



February 21, 2020

Mayor Satya Rhodes-Conway
City County Building, Room 403
210 Martin Luther King, Jr. Blvd.
Madison, Wisconsin 53703

Dear Mayor Rhodes-Conway:

In response to your request for information related to the basing of the F-35A aircraft at Truax Field, I provide the following:

November 1, 2019 Letter to NGB/A4AM

Process Concerns:

1. Why was the Aliant Energy Center selected for the public hearing?

Final Environmental Impact Statement (FEIS) Page A6-14, Comment #19:
Comment #19) Commenters at Madison and Boise were concerned that the public meeting venue was not located near the impacted area; therefore, some impacted communities were unable to attend the meeting.

FEIS Response: "The USAF made every attempt to find the best possible venue as close to the impacted area as possible. Because it was apparent that there would be a large turnout at both the Madison and Boise meetings, the USAF had to seek fairly large venues that could comfortably accommodate the anticipated crowds. There were no venues closer to the airports that had availability at any time during the public comment period. Venues for both of these meetings were within a 4 to 8 mile drive of the airfield (Boise and Madison, respectively). This information has been added into the public involvement section of the Final EIS."

2. What other options closer to the impacted area were investigated?

FEIS, Page A6-14, Comment #19:
Same FEIS reference from Process Concerns question 1 from above. In addition, attempts were made to re-book Crowne Plaza however there was not availability on the specified date. Contractor was unable to find an available location that met space specifications, to include Madison College, which was closer than the Alliant Energy Center.

3. Why didn't the USAF/ANG provide, or coordinate with the city to provide, better transportation options for the often transit-dependent residents living in the areas most impacted?

This was discussed in the after action meeting with the National Guard Bureau (NGB) and their contractor as a process improvement consideration for future events.

4. Why wasn't the EIS information translated into other languages? Were any efforts made to comply with executive order 13166 and Title VI of the Civil Rights Act of 1964?

FEIS, Page A6-20, Comment #41

FEIS Response: "Within the census block groups that overlap with the 65 dB or higher noise contours, the percentage of those Spanish speakers who speak English "not at all" (approximately 1%) and of Hmong speakers who understand English "less than very well" (approximately 1%), does not justify the time and cost to translate the entire document. Further, during the scoping process, there was no indication that there was a need to translate the document or the public involvement materials into another language."

Demographics:

1. Why was the arbitrary level of 50% of the population identifying as a minority used as the threshold for identifying impacted block groups?

FEIS, Page A6-9&10, Comment #6b:

FEIS Response: "In the EIS (Chapter 3, Section 3.8.2), the 20 percent and 50 percent methodology used is from the CEQ guidance (Environmental Justice Guidance Under NEPA, December 10, 1997). Furthermore, the analysis in the EIS is consistent with the City of Madison's determination that there are disproportionate impacts. Groupings of sensitive receptors or areas of high concentration of minority population would not change the significance findings of the EIS, which adequately inform the USAF decision maker of potential impacts."

Vol I, Page 3-36

FEIS: "Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations (1994), addresses potential disproportionate human health and environmental impacts that a project may have on minority or low-income communities. USEPA defines environmental justice as, "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies" (USEPA 2018c). It goes on to clarify that "no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.

CEQ guidance states that "minority populations should be identified where either: (a) the minority population of the affected areas exceeds 50 percent, or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis" (CEQ 1997). Minority populations include those that report their ethnicity as something other than non-Hispanic White alone; minority populations include Black or African American, Hispanic or Latin, American Indian, Native Hawaiian or other Pacific Islander, Asian, or Alaska Native (U.S. Census Bureau 2011). According to 15 USC § 689(3), HUD defines a low-income community as a census block or tract having greater than 20 percent of its population living below the federal poverty line, among other possible indicators."

2. What is the impact of using an alternative definition of any block group that contains more people of color than the area median?

FEIS, Page A6-9&10, Comment #6b:

Same as Demographics Questions 1. Additionally, see Table WI 3.7-1 on pg WI-83 (PDF pg 239 in Vol I) for some percentage breakdowns of minority and low income populations.

3. Why were concentrations of vulnerable populations, including schools, not taken into account in the draft EIS? How will that be remedied in the final EIS?

FEIS, Page A6-18, Comment #30:

FEIS Response: "PTSD is a serious, life-altering condition that can be successfully treated. The National Institute of Mental Health (NIMH) offers guidance to understand the symptoms and reactions as well as information to find treatment. NIMH has specific links on their website at <https://www.nimh.nih.gov/health/topics/post-traumatic-stress-disorder-ptsd/index.shtml>. PTSD affects 6-8 percent of the population. Initiating events are highly varied – from military combat and natural disasters to car accidents and assault. Given the diverse causation and success rate of individual treatment, it is unlikely that basing the F-35A at any of the alternative locations would have a significant effect on persons suffering PTSD.

Vulnerable groups (such as those who suffer autism) regarding environmental noise have been understudied, are generally underrepresented in study populations and evidence of differential effects is still highly anecdotal. As a consequence, clear effects are few and this is partly due to the lack of targeted and well-designed studies making clear comparisons between the general population and the potentially susceptible groups and quantifying these differences in terms of noise levels. Setting specific limit values to protect susceptible groups is not yet possible based on the available evidence, although some suggestions have been made in the literature. To further this field, it is necessary in future studies to present and compare subgroup-specific exposure effect relations. Generic use of the term "vulnerable groups" should be avoided as the mechanisms are quite different and maybe more important: they vary in time, place, and across contexts. Groups at risk or susceptible groups, periods or places would, in most cases, be more appropriate terms to use and are less stigmatizing than the term vulnerability. (van Kamp I, Davies H. Noise and health in vulnerable groups: A review. *Noise Health* [serial online] 2013 [cited 2019 Nov 14];15:153-9. Available from: <http://www.noiseandhealth.org/text.asp?2013/15/64/153/112361>). Information regarding impacts to special needs children/adults has been added to Appendix B in the Final EIS"

Impact on Public Housing Investments:

1. Why were these critical properties (Truax Park and Webb/Rethke Townhomes) not included in the EIS analysis?

FEIS, Page A6-6, Comment 4d:

Comment #4d) Commenters suggested that the USAF should include the 55 and 60 dB noise contours in the analysis.

