UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

June 25, 2012

Robert Dogan, NGB/A7AM
Sheppard Hall
3501 Fetchet Avenue
Joint Base Andrews, MD 20762-5157

Subject: Draft Environmental Impact Statement (DEIS), F-15 Aircraft Conversion 144th Fighter Wing California Air National Guard, Fresno-Yosemite International Airport, Fresno, California (CEQ # 20120144)

Dear Mr. Dogan:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

The Air Force National Guard Bureau (NGB) proposes to implement an aircraft conversion for the 144th Fighter Wing at Fresno-Yosemite International Airport that would convert the unit from F-16 Fighting Falcon aircraft and operations to F-15 Eagle aircraft and operations. The proposed action includes changes to staffing and manpower and some construction, building renovation and facility demolition at the airport.

Based on our review, we have rated the DEIS's proposed action (preferred alternative) as Environmental Concerns – Insufficient Information (EC-2) (see enclosed "Summary of Rating Definitions"). According to the analysis in the DEIS, the proposed action would more than double the number of residents experiencing noise impacts not compatible with residential land use (from 1,431 to 3,304 persons). Over 70% of these individuals are in the minority population and there is no information as to whether the NGB adapted project public outreach to overcome linguistic, cultural, or other potential barriers to effective participation by this population. Mitigation (sound-proofing) by the City's Airports Department could help reduce noise impacts within dwellings; however, there is uncertainty that mitigation would occur since no funding source has been identified for the matching funds necessary to obtain Federal Aviation Administration noise mitigation funding. The City has indicated it does not currently have a funding source to cover the additional impacts that would result from the proposed action. We strongly recommend that the NGB work with the City's Airports Department to explore ways that the Air Force can assist in ensuring the continued funding of the City's noise mitigation program. We also recommend that the noise impact analysis be improved in the FEIS to better disclose impacts to the public, and that the NGB provide targeted outreach to the affected minority population if this has not already occurred.

EPA appreciates the opportunity to review this DEIS. When the Final EIS is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

/s/

Kathleen Martyn Goforth, Manager
Environmental Review Office (CED-2)

Enclosure: Summary of EPA Rating Definitions
EPA's Detailed Comments

cc: Barry Franklin, Federal Aviation Administration
Kevin Meikle, City of Fresno Airports Department

Noise Impacts

Noise Impact Assessment and Disclosure

The DEIS indicates that, under the Proposed Action, the number of residents who would be affected by noise levels above 65 decibels (dB) Community Noise Level Equivalent (CNEL) would more than double over the existing number of residents exposed to these noise levels. Roughly 3,304 persons would be affected by CNEL above 65 dB, with 1,873 of these people being newly affected (p. 4-4). CNEL is roughly equivalent to the Day-Night Level (DNL), and U.S. Air Force land use guidelines identify a DNL of 65 dB as the highest aircraft noise level that is normally compatible with residential uses (p. 4-1). According to the DEIS, even with special noise attenuation measures installed, residential developments are never considered to be compatible with a DNL greater than 75 dB (p. 4-1).

The Federal Interagency Committee on Urban Noise (FICUN) Guidelines for Considering Noise in Land Use Planning and Control (1980) identify a DNL above 65 as a significant exposure, (Table 1 of FICUN Guidelines); however, the DEIS identifies the significance threshold for its noise analysis as exposing new residential land uses above 75 dB DNL (p. 4-2). The DEIS does not provide a compelling rationale for using this higher threshold[1].

The DEIS also includes, as a significance criterion, whether persons are exposed to noise levels that could cause impacts other than annoyance (p. 4-2). This appears intended to support the use of 75 dB DNL as a threshold, since a DNL of 75 dB is the threshold above which effects other than annoyance may occur (Committee on Hearing, Bioacoustics, and Biomechanics 1977). Such an approach implies that annoyance alone is not significant. As Appendix B indicates, long-term annoyance is the primary indicator of community response because it attempts to account for all negative aspects of noise effects, e.g. increased annoyance due to being awakened by aircraft and interference with everyday conversation (p. B1-10). It is not clear why these indicators are not considered in the significance determination, especially given their possible association with health impacts and learning barriers. Additionally, expressing noise impacts as speech interference and awakenings is easier for the lay reader to understand than DNL or CNEL and is, therefore, important in disclosing impacts and interpreting the results in a way that is more meaningful to the public. The analysis in the Marine Corps' West Coast Basing of the F-35B EIS[2] presented data for both indoor speech interference and indoor sleep disturbance for representative residences with windows open and windows closed. The F-35B EIS also identified the number of housing units affected in the 65 dB+ areas, which is useful for disclosing impacts and expressing the mitigation burden for the soundproofing of dwellings.

