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October 12, 2005

Airport Community Advisory Team c/o Mr. Kevin Bumen Noise and Business Operations Truckee Tahoe Airport 10356 Truckee Airport Road Truckee, CA 96161

Subject: Review of ACAT Memorandum on "FAA Part 150 Study Recommendations"

Reference: HMMH P05-20054

Dear Mr. Bumen:



In response to your request, Ted Baldwin and I have reviewed the "FAA Part 150 Study Recommendation" prepared by the Airport Community Advisory Team (ACAT) for the Truckee Tahoe Airport District (TTAD). This letter discusses our comments. We would be pleased to discuss these matters further with you, the ACAT, or the TTAD, should you or either of those groups desire additional information.

In summary, we concur with the ACAT's overall conclusions (discussed in slightly revised order); i.e.:

1. "... noise contour information already available suggests that it is very unlikely that TTAD would meet the eligibility criterion required by a Part 150 Study for noise mitigation program funding."

We concur; this conclusion is consistent with recent FAA actions, policies, and program guidance, as discussed below.

The most recent noise analysis for Truckee Tahoe Airport (TRK) indicates that even with very aggressive growth assumptions, the 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour falls nearly entirely within the airport property line and encompasses no residential land.¹

Part 150 includes a table that sets forth noise land use compatibility guidelines.² Those guidelines indicate that most land uses are normally compatible with aircraft-related noise exposure less than 65 dB, in terms of the Day-Night Average Sound Level (DNL), which FAA considers interchangeable with CNEL for Part 150 purposes in California. A footnote to the table clearly states that the FAA intends the information to be used as a guideline only, and cedes responsibility to local jurisdictions "for determining the acceptable and permissible land uses." In practice, however, the FAA has clearly indicated that it considers these guidelines to be *de facto* criteria, and sets very high standards for demonstrating that lower levels of exposure justify formal noise abatement or mitigation.³

¹ 20 year forecast from 2004 TRK "Airport Land Use Compatibility Plan".

² 14 C.F.R. Part 150. "Airport Noise Compatibility Planning," Appendix A, Table 1.

³ As we discussed with the ACAT, the FAA found a client of ours - the Naples Airport Authority - in violation of their grant assurances when the Authority adopted a formal use restriction on Stage 2 jet operations based on impacts between 60 and 65 dB DNL, even though the FAA found that the Authority had complied with all applicable Part 161 requirements prior to adopting the restriction. In order to resume eligibility for federal funding, the Authority had to appeal the FAA's determination to the Federal Court of Appeals for the Washington D.C. Circuit. The Court found that the Authority had established a sufficient factual basis to justify use of a lower compatibility threshold. A key element of

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FAA Order 5100.38B, the "AIP Handbook," permits FAA to fund mitigation actions outside 65 dB DNL in some situations; however such projects are assigned lower priority than projects that fall within that contour at other airports. Recent HMMH experience indicates that FAA is very reluctant to fund even non-controversial measures, such as noise and operations monitoring systems, to address issues outside of 65 dB DNL. Moreover, FAA program guidance indicates that competition for funding with the 65 dB DNL contour is so high that the agency now requires airports to further demonstrate that the noise contours on which they are basing their requests are no more than five years out of date.⁴

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In the absence of non-compatible land within the 65 dB CNEL contour or local adoption and absolutely rigid enforcement of lower compatible land use standards (demonstrated over several years), we concur that it would be very unlikely that the FAA would fund noise mitigation to any substantial degree at TRK, if at all, for the foreseeable future.

2. "The criterion used in a FAA Part 150 Study for determining eligibility for federal funding of noise mitigation programs does not provide - nor should it be used as - a means for ascertaining the existence and extent of noise impacts in the areas surrounding the Truckee Tahoe Airport."

HMMH absolutely concurs that the Part 150 compatibility and funding guidelines do not represent a universal basis for determining whether there are noise impacts or reasons to address community noise concerns at TRK - or any airport.

HMMH's assistance at Naples probably provides the most extensive evidence of our belief that there is no "one-size-fits-all" set of compatibility standards. We approach every airport noise study with open minds, and careful consideration of local conditions and concerns, including the level and mix of airport activity, the distribution of that activity throughout the day, seasonal variation, the geographic proximity and orientation of sensitive uses in the surrounding area, non-aircraft noise levels, and a wide range of other locally specific matters.

