

Turnagain Community Council

C/o TCC President Cathy L. Gleason
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May 3, 2013

Mr. Ryk Dunkelberg
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Mr. John E. Parrott
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Dear Mr. Dunkelberg and Mr. Parrott:

This letter, approved by the Turnagain Community Council at its May 2, 2013 meeting, is submitted as official written comments to the Ted Stevens Anchorage International Airport (TSAIA) 2013 Part 150 Noise Study. As such, these comments should be included in the Part 150 Noise Final Report and be copied to the Federal Aviation Administration (FAA).

Below are concerns regarding the Part 150 Noise Study working papers to-date, concerns that we hope can be addressed prior to finalizing the Part 150 Noise Study.

1. The Working Papers do not adequately explain how inputs are used to produce DNL contours from the integrated noise model. The following information needs to be provided in the Part 150 Study, so that readers can better understand the noise model, how it works, and its limitations:

- Provide a clear and precise statement of the FAA data inputs, their sources, and the sources for any other inputs that created the flight tracks and the traffic patterns used in the Integrated Noise Model.
- Provide a complete and clear explanation of how airplane tracks are derived from tower information.
- Clarify whether all or select flight tracks in base year 2009 were used in the Integrated Noise Model.
- Explain how FAA data sets and any other data are used by the model to determine the type of aircraft on a specific track and, when FAA data is absent, what data, if any, is substituted as input to the noise model and what its source is.
- Explain how general aviation aircraft have been identified when that information is not included in the flight track information provided by the FAA (See p.43, which only says “radar flight track data was supplied by the Federal Aviation Administration.”)

- Explain how the Integrated Noise Model leads to DNL contour placement, and in particular whether individual flight tracks are averaged or whether the model relies on air traffic patterns, and if so which ones.

2. The maps should include the Lake Hood gravel strip and Spenard Lake and Lake Hood float plane runways with noise data collected and flight tracks separately reflected in noise modeling, due to the strong seasonal impact of general aviation operations.

Although some may conclude that only jet noise impacts residents, those residents living north and east of the Lake Hood strip and float plane runways are seasonally impacted by additional far louder single-event noise than single-event jet noise. The data regarding small aircraft flight patterns should be separated from, and not aggregated with, the data from other TSAIA activities because it is seasonal, resulting in extremely loud noise when Lake Hood operations are at their peak. The overall noise generated at TSAIA will be more accurately described, and noise mitigation efforts can be more appropriately tailored, if this is done.

- Before beginning the 2012 noise sampling, neighbors told TSAIA consultants that failure to distinguish and monitor Lake Hood general aviation traffic during seasons of high activity would subject the final report to criticism because the general aviation impact is so significant during seasons of high activity. The recommendation to-date has been disregarded. Below are the concerns that are raised by the failure to adequately address noise generated by general aviation activities originating and landing at Lake Hood strip and lake areas:
 - If tracking of individual flights is only based on radar tracking of airborne aircraft that carry responders identifying the type of aircraft and not all general aviation planes have this type of transponder, then the noise from general aviation will not be accurately reflected in and appropriately sourced in the Integrated Noise Model. Please clarify what data is being used for general aviation activity using Lake Hood and precisely how and when the data was gathered.
 - Although 2009 data is being used for the current 2013 noise modeling because, as has been explained, “all runways were open and usable in 2009,” it is unclear how the individual flight tracks from general aviation were treated in 2009, including whether the noise from general aviation was separately monitored, whether it was monitored during the seasons that general aviation are active, or whether it was averaged with jet traffic, which dilutes drastically the noise impact for those who live are under general aviation flight patterns associated with Lake Hood.
 - The 2012/2013 data collection at site 9 (table C2 page C.33) was collected during the winter and spring of 2013 when all or portions of Lake Hood strip and float plane runways were closed. If data from 2009 for general aviation is not available AND collection of 2012/2013 data for Lake Hood general aviation activity was not done at a time when Lake Hood was active, then effectively the Integrated Noise Model’s reliability for predicting noise for those living in the Lake Hood flight pattern is severely limited and the 2013 Part 150 Noise Study

will be subject to significant public criticism unless efforts are taken to specifically break out and address in the noise model the noise generated by general aviation flight patterns associated with Lake Hood.

