



U.S. Department
of Transportation

**Federal Aviation
Administration**

Advisory Circular

**Subject: Reporting of Laser Illumination of
Aircraft**

Date: January 11, 2005 AC No: 70-2

**Initiated by: ATO-R System Change:
Operations Security**

1. PURPOSE

a. This Advisory Circular (AC) provides information to the aviation community, particularly air crews, operating within the National Airspace System (NAS) regarding steps taken by the Federal Aviation Administration to address the unauthorized illumination of aircraft by lasers.

b. In addition, this AC provides guidance to air crews on the reporting of laser illumination incidents and recommended mitigation actions to be taken in order to ensure continued safe and orderly flight operations.

c. This AC is promulgated in response to the recent, increasing incidents of unauthorized illumination of aircraft by lasers, as well as the proliferation and increasing sophistication of laser devices available to the general public and other parties. FAA and other governmental studies indicate that the exposure of air crews to laser illumination may cause hazardous effects (e.g., distraction, glare, afterimage flash blindness, and, in extreme circumstances, persistent or permanent visual impairment), which could adversely affect the ability of air crews to carry out their responsibilities.

d. The FAA, in coordination with other governmental stakeholders, such as the Transportation Security Administration (TSA), is taking immediate steps to safeguard flights against these unauthorized illuminations.

2. AUTHORITY

a. The FAA has the authority to regulate the safe and efficient use of navigable airspace (Title 49 U.S.C.,

Section 40103, Sovereignty and Use of Airspace, and the Public Right of Transit).

b. The FAA also has the authority to protect the flight of aircraft in air commerce (Title 49 U.S.C., Section 44701(a)(5)).

3. EFFECTIVE DATE This advisory circular becomes effective January 19, 2005.

4. FAA NOTIFICATIONS AND REPORTING

a. All FAA Air Traffic Control (ATC) facilities will immediately report unauthorized laser illumination incidents through the Domestic Events Network (DEN). The DEN, *inter alia*, supports the sharing of real-time security-related information affecting NAS air traffic operations among the FAA, TSA, and other governmental stakeholders, including law enforcement agencies. This information will be used to support appropriate action taken by these governmental entities to safeguard the safety and security of aviation operations in the NAS.

b. The ATC report will include event date and time (UTC), operator, flight number, type of aircraft, nearest major city, altitude, location of event (e.g., latitude/longitude and/or Fixed Radial Distance (FRD)), a brief description of the event, and any other information needed to support the aforementioned action.

c. If the laser event occurs in the vicinity of an FAA air traffic control terminal facility, ATC will notify flights operating in the

immediate area of reported incidents of unauthorized laser illumination of aircraft using Automatic Terminal Information Service systems (ATIS) for at least one hour following the report of the event. These ATIS broadcasts will include the following elements:

- Phrase "UNAUTHORIZED LASER ILLUMINATION EVENT"

- Event time (UTC), general positional information (e.g., location and altitude)

- General description of event (e.g., color, intensity, and direction of beam)

d. ATC facilities will also broadcast on appropriate control frequencies a general caution regarding reported incidents of unauthorized laser illumination of aircraft. These cautions, which will be provided for each incident, will be broadcast every five minutes for twenty minutes (i.e., four times). Cautionary broadcasts will include the following elements:

- Phrase "UNAUTHORIZED LASER ILLUMINATION EVENT"

- Event time (UTC), general positional information (e.g., location and altitude)

- General description of event (e.g., color, intensity, and direction of beam)

e. In addition, the FAA will disseminate information concerning laser incidents to operators through established communication mechanisms (e.g., the FAA Air Traffic Control System Command Center (ATCSCC), coordination with aircraft operators, including representatives of the Air Transport Association, the National Business Aircraft Association, etc.). These representatives at the ATCSCC will further disseminate this information as appropriate.