FEIS Response: "The EIS was written consistent with USAF policy for evaluating noise impacts and does not include impacts below the 65 dB DNL contours. Additionally, the federal government considers 65 dB to be an acceptable level of outdoor noise exposure."

FEIS, Page A6-8, Comment 4j:

Comment #4j) Commenter indicated that Truax Park and Webb/Rethke Townhomes were located on the border of the 65 dB noise contour and suggested that these residences should be included in the analysis.

FEIS Response: "These locations are outside the anticipated 65 dB contour and therefore would not have been included in those calculations."

FEIS, Page A6-10, Comment #6c: *Commenters also mentioned that poverty and persons of color occur just outside of the 65 dB DNL contour line at CDA Truax housing, CDA Webb-Rethke townhomes, and other housing near Worthington Park, and near the intersection of Packers Avenue and Northport Drive that might be ineligible for sound attenuation assistance.*

Response: Eligibility for sound attenuation is determined by FAA guidance. Such determinations are outside of the scope of the proposed USAF action and outside of the USAF's control (see response to comment #22c).

FEIS, Page A6-15, Comment 22a:

Comment #22a) Commenters suggested that noise mitigation needs to be more detailed and specific in the EIS.

FEIS Response: "As discussed in the EIS (Chapter 4, Section 3.1 of the installation-specific sections), the ANG conducted a detailed analysis of the noise impacts from the Proposed Action and determined that impacts from aircraft noise near the airfield would be considered significant in some locations. Potential mitigation for noise impacts is discussed in Chapter 4, Section 3.1.3 in the installation-specific sections of the EIS. Further, the USAF will prepare a formal mitigation plan for the two selected installations following signature of the ROD. No public outreach to schools within the impacted areas has been accomplished beyond that described in Section 1.6 of the EIS. The USAF and FAA will consider conducting outreach to the impacted schools as a part of the mitigation plan development process. Further, mitigation for pre-existing incompatible land uses associated with noise could be addressed during a FAA Part 150 Study update."

FEIS, Page A6-15, Comment #22c:

Comment #22c) Commenters noted that there is housing near the proposed 65 dB noise contour line and they will not be eligible for sound mitigation funding through the noise compatibility program. They also noted that these residences would experience virtually the same noise impacts as those located within the 65 dB noise contour.

FEIS Response: "The USAF does not have authority to expend appropriated funds on facilities that are not under the direct control of the USAF. However, the FAA has a program that addresses noise and compatible land use near airports. Title 14, Code of Federal Regulations (CFR), Part 150 – *Airport Noise Compatibility Planning*, the implementing regulations of the *Aviation Safety and Noise Abatement Act of 1979*, as amended, provides a voluntary process an airport sponsor can use to mitigate significant noise impacts from airport users. It is important to note that the Part 150 program is not a guarantee that sound mitigation or abatement will take place. Airport Improvement Program requires that the impacted property is located within a DNL 65 dB or higher noise contour and meet various other criteria in FAA guide documents used for sound mitigation."

2. Has HUD been consulted in the decision making process around this bed-down, given their investment of significant funds into our community, and this area in particular?

FEIS, Page A6-10, Comment #6d:

Comment #6d) Were consultations with the U.S. Department of Housing and Urban Development (HUD) performed?

FEIS Response: "HUD has no jurisdiction by law over the Proposed Action. However, data from HUD on the location of Public Housing Developments and Public Housing Buildings was used to analyze whether any of these locations were within the proposed 65 dB DNL noise contour."

According to this data from HUD, none of these public housing locations are located under the proposed 65 dB DNL or greater noise contour for any of the five installations.”

FEIS, Vol I, PDF pg 106:

FEIS “In June 1980, an *ad hoc* Federal Interagency Committee on Urban Noise (FICUN) published guidelines (FICUN 1980) relating to noise and compatible land uses. This committee was composed of representatives from Department of Defense (DoD); Department of Transportation and the Department of Housing and Urban Development (HUD); the U.S. Environmental Protection Agency (USEPA); and the Veterans Administration. Generally, federal agencies have adopted these guidelines for noise analyses.”

FEIS, Vol II, PDF Page 274 (Response to Sen Baldwin)

SECAF Response: “Drawing from Housing and Urban Development’s terminology, “incompatible use” means that sound attenuation is recommended. At or inside a 65 dB DNL contour line, which is acceptable for all land uses, the attenuation provided by a typical house or apartment wall assures the interior sound level will meet the standard that HUD considers acceptable for speech and sleeping, 45dB. Additional attenuation would be recommended for houses outside a 65 dB DNL contour line. As to outdoor activity, the federal government considers residential yards and similar land uses such as parks, outdoor sports and cultural activities unimpaired by noise exposure up to 75 dB. Ultimately, it is up to local residents to determine an acceptable standard of living in their community, factoring in cost, feasibility, and their development needs while keeping in mind that these levels include an adequate margin of safety.”

Contamination:

1. What are the true costs of dealing with PFAs contamination? Are those accounted for in the EIS?

Comment #24a) Commenters expressed a general concern about hazardous materials and wastes.

FEIS Response: “As discussed in the EIS (Chapter 4 Section 3.13 of the installation-specific sections), the ANG conducted a detailed analysis of the impacts of the Proposed Action associated with hazardous materials and wastes, and determined that there would be no new waste streams (including perfluorooctane sulfonate [PFOS]/perfluorooctanoic acid [PFOA]) associated with the F-35A aircraft). Additionally, existing contamination from previous activities is actively being investigated and in some cases remediation is ongoing. Impacts associated with hazardous materials/wastes from the Proposed Action would not be significant. See Comment #24b for more detailed information related specifically to PFOS/PFOA.”

2. How will the final EIS address the prevention of future PFAs contamination?

FIES, Page A6-16, Comment 24a:

Comment #24a) Commenters expressed a general concern about hazardous materials and wastes.