3. The Integrated Noise Model fails to take into account the noise generated by planes as they hold for takeoff or conduct engine run-ups for testing.¹ Mr. Jim Seeley asked at the November 7, 2012, Noise Study Input Committee meeting why the projected noise line to the east of the East-West runway was moved from its 2009 location closer to the East end of the East-West runway. The answer given at the time was that jets are generally quieter now. Although that may be true to some degree, it alone is not sufficient to justify moving the line closer to the East end of the East-West runway or to explain the hourglass like shapes for Figure D7 on page D19 and Figure D9 on page D 21. Please address the following concerns and questions:

- TSAIA continues to have takeoffs and landings from old, noisy commercial jets and military aircraft;² it is not clear how this information is integrated into the noise model especially given that the model clearly assumes that planes are quieter and getting quieter. TSAIA has older, noisier jets, and a seasonally very active general aviation fleet. Please explain in detail how these specific sources of noise are handled in the noise model.
- When aircraft departs the East end of the East-West runway it would use 100% of its available power. The noise on the runway is extremely loud and is directed into the surrounding neighborhood. Similarly, planes that are conducting engine run-up tests with jets pointed at neighborhoods produce extremely loud noise that can last all day long. Yet it appears the Integrated Noise Model does not take into account these kinds of regular, everyday occurrences. Whether such an operation is considered ground noise or airborne noise, it has a significant impact on surrounding neighbors. If rather than being included, such noise is excluded, these events do not show up in the model and what could be appropriate, inexpensive noise mitigation efforts may not be considered. Please propose how the issue of such extreme ground noise can be incorporated into noise modeling and discussions about noise mitigation. The model only seems to reflect noise generated once the plane is off the ground, often at points that are the furthest from the loudest noise generation, i.e. at the end of a runway after liftoff. The model thus fails to address some of the noisiest impacts to neighbors generated by aircraft operations. In that respect, the model does not accurately reflect noise, nor can mitigation efforts be appropriately tailored to reduce or mitigate some of the noisiest events at TSAIA.

¹ We understand that there are three types of engine run-ups. 1. For maintenance purposes that take place at one of the airport's two designated areas. 2. Maintenance run-ups, which occur at other than the airports designated areas. 3. Run-ups at 60% power most likely take place on the taxiway just prior to the aircraft departure when icing conditions are present.

² The working papers are not clear whether stage 2 aircraft or stage 2 aircraft with hush kits operate at TSAIA. Please provide a clear statement of what aircraft designated as what stage category operate at TSAIA.

4. The Integrated Noise Model apparently averages noise over a night weighted 24-hour period that is then averaged over a 365-day period, which dilutes, masks, and downplays the noise events that actually occur, particularly if the seasonal general aviation and the late night and early morning arrival and departure of heavy, older cargo planes is not separately identified and tracked.

- The noise work done in Australia and the criticisms nationally of the 65 DNL suggest that the Integrated Noise Model may not be appropriate for TSAIA given the seasonal differences caused by general aviation, the concentration of heavy, older cargo planes that concentrate their arrival and departure during the late night and early morning, and the unrestricted engine run-ups aimed at neighborhoods.
- If the model used is not capable of ferreting out different noise events, then tailoring appropriate noise mitigation efforts will be difficult. The current model masks individual, extremely loud noise events and the timing of those events have been masked. We understand that is the basis for doing the Supplemental Methodologies, which produced the Supplemental Metrics.
- Although the Working Papers include Supplemental Metrics, such as single event noise maps, they do not appear to reflect real flight patterns over the neighborhoods by general aviation aircraft. The flight patterns, landings and take offs of the extremely older and loud general aviation planes operating out of Lake Hood travel over areas in Turnagain, including Turnagain Elementary School, Wisconsin Street, Wendy's Way and the Spenard area, often feet above homes and little, if any, of this noise is reflected in the single event noise map. It is unclear to what extent, if any, this is reflected in the Integrated Noise Model.
- We request that you present more detail on the integrated Noise Model assumptions for the propeller aircraft types on page D.46. We want to ensure that the Noise Model assumptions as to a particular classification, such as GASEPF or CNA182FLT, GASEPV are conservative in that they include the noisier airplanes and propellers used by Alaska GA aircraft. It is important that the model assumptions apply to what we have at Lake Hood.
- Without understanding the noise generated by general aviation originating and returning to Lake Hood, options for truly mitigating noise are lost.

