



U.S. Department of Transportation

Federal Aviation Administration

Northern California Terminal Radar Approach Control

11375 Douglas Road
Mather, CA 95655
Phone: (916) 366-4001

April 8, 2004

Mr. G. Hardy Acree
Director of Airports
County Airport System
6900 Airport Boulevard
Sacramento, CA 95837

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BOARD OF SUPERVISORS
EL DORADO COUNTY

Dear Mr. Acree:

Thank you for your comprehensive data collection in support of the recently completed Mather Airport (MHR) VOR (Very High Omni-Directional Radio)/DME (Distance Measuring Equipment) Runway 22 Left Approach test. The following information and findings are based upon the MHR VOR/DME RWY 22L test results compared with the evaluation criterion of safety, efficiency, noise, community and air carrier comments, and air traffic controller workload.

Background:

The Sacramento County Airport System, along with the City of Folsom, the Sacramento County Board of Supervisors, the Sacramento County Area Council of Governments (SACOG), the Joint Powers Authority of Folsom and El Dorado County (JPA), and two El Dorado County Supervisors, requested that the FAA participate in a 120 day test of the Mather Airport VOR/DME RWY 22L approach from 10:00 pm to 7:00 am. The proposed test was to explore the feasibility of noise mitigation for residents living under the ILS (Instrument Landing System) RWY 22L approach to Mather Airport.

Prior to the start of the test, the Sacramento County Airport System established a special phone hotline in addition to the standard Noise Hot Line and an e-mail address for the VOR/DME complaints. Flyers were mailed to numerous residents in the affected counties advising of the test and announcing opportunities for the public to learn more about the test at three public meetings to be held by the Sacramento County Airport System. Five additional meetings were established, three to allow public input during the test, and two to provide an overview of preliminary findings at the end of the test. Noise monitoring equipment was placed beneath both approach paths and, during the test period, records were kept of the number of VOR/DME approaches offered, accepted, and denied during the nighttime period.

Prior to the end of the test, the Mayor of Folsom, the El Dorado County Board of Supervisors and the Joint Powers Authority withdrew their support of the test. Public

requests were then made by officials from both counties to end the test in advance of the 120 days. In order to ensure the integrity of the test, and to provide sufficient data to make a decision regarding this important issue, the test was continued to its planned termination at 120 days.

Review of data provided/collected:

1. Safety. Several concerns were raised by both the community and system users (airline companies and pilots) regarding safety i.e., the lack of precise navigational guidance during the test. The VOR/DME approach was offered to 250 aircraft during the test period: 136 aircraft accepted the approach, 95 requested the ILS approach, and the remaining 19 requested visual routing or an ILS intercept closer to the airport.

The VOR/DME is a non-precision approach that provides only lateral guidance to the runway. By contrast, the ILS is a precision approach providing both lateral guidance and continuous vertical guidance via the glideslope. Therefore, when both approaches are available, the ILS is the preferred approach because of the precise lateral and vertical navigational guidance. Additionally, the Code of Federal Regulations, Part 91, paragraph 91.129 (e) (2) requires large or turbine-powered airplanes that are ILS equipped to fly at or above the glideslope when making an approach to a runway served by an ILS. In other words, these types of aircraft utilize the navigational guidance of the ILS, even when conducting a visual approach. Under normal operations, the VOR/DME approach is utilized only if the ILS Runway 22 Left is out of service.

2. Efficiency. The flight path of the VOR/DME approach is slightly south of the ILS flight path; however no negative or positive efficiency impacts were experienced.

3. Noise. The measured noise levels collected by noise monitoring equipment under the VOR/DME approach path demonstrated that Single Event Noise Exposure Levels (SENELs) generated by aircraft flying the VOR/DME approach were 9 to 19 dB higher than the SENELs generated by identical aircraft utilizing the ILS approach when measured at the same sites. Results of the test demonstrated that the outcome was a shifting of some of the noise to another community, and not true noise mitigation. The VOR/DME 22L approach does not provide a significant level of noise mitigation or relief to the communities as a whole that surround the Mather Airport. It is contrary to established federal policy to shift noise from one area or community to another, solely as a noise abatement strategy.

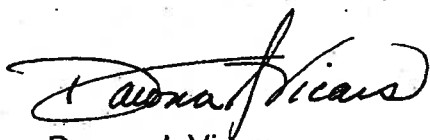
4. Community/Air Carrier Comments. Within the first 30 days of the test, over 300 aircraft noise phone complaints were generated. By the end of the 120 days, 1224 noise complaints had been received, and over 200 electronic mail messages were sent complaining of the test. Over 90% of the complaints were directly correlated to aircraft on the VOR/DME approach. During the mid-test public meetings, comments indicated that it was apparent that the VOR/DME was not mitigating noise that results from the Mather ILS Runway 22L approaches.

5. **Controller Workload.** The FAA controller workload was slightly increased during the test due to the number of refused approaches; however these impacts can be considered negligible.

Conclusion: ✓

The Western Pacific Regional Office has reviewed all of the data from this 120 day test. In consideration of all factors, the FAA will not support changing the primary approach procedure, specifically the ILS Runway 22 Left approach, used by aircraft approaching to land at Mather Airport during nighttime hours.

Sincerely,



Dawna J. Vicars
Air Traffic Manager, Northern California
Terminal Radar Approach Control