FEIS Response: “As discussed in the EIS (Chapter 4 Section 3.13 of the installation-specific sections), the ANG conducted a detailed analysis of the impacts of the Proposed Action associated with hazardous materials and wastes, and determined that there would be no new waste streams (including perfluorooctane sulfonate [PFOS]/perfluorooctanoic acid [PFOA]) associated with the F-35A aircraft). Additionally, existing contamination from previous activities

is actively being investigated and in some cases remediation is ongoing. Impacts associated with hazardous materials/wastes from the Proposed Action would not be significant.”

Comment #24b) Commenters suggested that the ANG cannot safely and legally perform the planned construction activities without a complete investigation that defines the extent and nature of PFOS/PFOA contamination in soil and groundwater and subsequent remediation.

FEIS Response: “As described in the EIS (Section 3.13 of the installation-specific sections), each base implements an active environmental restoration program that addresses contamination at the bases. Additional details regarding PFOS/PFOA have been added to the EIS (Section 3.13 of the installation-specific sections). Existing PFOS/PFOA contamination is related to the former use of aqueous film forming foam (AFFF), a fire suppressing agent. The USAF is transitioning to an alternative firefighting foam and taking steps to reduce the opportunity for this alternative formulation to enter the environment. Transition to use of this alternative foam in the hangar systems is expected to be complete by the end of 2019, and retrofitting of the fire vehicles is 97 percent complete.

To address the potential presence of PFOS/PFOA in the environment, the USAF carefully follows the established, step-wise process set forth in the governing federal cleanup law, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), to protect human health and the environment. The U.S. Environmental Protection Agency (USEPA), which is endowed by Congress with the expertise and authority to regulate environmental contaminants, has not issued regulatory limits on PFOS/PFOA. However, USEPA has issued a 70 parts per trillion Lifetime Health Advisory level for PFOS/PFOA in drinking water. If PFOS/PFOA attributable to USAF actions is found in drinking water at levels that exceed USEPA’s Lifetime Health Advisory, the USAF takes immediate action to stop human exposure by providing alternate drinking water sources.

Consistent with the CERCLA cleanup process, each of the five bases has completed a Site Investigation Report on PFOS/PFOA. If necessary, the next step in the CERCLA process would be the Remedial Investigation, which would determine the nature and extent of contamination and assess the potential risk to human health and the environment. If CERCLA’s risk assessment process ultimately determines there is a need for cleanup action, federal and state cleanup standards will be evaluated under the CERCLA process to see if they are Applicable or Relevant and Appropriate Requirements at the specific site. If so, they are incorporated into the cleanup levels that must be attained at the site.

The only known potential for existing PFOS/PFOA contamination to be encountered as a result of the proposed F-35A beddown is through construction activities. As described in Section 3.13.1.2 of each of the installation- specific sections, the USAF will comply with Air Force Guidance Memorandum (AFGM2019-32-01) AFFF-Related Waste Management Guidance to manage waste streams containing PFOS/PFOA (USAF 2019). The AFGM will be updated as needed to address changes in regulatory requirements, DoD determinations of risk, or development of new technologies.”

Storm water:

1. What are the expected costs to contain and remediate PFAS on the planned construction site?

See answers to contamination question #2 above regarding PFAS.

FEIS, Page WI-122: "Procedures for hazardous material management established for the 115 FW would continue to be followed in future operations associated with the Proposed Action and as required during all construction and renovation activities."

2. What storm water management standards does the Air Force anticipate meeting during and after construction?

FEIS, Page A6-20, Comment #42:

FEIS Response: "As discussed in the EIS, (Chapter 4, Section 3.8 of the installation-specific sections), the ANG conducted a detailed analysis of infrastructure, including potable water, wastewater, storm water, electrical and natural gas systems, solid waste management, and transportation. The Proposed Action would be managed in accordance with all applicable federal, state, and local regulations."

Noise:

1. Are the noise/sound analysis in the Draft EIS specific to Madison and practices of Truax Field?

Reference Response to Sen Baldwin's letter (Vol II, PDF pg 272-274)

SECAF Response: "The Draft Environmental Impact Statement (EIS) used 100% of home station air operations to provide a conservative estimate for the initial F-35 qualification training required for 115 FW pilots. After 115 FW pilots are qualified in the F-35, which is expected to take several years, and begin deployments and off-station training, air operations are expected to be reduced to a level closer to historical home station operations. – see Draft EIS on Section WI2.1.2 Page WI-3.

The Draft EIS did not assess noise profiles assuming 80% home station operations in order to provide a conservative estimate for the initial F-35 potential impacts. After 115 FW pilots are qualified in the F-35, and begin deployments and off-station training, air operations are expected to reduce to historical home station operations and could have an associated reduction in noise.

We anticipate a return to steady-state/historical operations in the 2025-2026 timeframe. With this return to steady-state operations we anticipate the noise profiles will encumber fewer households than reflected in the DEIS. Although the amounts were not analyzed in the DEIS, our noise experts indicate it would be on the order of a 1 - 2 dB drop."

FEIS, Page A6-5, Comment #4A:

Comment #4a) Commenters raised general comments about noise (e.g., complaints about noise, claims that the analysis was inadequate, etc.).

FEIS Response: "The EIS was written consistent with USAF policy for evaluating noise impacts. In the EIS, the Air National Guard (ANG) conducted a detailed noise analysis for each of the affected locations and determined that impacts from aircraft noise near the airfield would be considered significant in some locations. The noise analysis is located in Chapter 4, Section 3.1 in the installation-specific sections of the EIS. Other documents related to the noise analysis were located on the project website <http://www.angf35eis.com/DocumentsRef.aspx>, and included noise studies for each of the five alternative locations, as well as a noise appendix to the Pacific Operational Beddown EIS, which contained extensive background information on noise analyses (including impacts to structures from vibration, nonauditory human health impacts, wildlife impacts, etc.): http://www.angf35eis.com/Resources/Documents/F-35A_Operational_Beddown-Pacific_Final_EIS_Feb_Appendix_E.pdf. Specifically, noise-

induced vibration effects on structures and humans could be found in the Appendix Section E.2.10. This entire Pacific Ops Appendix E (which was previously incorporated by reference in the Draft EIS) has been brought into Appendix B of this EIS for easy access by the reader.”

