

From: [REDACTED]
To: [REDACTED]
Subject: Fwd: CEN23LA350 (N288AE) - Additional Questions
Date: Thursday, August 17, 2023 10:03:24
Attachments: [image003.png](#)
[Outlook-cid_image0.png](#)
[AV0009 Ground Contact for Unimproved Landing Site.pdf](#)

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Mike,

Please see below.

Thx.

Sincerely,
Tony Bonham
VP of Aviation
Air Evac Lifeteam
C: [REDACTED]

From: Andresen, Clayton [REDACTED]
Sent: Thursday, August 17, 2023 8:57 AM
To: Bonham, Tony [REDACTED]
Cc: Jenkins - Chief Pilot AEL, Timothy [REDACTED]; Rosso, Christopher [REDACTED]; Sweeza, Daniel [REDACTED]; Giovannini, Michael [REDACTED]
Subject: Re: CEN23LA350 (N288AE) - Additional Questions

Tony,

Here are the answers: I've attached policy AV0009 to help answer the questions about ground communication with scene flights.

1. Was the helicopter equipped with a radar altimeter? **Yes**
2. If the helicopter was equipped with a radar altimeter, did the pilot use it during the approach and the landing? **Yes**
3. Was the helicopter equipped with a NVG compatible searchlight? **Yes**
4. If the helicopter was equipped with NVG compatible searchlight, did the pilot use it to aid in scanning the landing zone (LZ) and the surrounding area prior to landing? **Yes**
5. During the approach and the landing to the LZ, what was the configuration of the external position/strobe/anti-collision lights? **On**
6. Has Air Evac Lifeteam worked with this fire department before? Such as providing air medical training and performing missions? **Yes**
7. For the LZ consisting of the dirt road, did the fire department wet down the area prior to N288AE arriving to prevent dust being kicked up? **No**
8. For the LZ consisting of the dirt road, was there any dust that was kicked up during the approach and the landing from rotor wash that obscured the vision of the aircrew? **No**
9. Was there any external illumination on the LZ provided by the fire department (such as chemical sticks, flares, lighting from a ground vehicle, etc.)? **Yes**
10. If there was external illumination on the LZ, how were the lighting sources positioned? **Marking lights on East and West sides of LZ pointing towards the East.**
11. Was there anyone on the ground near the LZ at the time was providing obstacle clearance information to the pilot via radio communications? **Yes**
12. With the LZ that was selected by the fire department, prior to N288AE arriving, did they do a LZ size assessment for the Bell 206 series? **They gave an LZ brief via the radio. All LZ training, we provide in that area is 206 specific.**
13. Is there any company guidance about landing to a confined area like that, particularly with a road and positioning the helicopter a certain way (to avoid obstacles, but yet have the cabin door facing a certain way to facilitate patient loading and keep an eye on individuals approaching and departing underneath the main rotor disk)?

We have these policies:

5.11 NIGHT UNAIDED FLIGHT RESTRICTIONS AND RECENT FLIGHT EXPERIENCE (cont.)

B. The following risk mitigating requirements are as follows:

1. Night landings to unimproved sites when any component of the NVG system is inoperable are not permitted without Tier I OCC approval. Consideration will be given for landings to highly illuminated unimproved area such as football fields or parking lots. Normally, landings to an unimproved patient scene location (ex. roads, farms, yards, etc.) will not be approved. At the discretion of Tier I OCC, additional restrictions or limitations may be imposed based on the following factors:

- a. Pilot night unaided proficiency/experience.
- b. Pilot and crew member familiarity with the unimproved site.
- c. Weather.
- d. Illumination.

e. Terrain considerations.

f. Available external aircraft lighting.

C. When the NVG system is operable, utilization of NVGs while landing at both improved and unimproved sites is at the discretion of the pilot based on recent aided/unaided flight experience, familiarity of location, illumination (natural and manmade), etc., and the NVGs are mounted to the helmet and ready for use if required (emergency).

1. Improved site is defined as an area where improvements have been made specifically to assist the landing of an aircraft (ex. runway, helipads, PELA sites, etc.).

2. Unimproved site is defined as all sites that are not improved (ex. roads, highways, farms, yards, pastures, etc.).

D. AEEMS pilots will accept/decline a flight based on the premise that the flight will be conducted unaided. Once the flight is accepted, NVGs will be utilized to enhance the safety of the flight.

E. For all nighttime operations, both aided and unaided, the pilot must have visual surface light reference, sufficient to safely control the aircraft, as required by 14 CFR Part 135.207.

F. Recent flight experience (night):

1. The following two regulations can be met either aided or unaided considering the regulations only address the time of day the takeoffs and landings must occur, and not the amount of illumination or visual cues:

a. 14 CFR Part 61.57(b)(1): Recent flight experience: Pilot in command: Night takeoff and landing experience; and

b. 14 CFR Part 135.247(a)(2): Pilot qualifications: Recent experience.

G. It's encouraged, but not required, that 14 CFR Part 61.57(b)(1) and 14 CFR Part 135.247(a)(2) are met both aided and unaided.

