

NPA 2018-04
Helicopter emergency medical services performance and public interest sites

Commentor:	UK CAA
<p>Page No: Various</p> <p>Paragraph No: Various</p> <p>Comment: This RMT was originally introduced to bring forward the JAA TGL 43 “Conduct of mountain HEMS/air-rescue by an AOC holder when requirements of JAR-OPS 3 cannot be met”. Part of the debate going back for over 10 years has been about the various differing operating principles for providing medical help and assistance to persons in need in the more remote and difficult areas of Europe and especially in mountainous regions. These principles vary between the established concept of HEMS and the more varied and flexible concept of helicopter Search and Rescue (SAR). HEMS is basically CAT with specifically approved alleviations whilst SAR is a <u>State</u> activity managed by individual Member States. Problems of interpretation and possibly expectation occur when the two are merged either intentionally or not. For this reason, it is strongly recommended that with regards to HEMS, the term “<u>rescue</u>” is not used but replaced by a similar one to ensure that the two disciplines are kept separate.</p> <p>Therefore, it is proposed that an alternative term, such as “HEMS Recovery” is introduced instead of any reference to ‘rescue’ when appropriate to the activities expounded and throughout the NPA. It could be defined as:</p> <p>HEMS Recovery <i>An operation conducted under a HEMS approval to recover persons in distress, provide for their initial medical or other needs and deliver them to a place of safety.</i></p> <p>Justification: The prevention of confusion and operational expectation in the provision of HEMS activities in accordance with the Air Operations regulation and SAR activities conducted under State regulation.</p> <p>Proposed Text: Insert proposed definition of HEMS Recovery and amend all references throughout the proposal where appropriate from “rescue operations other than SAR operations” to ‘HEMS recovery operations’.</p>	

Commentor:	UK CAA
<p>Page No: 14</p> <p>Paragraph No: 2.3.2.4, final paragraph</p> <p>Comment: Whilst the need to adjust the oxygen requirements for high altitude operations is understood, it is considered essential that the proposals are reviewed and agreed by a specialist panel of medical specialists to ensure that unintended safety issues have not been introduced.</p> <p>Justification: To ensure safety of operations at high altitudes with appropriate human physiological effects are truly considered</p>	

Commentor:	UK CAA

Page No: 17/18

Paragraph No: 2.3.3.5, sub-paragraph entitled 'Stabilisation platforms'

Comment: Whilst this principle is strongly supported, it is recommended that it should be incorporated into CAT.IDE.H.135 - single-pilot operations under IFR - which should be extended to include "at night" and therefore be applicable to all single pilot CAT operations including HEMS. Additional AMC might be added to support stabilisation features too.

Justification: Safety of CAT operations

Proposed Text: Amend CAT.IDE.H.135

CAT.IDE.H.135 Additional equipment for single-pilot operation under IFR *or at night*

Helicopters operated under IFR ***or at night*** with a single-pilot shall be equipped with an autopilot with at least altitude hold and heading mode.

Commentor:	UK CAA
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Page No: 21

Paragraph No: 3.2, sub-paragraph 4 (b)(i)

Comment: As mentioned in a previous UK CAA comment, it is considered that the use of the term "rescue" in the HEMS context is liable to introduce confusion and uncertainty. We recommend change to 'recovery' or 'retrieval' to differentiate between the two disciplines. This principle should be reflected throughout the NPA and appropriate changes made to the affected text.

Justification: Clarity of operations and regulations

Proposed Text:

(b) to perform any operation where either:

(i) a person is at imminent or anticipated health risk from the environment and needs to be ~~rescued~~ **recovered** or provided with supplies; or

Commentor:	UK CAA
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Page No: 22

Paragraph No: 3.5, sub-paragraph 2

Comment: A small text change is recommended as proposed below.