FEIS, Page A6-5, Comment #4E:

Comment #4e) Commenters mentioned that they do not understand why the analysis leans heavily on the DNL metric as opposed to Maximum Sound Level (Lmax).

FEIS Response: “The EIS was written consistent with USAF policy for evaluating noise impacts. As discussed in the EIS (Section 3.2.2), DNL was included per Department of Defense (DoD) guidelines. It is also a well-accepted predictor of annoyance used by the FAA and U.S. Environmental Protection Agency (USEPA), along with various other agencies, for impact analysis. DNL is time averaged over a 24-hour period and includes all noise events, so it is a very good metric for comparing the impacts at multiple sites. DNL is the only metric that specifically recognizes the importance of noise that occurs at night and heavily penalizes it. The 24-hour timeframe (based on Annual Average Day operations) makes DNL the best metric for judging chronic exposure such as neighbors in host communities experience. For all these reasons, DNL is considered the most useful, appropriate, and fair general metric.

Lmax is the greatest sound level measured during a single noise event (typically lasting 1/10 of a second only). It can be very loud, but like a gunshot or a backfiring lawnmower, the sound is typically gone before the observer identifies the source. Lmax’s usefulness as an impact metric or a predictor of annoyance is therefore limited. Sound Exposure Level (SEL), presented in the EIS, is a better descriptor than Lmax in this type of analysis. SEL is integrated over a single noise event. It includes the building and then receding of the sound (duration) as well as the peak (Lmax). This is more appropriate to describe the sound that a vehicle in motion makes. For example, a firecracker’s bang for a tenth second at an Lmax of 100 dB is likely not as impactful as a dump truck accelerating up a hill from a stop sign lasting many minutes at an Lmax of 90 dB. In addition, the sound from aircraft overflights typically lasts more than 1 second, so the SEL is usually greater than the Lmax. As described in Sections 3.2.3.2 and 3.2.3.3, SEL events have been provided in addition to DNL at noise-sensitive locations. Lmax has been included for those locations to determine the potential for Residential and Classroom Speech Interference.”

2. What is the actual average number of locally-based F-16 flight operations at Truax per year? How many additional operations would be expected when there is no anticipated increase in planes and only one additional pilot?

The FEIS, Table WI2.1-1, indicates that the 115FW flies 4900 locally based flight operations per year at Truax field. This number may fluctuate based on overseas commitments and training off station. However, we feel it is an accurate estimate of the 115FW’s typical flying year. While it is not likely that the amount of annual flying would significantly increase with the F-35, the FEIS does account for the possibility of more annual flight operations with the F-35 than with the F-16. The following excerpts from the FEIS address the number of annual operations.

FEIS, Page A6-4, Comment #3A,

Comment #3a) Commenters asked general questions about the details of the Proposed Action and/or Purpose and Need, which can be found in the EIS (e.g., how many aircraft would come? How many operations would be flown?).

FEIS Response: “EIS Chapter 2 and Chapter 4, Section 2 of the installation-specific sections described the Proposed Action and alternatives, including the No Action Alternative. The USAF proposes to beddown 18 F-35A aircraft at two of five alternative locations. The alternatives included: 115th Fighter Wing (115 FW) at Dane County Regional Airport in Madison, Wisconsin;

124th Fighter Wing (124 FW) at Boise Airport in Boise, Idaho; 125th Fighter Wing (125 FW) at Jacksonville International Airport in Jacksonville, Florida; 127th Wing (127 WG) at Selfridge Air National Guard Base (ANGB) in Harrison Township, Michigan; and 187th Fighter Wing (187 FW) at Montgomery Regional Airport in Montgomery, Alabama. For details on the purpose and need of the Proposed Action, see EIS Chapter 1, Section 1.2.”

FEIS, Page A6-7, Comment #4g:

Comment #4g) Commenters mentioned that they believe the EIS analyzed too many annual home station sorties (3,061), and if the historical number of sorties had been analyzed, there would be a reduction in the number of people affected by noise. Commenters also questioned whether use of the simulator would reduce actual flying time, and thus the noise footprint.

FEIS Response: “The 3,061 home station sorties were based on the USAF prescribed Ready Aircrew Program (RAP) requirements. The EIS (Table 2.2-2) reflected the increase in home station air operations for the initial F-35A qualification training required for ANG pilots. After the ANG pilots are qualified in the F-35A, which is expected to take several years, and begin deployments and off-station training, air operations could be expected to be reduced to a level closer to historical home station operations, with a commensurate reduction in noise impacts. Though the flight simulator would be used extensively by the ANG pilots, that training is in addition to the 3,061 sorties that would be expected to be flown annually. This information has been added to Section 2.2.1.2 of the Final EIS.”

3. How many operations are reduced as a result of offsite operations, deployment, winter weather conditions, aerial refueling with the 128th Refueling Wing and the proposed use of two new training simulators?

Best Management Practices such as Air-to-Air refueling are not addressed in FEIS as the scheduling of such operations are not a certainty. The 115 FW does currently utilize Air-to-Air refueling to accomplish training requirements with less sorties and anticipates executing similar training strategies with F-35 aircraft.

The FEIS also does not account for flying that the 115FW does off station in locations other than Truax Field. The 115FW regularly trains at bases such as Nellis Air Force base or goes overseas about once a year. This off station flying directly reduces the number of operations at Truax Field. Since these commitments are difficult to project for future years, the FEIS makes a conservative assumption that all flying will be done at home station.

FEIS, Page A6-7, Comment #4g:

FEIS Response: “The 3,061 home station sorties were based on the USAF prescribed Ready Aircrew Program (RAP) requirements. The EIS (Table 2.2-2) reflected the increase in home station air operations for the initial F-35A qualification training required for ANG pilots. After the ANG pilots are qualified in the F-35A, which is expected to take several years, and begin deployments and off-station training, air operations could be expected to be reduced to a level closer to historical home station operations, with a commensurate reduction in noise impacts. Though the flight simulator would be used extensively by the ANG pilots, that training is in addition to the 3,061 sorties that would be expected to be flown annually. This information has been added to Section 2.2.1.2 of the Final EIS.”

