Appendix One

TOWER ORDER

ORDER

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

MILWAUKEE MITCHELL ATCT

MILWAUKEE, WISCONSIN

MKE ATCT
7110.22T

SUBJ: Noise Abatement

1. **PURPOSE.** This order combines provisions of the Milwaukee County Airport Noise Abatement Plan with MKE ATCT's requirement, which provides for safe and expeditious handling of air traffic while also providing noise relief to surrounding communities. It is an informal runway use program which does not require a Letter of Understanding and participation is voluntary for aircraft operators and pilots. This directive applies to all turbojet aircraft except where noted.

2. **DISTRIBUTION.** This order is distributed to Milwaukee County Airport Authority, facility personnel and facility files.

3. **CANCELLATION.** Noise Abatement, MKE ATCT 7110.22S, dated October 8, 2002, is canceled.

4. **EFFECTIVE DATE.** March 20, 2003.

5. **POLICY.** The FAA has a primary function to determine under what conditions flight operations may be conducted without causing degradation of safety. Under ideal conditions aircraft takeoffs and landings should be conducted into the wind. Considerations such as delay and capacity problems, runway length, approach aids, noise abatement, and other factors may require aircraft operations to be conducted as follows:

a. In the order listed below, the following runways provide the greatest noise abatement benefits:

Takeoff	Landing
19R	1L
1L	19R
25L	7R
7R	25L

b. Runway 19R should be used for all turbojet departures, except when required for safe and efficient operations of aircraft. Using Runway 19R for departures is consistent with FAA Order 8400.9, National Safety and Operational Criteria for Runway Use Programs. Requests for use of other runways for reasons of operational necessity and safety will be honored.

c. Runway conditions should be considered when making runway assignments. i.e. wet or dry runway, slush on the runway, etc.

6. PROCEDURES.

a. The following procedures are to be used for turbojet departures.

(1) Runway 19R.

(a) All eastbound departures shall be issued headings to track approximately 15 degrees left of the centerline until leaving 3,000 feet MSL or are three (3) miles from the end of the departure runway.

(b) All westbound departures shall be issued headings to track approximately 15 degrees to the right of the centerline. After aircraft have crossed the departure end of the Runway 19R, the aircraft may be turned no further right than 270 degrees until leaving 3,000 feet MSL.

(c) Runway 19R departures at the intersection of Taxiway V are allowed between the hours of 7:00 AM and 10:00 PM.

(2) Runway 1L.

(a) Departures shall maintain runway heading until leaving 2,000 feet MSL then turn either left or right as follows:

1 All east and southbound departures shall not be assigned a heading to the right greater than 050 degrees until leaving 3,000 feet MSL or are three (3) miles from the end of the departure runway.

2 All west and southbound departures shall not be assigned a heading to the left less than 330 degrees until leaving 3,000 feet MSL or are three (3) miles from the end of the departure runway.

(3) Runway 7R.

(a) Departures shall maintain runway heading until leaving 2,000 feet MSL then turn left or right to tower assigned heading.

(4) Runway 25L.

(a) Departures shall maintain runway heading until leaving 2,000 feet MSL then turn left or right to tower assigned heading.

(b) When operating on a 25L arrival configuration all east and southbound turbojet departures should be assigned Runway 19R for departure.

6.a. Note.--the only exception for turns earlier than specified is for safety considerations.

b. Broadcast on the ATIS between 10:00 PM and 6:00 AM local time: "these runway assignments are in accordance with noise abatement procedures. Request other runways only for operational necessity".

c. Restrictions:

(1) When Runway 1L / 19R is available, Runway 1R / 19L shall be restricted to all except category I aircraft between 10:00 PM and 6:00 AM local time.

(2) When Runway 7R / 25L is available, Runway 7L / 25R shall be restricted to all except category I aircraft between 10:00 PM and 6:00 AM local time.

(3) Category II and III aircraft operating between 10:00 PM and 6:00 AM local time shall land on Runway 1L and takeoff on Runway 19R except when any of the following conditions exists as specified in accordance with FAA Order 8400.9, National Safety and Operational Criteria for Runway Use Program.

(a) There should be no significant wind shear or thunderstorms which affect the use of the selected runways such as:

1 That reported by an operating Low Level Wind Shear System (LLWAS) or Doppler (TDWR).

2 Pilot report of wind shear.

3 Thunderstorms on the initial takeoff departure path or final approach path (within five (5) NM of the selected runways.

(b) The reported visibility shall not be less than one (1) statute mile or Runway Visual Range less than 5000 feet.

(c) There should be no snow, slush, ice or standing water present or reported (other than isolated patches which do not impact braking effectiveness) on that width of the applicable runway or stop-way (overrun) to be used. Braking effectiveness must be "good" (e.g., not "fair", "poor" or "nil") and no reports of hydroplaning or unusual slippery runway surfaces (e.g. as may occur on un-grooved new pavement or contaminated surfaces).

(d) Winds, clear and dry runway.

1 The crosswind component for the selected runway must not be greater than 20 knots. (See Appendix 1, Table 1).

2 The tailwind component must not be greater than 5 knots. (See Appendix 1, Table 3).

(e) Winds, runways not clear or not dry.

