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Title	Fuel planning and management — Sub-NPA 2016-06 (B) 'Helicopters — Annex I (Definitions), Part-CAT, Part-SPA, Part-NCC, Part-NCO & Part-SPO'
NPA Number	NPA 2016-06(B)

UK CAA (European.Affairs@caa.co.uk) has placed **36** unique comments on this NPA:

Cmt#	Segment description	Page	Comment	Attachments
39	(General Comments)	0	<p>Page No: General Comment</p> <p>Paragraph No: Repeated text throughout document</p> <p>Comment: The word "minutes" has been reduced to the term 'min' throughout the document, and in NPA 2016-06(A) and (C) as well. It is recommended that in the interests of readability and to prevent incorrect interpretation, the full spelling "minutes" is used throughout.</p> <p>Justification: Clarity of meaning.</p>	
40	Notice of Proposed Amendment 2016-06(B) — Fuel planning and management — Sub-NPA 2016-06(B) 'Helicopters — Annex I (Definitions), Part-CAT, Part-SPA, Part-NCC, Part-NCO & Part-SPO' — General comments	1 - 3	<p>Page No: 1</p> <p>Paragraph No: Executive Summary</p> <p>Comment: In the Executive Summary for this sub-NPA the intentions for the NPA are described. The intention to align fuel policies across Annexes, where possible, is understood as is the need for proportionality and convergence with ICAO Annex 6. However, after reviewing all elements of the NPA, and in particular parts (B) and (C), the proposal to align Part-SPO with Part-NCC introduces significant issues and is not supported. Due to the wide range of activities to be conducted as specialised operations with all levels of motor powered aircraft, it is not appropriate to impose prescriptive fuel requirements on operators. The more performance based approach taken for Part-NCO is considered to be a practical and proportionate means of setting the safety standards for SPO. It is therefore strongly recommended that a further review is undertaken to address the inconsistencies that will inevitably arise if the proposed fuel provisions are taken forward.</p> <p>There is also inconsistency evident between the separate parts of this NPA, in particular with regards to the adoption of fuel policies which adds to the difficulties in assessing proportionality and appropriateness.</p> <p>Justification: The achievement of practical and reasonable fuel policies for the whole range of flying activities covered by the regulation. Imposing unrealistic and prescriptive requirements, especially for specialised operations, will incur unacceptable constraints and most probably non-compliance.</p>	
41	3. Proposed amendments — 3.4. Draft	10 - 15	<p>Page No: 10/11</p> <p>Paragraph No: 3.4 / 2, CAT.OP.MPA.150</p>	

regulation (draft opinion) — Part-CAT

Comment: The proposed text for CAT.OP.MPA.150 has, to some extent, been transposed from an AMC and uses incorrect emphasis for a rule. Additionally, terms are used that differ from the text proposed for aeroplanes. It is recommended that “reserve fuel” is not used and that “extra” and “discretionary” are used in the same way as for CAT.OP.MPA.181 for consistency and standardisation. Additionally, and to further align with aeroplanes, it is recommended that the FRF should be ‘on arrival at’ rather than ‘on arrival above’ the aerodrome, albeit this is different from ICAO Annex 6 Pt III.

Justification: Consistency of terminology for CAT and correct emphasis for rules.

Proposed Text: Amend the proposal as indicated:

CAT.OP.MPA.150 Fuel policy — helicopters

(...)

(c) The operator shall ensure that the pre-flight calculation of usable fuel required for a flight includes:

(1) taxi fuel, which ~~should~~ **shall** not be less than the amount expected to be used prior to take-off;

(2) trip fuel;

~~(3) reserve fuel consisting of:~~

(i) ~~(3)~~ **(3)** contingency fuel, which ~~should~~ **shall** be the amount of fuel required to compensate for unforeseen factors;

(ii) ~~(4)~~ **(4)** *destination* alternate fuel, if a destination alternate aerodrome is required;

(iii) ~~(5)~~ **(5)** final reserve fuel, which ~~should~~ **shall not** be *less than*:

(A) for visual flight rules (VFR) flights navigating by day with reference to visual landmarks, ~~20-min~~ **minutes** fuel at best-range speed; or