Justification: Improved grammar

Proposed Text:

If the operator conversion training ~~doesn't~~ **does not** include training in the aircraft/FSTD,

Commentor:	UK CAA
<p>Page No: 23</p> <p>Paragraph No: 3.6, sub-paragraph 2(e)</p> <p>Comment: A revision to the text is recommended as proposed below.</p> <p>Justification: Clarity and readability</p> <p>Proposed Text:</p> <p>(e) <i>If the technical crew member holds a</i> class 2 or LAPL medical certificate issued in accordance with Commission Regulation (EU) No 1178/20117, <i>then this would meet</i> meets these requirements.</p>	

Commentor:	UK CAA
<p>Page No: 25</p> <p>Paragraph No: 3.7, sub-paragraph 3(b)(2)</p> <p>Comment: The current regulation determines that the performance alleviation under CAT.POL.H.420 – PC3 over uncongested hostile environments - is not applicable to HEMS operations. The NPA proposes to delete this paragraph and so potentially allow PC3 for HEMS under any CA approved circumstances. There is no discussion or justification provided to support this change which is potentially a major reduction in safety for what is already a higher risk activity. It may be that due to the proposal to allow PC3 with Cat A helicopters above 10,000 feet density altitude for specific HEMS operations, a change here was thought appropriate. However, this may be better dealt with in SPA.HEMS.125.</p> <p>The UK CAA does not support the change as presented but would accept either the proposed text below which puts the amendment into context and provides constraint on its interpretation or a derogation provided in SPA.HEMS.125. The latter would probably be more appropriate as the HEMS Approval would constitute the approval necessary under CAT.POL.H.420 specifically for this type of operation.</p> <p>Justification: Unsupported and unacceptable reduction in safety of operations although possibly introduced as a result of unintended consequences.</p> <p>Proposed Text: If not changed in SPA.HEMS.125, amend as follows:</p> <p>(b) To obtain and maintain such approval, the operator shall:</p> <p>(1) only conduct these operations in the areas and under the conditions specified in the approval;</p> <p>(2) <i>not conduct these operations under a HEMS approval except in accordance with SPA.HEMS.125(a);</i></p>	

Commentor:	UK CAA
Page No: 26	

Paragraph No: 3.8, sub-paragraph 1(a)

Comment: A small text change is proposed below to improve readability.

Justification: Grammar

Proposed Text:

(a) 9.3 km (5 NM) to be increased to 10 NM if the navigational accuracy cannot be met ~~in~~ **for** 95 % of the total flight time; or

Commentor:	UK CAA
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Page No: 26

Paragraph No: 3.8, sub-paragraph 2(b) & (c)

Comment: In sub-paragraph (b), following the reference to SERA, the correct terminology should be “as authorised by the competent authority” not ‘approved by’. This is in accordance with SERA.5005(c)(5).

We believe sub-paragraph (c) is superfluous here under CAT as the conditions for HEMS should be contained in the SPA.HEMS. We recommend sub-paragraph (c) is deleted and the sentence underneath it is amended as shown below.

Justification: Clarity and context.

Proposed Text:

GM1 CAT.POL.H.215(a)(3)
RELEVANT TERRAIN AND OBSTACLES IN VFR

All terrain and obstacles along the route within the following distance on either side of the intended track should be considered:

- (a) for day VFR, the distances specified in SERA.5005(f);
- (b) for night VFR, the distances specified in SERA.5005(c), or as ~~approved~~ **authorised** by the competent authority;
- ~~(c) for night VFR in HEMS, the distances specified in SPA.HEMS.120(d).~~

~~The helicopter speed should be reduced accordingly.~~

The helicopter should be manoeuvred at a speed that will give adequate opportunity to observe any obstacles in time to avoid a collision.

Commentor:	UK CAA
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Page No: 28

Paragraph No: 3.8, sub-paragraph 3(d)(6)(i)

Comment: An amendment to the text is recommended as proposed below, for readability and correctness.

Justification: Clarity

Proposed Text:

(i) The required performance level of 8 % climb gradient in the first segment required by point CAT.POL.H.225(a)(5) reflects ICAO Annex 14 Volume II in 'Table 4-3 'Dimensions and slopes of obstacle limitations surfaces' for performance class 2. It was established as a means of mitigating performance issues. ~~This requirement is retained as it~~ **and** defines a proportionate mass penalty at such sites, thereby applying an additional performance margin to such operations **in the interests of safety**.

Commentor:

UK CAA

Page No: 28

Paragraph No: 3.8, sub-paragraph 4(c)

Comment: A text change is proposed below for correctness

Justification: Grammar

Proposed Text:

(c) The oxygen-dispensing unit should be approved in accordance with Commission Regulation (EU) No 748/2012 and may consist ~~in~~ **of** a nasal oxygen cannula.