1 The crosswind component must not exceed 15 knots. (See Appendix 1, Table 2).

2 No tailwind component may be present, except the nominal range of winds reported as calm (0-3 knots) may be considered to have no tailwind component.

(4) When traffic volume between 10:00 PM and 6:00 AM local time prevents opposite direction operations, land and depart on Runway 1L.

(5) Intersection departures by turbojet aircraft shall not be permitted, except as provided for in Paragraph 6.a.(1)(c).

(6) Runway 13/31 is noise sensitive and is closed to all turbojet aircraft without prior approval from the Airport Manager.

d. Area supervisors / CIC's shall record on FAA Form 7230-4, Daily Record of Facility Operations, the primary runway configuration along with the wind direction and velocity. Between 10:00 PM and 6:00 AM local time, departures and arrivals not utilizing the "Noise Abatement Runways", shall also be recorded on FAA Form 7230-4 .

(1) Between 10:00 PM and 6:00 AM, if conditions prevent operations on the primary "Noise Abatement Runways", include the reason on FAA Form 7230-4.

7. PROCEDURES FOR CONDUCTING AIRCRAFT ENGINE MAINTENANCE RUNUPS.

a. To mitigate the effects of noise generated by engine runups, the airport has constructed a Ground Runup Enclosure (GRE). All jet aircraft and turboprop over 10,500 pounds Maximum Take Off Weight with wingspans less than 214 feet shall conduct above idle engine run-ups in the GRE subject to GRE availability and meteorological conditions.

b. Only Beech 1900 aircraft conducting their daily autofeather, overspeed - governor, yaw damp / rudder boost checks will be exempt from the requirement to use the GRE. These daily checks will be completed at the de-ice pad at the west end of Taxiway Bravo.

c. If the GRE is not available due to weather or maintenance considerations, engine runups for jet aircraft may be conducted only at the locations and aircraft orientations as directed by Milwaukee County Airport Operations. These locations are predicated upon the type of maintenance runup to be performed and the wind direction and velocity at the time of the run-up request. The location and positioning of a jet aircraft requesting permission to perform an unsuppressed above idle engine runup, will be determined by Milwaukee County Airport Operations as follows:

Note.– Above idle engine runups are defined as a runup requiring the use of 50% or greater power

(1) Jet aircraft, above idle run-up, <u>WIND CALM</u> , (any direction, velocity 0-2 knots).

WIND DIRECTION	WIND SPEED	RUN-UP LOCATION	AIRCRAFT HEADING
Any	Calm 0 -2 knots	19R Pad	010

(2) Jet aircraft, above idle run-up, <u>LIGHT WINDS</u>, (Velocity 3 - 9 knots).

WIND DIRECTION	WIND SPEED	RUN-UP LOCATION	AIRCRAFT HEADING
000	3 - 9 Knots	19R Pad	010
010	3 - 9 Knots	19R Pad	010
020	3 - 9 Knots	19R Pad	010
030	3 - 9 Knots	19R Pad	010
040	3 - 9 Knots	19R Pad	010

050	3 - 9 Knots	19R Pad	010
060	3 - 9 Knots	19R Pad	010
070	3 - 9 Knots	19R Pad	010
080	3 - 9 Knots	19R Pad	010
090	3 - 9 Knots	19R Pad	010
100	3 - 9 Knots	19R Pad	010
110	3 - 9 Knots	1L Pad	190
120	3 - 9 Knots	1L Pad	190
130	3 - 9 Knots	1L Pad	190
140	3 - 9 Knots	1L Pad	190
150	3 - 9 Knots	1L Pad	190
160	3 - 9 Knots	1L Pad	190
170	3 - 9 Knots	1L Pad	190
180	3 - 9 Knots	1L Pad	190
190	3 - 9 Knots	1L Pad	190
200	3 - 9 Knots	1L Pad	190
210	3 - 9 Knots	1L Pad	190
220	3 - 9 Knots	1L Pad	190
230	3 - 9 Knots	1L Pad	190
240	3 - 9 Knots	1L Pad	190
250	3 - 9 Knots	1L Pad	190
260	3 - 9 Knots	1L Pad	190
270	3 - 9 Knots	1L Pad	190
280	3 - 9 Knots	1L Pad	190
290	3 - 9 Knots	19R Pad	010
300	3 - 9 Knots	19R Pad	010
310	3 - 9 Knots	19R Pad	010
320	3 - 9 Knots	19R Pad	010
330	3 - 9 Knots	19R Pad	010
340	3 - 9 Knots	19R Pad	010
350	3 - 9 Knots	19R Pad	010

(3) Jet aircraft, above idle run-up, STRONG WINDS, (velocity 10 knots and greater).