4. Please provide a detailed timeline and explanation of how the “alert mission” would be handled with the arrival of the F-35s; if F-16s are drawn down with the arrival of F-35s as stated in the EIS, what is the actual increase in flights that could be expected during the transition between fleets.

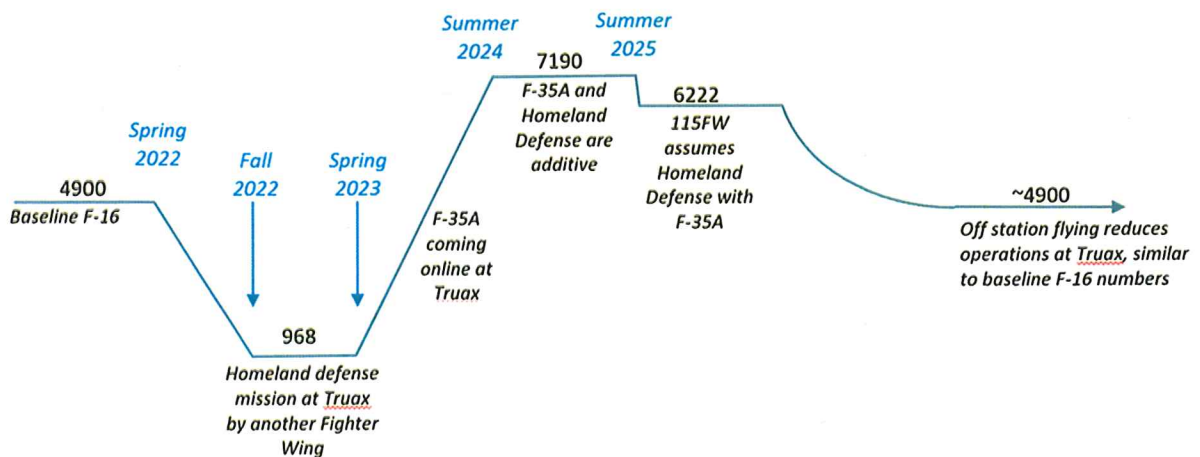
Page A6-19, Comment #35:

Comment #35) Commenters raised some questions regarding how long it will be until the alert mission changes to F-35A and operations decrease at the 115 FW.

FEIS Response: "As stated in the EIS (Section 2.2.1.2), the F-16s will continue to conduct the alert mission until the F-35A aircraft are alert mission-capable, which is currently an undetermined length of time. Also refer to Comment #4g" in question 3 above.

At the time of this letter, it is not currently known if the alert mission will be at Truax Field or not during the conversion to F-35. Since that is not known, the EIS conservatively assumes that the alert mission will continue at Truax Field until the F-35 is alert mission capable.

This graphic depicts how the number of local operations may fluctuate during the conversion to the F-35. The numbers used are from the FEIS.



Reference Response to Sen Baldwin's letter (Vol II, PDF pg 274)

SECAF Response: "We anticipate a return to steady-state/historical operations in the 2025-2026 timeframe. With this return to steady-state operations we anticipate the noise profiles will encumber fewer households than reflected in the DEIS. Although the amounts were not analyzed in the DEIS, our noise experts indicate it would be on the order of a 1 - 2 dB drop."

5. Please provide a map showing existing and proposed contours of peak volumes using the Sound Exposure Level, SEL, or Lmax measures instead of DNL. The Draft EIS only includes a table of SEL for select locations.

FEIS, Page A6-7, Comment #4e:

Comment #4e) Commenters mentioned that they do not understand why the analysis leans heavily on the DNL metric as opposed to Maximum Sound Level (Lmax).

FEIS Response: "The EIS was written consistent with USAF policy for evaluating noise impacts. As discussed in the EIS (Section 3.2.2), DNL was included per Department of Defense (DoD) guidelines. It is also a well-accepted predictor of annoyance used by the FAA and U.S. Environmental Protection Agency (USEPA), along with various other agencies, for impact analysis. DNL is time averaged over a 24-hour period and includes all noise events, so it is a very good metric for comparing the impacts at multiple sites. DNL is the only metric that specifically recognizes the importance of noise that occurs at night and heavily penalizes it. The 24-hour timeframe (based on Annual Average Day operations) makes DNL the best metric for

judging chronic exposure such as neighbors in host communities' experience. For all these reasons, DNL is considered the most useful, appropriate, and fair general metric.

Lmax is the greatest sound level measured during a single noise event (typically lasting 1/10 of a second only). It can be very loud, but like a gunshot or a backfiring lawnmower, the sound is typically gone before the observer identifies the source. Lmax's usefulness as an impact metric or a predictor of annoyance is therefore limited. Sound Exposure Level (SEL), presented in the EIS, is a better descriptor than Lmax in this type of analysis. SEL is integrated over a single noise event. It includes the building and then receding of the sound (duration) as well as the peak (Lmax). This is more appropriate to describe the sound that a vehicle in motion makes. For example, a firecracker's bang for a tenth second at an Lmax of 100 dB is likely not as impactful as a dump truck accelerating up a hill from a stop sign lasting many minutes at an Lmax of 90 dB. In addition, the sound from aircraft overflights typically lasts more than 1 second, so the SEL is usually greater than the Lmax. As described in Sections 3.2.3.2 and 3.2.3.3, SEL events have been provided in addition to DNL at noise-sensitive locations. Lmax has been included for those locations to determine the potential for Residential and Classroom Speech Interference."

FEIS, Page A6-22, Comment #44c:

Comment #44c) Comments on the "use of DNL to assess Speech Interference Level (SIL) is inappropriate in addressing everyday life and safety issues (parking lots, job sites, child supervision) in low altitude jet operations areas."