(B) when flying VFR and navigating by means other than by reference to visual landmarks or at night, ~~30-min~~ **minutes** fuel at best-range speed; or

(C) for instrument flight rules (IFR) flights, ~~30-min~~ **minutes** fuel at holding speed at 1 500 ft (450 m) above the aerodrome elevation in standard conditions calculated according to the estimated mass on arrival ~~above~~ **at** the destination alternate or **at** the destination when no destination alternate is required; and

~~(iv)~~ ~~(6)~~ **(6)** additional fuel, if required by the type of operation; ~~and~~

(7) extra fuel ~~if required by the commander~~ **to take into account anticipated delays or specific operational constraints; and.**

(8) discretionary fuel, if required by the commander.

(d) The operator shall ensure that in-flight replanning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination aerodrome other than originally planned includes:

(...)

(e) **Notwithstanding** ~~As an alternative to~~ paragraphs (b) to (d) above, for helicopters with an MCTOM of 3 175 kg or less, by day and over routes navigated by reference to visual landmarks, or for local helicopter operations(LHOs), the fuel policy shall ensure that,

			<p>on completion of the flight, or series of flights, the final reserve fuel is sufficient for:</p> <p>(1) 30 minutes of flying time at best-range speed; or</p> <p>(2) 20 minutes of flying time at best-range speed when operating within an area providing continuous and suitable precautionary landing sites.</p>	
42	3. Proposed amendments — 3.4. Draft regulation (draft opinion) — Part-CAT	10 - 15	<p>Page No: 14</p> <p>Paragraph No: 3.4 / 5, CAT.OP.MPA.153(c)</p> <p>Comment: The proposed text appears to have been copied from elsewhere and the terms “commander” and “pilot in command” used confusingly. For CAT operations, the term should be ‘Commander’. We recommend the text should be adjusted as shown below.</p> <p>Justification: Consistency and correct use of terminology.</p> <p>Proposed Text:</p> <p>(c) The commander shall declare an emergency when the actual usable fuel on board is less than final reserve fuel. The pilot-in-command commander shall advise the air traffic control (ATC) of a minimum fuel state by declaring MINIMUM FUEL when, having committed to land at an aerodrome or operating site, the pilot commander calculates that any change to the existing clearance to that aerodrome or operating site, or other air traffic delays, may result in landing with less than the planned final reserve fuel.</p>	
43	3. Proposed amendments — 3.4. Draft regulation (draft opinion) — Part-CAT	10 - 15	<p>Page No: 14</p> <p>Paragraph No: 3.4 / 6, CAT.OP.MPA.154</p> <p>Comment: CAT.OP.MPA.182, to be renumbered 154, was published in CR(EU) 2106/1199 with associated AMC/GM in Decision 2016/015/R. The text proposed in this NPA differs from that published and seems to reflect the AMC not the rule, and is in effect elevating the AMC to a rule without justification. It is suggested that this may be an oversight and unintended proposal which will introduce difficulties into the CAT regulations and is not reflected in the other Annexes. It is recommended that this proposal is deleted and the current published text of CAT.OP.MPA.182 retained.</p> <p>Justification: Probable unintended proposal to published rule text and over restrictive effect on CAT rules.</p>	
44	3. Proposed amendments — 3.4. Draft regulation (draft opinion) — Part-CAT	10 - 15	<p>Page No: 15</p> <p>Paragraph No: 3.4 / 7, CAT.OP.MPA.197</p> <p>Comment: It is recommended that sub-paragraphs (b), (c) and (d) are placed into AMC to support (e) which should be the requiring rule and amended as shown. It is also not clear how approval will be achieved. Suggested text provided.</p> <p>Justification: Clarification of requirement and method of compliance and approval.</p>	

