at Naval Air Station Whidbey Island, Washington as well as the 2005 AICUZ Study Update for Naval Air Station Whidbey Island's Ault Field and Outlying Landing Field Coupeville, Washington.

6. I was retained in the spring of 2013 by the plaintiffs in this action to (a) determine whether the 2004 Wyle Study noise contour projections are consistent with actual measured noise levels of the EA-8G aircraft operating at OLF Coupeville; and (b) to determine whether noise levels in various positions around the OLF are below or above thresholds that should sponsor a need to examine possible impact on the health and well-being of those exposed.

GENDLER & MANN, LLP
936 N. 34th Street, Suite 400
Seattle, WA 98103
Phone: (206) 621-8868
Fax: (206) 621-0512

7. In order conduct my analysis I installed data logging sound level meters at five locations near the OLF Coupeville landing strip. These locations represent populated areas where people could be exposed to the aircraft noise without necessary hearing protection. Two of the measurement locations were located outside of individual homes, and two were located in public parks. The fifth measurement position was an interior measurement with the noise monitoring system set up inside the living room.

8. A true and correct copy of my June 10, 2013, report summarizing my findings and conclusions is attached as Exhibit 2.

9. I collected noise measurements at each location on May 7, 2013, while the EA-18G aircraft were conducting field carrier landing practices at OLF-Coupeville. I collected noise measurements at each location for a single session of operations lasting up to 58 minutes. At each location I was able to measure the maximum A-weighted noise level (dBA), the maximum un-weighted peak noise level (dB) and the total sound exposure level (SEL) for the entire session of aircraft flyovers. The SEL represents the total acoustic energy in a noise event, and it depends on both the level and duration of the noise. The session SEL at each of the outdoor measuring locations ranged between 122.7 and 128.5 dBA. The session SEL for the indoor measuring location was 92.1 dBA. This information is shown in Table 1 of Exhibit 2.

10. I was also able to measure the total time that sound pressure levels were over a range of sound level thresholds. For example, during a single session of operations (less than one hour), the noise levels exceeded 100 dBA for over 2 minutes at position 1 and exceeded 110 dBA for over 11 seconds. Position 1 was in a densely populated residential neighborhood. This information is shown in Table 2 of Exhibit 2.

GENDLER & MANN, LLP
936 N. 34th Street, Suite 400
Seattle, WA 98103
Phone: (206) 621-8868
Fax: (206) 621-0512

11. Using the measured sound levels in Table 1 of Exhibit 2, I also calculated the single day DNL at each of the four outdoor measurement locations assuming various operating conditions and compared these to the CY 2013 values presented in the 2005 AICUZ Study Update. This information is shown in Table 3 of Exhibit 2, and the calculated noise levels are all higher than the sound levels presented in the 2005 AICUZ Study Update. The most likely reason for this difference is the fact that the 2005 AICUZ Study Update ignores the single day DNL and only evaluates that annual average, which effectively averages in all of the days when there is no aircraft noise.

12. Using the measured sound levels in Table 1 of Exhibit 2, I also calculated the annual average DNL at each measurement location assuming various ratios of daytime and nighttime operations and compared those to the CY 2013 values presented in the 2005 AICUZ Study Update. This information is shown in Table 4 of Exhibit 2. In this case I was able to get reasonable agreement with the 2005 AICUZ Study Update, but only when I assumed a total of 4,834 over-flights with 90% day sessions and 10% night sessions. It is my understanding that in 2012, 59% of the over-flights were during nighttime hours and only 41% occurred during daytime hours. Using the total 4,834 over-flights and the nighttime percentages from 2012 results in average annual DNL values above 80 dB at two of the four measurement locations. The average annual DNL at Position 1 is 83 dB under the actual 2012 conditions. This is in sharp contrast to Figure 4-4 in the 2005 AICUZ Study Update that shows the entire residential development south of the runway in the below 80 dB contour with the new EA-18G "Growler" aircraft. This difference can be explained by the fact that the noise analysis for the 2005 AICUZ Study Update assumed that there would only be 16.819% of the flights occurring during the nighttime hours.

GENDLER & MANN, LLP
936 N. 34th Street, Suite 400
Seattle, WA 98103
Phone: (206) 621-8868
Fax: (206) 621-0512

13. Clearly, the greatest noise impact at Coupeville OLF will be in the residential community immediately south of the south end of the runway (near Position 1 of Exhibit 2). This area has the highest population density in the vicinity of the Coupeville OLF and it is equally impacted by all 12 flight tracks. I have learned that recent aircraft activity at the Coupeville OLF has increased dramatically from the typical two 45-minute sessions per day (which I observed in 2013) to as much as a cumulative total of 8 hours per day. This much activity would increase the single day DNL at Position 1 to 89.5 dB, assuming no flights after 10 PM. It would also result in a total daily noise exposure of 117 seconds above 110 dBA and over 22.7 minutes per day over 100 dBA.

14. In my professional opinion the impact of the noise exposure received by the residents living near the Coupeville OLF is much greater than what would be expected from the results of the research that has been conducted on the impact of aircraft noise on the general public. This is primarily due to the fact that the bulk of the research has been conducted in areas near airports where there is relatively little variation in the daily volume of air traffic. In these areas the day to day variation of DNL is likely less than 5 dB, and an annual average DNL might make at least some sense. However, at the Coupeville OLF there may be only aircraft activity a few days per month, and the day to day variation of DNL could exceed 40 or even 50 dB (comparing a day with activity with a day without activity). Evaluation on the basis of an annual DNL makes no sense in this scenario. Taking this to the extreme, one could ask "what if all of the 4,834 over-flights in 2012 occurred on a single day (from 10 AM until 10 PM) with no over-flights on the other 364 days"? In this case, there would be one fly-over every 9 seconds, the instantaneous noise level would never drop below 110 dBA, and the single day DNL would be 103.6 dB, yet

GENDLER & MANN, LLP
936 N. 34th Street, Suite 400
Seattle, WA 98103
Phone: (206) 621-8868
Fax: (206) 621-0512

the average annual DNL would only be 79 dB. In this extreme case the average annual DNL makes no sense at all. What would make sense, and what I believe should be done, is to evaluate noise on the basis of the average DNL over the entire year, but only including the days with aircraft activity. This would likely provide results that would more closely reflect the bulk of the research that has been conducted on the effects of aircraft noise on people.

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

Dated this 22nd day of April, 2015, in Issaquah, Washington.

By: Jerry G. Lilly
JERRY G. LILLY

GENDLER & MANN, LLP
936 N. 34th Street, Suite 400
Seattle, WA 98103
Phone: (206) 621-8868
Fax: (206) 621-0512