5. AIR CREW REPORTING PROCEDURES

a. All air crews are requested to immediately report incidents of unauthorized laser illumination by radio to the appropriate ATC controlling facility. Reports should include event position (e.g., latitude/longitude and/or FRD), altitude, color of laser beam(s), originating direction and position, and any other information

deemed necessary for ATC, law enforcement and other governmental action taken to safeguard the safety and efficiency of aviation operations in the NAS.

b. Air crews flying in uncontrolled airspace are requested to immediately broadcast a general laser illumination caution on the appropriate UNICOM frequency. This general caution should include the following elements:

- Phrase "UNAUTHORIZED LASER ILLUMINATION EVENT"

- Event time (UTC), general positional information (e.g., location and altitude)

- General description of event (e.g., color, intensity, and direction of beam)

c. Upon arrival at destination, all air crews who have been affected by an unauthorized laser illumination are requested to complete the forms provided by **Appendix 1**. These forms should be faxed to the Washington Operations Control Complex (WOCC) at (202) 267-5289 as soon as possible following the incident.

6. AIR CREW MITIGATION PROCEDURES

a. Although unauthorized laser illumination is difficult to predict there are certain practical actions air crews should consider before, during and after encountering laser activity.

- Pilots should avoid flight within areas of reported ongoing unauthorized laser activity to the extent practicable.

- In the event that a cautionary broadcast (by ATC or another pilot) regarding unauthorized laser illumination is made within the previous twenty minutes for a particular area, pilots should avoid the area if practicable.

- In the event laser activity is encountered, pilots in contact with ATC shall obtain authorization prior to deviating from their last assigned clearance.

- Air crews unexpectedly exposed to laser illumination should avoid direct eye contact and shield their eyes to the maximum extent possible consistent with aircraft control and safety.

- As soon as possible following an incident, pilots should report it to the appropriate air traffic control facility in accordance with the guidance provided by this AC. Forward as much information as available. Expedient reporting will assist law enforcement in locating the source of the laser transmission.

- Pilots are encouraged to complete the Laser Beam Exposure Questionnaire provided in Appendix 1 form and fax it to the WOCC as soon as possible after landing.

b. Research is currently underway by government and private industry focusing on technological solutions for enhancing aircrew safety during laser incidents. Additional mitigation procedures will be disseminated as they become available.

7. AIR CREW INFORMATION RESOURCES

a. The FAA recommends that aircraft operators, particularly air crews, regularly check for updates regarding this issue in the appropriate Notices to Airmen (NOTAM), with FAA Flight Services Stations, and with their local ATC facilities.

b. Additional information may be available at the following web sites:

- www.faa.gov
- www.dhs.gov

8. APPENDIX

- Laser Beam Exposure Questionnaire

9. RELATED DOCUMENTS

a. Title 49 U.S.C., Section 40103, Sovereignty and use of Airspace.

b. Title 49 U.S.C., Section 44701(a)(5), General Requirements.

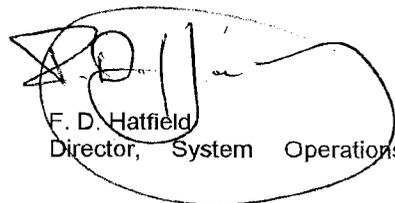
c. DHS/FBI Information Bulletin, dated 22 November 2005

d. FAA Order 7110.306, *Reporting of Suspicious Activities*

10. PAPERWORK REDUCTION ACT STATEMENT

a. Through the use of this AC, the FAA intends to maintain an increased level of safety between laser events and aircraft operations.

b. It will take the reporting air crew member approximately 15 minutes to provide the necessary information. The time should decrease with subsequent submissions of the laser beam exposure questionnaire.


F. D. Hatfield
Director, System Operations Security

LASER BEAM EXPOSURE QUESTIONNAIRE

FAX TO WASHINGTON OPERATIONS CONTROL CENTER(W0CC) at (202) 267-5289 ATTN: DEN

or

EMAIL at LaserReports@faa.gov

PILOT NAME _____ **PHONE NUMBER** _____
COMPANY _____ **FLIGHT NUMBER** _____

1. Date and time (UTC)? _____.
2. Position of event (lat/long and/or FRD)? _____.
3. Altitude? _____.
4. What was the visibility? - _____.
5. What were the atmospheric conditions? (Circle those which apply) - Clear, overcast, rainy, foggy, hazy, sunny. _____.
6. What was the color(s) of the light? _____.
7. Did the color(s) change during the exposure? _____.
8. Did you attempt an evasive maneuver? _____.
If yes, did the beam follow you as you tried to move away _____.
9. Can you estimate how far away the light source was from your location? _____.
10. What was the position of the light relative to the aircraft? _____.
11. Was the source moving? _____.
12. Was the light coming directly from its source or did it appear to be reflected off other surfaces? _____.
13. Were there multiple sources of light? _____.
14. How long was the exposure? _____.
15. Did the Light seem to track your path or was there incidental contact? _____.
16. What tasks were you performing when the exposure occurred? _____.
17. Did the Light prevent or hamper you from doing those tasks, or was the Light more of an annoyance? _____.
18. What were the visual effects you experienced (after-image, blind spot, flash-blindness, glare*)? _____.
19. Did you report the incident by radio to ATC? _____.