The DEIS calculates the single event sound (SEL) values for the F-15 and F-16 (Table 4.1-4) but does not interpret these values in relation to the proposed action.

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[1] We note that EPA identifies 55 dB DNL as the goal for outdoors in residential areas for protecting the public health and welfare with an adequate margin of safety – See *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, Environmental Protection Agency, Washington, D.C. (EPA 550/9-74-004) March 1974

[2] See http://www.usmcjsfwest.com/Resources/Documents/Final_Volume_I.pdf

Recommendations: EPA recommends the following improvements to the noise analysis in the Final EIS:

- Amend the significance thresholds in the noise analysis to ascribe significance to exposures above 65 dB DNL for residential or other sensitive land uses
- Disclose the indoor speech interference and indoor sleep disturbance expected under the proposed action and alternatives.
- Disclose the number of housing units affected for the different noise contours.
- Interpret the SEL values and changes in noise in relation to the proposed action.

Health Impacts from Noise

There is increasing evidence that noise impacts have health effects. We appreciate the generic discussion in Appendix B of the health effects of noise; however no health or well-being impacts are discussed in the body of the EIS in relation to the proposed action. We note that a fairly recent review article[3] that summarizes studies from the National Library of Medicine database on the adverse health effects of noise concludes that "*the potential health effects of noise pollution are numerous, pervasive, persistent, and medically and socially significant. Noise produces direct and cumulative adverse effects that impair health and that degrade residential, social, working, and learning environments with corresponding real (economic) and intangible (well-being) losses*". The health discussion in Appendix B concludes that there is no scientific basis for health effects from noise below 75 dB but EPA is concerned that all available data may not have been considered in this conclusion, particularly regarding the long-term health effects from sleep disturbances and on cardiovascular disturbances.

Recommendation: Disclose specific health impacts that could occur from the project in the body of the FEIS. Interpret the single event sound (SEL) analysis data (Table 4.1-4) in relation to sleep disturbances.

Noise Mitigation

We are concerned that the proposed action would expose an additional 1,873 residents to noise levels over 65 dB CNEL, which is not normally compatible with residential land use. It is important that the Air Force ensure mitigation would occur for these impacts before proceeding with the proposed action.

The DEIS implies that these impacts will be mitigated when it states that "*Implementation of a revised Airport Part 150[4] Study by the FAA would establish mitigation measures that would minimize the impacts of the increase in noise."* (p. ES-4). Based on a conversation with the Federal Aviation Administration (FAA), we understand it is highly likely that the FAA would revisit the Part 150 Program as a result of the project. However, the FAA requires local entities to provide matching funding in order to receive grants through its noise mitigation program and, based on conversations with the City of Fresno Airports Department, no funding source has been identified within the City to cover the additional impacts predicted from the proposed action. Without an identified funding source,

[3] Goines, Lisa RN and Hagler, Louis MD. "Noise Pollution: A Modern Plague", *Southern Medical Journal*: March 2007 - Volume 100 - Issue 3 - pp 287-294.

[4] "Part 150 of the Federal Aviation Regulations, Airport Noise Compatibility Planning, sets forth standards for airport operators to use in documenting noise exposure in the airport environs and establishing programs to minimize noise-related land use incompatibilities" (p. 3-6).

mitigation of the noise impacts from the F-15 conversion cannot take place. In the absence of assurances that funding will be available for this program, statements in the DEIS that impacts from the proposed action would be minimized are not supported.

> *Recommendation:* We strongly recommend that the Air Force National Guard Bureau work with the City of Fresno Airports Department to explore ways that the Air Force can assist in ensuring the continued funding for the City's noise mitigation program. We understand that there is no existing Department of Defense program that permits appropriated funding for off-base sound attenuation; however, the Air Force could request authorization from Congress to fund off-base noise mitigation measures or explore alternative funding avenues such as those connected with the joint use agreement being negotiated with the City.