FEIS Response: "As discussed in the EIS, (Appendix E, Noise Modeling, Methodology, and Effects, of the USAF F-35A Operational Beddown Pacific Final Environmental Impact Statement, which is incorporated by reference [available on the project website <http://www.angf35eis.com/>] and has also been incorporated into the Final EIS), the Defense Noise Working Group specifies indoor Lmax of 50 dB as a screening threshold for speech interfering events, which roughly translates to a SIL of 45 dB for aircraft noise. An Lmax of 50 dB has been shown to provide 90 percent speech intelligibility for students situated throughout a classroom and forms the basis for classroom speech interference and residential speech interference in the EIS."

6. Please provide a map showing the most recent measured DNL at Truax compared to modeling of current F-16's

New DNL contours were not produced for the Final EIS. Ref. Figure WI3.1-4. Page WI-32.

7. Please provide a map including 60 and 55dB DNL contours.

FEIS, Page A6-6, Comment #4d:

FEIS Response: "The EIS was written consistent with USAF policy for evaluating noise impacts and does not include impacts below the 65 dB DNL contours. Additionally, the federal government considers 65 dB to be an acceptable level of outdoor noise exposure."

8. C16 Under what circumstances would afterburners on the F-35s be required at Truax? How often would these circumstances occur?

FEIS, Page A6-13, Comment #16:

FEIS Response: "As addressed in the EIS (Section 2.2.1.2), use of afterburner by the F-35A aircraft at all five of these alternative locations has been modeled for 5 percent of take-offs. Due to the immense thrust provided by the F-35A engine, there would be little to no expected requirement for its use. Even though there is no anticipated requirement for afterburner use, it has been included at 5 percent in the noise model to provide a conservative estimate of

potential noise impacts. The USAF will not be modeling additional levels of afterburner use for this EIS.

The RAP for the F-35A does not require afterburner use for take-off. As addressed in the EIS (Section 2.2.1.2), use of afterburner, in the take-off phase of flight, is dictated by the F-35A Joint Technical Data (JTD) and Air Force Manual (AFMAN) 11-2F-35A Vol 3. Based on airfield temperature, pressure altitude, winds, aircraft weight/configuration (drag), and runway length, the JTD will give pilots all the parameters for take-off based on the selected power setting, military or afterburner. This is called aircraft Take-off and Landing Data (TOLD). The parameters include take-off distance, abort speed, rotation speed, take-off speed, acceleration check speed, etc. Based on this, the F-35A JTD and associated AFMANs do not require afterburner take-off under normal training loads and atmospheric conditions at the currently proposed Ops 5 and 6 F-35A bases.”

As of 19 Feb 2020, Burlington, Vermont has not had to use afterburner when taking off from home station.

9. C21 Under what circumstances would F-35s need to take off to the south using runway 18? How strong of a tailwind can the F-35 safely take off with, if doing so allows it to use runway 36 taking off to the north?

FEIS, Page A6-14, Comment #21:

Comment #21) Commenters wondered why current and proposed flights need to approach and take off over such a populated area as opposed to northerly approach. Why do flights circle and dip repeatedly over the city?

FEIS Response: “Each of the five alternative ANG locations for the F-35A beddown currently implement any procedures they can to minimize impacts to noise-sensitive receptors. Aircraft take-offs and landings are largely dictated by the prevailing winds at the time of the operation. Further, local pattern operations (circle and dip, as the commenter mentions) are similarly limited by local operational restrictions, and depending on the location, are infrequent. Depending on the circumstance, it could be in a single case of a pilot not being able to safely land in a particular condition (wind, weather, etc.) and needed to circle for another landing. In other instances, it allows for multiple aircraft to arrive in a short period of time and all safely land (avoiding conflicts between them, nor requiring radar control for safe separation).”

FEIS, Ref. A6-17, Comment #26:

Comment #26) Commenters raised questions about flight path information, and questioning why the aircraft cannot fly differently at the airfield.

FEIS Response: “Aircraft take-offs and landings are largely dictated by the prevailing winds at the time of the operation. Further, local pattern operations are similarly limited by local airport operational restrictions. Flight path information can be found in the installation-specific noise studies which are located on the project website at www.ANGF35EIS.com, EIS Documents tab, under Documents Incorporated by Reference.”

10. What mitigation measures are available for mobile home parks?

FEIS, Page A6-12, Comment #11:

Comment #11) Commenters were concerned about manufactured home communities located within the 65 dB and greater noise contours. With the current shortage of affordable housing in their areas, they are concerned that this would affect the lives of many disadvantaged people.

FEIS Response: "The 65 dB DNL metric is used by federal agencies, including the USAF and FAA, to determine compatibility of military aircraft operations with local land use. Residential land use, including mobile home parks, is considered compatible with noise levels of <65 dB DNL, and therefore nobody would be displaced from these mobile home communities. One commenter in particular from Boise was concerned about her mobile home community within the South Eisenman Neighborhood being located in the noise contours. Though this community is located near the airport and underneath aircraft flight tracks, it is located outside the 65 dB DNL noise contours both currently and under the Proposed Action."

FEIS, Page A6-15, Comment #22b:

Comment #22b) Commenters asked about how the USAF will track the mitigations that the ANG and FAA sign up to.

FEIS Response: "When the Mitigation and Monitoring Plan is developed, it will include metrics to track and monitor those activities that are identified to minimize the impacts. These could include afterburner usage, flight tracks, number of operations, etc. Mitigations will be identified in the ROD and the Mitigation and Monitoring Plan will identify who is responsible for implementing specific mitigation procedures, who is responsible for funding them, and who is responsible for tracking these measures to ensure compliance. This information has been added to Chapter 4 of each installation-specific Section 3.1.3 of the Final EIS."

FEIS, Page A6-15, Comment #22c:

Comment #22c) Commenters noted that there is housing near the proposed 65 dB noise contour line and they will not be eligible for sound mitigation funding through the noise compatibility program. They also noted that these residences would experience virtually the same noise impacts as those located within the 65 dB noise contour.