The ACAT memorandum does an excellent job of summarizing relevant background on the Part 150 compatibility guidelines. As that memorandum concludes, Ted Schultz, author of the "Schultz curve," which was the FAA's primary basis for adopting the 65 dB DNL compatibility "cutoff," never intended his work to represent "a standardized, universally applied model of community annoyance."

We would like to note that we do not believe existence of non-compatible land use within 65 dB or any other contour is a prerequisite for an airport to conduct a noise study or to pursue noise abatement or mitigation. A high percentage of HMMH's aviation practice is focused on situations outside of the 65 dB DNL/CNEL contour. Airports across the country recognize that noise does not end at that line and are making concerted efforts to address community concerns related to lower levels of exposure. Airports also are addressing a broad range of noise-related matters to which DNL or CNEL are not sensitive, such as unusually loud (but relatively infrequent) "single events," infrequent activity during sensitive

that justification was the fact that all local land use control jurisdictions had adopted and rigorously enforced 60 dB DNL as a criterion for approval of new residential development.

⁴ FAA Program Guidance Letter 03-2.1, "Determining Justification of Projects for the Noise Set-Aside Based on Currency of Noise Exposure Maps," August 4, 2003.

⁵ It may be of interest to ACAT and TTAD members to know that many of the most senior staff at HMMH, including Ted Baldwin, understand Mr. Schultz's intention based on first-hand experience gained working with him at Bolt Beranek and Newman Inc., where he developed his "curve."

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nighttime hours, ground operations that generate low frequency noise and vibration, unusual seasonality patterns, abrupt changes in airport activity, or other special circumstances.

3. "It is therefore recommended that a formal Part 150 Study not be pursued at this time."

We concur that the two preceding items support this recommendation.

We recommend that the TTAD continue the cooperative effort it has initiated through the ACAT, to develop a better understanding of existing conditions and options, including:

- Airport operations (in as many dimensions as possible, as discussed in Item 2, above).
- The noise resulting from current and potential future operations (again, in as many dimensions as possible and appropriate, as discussed in Item 2).
- Potentially effective noise abatement options, their likely effectiveness, and their implementability.

As we discussed in our presentation to the ACAT earlier this year, we believe that a baseline inventory and analysis study can be conducted for a fraction of the cost of a full Part 150, and in a fraction of the time. We recommend that you follow Part 150 technical requirements in conducting such a study, to preserve the option of folding the work into a full Part 150 submission, should you conclude that would be of value at a later time.

As we also discussed with the ACAT, we recommend that you initiate investigation into practical matters related to installation of a noise and operations monitoring system (NOMS), with a primary focus on operations monitoring. A NOMS will provide objective information for the baseline study effort, and for continuing pilot education, community information, and other implementation purposes, in a cost- and labor-efficient manner. However, prior to initiating procurement of such a system, we would want you to be sure that it would work in the TRK situation, particularly whether aircraft identification would be obtained for a large enough sample of activity to be of value and whether or not the local terrain would obscure flight tracks to an unacceptable degree.

As the ACAT memorandum notes, the FAA might fund the preparation of a Part 150 study at TRK. However, our experience indicates that the application and approval process for obtaining such funding would likely delay the study's start. Even if FAA agrees to fund the study and determines that funds are available, receipt of that funding would likely be delayed at least until the start of the next federal fiscal year on October 1, 2006. Furthermore, as discussed in Item 1, it is nearly certain that a Part 150 study would not lead to FAA approval of formal noise abatement procedures or to funding for noise mitigation, such as sound insulation.

As we discussed with the ACAT, the FAA also might fund acquisition of a NOMS, based on ultimate FAA approval of it as an element of the Part 150 Noise Compatibility Program (NCP). However, as noted in Item 1, above, FAA funding for a NOMS is far from certain. Moreover, the only way to be certain is to complete the full Part 150 process, through NCP submission and FAA review. That process would require at least two years from the date you gave a consultant notice-to-proceed; with FAA funding (which is uncertain at best) and consultant selection factored in, the minimum time period is over three years (late 2008, but likely 2009 or beyond). Given the high level of uncertainty, we do not believe it is worth delaying the progress of the positive initiative that you have in motion.