Any other pertinent information: _____

This questionnaire may be filled out by the competent authority during interviews with aircrews exposed to unauthorized laser illumination. This information will be used to aid in subsequent investigation by ATC, law enforcement and other governmental agencies to safeguard the safety and efficiency of civil aviation operation in the NAS.

*Examples of common visual effects:

After-image- An image that remains in the visual field after an exposure to a bright light

Blindspot- A temporary or permanent loss of vision of part of the visual field

Flash-blindness- The inability to see (either temporarily or permanently) caused by bright light entering the eye and persisting after the illumination has ceased

Glare- A temporary disruption in vision caused by the presence of a bright light (such as an oncoming car's headlights) within the individual's field of vision. Glare lasts only as long as the bright light is actually present within the individual's field of vision

Paperwork Reduction Act Statement: This form is being used to collect information regarding the unauthorized laser illumination of aircraft. We estimate that it will take 15 minutes to provide this information. The collection is voluntary. Note that an agency may not conduct a sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control number associated with the collection is 2120-0698.

5. Loss of all avionics in clouds.
6. VLF navigation system inoperative most of the time.
7. Erratic instrument readouts.
8. Weak transmissions and poor receptivity of radios.
9. "St. Elmo's Fire" on windshield.

c. Each of these symptoms is caused by one general problem on the airframe. This problem is the inability of the accumulated charge to flow easily to the wing tips and tail of the airframe, and properly discharge to the airstream.

d. Static dischargers work on the principal of creating a relatively easy path for discharging negative charges that develop on the aircraft by using a discharger with fine metal points, carbon coated rods, or carbon wicks rather than wait until a large charge is developed and discharged off the trailing edges of the aircraft that will interfere with avionics equipment. This process offers approximately 50 decibels (dB) static noise reduction which is adequate in most cases to be below the threshold of noise that would cause interference in avionics equipment.

e. It is important to remember that precipitation static problems can only be corrected with the proper number of quality static dischargers, properly installed on a properly bonded aircraft. P-static is indeed a problem in the all weather operation of the aircraft, but there are effective ways to combat it. All possible methods of reducing the effects of P-static should be considered so as to provide the best possible performance in the flight environment.

f. A wide variety of discharger designs is available on the commercial market. The inclusion of well-designed dischargers may be expected to improve airframe noise in P-static conditions by as much as 50 dB. Essentially, the discharger provides a path by which accumulated charge may leave the airframe quietly. This is generally accomplished by providing a group of tiny corona points to permit onset of corona-current flow at a low aircraft potential. Additionally, aerodynamic design of dischargers to permit corona to occur at the lowest possible atmospheric pressure also lowers the corona threshold. In addition to permitting a low-potential

discharge, the discharger will minimize the radiation of radio frequency (RF) energy which accompanies the corona discharge, in order to minimize effects of RF components at communications and navigation frequencies on avionics performance. These effects are reduced through resistive attachment of the corona point(s) to the airframe, preserving direct current connection but attenuating the higher-frequency components of the discharge.

g. Each manufacturer of static dischargers offers information concerning appropriate discharger location on specific airframes. Such locations emphasize the trailing outboard surfaces of wings and horizontal tail surfaces, plus the tip of the vertical stabilizer, where charge tends to accumulate on the airframe. Sufficient dischargers must be provided to allow for current-carrying capacity which will maintain airframe potential below the corona threshold of the trailing edges.

h. In order to achieve full performance of avionic equipment, the static discharge system will require periodic maintenance. A pilot knowledgeable of P-static causes and effects is an important element in assuring optimum performance by early recognition of these types of problems.