FEIS Response: "The USAF does not have authority to expend appropriated funds on facilities that are not under the direct control of the USAF. However, the FAA has a program that addresses noise and compatible land use near airports. Title 14, Code of Federal Regulations (CFR), Part 150 – Airport Noise Compatibility Planning, the implementing regulations of the Aviation Safety and Noise Abatement Act of 1979, as amended, provides a voluntary process an airport sponsor can use to mitigate significant noise impacts from airport users. It is important to note that the Part 150 program is not a guarantee that sound mitigation or abatement will take place. Airport Improvement Program requires that the impacted property is located within a DNL 65 dB or higher noise contour and meet various other criteria in FAA guide documents used for sound mitigation."

Environmental Concerns:

1. Why is the survey of federal-and state-listed species confined to the airport property?

FEIS, Page A6-12, Comment #14a:

Comment #14a) Commenters expressed a general concern for wildlife (endangered species, birds, etc.) as a result of the F-35A operations.

FEIS Response: "Reference Chapter 3, Section 3.2.1.3 Wildlife and Domesticated Animals Noise Effects. Also see: Appendix E, Noise Modeling, Methodology, and Effects, of the USAF F-35A Operational Beddown Pacific Final Environmental Impact Statement, which is incorporated by reference (available on the project website <http://www.angf35eis.com/>) and has also been incorporated into the Final EIS. Studies recommended by commenters were reviewed for applicability."

FEIS, Page A6-13, Comment #14b:

Comment #14b) Commenters suggested that the EIS is deficient because it did not list all species that could occur in the vicinity of the airfield and/or the Special Use Airspace (SUA) that would be used by the F-35A aircraft.

FEIS Response: "As discussed in the EIS (Section 3.11 of the installation-specific sections), all federally listed species that have the potential to occur in the area(s) were analyzed in detail. Please note that the non-federally listed species discussed within the installation and/or airspace sections is not an exhaustive list of all species that might be found within the geographic region, but rather a representative list."

2. Why are the impacts on species in surrounding areas not included in the Draft EIS?

Please see same references as Environmental Concerns question #1 above.

Questions Received February 19, 2020

1. Many residents believe F-35s will be four times louder than the current F-16s. Has the final Madison EIS resulted in any further noise information that gives us a clearer picture of the peak levels of noise that will be faced by Madison residents?

This Sound Exposure Level (SEL) metric is a good way to quantify peak noise levels. It takes the sound from one event, such as an aircraft flying overhead, and compresses it into a one second interval. See para 3.2.2.2 for a detailed explanation of SEL. It is typically *higher* than peak noise. Table WI3.1-12 in the FEIS indicates that for most points of interest, the increase in noise from the F-16 to the F-35 is between 0 and 4dBA.

Four times louder would be represented by an increase of 20dB. There is nothing in the FEIS that indicates the F-35 will be 20dB louder than the F-16 at any location around Truax Field.

2. Do we have any further information about the projected use of afterburners?

Pilots use Takeoff and Landing Data (TOLD) to predict takeoff distance for a given set of conditions and to determine if they need afterburner for takeoff. TOLD takes into account runway length, temperature, humidity, runway elevation above sea level, wind, and aircraft weight. If the TOLD predicts that the takeoff distance exceeds 50% of the runway length, then afterburner is required for takeoff.

The TOLD predicts that F-35 pilots will not have to use afterburner for takeoff from Truax Field in even the worst performance conditions which is a hot, humid day. In the time that the 158FW in Burlington, VT has operated F-35s, since September of 2019, their pilots have not had to use afterburner on any of their takeoffs. The pilots found the TOLD data to be accurate. It's worth noting that Burlington's runway is slight shorter than Madison's 9K' runway.

Based on this, we expect that the 5% afterburner predication in the FEIS is accurate. Also - when pilots do use afterburner for takeoff, the afterburner is turned off shortly after the airplane is safely airborne, usually by the departure end of the runway. The entire climb and departure profile is not flown in afterburner.

3. Do we have any further information about the specific number of locally-based flight operations at Truax per year, and how factors such as weather, deployments, training operations and refueling practices impact operations?

The 115FW believes that the predicted number of takeoffs and landings, referred to as operations, in the FEIS is higher than what will actually be flown when the F-35 is operational at Truax Field. The FEIS represents the "maximum potential impact", or worst case scenario if current best management practices are not maintained. The number of operations by F-35s at Truax will likely be similar to the number of operations by current day F-16s. Keep in mind the unit is not receiving more airplanes than currently assigned with the addition of a few maintenance personnel and 1 pilot; generating 27% more flights without commensurate resources would be difficult.

The number of annual flights at Madison will be reduced due to off station commitments that are a normal part of the 115FW's federal mission. This is indicated in FEIS paragraph WI2.1.2 – "...Based on proposed requirements and deployment patterns under CAF, the F-35A operational aircraft would fly some operations for exercises at other locations during deployments or in preparation for deployments. During such periods, home station flying operations would be reduced accordingly." Historically, off station flying for F-16s has been about 20% per year.

Best management practices that will reduce the number of flights includes the use of airborne refueling, off-station exercise participation, and flight simulators use. The 115 FW currently use airborne refueling for about 40% of their local training sorties, which allows for multiple training events in a single sortie; maximizing training and reducing the number of airfield operations. With the availability of four F-35 Full Mission Simulators (FMS) at Truax, it is anticipated future pilot training requirements will allow the replication of some actual flying with in simulators events. Since these best management practices cannot be guaranteed at this time, the FEIS does not account for them when predicting every scheduled pilot training event will require a take-off and landing at Truax Field.

Weather plays a factor as well. The 115FW typically experience a reduction in flights in the January, February and March due to ice and poor visibility. This attrition is anticipated when planning the annual flying program.

4. Hearing loss: Is there any operation that would have a noise intensity and/or frequency that it would pose a risk of hearing loss to neighboring residents?

The Federal Aviation Administration (FAA) and the military take into account many factors when it comes to the effect of noise on a community. Some of those are annoyance, speech interference, classroom learning interference, recreational interference, and the potential for hearing loss.