			<p>Proposed Text:</p> <p>Move sub-paragraphs (b) to (d) to AMC and amend sub-paragraph (e) as follows: .</p> <p>(eb) The operator shall ensure that the helicopter refuelling procedures with engine and/or rotors running and any change thereto shall be are specified in the operations manual and require prior approval has been granted by the competent authority.</p>	
45	3. Proposed amendments — 3.5. Draft AMC and GM (draft decision) — Part-CAT	15 - 22	<p>Page No: 16</p> <p>Paragraph No: 3.5 / 1, AMC1 CAT.OP.MPA.150(b), sub-paragraph (a)(4) and (6)</p> <p>Comment: The following amendments are recommended:</p> <p>At (4), amend the text to include “destination” in front of ‘alternate fuel’.</p> <p>At (6), amend the text to reflect that used for CAT aeroplanes as regards “extra fuel” and “discretionary fuel”.</p> <p>Justification: Consistency of terminology.</p> <p>Proposed Text:</p> <p>“(4) destination alternate fuel, should be:</p> <p>(.....)</p> <p>(6) extra fuel, which should be at the discretion of the commander to take into account anticipated delays or specific operational constraints; and</p> <p>(7) discretionary fuel, if required by the commander.”</p>	
46	3. Proposed amendments — 3.5. Draft AMC and GM (draft decision) — Part-CAT	15 - 22	<p>Page No: 19</p> <p>Paragraph No: 3.5 / 7, AMC2 CAT.OP.MPA.195</p> <p>Comment: We believe the proposed text is poorly worded and unclear in its intent. It does not meet the requirements for an AMC. It is strongly recommended that the original text as in AMC1 CAT.OP.MPA.195, both the general part at sub paragraphs (a) and (b) and the helicopter part at (d) are retained and put into a revised AMC2. Alternatively, AMC1 could be retained unchanged.</p> <p>Justification: Relevance and clarity of meaning/intent</p>	
47	3. Proposed amendments — 3.5. Draft AMC and GM (draft decision) — Part-CAT	15 - 22	<p>Page No: 20</p> <p>Paragraph No: 3.5 / 8, AMC1 CAT.OP.MPA.197(b)</p> <p>Comment: It is recommended that the paragraph be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. A suggested form of words is provided.</p>	

			<p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>(b) — In addition, operational procedures to be described in the operations manual should specify that at least the following precautions are taken:</p> <p>“(b) The operational procedures specified in the operations manual should cover at least the following factors:”</p>	
48	3. Proposed amendments — 3.5. Draft AMC and GM (draft decision) — Part-CAT	15 - 22	<p>Page No: 21</p> <p>Paragraph No: 3.5 / 9, AMC2 CAT.OP.MPA.197</p> <p>Comment: It is recommended that the paragraphs be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. Suggested amendments are provided.</p> <p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>“(a) In addition to AMC1 CAT.OP.MPA.197, for refuelling with passengers on board, operational procedures to be described specified in the operations manual specify cover at least the following factors precautions are taken:</p> <p>(1) the way positioning of the helicopter should be positioned related in relation to the wind and refuelling facilities or vehicles should be defined, whenever practicable, together with the corresponding helicopter evacuation strategy;</p> <p>(2) on a heliport, the ground area beneath the exits intended for emergency evacuation should be kept clear;</p> <p>(3) additional passenger briefing and instructions should be defined, and the need for ‘No smoking’ signs should to be on;</p> <p>(4) the setting of interior lighting should be set to enable identification of emergency exits;</p> <p>(5) the use of doors during refuelling should be defined on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open unless otherwise specified in the aircraft flight manual (AFM);</p> <p>(6) one qualified person the provision of at least one suitable person capable of handling emergency procedures concerning fire protection and including fire fighting, handling communications, and initiating and directing an evacuation who should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and</p> <p>(7) unless passengers are regularly trained in emergency</p>	