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I trust that this letter provides you with the feedback you sought. Once again, do not hesitate to contact me if you have further questions. We look forward to hearing the result of further ACAT and TTAD deliberations on this important matter.

Sincerely yours,

HARRIS MILLER MILLER & HANSON INC.



Eugene M. Reindel Principal Consultant

c: T. Baldwin, HMMH

FAA Part 161 Study Recommendation Airport Community Advisory Team (ACAT) Truckee Tahoe Airport District April 2006

Board Action Requested: Vigorously monitor and encourage voluntary curfew while studying further need for mandatory curfew with consideration of future conditions. Collect more data. Reconsider options as needed or in 12 months.

Background

At the Truckee Tahoe Airport District Board of Directors Workshop on February 7, 2006 there was discussion regarding the possibility of conducting a Part 161 Study to result in some form of access restrictions at the Truckee Tahoe Airport (TRK). The Board, Airport Community Advisory Team (ACAT) and staff have been briefed by special legal counsel Peter Kirsch, and noise consultants HMMH on issues surrounding both Part 150 and Part 161.

The primary purpose of these restrictions would be to limit aircraft operations impacts on the surrounding community, especially during the nighttime hours. The purpose of this paper is to summarize the current regulations that control the implementation of access restrictions and provide a description of some activities other airports have undertaken in order to facilitate discussion on this subject relevant to TRK.

The Airport Noise and Capacity Act (ANCA) was enacted by Congress in 1990. ANCA is legislation that was passed by Congress to institute the gradual phase out of older "Stage 2" aircraft over 75,000 pounds in gross weight to quieter "Stage 3" aircraft by the end of the year 2000. The Act also regulated the adoption of restrictions on Stage 2 and 3 aircraft by airports. The intent was to reduce off-airport noise impacts by reducing noise generated at the source.

Prior to ANCA, FAR Part 150 required the airport to demonstrate that the proposed access restriction would first not unjustly discriminate against a single operator or type of aircraft and secondly, not create an undue burden on interstate commerce. Part 161 was created with the genesis of ANCA to allow airports a process by which to legally implement access and operations restrictions.

FAA Guidelines & Criteria

The Truckee Tahoe Airport District (TTAD) and the Airport Community Advisory Team (ACAT) have been investigating the applicability of a Part 161 study to the current and future situation at Truckee Tahoe Airport (TRK). The Part 161 process is used to adopt or implement a noise or use restriction at an airport.

The FAA recommends an incremental approach to noise control at airports. The Part 161 study and restrictions are seen as measures of last resort. The FAA requires that the Part 161 study demonstrate that any restrictive measure achieves noise reduction benefits (areas inside the 65db CNEL contour) not met by other non-restrictive measures. It also requires identification and evaluation of alternative restrictive options to meet the stated goal. Data to support the options is required.

Comment [S1]: I forgot... does Part 161 defer to California's CNEL (versus DNL)?

Comment [S2]: Requirement????

After ANCA was passed, FAR Part 161 added more restrictive criteria. In addition to unjust discrimination and burdens on interstate commerce, an airport must now demonstrate the restriction complies with the following:

- Provides an adequate analysis of the costs and benefits of the proposed restriction and alternative measures.
- 2. The restriction is reasonable, non arbitrary and non-discriminatory.
- 3. The restriction maintains safe and efficient use of navigable airspace.
- 4. The restriction does not conflict with any existing federal statute or regulation.
- The applicant has provided adequate opportunity for public comment on the proposed restriction.
- 6. The restriction does not create an undue burden on the National Aviation System.
- The study must also account for the noise impact on the receiving communities if the restricted flights are presumed to be diverted.