Commentor:

UK CAA

Page No: 29

Paragraph No: 3.9, sub-paragraph 2(b)(5)

Comment: We recommend that the word "and" should be added at the end of sub-paragraph (5), as shown below, as this list is inclusive.

Justification: Completeness and editorial

Proposed Text:

(5) HEMS HEC specific SOPs shall be developed according to a risk assessment conducted by the operator; **and**

Commentor:

UK CAA

Page No: 29

Paragraph No: 3.9, sub-paragraph 3(c)

Comment: In the discussion of Option 3 on page 14, the intention was to align oxygen requirements for a MOPSC of **6** or less. In the draft proposal this is indicated as a MOPSC of **9** or less. It is not clear or substantiated which is intended but the alleviation should only be applied if the number of people onboard and affected is controlled and reduced. In the interests of safety and personal

exposure, it is recommended that the MOPSC for complex helicopters involved in high altitude HEMS operations and not using the CAT.IDE.H.240 oxygen requirements is restricted to 6.

It is recommended that the derogation text should be amended as necessary once the intended MOPSC has been determined.

Justification: The intended alleviation for oxygen equipment and use in complex helicopters conducting high altitude HEMS operations is inconsistent with the discussion and explanation. A clearly argued and justified proposal should be provided.

Commentor:	UK CAA
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Page No: 30

Paragraph No: 3.9, sub-paragraph 3(d)(9) & (10)

Comment: The hypoxia training and medical status is relevant not only to pilots but also to the HEMS technical crew member who is part of the crew when carried and necessary for single-pilot operations. We recommend that sub-paragraphs (9) & (10) are amended to reflect this. Additionally the word 'and' is added at the end of sub-paragraph (9).

Justification: Editorial and relevance of safety training for other crew members.

Proposed Text:

(9) hypoxia training for all pilots **and HEMS technical crew members** involved; **and**
(10) the absence of a medical condition that could lead to hypoxia, for the pilots **and HEMS technical crew members** involved.

Commentor:	UK CAA
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Page No: 30

Paragraph No: 3.9, sub-paragraph 3(f)

Comment: The additional IFR instruments to be required for HEMS by day are agreed but the Vertical Speed indication mentioned under CAT.IDE.H.130(a)(4) for IFR is already required under CAT.IDE.H.125(a)(1)(v) so can be deleted.

Justification: Relevance.

Proposed Text:

(f) For HEMS operations by day, the helicopter shall be equipped with the flight instruments required under CAT.IDE.H.130~~(a)(4)~~, (a)(6) and (a)(7).

Commentor:	UK CAA
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Page No: 30

Paragraph No: 3.9, sub-paragraph 4(a)

Comment: The proposal has moved the HEMS Operating Minima, previously listed under Table 1, from the rule to AMC. The revised paragraph (a) now states that:

(a) *HEMS flights operated under VFR ~~in performance class 1 and 2~~ shall comply with the HEMS specific ~~the~~ weather minima ~~in Table 4~~ for dispatch and en-route phase of the HEMS flight.*

The main problem now is that there are no longer any “HEMS specific weather minima” to comply with, only those proposed in the AMC. This is not a correct concept and the operating minima should be reinstated back in the rule. These are fundamental safety barriers and are already lower than standard CAT requirements so should be properly regulated.

We believe the proposal should be withdrawn and the construct returned to the current form, albeit the detail of the minima may be amended as intended.

Additionally, there is no clear indication as to what types of airspace these minima are acceptable for but it is expected that only Class F or G would be appropriate. This should be made clear in the regulation.

Justification: Inappropriate and disconnected requirements that must be elevated back to the regulatory level. An intention to use a form of performance basis for this rule is inappropriate here.

Commentor:	UK CAA
Page No: 31	
Paragraph No: 3.9, sub-paragraph 5(a) & (c)	
Comment: For sub-paragraph (a) to align with CAT.OP.MPA.181 (current), the destination alternate requirements should include “and navigating by means other than by reference to visual landmarks.”	
Sub-paragraph (c), should be amended to include the word “and” at the end as this list is inclusive.	
Justification: Alignment of regulations	
Proposed Text:	
(a) the flight is operated under IFR <i>or when flying under VFR and navigating by means other than by reference to visual landmarks;</i>	
(c) two published instrument approaches with independent navigation aids are available at the aerodrome of intended landing; and	

Commentor:	UK CAA
Page No: 31	
Paragraph No: 3.9, sub-paragraph 6(a)	
Comment: Further to the UK CAA comments made about the changes to CAT.POL.H.420 on Page 25, paragraph 3.7, sub-paragraph (b)(2), it is recommended that the text of SPA.HEMS.125(a) be amended to provide for PC3 operations over a hostile environment above 10,000 ft with Cat A	

helicopters. At sub-paragraph (b) a derogation against CAT.POL.H.400(d)(2) is already proposed and sets a suitable precedent. By introducing a derogation here, the HEMS approval will in effect provide the necessary approval otherwise required under CAT.POL.H.420.