H. The requirements of 14 CFR Part 61.57(f)(1)(i through v): Recent flight experience: Pilot in command: Night vision goggle operating experience, must also continue to be met.

I. All unaided takeoffs and landings to meet the night recent flight experience requirements will be conducted at a lighted improved site. While meeting this unaided requirement, the NVGs will be mounted on the helmet, placed in the up (stowed) position, and be ready for use if required.

J. During times when the NVG system may be deferred per the MEL/NEF (other than the goggles themselves), and the NVGs are not authorized, it is highly recommended that the NVGs are worn in the up (stowed) position in case they are needed during an emergency landing (ex. engine loss, fire, or other issues which may result in an emergency landing).

5.31 MINIMUM CLEARANCES

A. When taxiing, minimum clearance between the helicopter and another aircraft must be a distance great enough that the rotor downwash could not damage the control surfaces or blow an object into another aircraft.

B. Minimum clearances for all helicopters will be at least 1/3 of the rotor diameter between the rotor blade tips on rotor discs of operating helicopters, between the outboard tip of the rotor disc and any obstruction, and at a distance great enough not to create a hazard to persons or property on the ground in non-secured areas. Additional vigilance must be observed when landing in close proximity to another aircraft, especially at a hospital helipad or during scene operations.

14. I know with using NVGs, it can be hard at times with distance estimation and depth perception. Is the consensus with the aircrew is that they thought the fence that was impacted was perhaps farther away than it actually was during the landing? **Yes, discussed and agreed upon during all phases of flight.**

Thank you,
Clayton Andresen
Regional Director of Flight Operations
Air Evac EMS, (Region 7)

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From: Bonham, Tony [REDACTED]
Sent: Tuesday, August 15, 2023 4:08 PM
To: Andresen, Clayton [REDACTED]
Cc: Jenkins - Chief Pilot AEL, Timothy [REDACTED]; Rosso, Christopher [REDACTED]; Sweeza, Daniel [REDACTED]; Giovannini, Michael [REDACTED]
Subject: Fwd: CEN23LA350 (N288AE) - Additional Questions

Clayton,

I'll need all the answers to the below questions.

Thx.

Sincerely,
Tony Bonham
VP of Aviation
Air Evac Lifeteam
C: [REDACTED]

From: Hodges Michael [REDACTED]
Sent: Tuesday, August 15, 2023 4:04 PM
To: Bonham, Tony [REDACTED]
Cc: Alex.Q.Taylor@faa.gov [REDACTED]
Subject: EXT: CEN23LA350 (N288AE) - Additional Questions

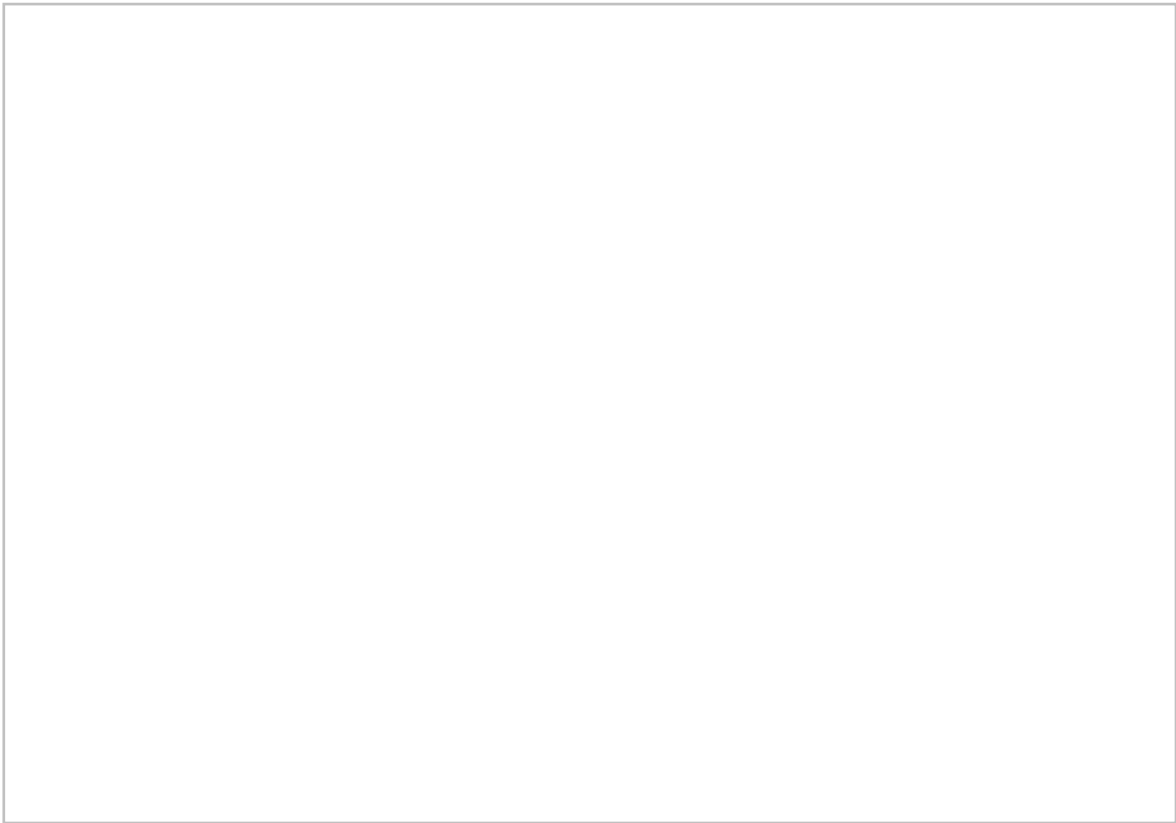
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Hi Tony,

I have a few additional questions please about the accident with N288AE.