7-5-12. Light Amplification by Stimulated Emission of Radiation (Laser) Operations and Reporting Illumination of Aircraft

a. Lasers have many applications. Of concern to users of the National Airspace System are those laser events that may affect pilots, e.g., outdoor laser light shows or demonstrations for entertainment and advertisements at special events and theme parks. Generally, the beams from these events appear as bright blue-green in color; however, they may be red, yellow, or white. However, some laser systems produce light which is invisible to the human eye.

b. FAA regulations prohibit the disruption of aviation activity by any person on the ground or in the air. The FAA and the Food and Drug Administration (the Federal agency that has the responsibility to enforce compliance with Federal requirements for laser systems and laser light show products) are working together to ensure that operators of these devices do not pose a hazard to aircraft operators.

c. Pilots should be aware that illumination from these laser operations are able to create temporary vision impairment miles from the actual location. In addition, these operations can produce permanent eye damage. Pilots should make themselves aware of where these activities are being conducted and avoid these areas if possible.

d. Recent and increasing incidents of unauthorized illumination of aircraft by lasers, as well as the proliferation and increasing sophistication of laser devices available to the general public, dictates that the FAA, in coordination with other government agencies, take action to safeguard flights from these unauthorized illuminations.

e. Pilots should report laser illumination activity to the controlling Air Traffic Control facilities, Federal Contract Towers or Flight Service Stations as soon as possible after the event. The following information should be included:

1. UTC Date and Time of Event.
2. Call Sign or Aircraft Registration Number.
3. Type Aircraft.
4. Nearest Major City.
5. Altitude.
6. Location of Event (Latitude/Longitude and/or Fixed Radial Distance (FRD)).
7. Brief Description of the Event and any other Pertinent Information.

f. Pilots are also encouraged to complete the Laser Beam Exposure Questionnaire (See Appendix 3), and fax it to the Washington Operations Center Complex (WOCC) as soon as possible after landing.

g. When a laser event is reported to an air traffic facility, a general caution warning will be broadcasted on all appropriate frequencies every five minutes for 20 minutes and broadcasted on the ATIS for one hour following the report.

PHRASEOLOGY-

UNAUTHORIZED LASER ILLUMINATION EVENT, (UTC time), (location), (altitude), (color), (direction).

EXAMPLE-

“Unauthorized laser illumination event, at 0100z, 8 mile final runway 18R at 3,000 feet, green laser from the southwest.”

REFERENCE-

FAAO 7110.65, *Unauthorized Laser Illumination of Aircraft, Para 10-2-14.*

FAAO 7210.3, *Reporting Laser Illumination of Aircraft, Para 2-1-27.*

h. When these activities become known to the FAA, Notices to Airmen (NOTAMs) are issued to inform the aviation community of the events. Pilots should consult NOTAMs or the Special Notices section of the Airport/Facility Directory for information regarding these activities.

7-5-13. Flying in Flat Light and White Out Conditions

a. **Flat Light.** Flat light is an optical illusion, also known as “**sector or partial white out.**” It is not as severe as “white out” but the condition causes pilots to lose their depth-of-field and contrast in vision. Flat light conditions are usually accompanied by overcast skies inhibiting any visual clues. Such conditions can occur anywhere in the world, primarily in snow covered areas but can occur in dust, sand, mud flats, or on glassy water. Flat light can completely obscure features of the terrain, creating an inability to distinguish distances and closure rates. As a result of this reflected light, it can give pilots the illusion that they are ascending or descending when they may actually be flying level. However, with good judgment and proper training and planning, it is possible to safely operate an aircraft in flat light conditions.

b. **White Out.** As defined in meteorological terms, white out occurs when a person becomes engulfed in a uniformly white glow. The glow is a result of being surrounded by blowing snow, dust, sand, mud or water. There are no shadows, no horizon or clouds and all depth-of-field and orientation are lost. A white out situation is severe in that there are no visual references. Flying is not recommended in any white out situation. Flat light conditions can lead to a white out environment quite rapidly, and both atmospheric conditions are insidious; they sneak up on you as your visual references slowly begin to disappear. White out has been the cause of several aviation accidents.

c. **Self Induced White Out.** This effect typically occurs when a helicopter takes off or lands on a snow-covered area. The rotor down wash picks up particles and re-circulates them through the rotor down wash. The effect can vary in intensity depending upon the amount of light on the surface. This can happen on the sunniest, brightest day with

(a) (Airport/facility name) airport information.

(b) Phonetic alphabet designator.