Justification: Placing a derogation in this section provides the necessary control on the alleviated performance requirements in an appropriate context.

Proposed Text: In preference to any change at CAT.POL.H.420, amend proposed change here as shown:

(a) **By way of derogation from CAT.POL.H.420(b)(2)**, Performance class 3 operations over a hostile environment shall only be conducted when a HEMS operating site used for take-off, landing or HEMS HEC operations is located above 10 000 ft density altitude and with a helicopter certified as Category A or equivalent as determined by the Agency.

Commentor:	UK CAA
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Page No: 32

Paragraph No: 3.9, sub-paragraph 6(c)(3)

Comment: An editorial suggestion is proposed below.

Justification: Improved readability.

Proposed Text:

3) ~~Unless performance class 3 criteria can be used~~ **Except** in accordance with (a) above, helicopters ~~Helicopters~~ conducting operations to/from a HEMS operating site located in a hostile environment shall be operated in accordance with performance class 2 and be exempt from the approval required by CAT.POL.H.305(a), provided compliance is shown with CAT.POL.H.305(b)(2) and (b)(3).

Commentor:	UK CAA
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Page No: 32

Paragraph No: 3.9, sub-paragraph 7(a)

Comment: An editorial suggestion to retain the original text is proposed below.

Justification: Improved readability

Proposed Text:

(a) *Selection.* The operator shall establish criteria for the selection of flight crew members for the HEMS task, taking ~~prior~~ **previous** experience into account.

Commentor:	UK CAA
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Page No: 33

Paragraph No: 3.9, sub-paragraphs 7(d)(1)(i)(C) & (ii)

Comment: After sub-paragraph (C), we recommend there should be an “or” inserted as the items in this list are exclusive.

In sub-paragraph (ii), there is reference to SPA.HERMS.120 and Table 1 which has been proposed to be moved to AMC. However, as previously commented, we believe this is incorrect and that the operating minima must be in the rule. The connectivity should be reviewed after the regulation has been addressed.

Justification: Editorial and correct references.

Proposed Text:

(C) the medical passenger requires the assistance of the HEMS technical crew member in flight; **or**

Commentor:	UK CAA
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Page No: 33

Paragraph No: 3.9, sub-paragraph 7(e)(2)(ii)

Comment: A correction to the reference is proposed below, to reflect the renumbering of paragraphs

Justification: Accuracy

Proposed Text:

(ii) The measures referred to in ~~(f)(2)(i)~~ **(e)(2)(i)** shall be assessed during both of the following:

Commentor:	UK CAA
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Page No: 34

Paragraph No: 3.9, sub-paragraph 8(b)

Comment: An editorial suggestion is made below to improve readability.

Justification: Clarity

Proposed Text:

(b) Relevant extracts from the operations manual shall be made available to the organisation for which the HEMS **operations** are is being provided.

Commentor:	UK CAA
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Page No: 39

Paragraph No: 3.10, sub-paragraph 3(g)

Comment: It is not clear why the HEMS HEC check should be done every 2 years instead of annually. We recommend this check should be aligned with other checks in accordance with ORO.FC.230.

Justification: Alignment of checks and proficiency.

Proposed Text:

(g) A pilot involved in HEMS HEC operations should complete a flight check at least ~~every 2 years~~ **annually** to demonstrate competence in carrying out HEMS HEC operations. The checking may be combined with the line check or with a HEC training flight.

Commentor:	UK CAA
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Page No: 39

Paragraph No: 3.10, sub-paragraph 4

Comment: An editorial suggestion is proposed below to provide an appropriate level of compliance.

Justification: Proportionality

Proposed Text:

MOVING MAP DISPLAYS

A moving map display may be **at least** any of the following:

Commentor:	UK CAA
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Page No: 39

Paragraph No: 3.10, sub-paragraph 5

Comment: It is considered that the operator should seek expert medical guidance when determining conditions and limitations for individuals to fly at high altitudes without supplementary oxygen.