Other Airports

While each community and airport is unique, it is important for TTAD to be conscious of the experiences of other airports. With the exception of the Naples airport, the following airports began studies and never submitted them to the FAA for various reasons:

1. Kahului Airport, Kahului, Maui, Hawaii

The state of Hawaii was exempted from some ANCA provisions due to the significant role of air transportation in the economy. Stage 2 aircraft operating inter-island flights were exempted and capped, thus allowing commercial operations past the year 2000. Kahului Airport, owned and operated by the State of Hawaii, unsuccessfully pursued a ban on night commercial Stage 2 aircraft operations.

The FAA stated in preliminary correspondence, "A local phase out requirement would also frustrate the national aviation noise policy because action by the State of Hawaii to impose a local phase out at Kahului would prompt similar or more stringent restrictions on operations by Stage 2 aircraft at its other airports. A patchwork of airport use restrictions is the kind of situation that Congress sought to avoid by adopting the Act..." The FAA clearly did not want to allow local restrictions based on aircraft stage and time of operation.

2. Minneapolis-St. Paul International Airport, Minneapolis, Minnesota

The Metropolitan Airports Commission (MAC) prepared a Part 161 notice and analysis in July 2000 to adopt revisions to current MAC Ordinance 51 to implement a nighttime curfew on Stage 2 jet operations and a nighttime curfew on maintenance run-ups at Flying Cloud Airport (FCM – located in the City of Eden Prairie). MAC was also proposing to revise Ordinance 51 to prohibit scheduled airline and Part 121 cargo operations at FCM.

The FAA commented to the MAC that the mandatory restrictions outlined in the Part 161 notice and analysis were discriminatory and therefore inconsistent with the conditions of receiving federal grants. As a result, the MAC discontinued the Part 161 process to implement the mandatory restrictions and instead replaced Ordinance 51 with Ordinance 97. The new ordinance prohibits maintenance run-ups between the hours of 10 p.m. and 7 a.m. and restricts the use of the airport to only aircraft weighing less than 60,000 pounds certified max gross takeoff weight, dual wheel (runway weight bearing

capacity). The new 60,000 pound restriction was a relaxation of the existing 20,000 pound restriction in Ordinance 51 and therefore was acceptable to the FAA.

3. San Francisco International, San Francisco, CA

As a precursor to the San Francisco International Airport (SFO) Part 161 Study, HMMH developed a FAR Part 161.205 (Stage 2 restriction) work scope for the City and County of San Francisco for a proposed expansion of the nighttime curfew on Stage 2 operations at SFO. Specifically, the proposed airport use restriction evaluated under FAR Part 161 was a restriction, beginning on January 1,1999 of landing and takeoff operations by Stage 2 aircraft greater than 75,000 pounds between the hours of 20:00 to 08:00.

The study evaluated noise effects and cost benefits of Stage 2 restrictions for two alternative periods: (1) 21:00 to 08:00 and (2) 22:00 to 08:00. Each of the potential restrictions was an extension of an existing restriction at SFO. At the time, San Francisco International Airport Noise Abatement Regulations, Resolution No. 88-016 as amended through January 17, 1995 by Resolution No. 95-0015, which were grandfathered under the Aircraft Noise and Capacity Act, restricted operations of Stage 2 aircraft greater than 75,000 pounds from operating between 23:00 and 07:00.

During the Part 161 study, HMMH carefully examined the impact of the restrictions on nighttime all-cargo aircraft operations. The study concluded that the benefit (in terms of noise reduction) of implementing the restriction outweighed the cost to the airlines. The SFO FAR Part 161 Study was the first Part 161 study submitted to the Federal Aviation Administration for review. SFO elected to withdraw the study when the airlines agreed to implement voluntary noise reduction measures that accomplished the same goals as the Part 161 study.

4. San Jose International, San Jose, CA

The City of San Jose hired HMMH to prepare a Part 161 work scope that met all of the requirements of FAR Part 161 while accounting for requirements generated by agreements with Citizens Against Airport Pollution (CAAP) and the on-going airport Master Plan Update. The Part 161 was contemplated to enact Stage 2 aircraft noise restrictions.

As a follow on to the San José International Airport (SJC) Part 161 Work Scope Development project, the City of San Jose hired HMMH to conduct a Part 161 Study. HMMH examined the noise effects and benefits-costs associated with two potential Stage 2 restrictions: 1) a complete ban on Stage 2 aircraft operations and 2) a collapsing curfew; during which Stage 2 aircraft would have fewer and fewer hours to operate at SJC as the Year 2000 approached. The study was completed within the 12-month schedule dictated by the stipulated agreement between the City of San José and Citizens Against Airport Pollution (CAAP).