5. The Working Paper explains that the role of noise monitoring is “to verify the noise from individual over flights and run up activity to accurately depict aircraft operations at the Ted Stevens International Airport and Lake Hood Seaplane Base.” C35. Before any noise monitoring began for 2012 or 2013, the noise consulting team was informed by Noise Study Input Committee members that Noise Monitor 8 (Table C4 page C.35) at Lyn Ary Park was inoperable and poorly located. Noise Monitor Number 8 should have been made operable and moved to the Lyn Ary Park ball fields, where it would pick up noise directed

at Turnagain, rather than be blocked by a home. Monitor 8 is the only noise monitor north and east of the North-South runway and the only monitor that could report data for the entire residential area of the Turnagain neighborhood regarding noise generated from take-offs and landings from the North South runway (particularly when jets bank to the west after taking off), continuous engine testing run-ups conducted at the end of the North-South runway and that directs noise in the direction of Earthquake Park and Turnagain, and the Lake Hood Flight Pattern, which takes general aviation activity directly across Turnagain. No corrective efforts were taken. The result is that now no data exists to correlate how some of the noisiest activity at TSAIA impacts Turnagain residents; it is *impossible* “to verify how the noise from individual over flights and run up activity” affects the Turnagain residential area. Without the ability to verify individual over-flights and run-ups, the Noise Study will provide Turnagain residents little “confidence in the accuracy of the noise exposure contours.” (See C28).

- The failure to provide such verification is particularly troublesome. The consultants were told that the monitor was non-operable and the location questionable before the study began. Further, the consultants knew from earlier studies that the heaviest, oldest and noisiest cargo jets take off and land from the North-South runway late at night and early in the morning. Finally, TSAIA and Turnagain residents are fully aware that three issues of master planning will significantly impact Turnagain in the future: the continued location of jet engine run-ups near the North end of the North South runway, preferential use of the North-South runway to avoid noise impacts on residential areas to the east of the East-West runway, and the potential effort to build a second North-South runway if TSAIA operations experience significantly higher operations at some point in the future.
- Importantly, the failure on the part of the Noise Study to include verification of noise in the Turnagain area may raise questions of political intent or agenda by omission. On this ground alone, the Noise Study team should contemplate how to verify noise occurrences in the Turnagain area BEFORE the Part 150 Noise Study is finalized — including a final list of noise reduction and mitigation measures — and submitted.

6. The discussion of engine run-up noise is inadequate and inaccurate.

- At page D62, the Noise Study states that when doing engine run-ups, planes have their engines pointing away from residences and the terminal. Although the tower may so direct planes to conduct engine run-ups in this orientation, repeated observation over the years indicates that engines are instead pointed north and east, right at Earthquake Park and the Turnagain residential areas. As an example, the noise generated and directed at Turnagain by all-day engine run-ups at the north end of the North-South runway on Easter Sunday, 2012, was so loud it disrupted outdoor Easter services at Lyn Ary Park approximately 2 miles away.

- Residents asked TSAIA during the 2009 Noise Study and Master Planning effort to have run-ups take place at the west end of the East-West runway, where engines can be pointed out across Cook Inlet and directly away from Anchorage. Although the Airport reportedly has a preferentially engine run-up location at the west end of the East-West runway, the preferred engine location is rarely used, presumably because of the time required for planes to taxi to this location and the tower's willingness to grant waivers.
- Further, since 2009 it appears that TSAIA has improved the engine testing run-up area at the north end of the North-South runway, rather than improving facilities where the run-up noise would create less of an impact on residents and despite a commitment to direct engine run-ups to the west end of the East-West runway.
- Neither the AIA nor the consultants appear to have monitored the run-up activity at TSAIA. With some of the noisiest airplane fleet anywhere in the United States, and given that run-ups are causing continuous and major residential noise impacts, the noise generated by airport ground operations should be studied so that appropriate mitigation efforts can be determined.
- The most obvious and least costly mitigation is to require run-ups be conducted at the west end of the East-West runway and to limit their time and duration, all of which is done at other airports across the nation. Failure to take steps now will ultimately result in costly future infrastructure requirements, such as sound proofing measures like hangars or other structures, currently being built at airports less active than TSAIA.
- Some may well claim that the failure of the Noise Study team to conduct any verifying noise monitoring north and east of the North-South Runway in the Turnagain neighborhood north of Northern Lights Boulevard was intentionally motivated, so that the lack of data can result in TSAIA not being held to changing its operations to mitigate noise.