1. Was the helicopter equipped with a radar altimeter?
2. If the helicopter was equipped with a radar altimeter, did the pilot use it during the approach and the landing?
3. Was the helicopter equipped with a NVG compatible searchlight?
4. If the helicopter was equipped with NVG compatible searchlight, did the pilot use it to aid in scanning the landing zone (LZ) and the surrounding area prior to landing?
5. During the approach and the landing to the LZ, what was the configuration of the external position/strobe/anti-collision lights?
6. Has Air Evac Lifeteam worked with this fire department before? Such as providing air medical training and performing missions?
7. For the LZ consisting of the dirt road, did the fire department wet down the area prior to N288AE arriving to prevent dust being kicked up?
8. For the LZ consisting of the dirt road, was there any dust that was kicked up during the approach and the landing from rotor wash that obscured the vision of the aircrew?
9. Was there any external illumination on the LZ provided by the fire department (such as chemical sticks, flares, lighting from a ground vehicle, etc.)?
10. If there was external illumination on the LZ, how were the lighting sources positioned?
11. Was there anyone on the ground near the LZ at the time was providing obstacle clearance information to the pilot via radio communications?
12. With the LZ that was selected by the fire department, prior to N288AE arriving, did they do a LZ size assessment for the Bell 206 series?

[Special Operations \(faa.gov\)](#)



13. Is there any company guidance about landing to a confined area like that, particularly with a road and positioning the helicopter a certain way (to avoid obstacles, but yet have the cabin door facing a certain way to facilitate patient loading and keep an eye on individuals approaching and departing underneath the main rotor disk)?
14. I know with using NVGs, it can be hard at times with distance estimation and depth perception. Is the consensus with the aircrew is that they thought the fence that was impacted was perhaps farther away than it actually was during the landing?

Thank you again for the help.

Mike

Mike J. Hodges, MS
Aviation Accident Investigator, Central Region
National Transportation Safety Board

14291 East 4th Avenue, Suite 7-300
Aurora, Colorado 80011

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Facsimile: [REDACTED]
Response Operations Center (24/7): 1-844-373-9922
Work Hours: Monday-Friday, 0900-1730 Central Time

“Don’t let yesterday use up too much of today.” – Will Rogers

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AIR EVAC EMS, INC.
POLICIES AND PROCEDURES

Policy Number: AV-0009
Title: Ground Contact for *Unimproved* Landing Site
Submitting Dept: Aviation
Effective Date: 4-1-04
Revision Date: 8-2-06; 3-1-08; 3-1-10; 3-1-13; **Revision Number:** 6
4-23-14; 7-1-19
Review Date: 8-2-06; 11-1-07; 3-1-08; 3-1-09; 5-1-09; 3-1-10; 3-1-11;
3-1-12; 3-1-13; 3-1-14; 4-23-14; 6-1-15; 6-1-16; 6-1-17;
7-1-18; 7-1-19
Disclosure Level: ☒ **Post to Policy Library** ☐ **Restricted For Viewing**

I. Purpose

To establish a policy for obtaining a ground contact for an *unimproved* landing site.

II. Policy

The Communications Specialist will provide the necessary information to assist the pilot with establishing a ground contact for all helicopter flights responding to an *unimproved* landing site; ex. scene vs. helipad.

III. Procedure

- A. Upon receiving a request for a scene flight, the Communications Specialist will:
1. Determine from the requesting agency the unit designator or unit number for the ground contact.
 2. Obtain the ground contact frequency.
 3. When the helicopter is en route to the scene, advise the pilot of the ground contact, unit number, frequency, and any other pertinent landing instructions. ***Whenever possible, the crew will communicate with those on the ground for daytime flights. For nighttime flights, the crew must make contact with the ground prior to landing.**
 4. In the event the helicopter and requesting agency are not able to use a compatible frequency, the Communications Specialist will relay all pertinent information from the ground contact, to the pilot, via appropriate radio frequencies, or telephone patch.
 5. For all night scene landings *to an unimproved landing site*, communication with the ground personnel will be established before the approach is made. Ground communication may be relayed through CENCOM (Communications Center). If communication is not established,

the pilot will land in a known open area, free of obstacles, or abort the patient transport.

B. Pilot in Command

1. The Pilot in Command will always have the final authority as to the acceptance of the landing site.
2. If proper suitability cannot be determined through visual reference, and in the absence of ground contact, the pilot may elect another landing site or abort the landing and make other arrangements for pick-up.