			evacuation procedures, the provision of an additional crew member or ground crew member should be assigned to assist in the rapid evacuation of the passengers.”
74	3. Proposed amendments — 3.7. Draft AMC and GM (draft decision) — Part-SPA	23	<p>Page No: 23</p> <p>Paragraph No: 3.7 / 1, new AMC1 SPA.HOFO.110(a)(4)</p> <p>Comment: This is not required as the operator will still be using Part-CAT, Part-NCC or Part-SPO and the procedures will be already there. We recommend this should be deleted.</p> <p>Justification: Simplification</p>
49	3. Proposed amendments — 3.8. Draft regulation (draft opinion) — Part-NCC	23 - 24	<p>Page No: 23</p> <p>Paragraph No: 3.8, Part-NCC</p> <p>Comment: General Comment. Whilst reviewing NPA 2016-06(C), it was noted that NCC.OP.130 (Fuel and oil supply – aeroplanes) will be amended to some extent and separate comments have been made. However, NCC.OP.131 (Fuel and oil supply – helicopters) has not been proposed to be changed. It is recommended that the changes in NPA 2016-06(C) and the UK CAA proposals for NCC.OP.130(b) and (c) are reviewed against NCC.OP.131 for consistency and application, particularly with regards to the establishment of a fuel policy by the operator. It does not seem appropriate for there to be a difference. AMC and GM should also be aligned as far as possible as there is none currently provided or proposed for helicopters.</p> <p>Justification: Alignment of procedures and policy.</p> <p>Proposed Text: Use similar text as proposed by UK CAA for amended NCC.OP.130 and its AMC/GM is recommended.</p>
50	3. Proposed amendments — 3.8. Draft regulation (draft opinion) — Part-NCC	23 - 24	<p>Page No: 23</p> <p>Paragraph No: 3.8 / 1, NCC.OP.157(a)(1)</p> <p>Comment: We believe the term ‘Technical Crewmember’ is inappropriate for NCC, and should be deleted.</p> <p>Justification: Correct terminology.</p>
51	3. Proposed amendments — 3.8. Draft regulation (draft opinion) — Part-NCC	23 - 24	<p>Page No: 23/24</p> <p>Paragraph No: 3.8 / 1, NCC.OP.157</p> <p>Comment: It is recommended that sub-paragraphs (b), (c) and (d) are placed into AMC to support (e) which should be the requiring rule and be amended as shown. It is not clear how “prior approval by the competent authority” can be achieved for NCC operators. Recommend delete this element as reflected in SPO.OP.157.</p> <p>Justification: Clarification of requirement and method of compliance and approval.</p>

			<p>Proposed Text:</p> <p>Move sub-paragraphs (b) to (d) to AMC and amend sub-paragraph (e) as follows:</p> <p>(eb) The operator shall ensure that the helicopter refuelling procedures with engine and/or rotors running and any change thereto shall be are specified in the operations manual.</p>	
52	3. Proposed amendments — 3.8. Draft regulation (draft opinion) — Part-NCC	23 - 24	<p>Page No: 24</p> <p>Paragraph No: 3.8 / 2, NCC.OP.205(b)</p> <p>Comment: The use of the term “to a site” may be misinterpreted and it is recommended that the text is amended to read ‘aerodrome or operating site’. Also the use of the phrase “shall be made” is inappropriate and it is recommended that it is replaced with the ICAO text of ‘can be made’.</p> <p>Justification: Clarity and correct use of defined terminology</p> <p>Proposed Text:</p> <p>(b) The pilot in command shall monitor the amount of usable fuel to ensure that it is not less than the fuel required to proceed to an aerodrome or operating site where a safe landing shall can be made with the planned final reserve fuel remaining.</p>	
53	3. Proposed amendments — 3.9. Draft AMC and GM (draft decision) — Part-NCC	24 - 29	<p>Page No: 25</p> <p>Paragraph No: 3.9 / 2, AMC2 NCC.OP.155</p> <p>Comment: The proposed text is poorly worded and unclear in its intent. It does not meet the requirements for an AMC. It is strongly recommended that the original text as in AMC1 NCC.OP.155, both the general part at subparagraphs (a) and (b) and the helicopter part at (d) are retained and put into a revised AMC2. Alternatively, AMC1 could be retained unchanged. This is a similar comment as for AMC2 CAT.OP.MPA.195.</p> <p>Justification: Relevance and clarity of meaning/intent</p>	
54	3. Proposed amendments — 3.9. Draft AMC and GM (draft decision) — Part-NCC	24 - 29	<p>Page No: 26</p> <p>Paragraph No: 3.9 / 3, AMC1 NCC.OP.157(b)</p> <p>Comment: It is recommended that the paragraph be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. A suggested form of words is provided.</p> <p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>(b) — In addition, operational procedures to be described in the operations manual should specify that at least the following</p>	