7. Additional questions need to be addressed prior to a complete noise study and report is possible.

- In reference to page C-23, please explain what constitutes "newly certified aircraft/engines" with reference to Stage 4 Standard. Are these newly built aircraft? Or does this refer to a new design for an aircraft yet to be built?
- In reference to page C-26 and the Federal Interagency Committee on Noise Report of 1992, what is the consultant's recommendation on "public understanding of the DNL and supplemental methodologies?"
- The Noise Study predicts that the activity of military aircraft will be cut in half. In light of the Air Force's possible decision to move F-16s to Anchorage, conclusions about military aircraft in Anchorage airspace should be re-examined and the finding after such scrutiny explained in the Part 150 Noise Report text discussing projected growth.

- Although the Part 150 study is a Noise Study based on a forecast of activity, to what extent has the future TSAIA growth projection taken into account the significant airspace constrictions that exist over Cook Inlet and Anchorage?
- To what extent does the 2013 Noise Study reflect the findings of the 2002 Finalized Ground Noise Study — including noise reduction and mitigation measures recommended for implementation in this study?
- How is aircraft taxing noise, take-off noise, run-up engine testing noise, and snow removal noise accounted for in the Integrated Noise Monitoring Model or in supplemental analysis? If these noise sources are not accounted for, why not, particularly in light of the general aviation and older, noisier and heavier airplanes included in the TSAIA fleet mix? Should not the Integrated Noise Model be modified to reflect the overall higher level of noise generated by TSAIA activities than many other airports, so that noise mitigation efforts and funding can be appropriately targeted to make the biggest reduction in TSAIA generated noise?
- How does the aircraft fleet, including the planes using Lake Hood, compare with the fleets of other airports in the United States in terms of noise generation?
- If ground noise and general aviation impacts are not considered in modeling across all DNLs for purposes of determining effective noise mitigation options, then TSAIA's mitigation will most likely not be appropriately or cost effectively directed at making the biggest reduction in overall noise impacts suffered by residents.

8. The Working Papers do not adequately explain and analyze the effectiveness of mitigation measures recommended and put in place in the past, or explain when and why past mitigation measures have been discontinued.

- The First Working Paper did not explain what mitigation actions have been completed, what actions are being implemented on an on-going basis, and what recommendations are still being worked on (A.22-24). If implementation actions have changed, that should be noted as well, such as the shutdown of the noise monitoring system, and the date and reasons included. These details need to be clearly and fully presented prior to the discussion of future mitigation measures.

9. A productive discussion of noise mitigation measures cannot take place without a comprehensive understanding of the noise profile generated by TSAIA activities, including Lake Hood operations. Comments 1-8 are provided in an effort to encourage a complete understanding of the airport-generated noise and what mitigations measures are now in place, so that information can be used as a reliable basis for identifying, ranking and implementing appropriate noise mitigation options.

Thank you for considering these comments and including them in the final Part 150 Noise Study that you will be filing with the Federal Aviation Administration. We hope that it will be possible to work with you through a reliable process to address the concerns.

Unfortunately, one of the disillusioning aspects of the Part 150 Noise Study has been the unwillingness of TSAIA to enter into dialog that completely and meaningfully responds to questions about the Noise Study. The community has had hopes of participating in a process that reliably and meaningfully identifies and addresses ways to mitigated noise generated from TSAIA activities.

Instead, public meetings have consisted of reports on various completed portions of the Part 150 Noise Study — with little opportunity for a meaningful question and answer exchange. When questions are asked, they are not fully answered and the process simply presses forward.

Attendance by community members has dropped off significantly, as community members have come to recognize that any input they might have does not result in new study work product or substantive response. At the last meeting, the number of consultants and TSAIA employees dramatically outweighed the community members present.

Turnagain Community Council nonetheless looks forward to working with the TSAIA and its Part 150 Noise Study consultants through what probably needs to be a reiterative process to address the concerns raised in this letter. We hope that TSAIA and its consultants will similarly be willing to work together to complete a Part 150 Noise Study that accurately reflects the noise generated by TSAIA operations and identifies appropriate, tailored, and effective noise mitigation efforts. TCC looks forward to receiving responses to the above items.

Sincerely,

Cathy Gleason
President
Turnagain Community Council

Breck Tostevin
Part 150 Noise Study Input Committee Member
Turnagain Community Council Representative