Justification: Safety of operations and personnel.

Proposed Text:

SHORT EXCURSIONS ABOVE 13 000 FT WITHOUT OXYGEN

If the operator or an individual crew member has no experience in flying without oxygen above 13 000 ft, then the operator should set, based on a risk assessment, operating conditions or individual limitations for crew members to progressively gain experience and adapt to altitude. ***The operator should seek appropriate expert medical guidance when setting such conditions or limitations.***

Commentor:	UK CAA
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Page No: 39

Paragraph No: 3.10, sub-paragraph 6

Comment: The CAA supports the intention to require suitable SAS or autopilot equipment for single-pilot night operations, but as previously commented against paragraph 3.9, 3(e) believes this should be achieved by amending CAT.IDE.H.135 to include both IFR and night conditions. This would enhance the safety of all CAT operations and reflects that which has been required by the UK for public transport operations (including JAR-OPS 3 operations) for over 15 years following fatal accident safety recommendations.

Justification: Improvement in safety standards for all CAT single-pilot IFR and night operations and standardisation of equipment.

Commentor:	UK CAA
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Page No: 39/40

Paragraph No: 3.10, sub-paragraph 7

Comment: As has been commented on previously, we believe the “HEMS operating minima” needs to be moved back under SPA.HEMS.120 as a rule and not AMC. These are specific minima which all operators should abide by in order to retain an acceptable level of safety performance whilst conducting HEMS, and are generally below the requirements set out in SERA.

Justification: The minima should be laid down in a rule and not left as AMC in operations already subject to wider alleviation than pure CAT and SERA.

Commentor:	UK CAA
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Page No: 40

Paragraph No: 3.10, sub-paragraph 7, Table 1

Comment: Cloud ‘ceiling’ is defined in SERA as:

‘Ceiling. Means the height above the ground or water of the base of the lowest layer of cloud below 6 000 metres (20 000 feet) covering more than half the sky.’

It should be recognised that, with any ceiling there exists a probability that there will be cloud below the forecast, or observed, level and it will not be possible to sustain the specified in-flight visibility unless ‘clear of cloud’. This is accounted for in SERA.5001 by the stipulation that the aircraft remains ‘clear of cloud and with the surface in sight’. It might be necessary to add a ‘note’ to the visibility column making this stipulation.

The ceiling is a dispatch criteria for the departure site (arrival site). Unless the departure site exists on a hill, the en-route VFR operating minima (established below) of 300ft will not be met. There should be a note in the AMC indicating that observance of the minimum levels of flight would be difficult, in the required visibility. (This is especially the case when the en-route ceiling is given with reference to AMSL.)

NVIS criteria is a matter for the NVIS SPA approval and might cause confusion here if not cross-referenced in SPA.NVIS.

Justification: Clarity of intent and purpose.

Commentor: UK CAA

Page No: 40

Paragraph No: 3.10, sub-paragraph 7, Table 1, Day, Ceiling 499-300 ft

Comment: With the minimum separation height of 300 ft as proposed in HEMS VFR MINIMA: DISTANCE TO OBSTACLES, we believe this ceiling is too low. The minimum ceiling should be 500 ft to ensure the aircraft remains clear of cloud and in sight of the surface with the necessary visibility and separation.

Justification: Maintenance of adequate safety margins for CAT/HEMS in realistic situations.

Proposed Text:

Amend DAY Ceiling to two categories: Above 500 ft, and 500 ft.

Commentor: UK CAA

Page No: 40

Paragraph No: 3.10, sub-paragraph 7, Table 1, Night

Comment: Whilst the introduction of NVIS and Non-NVIS minima here is understood, there is a possibility of confusion arising with SPA.NVIS and the various approvals. We recommend that this is reviewed and if necessary resolved.

However, there should in fact be no difference between with and without NVIS, as no specific credit should be allowed for the use of NVIS as if a failure occurred, for instance, the pilot must be able to continue safely unaided. This anyway is part of the NVIS approval, not HEMS, and we believe deserves further consideration and justification.

Justification: Alignment with other regulations and clarity of purpose.

Commentor: UK CAA

Page No: 40

Paragraph No: 3.10, sub-paragraph 7, Table 2

Comment: The table is not entirely clear with the intended distances and it is suggested that the presentation could be improved as proposed below.