Environmental Justice

The DEIS states that the noise impacts would not disproportionately affect minority or low-income populations in the vicinity of Fresno-Yosemite IAP (p. 4-28). Tables 3.4-4 and 4.4-1 show that compared to the baseline, the minority population within the 65-70 dB noise contour would more than double under the proposed action (from 1,014 to 2,219), and the minority population in the 70-75 dB noise contour would significantly increase (from 5 to 205). This minority population constitutes over 73% of the total population in these noise-impacted areas. It is difficult to conclude that this is not a disproportional impact to minorities. The DEIS concludes that because the *percentage* of minority and low-income persons affected would increase slightly, it is not a disproportional impact; however, expanding an existing disproportional impact does not support a conclusion that project impacts are not disproportionate. The DEIS also concludes that there would be no cumulative disproportionate impacts to minority populations in concert with the current and reasonably foreseeable actions in the region of influence (p. 5-7); however, the assessment of cumulative impacts should include past actions as well[5] (40 CFR 1508.7), which are reflected in the existing conditions.

Additionally, the project's noise impacts appear to meet all three significance criteria identified on p. 4-27 of the DEIS*: "(1) there must be one or more* [minority or low-income] *populations within the region of influence (ROI), (2) there must be adverse (or significant) impacts from the Proposed Action, and (3) the environmental justice populations within the ROI must bear a disproportionate burden of those adverse impacts".*

The DEIS does not indicate which minority population(s) are primarily affected; however, based on the online census information for the City of Fresno[6], we assume the minorities are largely those of Hispanic or Latino origin. The DEIS does not indicate whether the Air Force made any efforts to ensure the minority population was accommodated in its public outreach efforts. Executive Order 12898 - *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* states that each Federal agency shall, "wherever practicable and appropriate, translate crucial public documents, notices and hearings, relating to human health or the environment for limited English speaking populations" and work to "ensure that public documents, notices, and hearings relating to human health or the environment are concise, understandable, and readily accessible to the public."

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[5] Per 40 CFR 1508.7 - "Cumulative impact" is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.

[6] 46.9% of persons in Fresno (city) are of Hispanic or Latino origin. See: http://quickfacts.census.gov/qfd/states/06/0627000.html

Recommendation: The Final EIS should clearly document that high and adverse noise impacts from the proposed action would be disproportionately borne by a minority population. As we state above, any resident within the 65+ dB noise contour represents a significant exposure that is incompatible with residential land use per the FICUN Guidelines, and this is a significant impact, especially since mitigation is not assured.

Because the majority of noise impacts of the proposed action would be borne by minorities, EPA recommends that targeted outreach to these communities occur, consistent with E.O. 12898. If targeted outreach has not already occurred, we recommend this occur prior to issuance of the Final EIS. If targeted outreach has occurred, document this in the Final EIS.

Impacts to Children

The DEIS states that there would be three new schools within the noise contours of 65 dB and above under the Proposed Action (p. 4-22). One is a K-12 school (Scandinavian Middle School) and would fall between 65 dB and 70 dB noise contours or above (p. 4-29), and there is one existing K-12 school that is currently exposed to aircraft noise 65 dB or above. The DEIS does not disclose whether this currently impacted school would experience increased noise impacts or whether this school currently includes noise mitigation features.

Appendix B contains a generic discussion of the noise effects on learning and cognitive abilities of children, but this information is not discussed in relation to the proposed project's predicted impacts. For example, Appendix B cites the ANSI acoustical performance criteria for schools and the requirement that the one-hour average background noise level shall not exceed 35 dBA in core learning spaces smaller than 20,000 cubic feet and 40 dBA in larger spaces. It does not discuss whether the schools affected would meet these criteria, and if not, whether it is possible to mitigate impacts to meet these criteria.

Recommendation: The information in Appendix B regarding impacts to children and learning should be incorporated into the body of the EIS and discussed in relation to the proposed project. The FEIS should indicate whether project impacts are capable of being mitigated to levels that would meet the ANSI acoustical performance criteria for schools, and if so, the likelihood that mitigation would occur.