			precautions are taken: (b) The operational procedures specified in the operations manual should cover at least the following factors:	
55	3. Proposed amendments — 3.9. Draft AMC and GM (draft decision) — Part-NCC	24 - 29	<p>Page No: 26</p> <p>Paragraph No: 3.9 / 4, AMC2 NCC.OP.157</p> <p>Comment: It is recommended that the paragraphs be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. Suggested amendments are provided. In addition, the paragraph numbering needs to be corrected.</p> <p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>(a) In addition to AMC1 NCC.OP.157, for refuelling with passengers on board, operational procedures to be described specified in the operations manual should specify cover that at least the following factors precautions are taken:</p> <p>(11)(1) the way positioning of the helicopter should be positioned related in relation to the wind and refuelling facilities or vehicles should be defined, whenever practicable, together with the corresponding helicopter evacuation strategy;</p> <p>(12)(2) on a heliport, the ground area beneath the exits intended for emergency evacuation should be kept clear;</p> <p>(13)(3) additional passenger briefing and instructions should be defined, and the need for 'No smoking' signs should to be on;</p> <p>(14)(4) the setting of interior lighting should be set to enable identification of emergency exits;</p> <p>(15)(5) the use of doors during refuelling should be defined on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open unless otherwise specified in the aircraft flight manual (AFM);</p> <p>(16)(6) one qualified person the provision of at least one suitable person capable of handling emergency procedures concerning fire protection and including fire fighting, handling communications, and initiating and directing an evacuation who should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and</p> <p>(17)(7) unless passengers are regularly trained in emergency evacuation procedures, the provision of an additional crew member or ground crew member should be assigned to assist in the rapid evacuation of the passengers.</p>	
56	3. Proposed amendments — 3.9. Draft AMC	24 - 29	<p>Page No: 27</p> <p>Paragraph No: 3.9 / 5, GM1 NCC.OP.157</p>	

	and GM (draft decision) — Part-NCC		<p>Comment: We believe the reference to “Helicopter Emergency medical Service (HEMS)” in first paragraph is inappropriate for NCC and should be deleted.</p> <p>Justification: Accuracy and relevance.</p>	
57	3. Proposed amendments — 3.9. Draft AMC and GM (draft decision) — Part-NCC	24 - 29	<p>Page No: 28</p> <p>Paragraph No: 3.9 / 6, GM1 NCC.OP.205(b)&(d), Note.</p> <p>Comment: It is not clear why the definition of “Safe Landing” is included here as there is a proposal in NPA 2016-06 (A) on page 31 to include it in Annex 1 Definitions. Either, Annex 1 is amended with a definition for all other Annexes, or the Note is retained.</p> <p>In addition, the term “Precautionary Landing is used in this GM without definition. It is recommended that the definition of a “precautionary landing”, as shown in proposed GM1 NCO.OP.185(b)&(c) sub-paragraph (c) on page 34, is added here as well or included in Annex 1 for use in all Annexes.</p> <p>Justification: Standardisation of terms and definitions.</p>	
58	3. Proposed amendments — 3.9. Draft AMC and GM (draft decision) — Part-NCC	24 - 29	<p>Page No: 28</p> <p>Paragraph No: 3.9 / 7, GM1 NCC.OP.205(c)</p> <p>Comment: The term “Precautionary Landing is used in this GM without definition. It is recommended that the definition of a “precautionary landing”, as shown in proposed GM1 NCO.OP.185(b)&(c) sub-paragraph (c) on page 34, is added here as well or included in Annex 1 for use in all Annexes.</p> <p>Justification: Standardisation of terms and definitions.</p>	
59	3. Proposed amendments — 3.10. Draft regulation (draft opinion) — Part-NCO	29 - 32	<p>Page No: 29</p> <p>Paragraph No: 3.10 / 1, NCO.OP.125(a)</p> <p>Comment: The new section at (a) is supported but the term ‘guaranteed’ is not considered appropriate in this context as this is a planning stage and the ‘completion of a flight’ cannot be totally predicted. It is recommended that the section is amended as shown below.</p> <p>Justification: Reasonable terminology for the intent of the rule.</p> <p>Proposed Text:</p> <p>(a) The pilot-in-command shall ensure that the quantity of energy/fuel and oil carried on board is sufficient to guarantee that for the intended flight is to be completed safely, taking into account the meteorological conditions, any element affecting the performance of the aircraft, and any delays that are expected in flight, with an allowance for contingencies that may reasonably be expected to affect the flight.</p>	

