

Rolling Takeoff Aircraft Departure Procedure

Noise Abatement Procedure Implementation

The rolling takeoff noise abatement departure procedure was designed to reduce the effects of back-blast noise for late-night aircraft departures when the air traffic controller and the pilot can effectively work in concert with one another and air traffic operations are light. Under normal and typical operating conditions, the air traffic controller instructs the pilot to “position and hold”¹, which means that the pilot taxis the aircraft onto the runway and stops until instructed in a follow-up order to initiate the aircraft’s departure when the air traffic controller provides “departure clearance”. The “position and hold” command is a common and highly used instruction since it provides for the most efficient use of the airport’s runways and helps to maintain runway maximum capacity especially during busy periods. When possible, an air traffic controller will give “departure clearance” as the aircraft is entering the runway prior to the aircraft’s stop on the runway to meet the “position and hold” command. In these situations, the aircraft will continue its departure roll down the runway without stopping. This would be considered a rolling takeoff.

Consequently, in order for a noise abatement procedure to be applied for late-night departures that maximize the use of a rolling start procedure, the air traffic controller must be cognizant of air traffic operations and cooperating in the program to time the departures accordingly. For the most effective procedure, the air traffic controller should not give a “position and hold” command but wait until a “departure clearance” can be provided to the pilot and the pilot must cooperate and utilize the rolling takeoff procedure as specified in the airline’s operations manual.

Airport Actions to Monitor the Procedure

The rolling takeoff noise abatement departure procedure is challenging to monitor since the flight track monitoring system cannot distinguish a rolling takeoff from a standard takeoff. Also, since there are small differences between the noise levels produced by a rolling takeoff compared with those of a standard takeoff and other factors affect noise propagation, it is not always practical to use noise data to determine the use of a rolling takeoff departure. The most effective means for monitoring this procedure is by use of a video camera recording system that can tape activity during nighttime hours and provides the technology for quick and efficient search and replay. At some point it may be necessary to implement such a program. As long as the FAA maintains its current policy not to use the “position and hold” procedure at night, the Port will review aircraft noise measurements and compare these current levels with the base period prior to implementation of the procedure.

¹ The OAK Air Traffic Control Tower has not applied the position and hold policy during nighttime hours since March 2006 due to a change in Federal Aviation Administration policy.

Noise Abatement Procedure Report Summary

The rolling take-off procedure is monitored for performance by reviewing all FedEx aircraft departure noise levels between 1:00 a.m. and 5:00 a.m. nightly measured at RMT #2 and comparing these measurements with those collected during the base period prior to implementation of the procedure. The baseline data was measured in November 2002.

SAMPLE REPORT

Rolling Takeoff Procedure Runway 29 Departures Between 1:00 and 5:00 a.m. Compliance Report - Third Quarter 2006						
Baseline Data @ RMT #2 (November 2002)	Total Nov. 2002 Departures		Noise Events	Lmax Average	SEL Average	Duration Average (seconds)
B727	104		101	76	87	44
DC10/MD10	87		32	69	78	22
MD11	32		13	70	79	24
A306	67		21	67	77	25
Third Quarter 2006	Aircraft Departures		Noise Events	Lmax Average	SEL Average	Duration Average (seconds)
	Total Quarterly	Average Monthly				
B727	181	60	152	72	81	29
DC10/MD10	259	86	42	67	76	17
MD11	148	49	39	67	75	14
A306	204	68	13	66	75	16
Difference				Lmax Average	SEL Average	Duration Average (seconds)
B727				-4.0	-6.0	-15
DC10/MD10				-2.0	-2.0	-5
MD11				-3.0	-4.0	-10
A306				-1.0	-2.0	-9