Justification: Clarity

Proposed Text:

Table 2

Reduced HEMS operating minima when instructed to 'proceed VFR' following an instrument		
X is the distance between the missed approach point (MAPt) and the heliport or operating site		
X	Visibility	Ceiling
< 1 000 m	1 000 m	MDH
≥ 1 000 m but ≤ 3 000M	X m	MDH
≥ 3 001 m but ≤ 5 000M	3 000 m	MDH

Commentor:	UK CAA	
Page No: 41		
Paragraph No: 3.10, sub-paragraph 7, Table 3		
Comment: Similarly to UK CAA comment on Table 2, it is suggested that Table 3 could be improved as proposed below.		
Justification: Clarity		
Proposed Text:		
<p>Table 3 Reduced HEMS operating minima when instructed to 'proceed VFR' prior to an IFR</p>		
X is the distance between the heliport or operating site and the initial departure fix (IDF)		
X	Visibility	Ceiling
< 1 500 m	X m	Crossing height at IDF
≥ 1 500 m but ≤ 3 000	3 000 m by night 1 500 m by day	Crossing height at IDF

Commentor:	UK CAA
Page No: 41	
Paragraph No: 3.10, sub-paragraph 7 (a) &(b), HEMS VFR MINIMA: DISTANCE TO OBSTACLES	
Comment: Sub-paragraphs (a) and (b) both set prescribed minima and should be in the rule and not AMC; indeed, they state that operations “shall only be performed”.	
<p>Additionally, the text of sub-paragraph (a) reflects SERA.5005(f)(1) but is not quite the same, which could introduce confusion, and sub-paragraph (b) seems to conflict with SERA.5005(c)(5) with regards to State minima which is still applicable. Where a distance is mentioned in feet, it should also be referenced in metres for consistency (300 ft for instance). The safety requirements of SERA.3105 in respect of not permitting undue hazard are still applicable and in some States additional requirements such as not allowing take-offs or landings in a congested area without prior CA approval needs to be recognised.</p>	
Maintaining continuous sight of the surface is also a necessary factor and should be highlighted.	

Another factor that should be captured, especially for this proposal, is operations in the mountains and any additional safety margins that should be applied. SERA.5005 again refers to mountain operations at (c) and these should be considered.

Justification: Consistency and clarity.

Commentor: UK CAA

Page No: 42

Paragraph No: 3.10, sub-paragraph 11

Comment: The AMC reference needs alignment with the correct sub-paragraph of SPA.HEMS.125 and should be shown as '(c)(4)'.

Sub-paragraph (a) as revised restates the safety objective of SPA.HEMS.125(c) and is considered not helpful. We believe the previous text should be retained and modified as shown below along with a new sub-paragraph (b) for NVIS operations. The illumination requirements listed on Page 45 should be added to this AMC as a sub-section of AMC1 SPA.HEMS.125(c)(4) and will be proposed separately.

Justification: Accuracy and improved means of compliance to ensure adequate levels of safety are maintained and not lost.

Proposed Text: Amend to:

AMC1 SPA.HEMS.125(4) Performance requirements for HEMS operations

HEMS OPERATING SITE DIMENSIONS

(a) ***When selecting a HEMS operating site, it should be of sufficient size, shape and clear of obstacles to provide for safe operations and have a minimum dimension of at least 2 x D (the largest dimensions of the helicopter when the rotors are turning).***

(b) ***For night operations with NVIS, un-surveyed HEMS operating sites should have dimensions of at least 4 x D in length and 2 x D in width.***

~~(b) For night operations, the illumination may be either from the ground or from the helicopter. Covered by new AMC/GM~~

~~(c) For night operations without NVIS, the pre-surveyed HEMS operating site dimensions should be at least 2 x D. Incorporated in (a) already.~~

Commentor: UK CAA

Page No: 43

Paragraph No: 3.10, sub-paragraph 14, Heading and (f)

Comment: The Heading does not refer to the correct regulation sub-paragraph number and should be amended as shown below.

We believe the sub-heading "RECENCY" is now redundant and should be deleted.

At sub-paragraph (f) it is suggested that a currency requirement for the IR is introduced to ensure appropriate qualification for meeting training standards.

Justification: Accuracy and necessary qualifications.