60	3. Proposed amendments — 3.10. Draft regulation (draft opinion) — Part-NCO	29 - 32	<p>Page No: 29</p> <p>Paragraph No: 3.10 / 1, NCO.OP.125(b)</p> <p>Comment: It is appreciated that there is an ambition to allow a degree of flexibility in the establishment of a Final Reserve Fuel but its planning mentioned here seems to have become very confused with the other fuel planning elements such as 'contingency' as stated in sub-paragraph (a). It is strongly recommended that this section be re-written as shown and that the relevant material be expanded in AMC/GM.</p> <p>Justification: Clarity of purpose and intent.</p> <p>Proposed Text:</p> <p>(b) The pilot-in-command shall plan a quantity of fuel/energy to be protected as final reserve fuel/energy in order to ensure a safe landing. when unforeseen occurrences may not permit safe completion of an operation as originally planned. In determining the quantity of the final reserve fuel/energy, the pilot-in-command shall take into account:</p> <p>(1) — the severity of the hazard to persons or property that may result from an emergency landing after fuel/energy starvation;</p> <p>(2) — the terrain in which such an emergency landing is made;</p> <p>(3) — the weather conditions at and close to the destination/alternate aerodrome;</p> <p>(4) — the precision of the measurement and calculation of fuel/energy expected on board at the end of the flight;</p> <p>(5) — the availability of alternative landing options; and</p> <p>(6) — the likelihood of unexpected circumstances that might prevent or delay a safe landing at the end of the intended flight;</p>
61	3. Proposed amendments — 3.10. Draft regulation (draft opinion) — Part-NCO	29 - 32	<p>Page No: 32</p> <p>Paragraph No: 3.10 / 5, NCO.SPEC.140</p> <p>Comment: We believe the text as written is not as clear as it could be to achieve the aim. We recommended the version provided below. Also deletion of the reference to NCO.OP.126(a) leads to ambiguity of which rule to operate to; this should be reinstated.</p> <p>Justification: Clarity of intent.</p> <p>Proposed Text:</p> <p>NCO.SPEC.140 Fuel and oil supply — helicopters</p> <p><i>Notwithstanding NCO.OP.126(a)(1), the</i> The pilot-in-command of a helicopter may only commence a VFR flight by day when remaining within 25 NM of the aerodrome/operating site of departure, with a final reserve fuel of not less than 10 minutes at best-range-speed.</p>
62	3. Proposed amendments — 3.11. Draft AMC and GM (draft	32 - 34	<p>Page No: 32</p> <p>Paragraph No: 3.11 / 1, AMC1 NCO.OP.125(b)</p>