The SJĆ Part 161 Study revealed several important facts: while some passenger carriers would experience economic losses due to the restrictions, others would experience economic gains from substituting more efficient Stage 3 aircraft for a Stage 2 aircraft; one cargo carrier would leave SJC completely and resume operations at the next closest air carrier airport; lost secondary spending (hotel rooms, meals, etc.) within the City of San José, due to passengers shifting to other Bay-area airports, was significant; and, most important, there was not enough time between the date of implementation of the Stage 2 restrictions and the Year 2000 for the economic benefits (i.e., reduced sound insulation costs) to overcome the costs of the restrictions.

The SJC Part 161 Study was the first full Part 161 study undertaken under the Aircraft Noise and Capacity Act and remains the model upon which all Part 161 studies to date have been based.

5. Bob Hope/ Glendale, Pasadena, Burbank Airport

Burbank, CA (BUR) began a Part 161 study on July 15, 2000 with the goal, "To eliminate or significantly reduce nighttime flight noise at Burbank Airport now and in the future." The study ceased in late 2003 after preliminary review from the FAA indicating a complete nighttime curfew was inconsistent with Part 161 criteria.

Specific Wording: The Burbank-Glendale-Pasadena Airport Authority will enact a curfew on all operations by aircraft at BUR between the hours of 10 p.m. and 7 a.m. (local time). The curfew will take effect sixty days following approval. This proposed restriction would be subject to approval by the Federal Aviation Administration under the provisions of Federal Aviation Regulation Part 161.

Exceptions: The following aircraft shall be permitted to land at and takeoff from the Burbank-Glendale-Pasadena Airport between the hours of 10:00 p.m. and 7:00 a.m.:

 Law enforcement and fire fighting aircraft, military aircraft, aircraft owned or operated by the armed forces of the United States, and aircraft operated in support of military operations.

Medical flight aircraft with documentation engaged in active emergency operations for the transportation of patients or human organs.

3. Aircraft delayed in landing and/or takeoff by weather, mechanical, or air traffic control; provided however, that this exception shall not authorize any landing or takeoff between the hours of 11:00 p.m. and 7:00 a.m.

Upon the request of the Airport Authority, the aircraft operator or pilot in command shall document or demonstrate the precise emergency or delay causing conditions resulting in a landing and/or takeoff between the hours of 10:00 p.m. and 7:00 a.m.

Enforcement: Violators penalized by a series of fines and/or sanctions: (Violations are based on a 12 month period):

1st Violation - \$1000 Fine 2nd Violation - \$2000 Fine 3rd Violation - \$3000 Fine

4th Violation - \$5000 Fine and action to ban access or terminate lease

After nearly 4 years and \$3 million the airport ceased the study of a nighttime curfew for all operations. The Part 161 study was never formally submitted to the FAA.

The success and failures of other airports certainly don't predict the outcome of a Part 161 by TTAD, however they do provide insight into the FAA process. The Burbank story is interesting because the curfew was "non-discriminatory" (no one was allowed to fly).

Naples, FL -Stage 2 GA Jet Restriction

Naples is the only airport to successfully implement a restriction with the Part 161 process (and much litigation) since ANCA was established. The Naples study is the only submission that the FAA has found in compliance with Part 161 analysis, documentation, and notification requirements. The airport banned all Stage 2 aircraft in November of 2000. It is important to note that no airport has ever attempted to ban Stage 3 aircraft specifically. Naples used a 60db DNL standard in the assessment of community impact. The standard was previously established by the City and County. Naples spent over \$3 million and nearly 4 years conducting the study and litigating.

Burbank and Naples both provide examples of the Part 161 process and its various risks and opportunities. While no two airports are the same, it is important to carefully consider local conditions in the decision to pursue a Part 161 Study.