(c) Special routing procedures in effect (when appropriate for the Ketchikan (KTN) area).

(d) Time of the AFIS preparation (UTC) followed by the word, "ZULU."

(e) Weather information consisting of: Wind, visibility, present weather (obstructions to visibility), sky condition, temperature, dew point, altimeter, pertinent remarks included in the official weather observation. The ceiling/sky condition, visibility, and obstructions to vision may be omitted if the ceiling is above 5,000 feet and the visibility is more than 5 miles.

EXAMPLE–

"The weather is better than five thousand and five."

(f) Favored runway and additional local information, as required.

(g) NOTAMs concerning local NAVAIDs and field conditions pertinent to flight.

EXAMPLE–

"Notice to Airmen, Iliamna NDB out of service."

"Transcribed weather broadcast out of service."

(h) Runway breaking action or friction reports when provided. Include the time of the report and a word describing the cause of the runway friction problem.

PHRASEOLOGY–

"RUNWAY (number) MU (first value, second value, third value) AT (time), (cause)."

REFERENCE–

FAAO JO 7110.10, Para 4–4–2, LAA/RAIS/RAA Elements and Phraseology.

(i) Low Level Wind shear (LLWS) advisory, including those contained in the terminal forecast and in pilot reports. (Include pilot report information at least 20 minutes following the report).

EXAMPLE–

"Low level wind shear is forecast."

(j) Unauthorized Laser Illumination Events. When a laser event is reported, include reported unauthorized laser illumination events on the AFIS broadcast for one hour following the last report. Include the time, location, altitude, color, and direction of the laser as reported by the pilot.

PHRASEOLOGY–

"UNAUTHORIZED LASER ILLUMINATION EVENT, (UTC time), (location), (altitude), (color), (direction)."

EXAMPLE–

"Unauthorized laser illumination event at zero one zero zero Zulu, eight-mile final runway one eight at three thousand feet, green laser from the southwest."

(k) Man-Portable Air Defense Systems (MANPADS) alert and advisory. Specify the nature and location of threat or incident, whether reported or observed and by whom, time (if known), and notification to pilots to advise ATC if they need to divert.

PHRASEOLOGY–

"MANPADS ALERT. EXERCISE EXTREME CAUTION. MANPADS THREAT/ATTACK/POST-EVENT ACTIVITY OBSERVED/REPORTED BY (reporting agency) (location) AT (time, if known). (When transmitting to an individual aircraft) ADVISE ON INITIAL CONTACT IF YOU WANT TO DIVERT."

EXAMPLE–

"MANPADS alert. Exercise extreme caution. MANPADS threat reported by TSA, Anchorage area. Advise on initial contact if you want to divert."

"MANPADS alert. Exercise extreme caution. MANPADS attack observed by flight service station one-half mile northwest of airfield at one-two-five-zero Zulu. Advise on initial contact if you want to divert."

NOTE–

1. Upon receiving or observing an unauthorized MANPADS alert/advisory, contact the Alaska Flight Service Information Area Group through the Alaskan Region Regional Operations Center (ROC).

2. Continue broadcasting the MANPADS alert/advisory until advised by national headquarters the threat is no longer present. Coordination may be through Alaska Flight Service Information Area Group or the Alaskan Region ROC.

REFERENCE–

FAAO JO 7210.3, Para 2–1–9, Handling MANPADS Incidents.

(l) Any other advisories applicable to the area covered by the FSS LAA.

(m) Local frequency advisory.

PHRASEOLOGY–

"CONTACT (facility name) RADIO ON (frequency) FOR TRAFFIC ADVISORIES."

(n) Instructions for the pilot to acknowledge receipt of the FSS AFIS message on initial contact.

EXAMPLE–

"Dillingham airport information ALFA. One six five five"

a. An En Route and Oceanic Operations Area Office transmittal memorandum containing a brief overview of the ATCAA, and/or changes to, FAA headquarters, System Operations Security; and System Operations Airspace and Aeronautical Information Management. Summarize the ATCAAs or any amendments made to ATCAAs including additional changes, etc.

b. A separate attachment that contains a description of the area to include latitude/longitude points, boundaries, altitudes, times, controlling agency, using agency, and any other relative information.