	decision) — Part-NCO		<p>Comment: We believe the first sentence should be amended to include 'fuel/energy' as shown below.</p> <p>Justification: Clarity.</p> <p>Proposed Text: The final reserve <i>fuel/energy</i> quantity should be no less than required to fly:</p>	
63	3. Proposed amendments — 3.11. Draft AMC and GM (draft decision) — Part-NCO	32 - 34	<p>Page No: 33</p> <p>Paragraph No: 3.11 / 5, GM1 NCO.OP.125(b)(6)</p> <p>Comment: We believe this GM should be deleted as it provides no useful information that is not obvious.</p> <p>Justification: Superfluous information.</p>	
64	3. Proposed amendments — 3.11. Draft AMC and GM (draft decision) — Part-NCO	32 - 34	<p>Page No: 34</p> <p>Paragraph No: 3.11 / 8, GM1 NCO.OP.185(b)&(c), sub-paragraph (a), Note</p> <p>Comment: As written the 'Note' is confusing with its mention of CAT. It is recommended that this sentence be amended as shown.</p> <p>Justification: Clarity of information</p> <p>Proposed Text:</p> <p>Note: as for CAT, the final reserve fuel is always 30 min, but for Part-NCO operators, the final reserve varies from 10 to 45 minutes; therefore, the air traffic control (ATC) may not be aware of the amount of the remaining fuel/energy <i>and therefore endurance</i>.</p>	
65	3. Proposed amendments — 3.11. Draft AMC and GM (draft decision) — Part-NCO	32 - 34	<p>Page No: 34</p> <p>Paragraph No: 3.11 / 8, GM1 NCO.OP.185(b)&(c), sub-paragraph (c)</p> <p>Comment: The definition of "Precautionary Landing" is useful here but as previously mentioned might be better placed in Annex 1 Definitions rather than being repeated.</p> <p>Justification: Clarity of information</p>	
66	3. Proposed amendments — 3.12. Draft regulation (draft opinion) — Part-SPO	34 - 36	<p>Page No: 34</p> <p>Paragraph No: 3.12 / 1, SPO.OP.131</p> <p>Comment: It is strongly recommended that this section be amended for alignment with SPO.OP.130 for aeroplanes, or amalgamation with that section, as separately proposed by the UK CAA in response to NPA 2016-06(C), particularly with regard to the establishment of a 'fuel policy' and the amended Final Reserve Fuel requirements – FRF is not mentioned in the present SPO.OP.131. The section enforces constraints on SPO activities which would be better managed by the operator using a performance based rule with</p>	

			comprehensive AMC/GM to support it. Justification: The proposal introduces requirements that cannot be met when considering the whole range of SPO activities. A more proportionate set of requirements, possibly based on the performance principles use in the proposed Part-NCO requirements should be assigned. Proposed Text: See UK CAA response to NPA 2016-06(C), SPO.OP.130.	
67	3. Proposed amendments — 3.12. Draft regulation (draft opinion) — Part-SPO	34 - 36	Page No: 35 Paragraph No: 3.12 / 2, SPO.OP.157 Comment: It is recommended that sub-paragraphs (b), (c) and (d) are placed into AMC to support (e) which should be the requiring rule and be amended as shown below. Justification: Clarification of requirement and method of compliance and approval. Proposed Text: Move sub-paragraphs (b) to (d) to AMC and amend sub-paragraph (e) as follows: (e b) The operator shall ensure that the helicopter refuelling procedures with engine and/or rotors running and any change thereto shall be are specified in the operations manual.	
68	3. Proposed amendments — 3.12. Draft regulation (draft opinion) — Part-SPO	34 - 36	Page No: 36 Paragraph No: 3.12 / 3, SPO.OP.190, (b) Comment: The use of the term “to a site” may be misinterpreted and it is recommended that the text is amended to read ‘aerodrome or operating site’. Also the use of the phrase “shall be made” is inappropriate and it is recommended that it is replaced with the ICAO text of ‘can be made’. Justification: Clarity and correct use of defined terminology Proposed Text: (b) The pilot in command shall monitor the amount of usable fuel to ensure that it is not less than the fuel required to proceed to an aerodrome or operating site where a safe landing shall can be made with the planned final reserve fuel remaining.	
69	3. Proposed amendments — 3.12. Draft regulation (draft opinion) — Part-SPO	34 - 36	Page No: 36 Paragraph No: 3.12 / 3, SPO.OP.190, sub-paragraphs (c)&(d) Comment: Due to the nature of SPO activities, the proposed text and procedures may lead to an unnecessary level of confusion and misreporting of fuel conditions. It is likely that many	