Proposed Text:

AMC1 SPA.HEMS.130(d) Crew requirements

RECENCY

(f) The instrument training should be conducted by a FI/TRI/SFI **holding a current IR** and should be sufficient for the pilot to demonstrate competence in the following manoeuvres:

Commentor: UK CAA

Page No: 44

Paragraph No: 3.10, sub-paragraph 15, Heading and (a)(4) & (5)

Comment: The Heading does not refer to the correct regulation sub-paragraph number and should be amended as shown below.

At sub-paragraph (a)(4), it is not clear who is responsible for any "risk assessment" and it is recommended that this is clarified to ensure consistency and safety.

At sub-paragraph (a)(5) the statement "the commander decides so" is not a clear statement as such and it is recommended that the leading paragraph is revised as shown below, including other minor changes and sub-paragraph (5) is deleted.

Justification: Clarification and assignment of responsibilities to ensure safety performance is met.

Proposed Text:

AMC1 SPA.HEMS.130(d) Crew requirements

(a) When the crew is composed of one pilot and one HEMS technical crew member, the latter should be seated in the front seat (co-pilot seat) during the flight. However, the HEMS technical crew member may be seated in the cabin **at the discretion of the commander, and in accordance with procedures in the operations manual** if all of the following conditions are met:

- (1) the HEMS technical crew member is also an HHO technical crew member;
- (2) the helicopter is equipped with a hoist;
- (3) the flight is conducted to or from a HEMS operating site; **and**
- (4) a risk assessment (**by whom?**) determines that the technical crew member can carry out his or her primary tasks from the cabin; this risk assessment may determine that the rear door(s) needs (need) to remain open for better visibility **if the RFM permits such operation.**

~~(5) the commander decides so.~~

Commentor: UK CAA

Page No: 45

Paragraph No: 3.10, sub-paragraphs 17 and 18

Comment: It is not clear why the AMC and GM which refer to Illumination of HEMS operating sites are linked to SPA.HEMS.130 which is to do with Crew Requirements. This may be a formatting error but it is recommended that the two be aligned and suitably merged with AMC1 SPA.HEMS.125(c)(4) as previously mentioned. This then would bring together the lighting as indicated under SPA.HEMS.125(c)(4).

Justification: Correctness and consistency

Commentor: UK CAA

Page No: 47

Paragraph No: 3.10, sub-paragraph 20, Heading and references

Comment: The Heading does not refer to the correct regulation sub-paragraph numbers and should be amended as shown below. An amendment to the heading is also proposed.

Justification: Accuracy

Proposed Text: Amend to:

HEMS TECHNICAL CREW MEMBER TRAINING AND CHECKING SYLLABUS

INITIAL AND RECURRENT TRAINING COVERING PRIMARY TASKS

(as defined in AMC2 1 SPA.HEMS.130(ed), paragraph (b), in SPA.HEMS.130(fe)(2) and in SPA.HEMS.155)

Commentor: UK CAA

Page No: 48

Paragraph No: 3.10, sub-paragraph 20(b)

Comment: An amendment to the reference is proposed below to correctly align the material.

Justification: Accuracy

Proposed Text:

NAVIGATION TRAINING

(as defined in AMC1 SPA.HEMS.130(ed), paragraph (b)(1) and (b)(2) (navigation))

Commentor: UK CAA

Page No: 49

Paragraph No: 3.10, sub-paragraph 20 (c)

Comment: Amendments to the references are proposed below to correctly align with the material. Additionally, it is suggested that reference might be made to the point that if the HTC is expected to communicate on the radio he/she may require a radio telephony licence.

Justification: Accuracy

Proposed Text:

COMMUNICATION TRAINING
(as defined in AMC1 SPA.HEMS.130(ed), paragraph (bc)(2) (communications))

Commentor:	UK CAA
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Page No: 50

Paragraph No: 3.10, sub-paragraph 20(i)(2)

Comment: A small editorial amendment is proposed below to improve readability

Justification: Editorial

Proposed Text:

(2) Line flights under supervision provide the opportunity for a HEMS technical crew member to practice the procedures and techniques he or she should be familiar with, regarding ground and flight operations, including any elements that are specific to a particular helicopter type. Upon completion of the line flying under supervision, the HEMS technical crew member should be able to safely conduct his or her **the** flight operational duties assigned to him or her according to the procedures laid down in the operator's operations manual.