NOTE-

If only part of the description of an existing area is being amended, the attachment should show just the changed information rather than the full legal description.

c. A sectional aeronautical chart depicting the final boundaries of the proposed area, including any subdivisions.

d. Any other information that should be considered by FAA headquarters.

NOTE-

ATCAA descriptive data will normally be submitted 9 weeks prior to the requested/required airspace effective date.

2-1-26. SUBMISSION OF SUA AND PAJA FREQUENCY INFORMATION

The Aeronautical Information Services maintain a national database of Special Use Airspace (SUA) and Parachute Jump Area (PAJA) controlling sector contact information. The database is used to publish frequencies for pilots to obtain status information for SUAs and PAJAs. Facility managers should ensure

that the following information is forwarded to Aeronautical Information Services:

a. Contact frequencies for existing SUAs and PAJAs within your area of jurisdiction.

b. Any changes to contact frequencies for existing SUAs and PAJAs within your area of jurisdiction.

c. Contact frequencies for any new SUAs or PAJAs within your area of jurisdiction.

2-1-27. REPORTING UNAUTHORIZED LASER ILLUMINATION OF AIRCRAFT

All FAA Air Traffic Control facilities, Federal Contract Towers and Flight Service Stations shall report unauthorized laser illumination incidents through the Domestic Events Network (DEN), providing the following information:

a. UTC date and time of event.

b. Call Sign, or aircraft registration number.

c. Type of aircraft.

d. Nearest major city.

e. Altitude.

f. Location of event (e.g., latitude/longitude and/or Fixed Radial Distance (FRD)).

g. Brief description of the event.

h. Any other pertinent information.

NOTE-

Facilities without direct access to the DEN shall forward the information through the overlying TRACON or ARTCC facility.

REFERENCE-

FAAO JO 7110.65, Para 2-9-3, Content

FAAO JO 7110.65, Para 10-2-14, Unauthorized Laser Illumination of Aircraft,.

2-9-3. CONTENT

Include the following in ATIS broadcast as appropriate:

a. Airport/facility name, phonetic letter code, time of weather sequence (UTC). Weather information consisting of wind direction and velocity, visibility, obstructions to vision, present weather, sky condition, temperature, dew point, altimeter, a density altitude advisory when appropriate and other pertinent remarks included in the official weather observation. Wind direction, velocity, and altimeter shall be reported from certified direct reading instruments. Temperature and dew point should be reported from certified direct reading sensors when available. Always include weather observation remarks of lightning, cumulonimbus, and towering cumulus clouds.

NOTE-

ASOS/AWOS is to be considered the primary source of wind direction, velocity, and altimeter data for weather observation purposes at those locations that are so equipped. The ASOS Operator Interface Device (OID) displays the magnetic wind as "MAG WND" in the auxiliary data location in the lower left-hand portion of the screen. Other OID displayed winds are true and are not to be used for operational purposes.

b. Man-Portable Air Defense Systems (MANPADS) alert and advisory. Specify the nature and location of threat or incident, whether reported or observed and by whom, time (if known), and notification to pilots to advise ATC if they need to divert.

EXAMPLE-

1. "MANPADS alert. Exercise extreme caution. MANPADS threat reported by TSA, Chicago area." "Advise on initial contact if you want to divert."

2. "MANPADS alert. Exercise extreme caution. MANPADS attack observed by tower one-half mile northwest of airfield at one-two-five-zero Zulu." "Advise on initial contact if you want to divert."

REFERENCE-

FAAO JO 7110.65, Para 10-2-13, MANPADS Alert.
FAAO JO 7210.3, Para 2-1-9, Handling MANPADS Incidents.

c. Terminal facilities shall include reported unauthorized laser illumination events on the ATIS broadcast for one hour following the last report.

Include the time, location, altitude, color, and direction of the laser as reported by the pilot.

PHRASEOLOGY-

UNAUTHORIZED LASER ILLUMINATION EVENT, (UTC time), (location), (altitude), (color), (direction).

EXAMPLE-

UNAUTHORIZED LASER ILLUMINATION EVENT, AT 0100z, 8 MILE FINAL RUNWAY 18R AT 3,000 FEET, GREEN LASER FROM THE SOUTHWEST.

REFERENCE-

FAAO JO 7110.65, Para 10-2-14, Unauthorized Laser Illumination of Aircraft.

