



U.S. DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION  
Air Traffic Organization Policy

**ORDER  
JO 3900.60**

Effective Date:  
11/21/2008

**SUBJ: SAFETY ALERT – Airport Surveillance Detection Equipment – Model X, Surface Movement Radar (ASDE-X SMR) Antenna**

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**1. Purpose.** This order directs attention to the potentially severe safety hazard involving the shedding of ice build up on the ASDE-X SMR antenna. This hazard can occur during or after weather conditions involving icing situations. The weather conditions need not be severe.

**2. Audience.** This order serves as the official notice advising all FAA /ATO employees of the safety hazard associated with the build-up of ice on the rotating ASDE-X SMR antenna. Personnel affected by this safety alert include any and all personnel in the area of an ASDE-X SMR antenna. A current listing of all the ASDE-X sites as of the date of this alert is provided on the last page of this order.

**3. Where Can I Find This Order.** You can find this order on the Directives Management System (DMS) website: [https://employees.faa.gov/tools\\_resources/orders\\_notices/](https://employees.faa.gov/tools_resources/orders_notices/).

**4. Information.** Following a severe ice storm in the Northeast, a piece of ice broke free of an ASDE-X SMR antenna. This ice block was approximately 2 inches thick, 6 inches wide, and nearly 12 inches long. ASDE-X antennas rotate at 60 revolutions per minute and are installed at various heights, including the rooftops of airport traffic control towers (ATCTs). Ice matter of the reported dimensions propelled at the speed of the rotating antenna poses serious hazards to personnel, equipment, and aircraft in the area that can result in serious injury, damage, or death.

**5. Actions.**

a. **Short Term Actions.** The short term solution to the ice shedding problem is to control the hazard by controlling the movement of personnel and controlling the equipment.

(1) ATO managers and supervisors are responsible for:

-Informing employees to stay alert to the possibility of ice shedding during and after icing conditions;

-Informing employees to avoid or minimize movement through areas that this condition may occur;

-Informing other airport personnel who may be impacted of the possible hazard.

(2) In addition, ATO SSC managers or their designees will:

-Monitor the accumulation of ice;

-Temporarily disable rotation of the ASDE-X antenna when the ice buildup on the antenna is too great until such time as the condition is no longer considered hazardous.

(3) It is recommended that ice buildup of greater than 1/2 inch be considered potentially hazardous; however, the amount of ice build up that is considered hazardous will be at the discretion of the SSC Manager or his/her designee and could be less. When removing the equipment from service, standard equipment shutdown and notification procedures will be used. All equipment outages attributed to icing conditions will reflect the correct outage code per the latest version of Order 6040.15, National Airspace Performance Reporting System. An outage code of 65 with a supplemental code of 1 will be used for scheduled outages. An outage code of 85 with a supplemental code of 1 will be used for unscheduled outages.

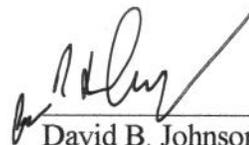
b. Near Term Actions. Investigations into a chemical solution to prevent or remove the ice buildup have proven ineffective (e.g.: waxing and chemical deicers). Dependent upon the weather conditions, these solutions may pose a greater risk to the Airway Transportation System Specialist (ATSS) performing the actions than that posed by the ice buildup. Further attempts at this solution have been discontinued. However, the National Airway Systems-Engineering (NAS-E) is planning to initiate an engineering study to investigate parameters in the system that may be used to detect ice loading on the antenna and subsequently take appropriate action to shutdown the antenna. Point of contact for further information on the progress of the engineering study is: Devlan Maxwell, National Airway Systems Engineering Group, AJW-14, at (405) 954-1174.

c. Long Term Actions. The ASDE-X Product Team at headquarters in conjunction with the National Airway Systems Engineering Group, AJW 14, will investigate and provide a long term solution that satisfactorily resolves this problem either by eliminating or permanently controlling (e.g. heaters, barriers, radomes, or covers) the ice build up and shedding condition from the antenna. This is anticipated to be done in a timely manner to help rectify an already hazardous condition present at some northern sites; however it will require a certain amount of time for the design and modification effort. The long term solution is expected to be site tested during the winter of 2009/2010. The ASDE-X Program Office Point of Contact for this matter is Scott Schlegel in the Terminal Surveillance Group, AJT-11, at (202) 385-8724.

**6. Point of Contact for Further Information.** This alert has been issued by EOSH Services at FAA Washington headquarters. The Point of Contact is Maureen Anderson at (202) 493-4737 or Martha Christie at (202) 267-3239. Service Area/Center safety personnel (Safety Environmental Compliance Managers or Program Implementation Managers) may also be contacted for further information regarding this alert.



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**ASDE-X Site Listing (Current and Planned)**

MKE	General Mitchell International Airport (Milwaukee, WI)
MCO	Orlando International Airport (Orlando, FL)
PVD	Theodore Francis Green State Airport (Providence, RI)
HOU	William P. Hobby Airport (Houston, TX)
SEA	Seattle-Tacoma International Airport
ATL	Hartsfield-Jackson Atlanta International Airport
BDL	Bradley International Airport (Hartfield, CT)
SDF (3X)*	Louisville International Airport - Standiford Field
ORD (3X)*	Chicago O'Hare International Airport
CLT (3X)*	Charlotte Douglas International Airport
IAD	Washington Dulles International Airport
PHX	Phoenix Sky Harbor International Airport
BOS	Boston Logan International Airport
DTW	Detroit Metro Wayne County Airport
EWR	Newark International Airport
LAX	Los Angeles International Airport
DEN	Denver International Airport
JFK	John F. Kennedy International Airport
LAS	Las Vegas McCarran International Airport
IAH	George Bush Intercontinental Airport
PHL	Philadelphia International Airport
FLL	Ft. Lauderdale/Hollywood Airport
MSP	Minneapolis-St. Paul International Airport
SNA	John Wayne-Orange County Airport
DFW	Dallas/Ft. Worth International Airport
SLC	Salt Lake City International Airport
BWI	Baltimore-Washington International Airport
MDW	Chicago Midway Airport
HNL	Honolulu International - Hickam AFB Airport
MIA	Miami International Airport
DCA	Ronald Regan Washington National Airport
SAN	San Diego International Airport
LGA	New York LaGuardia Airport
MEM	Memphis International Airport

\* Configured with the ADSE-3 antenna; ice prevention systems (heaters) are installed.