Paragraph 3.2.3.6 in the FEIS indicates that "populations exposed to noise greater than 80dB DNL are at the greatest risk of potential for hearing loss (PHL)." The noise predictions for the F-35 in the FEIS show that no residential areas will be exposed to DNLs of 80dB. There may be portions of the 115FW installation that are within the 80dB DNL contour, but that is workplace noise that is mitigated with proper hearing protection.

Volume II of the FEIS contains some of the source data on hearing loss as well as responses to questions about hearing loss. Paragraph B.2.5 in Volume II discusses noise induced hearing impairment. The conclusion drawn in that section is that "Aviation noise levels are not comparable to the occupational noise levels associated with hearing loss of workers in manufacturing industries. There is little chance of hearing loss at levels less than 75 dB DNL."

The answer to comment #44a page A6-21 also goes into detail on hearing loss. Air Force Instruction 48-127, Occupational Noise and Hearing Conservation Program, recommends that an individual's daily exposure to noise above 85dBA does not exceed 8 hours. To quantify this, the metric $L_{EQ(8)}$ is used. Table WI3.1-7 and WI3.1-13 indicate that the $L_{EQ(8)}$ at various locations far below the 85dBA threshold for various points of interest.

Based on the explanations in both the FEIS the Volume II Appendices, it is estimated there will not be Noise Induced Permanent Threshold Shift (NIPTS), or hearing loss, as a result of the F-35 being stationed at Truax Field.

5. Public safety: What is the safety record of the F-35A vs. the safety record of the F-16?

The Final EIS depicts a historical Class A Flight Mishap information in Table 3.5-2 (pg 3-30). A Class A Flight Mishap is the result of one or more of the following:

1. Direct mishap cost totaling \$2,500,000 or more (\$2,000,000 for mishaps before FY20, \$1,000,000 for mishaps occurring before FY10).
2. A fatality or permanent total disability.
3. Destruction of a Department of Defense aircraft.

By definition, a Class A Mishap doesn't necessarily indicate the aircraft crashed. Many mishaps are due to items ingested into the power plant or weather induced damage. However, with a lower cost to repair aircraft damage, 89% of USAF F-16 Class A Mishaps through 2019 were the result of destroyed aircraft versus merely damaged aircraft (lifetime destroyed rate of 3.00).

Fifth Generation aircraft, like the F-35, can be more expensive to repair when there is a Mishap. This makes it more likely a Class A Mishap will be recorded due to the cost of repairing damage related to flight activities. The lifetime Flight Class A Mishap rate for F-35 aircraft is 3.11 compared to 3.35 for the F-16, however there has not been a single USAF F-35A crash through October 2019 (Lifetime destroyed rate of 0.00). In the first eight years of flight, the F-35A has recorded 3 Class A Flight Mishaps with zero destroyed aircraft. In comparison, the F-16 experienced 31 Class A Flight Mishaps and 26 destroyed aircraft during its first eight years of flight.

6. Firefighting: Do the composite materials used in the F-35 pose more significant fire-fighting challenges compared to the F-16?

The F-35 and F-16 are similar sized aircraft with a percentage of the aircraft composed of composite material. Converting from the F-35 to the F-16 will not cause a change in fire-fighting equipment, fire extinguishing product type, fire extinguishing product quantity, or general training required at Dane County Regional Airport. Water alone can be very effective at extinguishing composite fires.

7. Contamination and PFAs: Is there any new information regarding the cleanup of PFAs and other contamination at Truax?

The Department of Military Affairs and 115th Fighter Wing is working collaboratively with Dane County Regional Airport (DCRA), City of Madison, and Wisconsin Department of Natural Resources (WI DNR) to address existing Polyfluoroalkyl Substance (PFAs) contamination at DCRA. Two work plans have been submitted to the WI DNR to address DCRA storm water contamination and two Fire Training Areas that have been previously utilized by area fire departments. Recent testing of storm water outlets have already taken place and results are expected in early March 2020. These test results will help identify the next steps to take for addressing PFAs contamination at DCRA.

The use of Aqueous Film Forming Foam (AFFF) containing PFAs is mandated by the Federal Aviation Administration (FAA) for certified airports like DCRA. The AFFF on hand capacity and number of Aircraft Rescue and Firefighting (ARFF) vehicles are determined by the "Index" of the airport. As an Index C airport, DCRA's AFFF and ARFF requirements are greater than the military needs for either F-16 or F-35 aircraft.

In August of 2015, the Truax Field Fire Department stopped testing and training with AFFF systems on ARFF vehicles by flowing AFFF external to the system. AFFF fire extinguishing techniques are still taught as part of the normal training syllabus, however, AFFF is not dispensed during local training. ARFF vehicles are currently tested with self-contained test equipment which doesn't require AFFF to be dispensed from the system. In November of 2016, Truax Field Fire Department replaced legacy AFFF with a more environmentally friendly, FAA approved AFFF. The Truax Field Fire Department currently uses AFFF for emergency responses actions only.

The Air National Guard voluntarily began the process to identify PFAs at the 115th Fighter Wing in 2015. A Site Inspection was conducted and results were shared with the WI DNR. The next step in the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process will be to accomplish a Remedial Investigation. During the Remedial Investigation, the agency will collect detailed information to characterize site conditions, determine the nature and extent of the contamination, and evaluate risks to human health and the environment posed by the site conditions by conducting a baseline ecological and human health risk assessment.

If selected as the 5th Operational Beddown location for the F-35, the 115th Fighter Wing will conduct multiple construction projects which will provide the opportunity to mitigate any contamination encountered. The Air National Guard has agreed to prepare Material Management Plans for approval by the WI DNR and has started that effort. Construction projects include funding for remediation efforts and will not need to compete for funding from other sources. Construction activities, to include the handling, mitigation, and disposal or other disposition of contamination discovered before or during the construction activity, will proceed in accordance with all applicable legal requirements. The CERCLA process for the Air National Guard will continue regardless of any construction activities.

Please contact my office if you require any additional information/clarification on the information contained in the Environmental Impact Statement. My point of contact is Mr. Michael Hinman who can be reached at (608)242-3009.

Sincerely,


JOANE K. MATHEWS
BG, Wisconsin National Guard
Interim Adjutant General