FAAO JO 7210.3, Para 2-1-27, Reporting Unauthorized Laser Illumination of Aircraft.

d. The ceiling/sky condition, visibility, and obstructions to vision may be omitted if the ceiling is above 5,000 feet and the visibility is more than 5 miles.

EXAMPLE-

A remark may be made, "The weather is better than five thousand and five."

e. Instrument/visual approach/s in use. Specify landing runway/s unless the runway is that to which the instrument approach is made.

f. Departure runway/s (to be given only if different from landing runway/s or in the instance of a "departure only" ATIS).

g. Taxiway closures which affect the entrance or exit of active runways, other closures which impact airport operations, other NOTAMs and PIREPs pertinent to operations in the terminal area. Inform pilots of where hazardous weather is occurring and how the information may be obtained. Include available information of known bird activity.

REFERENCE-

FAAO JO 7110.65, Para 2-1-22, Bird Activity Information.

h. Runway braking action or friction reports when provided. Include the time of the report and a word describing the cause of the runway friction problem.

PHRASEOLOGY-

RUNWAY (number) MU (first value, second value, third value) AT (time), (cause).

EXAMPLE-

"Runway Two Seven, MU forty-two, forty-one, twenty-eight at one zero one eight Zulu, ice."

REFERENCE-

FAAO JO 7110.65, Para 3-3-5, Braking Action Advisories.

10-2-14. UNAUTHORIZED LASER ILLUMINATION OF AIRCRAFT

a. When a laser event is reported to an air traffic facility, broadcast on all appropriate frequencies a general caution warning every five minutes for 20 minutes following the last report.

PHRASEOLOGY-

UNAUTHORIZED LASER ILLUMINATION EVENT, (location), (altitude).

b. Terminal facilities shall include reported unauthorized laser illumination events on the ATIS broadcast for one hour following the last report. Include the time, location, altitude, color, and direction of the laser as reported by the pilot.

NOTE-

All personnel can expect aircrews to regard lasers as an inflight emergency and may take evasive action to avoid laser illumination. Additionally, other aircraft may request clearance to avoid the area.

REFERENCE-

FAAO JO 7110.65, Para 2-9-3, Content.

FAAO JO 7210.3, Para 2-1-27, Reporting Unauthorized Laser Illumination of Aircraft.

10-2-15. EMERGENCY AIRPORT RECOMMENDATION

a. Consider the following factors when recommending an emergency airport:

1. Remaining fuel in relation to airport distances.
2. Weather conditions.

NOTE-

Depending on the nature of the emergency, certain weather phenomena may deserve weighted consideration when recommending an airport; e.g., a pilot may elect to fly farther to land at an airport with VFR instead of IFR conditions.

3. Airport conditions.
4. NAVAID status.
5. Aircraft type.
6. Pilot's qualifications.
7. Vectoring or homing capability to the emergency airport.

b. Consideration to the provisions of subpara a and para 10-2-16, Guidance to Emergency Airport, shall

be used in conjunction with the information derived from any automated emergency airport information source.

10-2-16. GUIDANCE TO EMERGENCY AIRPORT

a. When necessary, use any of the following for guidance to the airport:

1. Radar.
2. DF.
3. Following another aircraft.
4. NAVAIDs.
5. Pilotage by landmarks.
6. Compass headings.

b. Consideration to the provisions of para 10-2-15, Emergency Airport Recommendation, shall be used in conjunction with the information derived from any automated emergency airport information source.

10-2-17. EMERGENCY OBSTRUCTION VIDEO MAP (EOVM)

a. The EOVM is intended to facilitate advisory service to an aircraft in an emergency situation wherein an appropriate terrain/obstacle clearance minimum altitude cannot be maintained. It shall only be used and the service provided under the following conditions:

1. The pilot has declared an emergency, or
2. The controller has determined that an emergency condition exists or is imminent because of the pilot's inability to maintain an appropriate terrain/obstacle clearance minimum altitude.

NOTE-

Appropriate terrain/obstacle clearance minimum altitudes may be defined as Minimum IFR Altitude (MIA), Minimum En Route Altitude (MEA), Minimum Obstruction Clearance Altitude (MOCA), or Minimum Vectoring Altitude (MVA).

b. When providing emergency vectoring service, the controller shall advise the pilot that any headings issued are emergency advisories intended only to direct the aircraft toward and over an area of lower terrain/obstacle elevation.