WIND DIRECTION	WIND SPEED	RUN-UP LOCATION	AIRCRAFT HEADING
000	10 + Knots	19R Pad	010
010	10 + Knots	19R Pad	010
020	10 + Knots	19R Pad	010

030	10 + Knots	19R Pad	010
040	10 + Knots	19R Pad	010
050	10 + Knots	19R Pad	010
060	10 + Knots	19R Pad	020
070	10 + Knots	19R Pad	030
080	10 + Knots	19R Pad	040
090	10 + Knots	19R Pad	050
100	10 + Knots	1L Pad	140
110	10 + Knots	1L Pad	150
120	10 + Knots	1L Pad	160
130	10 + Knots	1L Pad	170
140	10 + Knots	1L Pad	180
150	10 + Knots	1L Pad	190
160	10 + Knots	1L Pad	190
170	10 + Knots	1L Pad	190
180	10 + Knots	1L Pad	190
190	10 + Knots	1L Pad	190
200	10 + Knots	1L Pad	190
210	10 + Knots	1L Pad	190
220	10 + Knots	1L Pad	190
230	10 + Knots	1L Pad	190
240	10 + Knots	7R Pad	280
250	10 + Knots	7R Pad	280
260	10 + Knots	7R Pad	280
270	10 + Knots	7R Pad	280
280	10 + Knots	7R Pad	280
290	10 + Knots	7R Pad	280
300	10 + Knots	7R Pad	280
310	10 + Knots	7R Pad	280
320	10 + Knots	7R Pad	280
330	10 + Knots	19R Pad	010
340	10 + Knots	19R Pad	010
350	10 + Knots	19R Pad	010

d. Jet aircraft may perform an idle engine runup, lasting no longer than ten (10) minutes, at any location on the airport between 7:00 AM and 10:00 PM on weekdays and between 8:00 AM and 10:00 PM on weekends and holidays.

e. Between 10:00 PM and 7:00 AM on weekdays and between 10:00 PM and 8:00 AM on weekends and holidays, jet aircraft performing idle runups of a duration exceeding ten (10) minutes will only be allowed at passenger boarding gates, a designated jet runup location, or any location south of Taxiway "K".

Note.-- Idle engine runups are defined as a runup requiring the use of less than 50 % power.

f. If the GRE is not available due to weather or maintenance considerations, unsuppressed engine runups for turboprop aircraft over 10,500 pounds Maximum Take Off Weight (MTOW), may be conducted only at the locations and aircraft orientations as directed by Milwaukee County Airport Operations. These locations are predicated upon the type of maintenance runup to be performed and the wind direction and velocity at the time of the run-up request. The location and positioning of a turboprop aircraft over 10,500 pounds MTOW requesting permission to perform an unsuppressed above idle engine runup will be determined by Milwaukee County Airport Operations as follows:

Note.-- Above idle engine runups are defined as a runup requiring the use of 50% or greater power.

(1) Turboprop aircraft, above idle run-up, ALL WIND DIRECTIONS AND VELOCITIES.

WIND DIRECTION	WIND SPEED	RUN-UP LOCATION	AIRCRAFT HEADING
All	All	De-ice Pad	Nose into wind

(2) During winter operations when aircraft de-icing makes the de-ice pad unavailable for engine run-up operations, turboprop aircraft shall be directed to the International Arrivals Building ramp.

g. Turboprop aircraft over 10,500 pounds MTOW, may perform an idle engine runup, lasting no longer than ten (10) minutes, at any location on the airport between 7:00 AM and 10:00 PM on weekdays and between 8:00 AM and 10:00 PM on weekends and holidays.

h. Between 10:00 PM and 7:00 AM on weekdays and between 10:00 PM and 8:00 AM on weekends and holidays Turboprop aircraft over 10,500 pounds MTOW performing idle engine runups of a duration exceeding ten (10) minutes will only be allowed at passenger boarding gates, the designated turboprop runup location, or any location south of Taxiway "K".

Note.-- Idle engine runups are defined as a runup requiring the use of 50% or less power.

8. Milwaukee County Airport Operations will provide the appropriate runup location to an operator, who will then contact Ground Control for taxi instructions. If Ground Control determines that the designated run-up location should not be used, the tower supervisor / CIC shall contact Milwaukee County Airport Operations to obtain an exception from this run-up location assignment.

Wanda L Adelman

Wanda L. Adelman
Air Traffic Manager

03/20/03

TABLE OF MAXIMUM WIND VALUES

The following tables illustrate the maximum components for wind direction in 10 degree increments relative To a runway. No headwind component limitations are stated because strong headwinds would dictate the use of a runway aligned into the wind due to the crosswind limitation. Velocity values are rounded down to the nearest whole number.

CROSSWIND COMPONENT TABLE 1

(DRY RUNWAY)

Wind Angle (Degree)

From Runway Heading	Wind Velocity (Knots)
10	114
20	58
30	40
40	31
45	28
50	26
60	23
70	21
80	20
90	20

CROSSWIND COMPONENT TABLE 2

(RUNWAY NOT CLEAR AND DRY)

Wind Angle (Degree)

From Runway Heading	Wind Velocity (Knots)
10	86
20	44
30	30
40	23
45	21
50	19
60	17
70	16
80	15
90	15

TAILWIND COMPONENT TABLE 3

(DRY RUNWAY)

Wind Angle (Degrees)

From Runway Heading	Wind Velocity (Knots)
100	20
110	14
120	10
130	7
135	7
140	6
150	5
160	5
170	5
180	5