Truckee Tahoe Airport Conditions and Facts

An assessment of local conditions and facts is important to gauge the impacts of current operations and fleet mix. As actions are considered the decisions must be considered in the interest of future operational scenarios at TRK. The success or failure of very light jets, fuel pricing, avionics advances, and other innovations may or may not have a measurable impact on the community, but possible outcomes must be considered.

The current fleet mix and operational count at TRK is assessed by the UNICOM operator manually inputting each operation into a database. While not all operations are captured, the data is worthwhile for reference purposes. Likewise, staff also records all reports of community annoyance related to aircraft operations in a separate database. The two key indicators from this data are 1) an increase in jet operations, and 2) minimal reported nighttime annoyance. Nighttime is currently defined as 11:00 p.m.-6:00 a.m. based on the voluntary curfew at TRK. It should be noted that the State of California defines nighttime as 10:00 p.m.-7:00 a.m. for purposes of noise modeling.

The key question is "What do we want to accomplish and is a Part 161 Study a tool to consider?" The following facts must be considered:

- No Part 150 Study has been completed by TTAD. Although a Part 150 study is not a requirement, no airport has ever attempted the Part 161 process without a 150 study.
- 2. No homes are currently located within the 65db CNEL contour on the average annual day.
- 3. TTAD estimates night operations (11:00 p.m.- 6:00 a.m.) to be less than 50 per year. No formal data exists making baseline impacts difficult to determine.
- 4. Total reported nighttime annoyance is very low and has decreased over the last three years.

- If a restriction were adopted and implemented, TRK does not currently have the ability to monitor and enforce the requirements.
- 6. Non-restrictive options have not been thoroughly explored and implemented.

While current conditions don't provide evidence to support a successful Part 161 study, the future conditions of the airport and the community must be considered. Important factors to consider are:

- Population growth in Truckee and the Martis Valley
- Increase in total airport operations
- Change of aircraft fleet mix
- Introduction of very light jets
- Avionics advancements, enabling more operations at night or in inclement weather
- Introduction of next generation air taxi services

No airport has attempted a Part 161 study to prevent conditions that may occur in the future. Special counsel to TTAD has stated, "This would be an interesting approach..." If TRK were to attempt a Part 161 Study this would be the likely approach given current conditions. The opportunities in this approach would be mostly strategic, yet not without risk. Conducting a Part 161 study in a preemptive approach could provide some value in discussions with various stakeholders, but the unknown outcome could weaken its strategic value.

The total cost for a Part 161 study could range from \$250,000-\$1,000,000 with additional legal costs. While difficult to estimate legal costs, the City of Naples spent nearly \$4,000,000 defending the airport in the Part 161 process against the FAA and private parties. Litigation from private parties, AOPA, NBAA and the FAA could follow a Part 161 study at TRK based on briefings from outside legal counsel, Peter Kirsch.

Options for Action

- 1. Do nothing, wait and see.
- Vigorously monitor and encourage voluntary curfew while studying further need for mandatory curfew with consideration of future conditions. Therefore a Part 161 study is not recommended at this time. Collect more data. Reconsider options as needed or in 12 months.
- 3. Conduct Part 161 study, adopt, but don't implement.
- 4. Conduct Part 161 study, adopt and implement (requires operations monitoring system and police powers for enforcement).

Conclusion & Recommendation

The decision to initiate a Part 161 study should incorporate the likelihood of acceptance by the FAA, overall cost (study and potential litigation), ability to implement and monitor. Finally overall strategic value should be considered.

Based on the current conditions at TRK coupled with the track record of other airports, the likelihood of getting the study approved by the FAA is very small. The ACAT believes that many of the current problems at TRK can be mitigated and/or solved through voluntary means and other

programs currently being developed. While the study could provide some strategic value to the airport in discussions with other stakeholders, the large cost of this potential benefit is not supported by the ACAT at this time.

The ACAT does not recommend beginning a Part 161 study for the Truckee Tahoe Airport. The ACAT has not recommended any specific actions that would require a Part 161 study, therefore a Part 161 study is not recommended at this time. The ACAT recommends vigorous monitoring and encouragement of the existing voluntary curfew while studying further need for mandatory curfew with consideration of future conditions. The ACAT further recommends that more data be collected and the options for action be reconsidered as needed or in 12 months.