			<p>SPO flights will not be in controlled airspace or be using ATC so it is strongly recommended that for Part-SPO the proposed text for Part-NCO as at NCO.OP.185 is used instead. This would be more appropriate and proportional.</p> <p>Justification: Proportionate and appropriate procedures and terminology</p> <p>Proposed Text: Delete proposed sub-paragraphs (c) and (d) and replace with:</p> <p>(c) <i>The pilot-in-command of a controlled flight shall advise the air traffic control (ATC) of a minimum fuel/energy state by declaring MINIMUM FUEL when, having committed to land at a specific aerodrome or operating site, the pilot calculates that any change to the existing clearance to land at that aerodrome or operating site, or other air traffic delays, may result in landing with less than the final reserve fuel/energy.</i></p> <p>(d) <i>The pilot-in-command of a controlled flight shall declare a situation of fuel/energy emergency by broadcasting MAYDAY MAYDAY MAYDAY FUEL when the usable fuel/energy estimated to be available upon landing at the nearest site where a safe landing can be made in accordance with normal operating procedures is less than the planned final reserve fuel/energy.</i></p>	
70	3. Proposed amendments — 3.13. Draft AMC and GM (draft decision) — Part-SPO	36 - 40	<p>Page No: 37</p> <p>Paragraph No: 3.13 / 2, AMC2 SPO.OP.155</p> <p>Comment: In a similar way as for comments on AMC2 NCC.OP.155 and AMC2 CAT.OP.MPA.195, we believe that the proposed text is poorly worded and unclear in its intent. It does not meet the requirements for an AMC. It is strongly recommended that the original text as in AMC1 SPO.OP.155 (b) is retained and put into a revised AMC2. Alternatively, AMC1 could be retained unchanged. Additionally, the considerations stated for aeroplanes is more comprehensive and worthy of review against the helicopter requirements.</p> <p>Justification: Relevance and clarity of meaning/intent</p>	
71	3. Proposed amendments — 3.13. Draft AMC and GM (draft decision) — Part-SPO	36 - 40	<p>Page No: 37</p> <p>Paragraph No: 3.13 / 3, AMC1 SPO.OP.157(b)</p> <p>Comment: It is recommended that the paragraph be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. A suggested form of words is provided below.</p> <p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>(b) — In addition, operational procedures to be described in the operations manual should specify that at least the following precautions are taken:</p>	

(b) The operational procedures specified in the operations manual should cover at least the following factors:

72	3. Proposed amendments — 3.13. Draft AMC and GM (draft decision) — Part-SPO	36 - 40	<p>Page No: 38</p> <p>Paragraph No: 3.13 / 4, AMC2 SPO.OP.157</p> <p>Comment: It is recommended that the paragraphs be re-worded to clarify the purpose of the AMC as regards to meeting the operational procedures required by the rule. Suggested amendments are provided below.</p> <p>Justification: Clarification and format for meeting the requirements.</p> <p>Proposed Text:</p> <p>In addition to AMC1 SPO.OP.157, for refuelling with passengers on board, operational procedures to be described specified in the operations manual should specify cover at least the following factors precautions are taken:</p> <p>(a) the way positioning of the helicopter should be positioned related in relation to the wind and refuelling facilities or vehicles should be defined, whenever practicable, together with the corresponding helicopter evacuation strategy;</p> <p>(b) on a heliport, the ground area beneath the exits intended for emergency evacuation should be kept clear;</p> <p>(c) additional passenger briefing and instructions should be defined, and the need for 'No smoking' signs should to be on;</p> <p>(d) the setting of interior lighting should be set to enable identification of emergency exits;</p> <p>(e) the use of doors during refuelling should be defined on the refuelling side should remain closed, while doors on the opposite side should remain unlocked or, weather permitting, open unless otherwise specified in the aircraft flight manual (AFM);</p> <p>(f) one qualified person the provision of at least one suitable person capable of handling emergency procedures concerning fire protection and including fire fighting, handling communications, and initiating and directing an evacuation who should remain at a specified location; this person should not be the qualified pilot at the controls or the person performing the refuelling; and</p> <p>(g) unless passengers are regularly trained in emergency evacuation procedures, the provision of an additional crew member or ground crew member should be assigned to assist in the rapid evacuation of the passengers.</p>
73	3. Proposed amendments — 3.13. Draft AMC and GM (draft decision) —	36 - 40	<p>Page No: 39</p> <p>Paragraph No: 3.13 / 6, GM1 SPO.OP.190(b)&(d)</p> <p>Comment: The term "Precautionary Landing is used in</p>

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this GM without definition. It is recommended that the definition of a "precautionary landing", as shown in proposed GM1 NCO.OP.185(b)&(c) sub-paragraph (c) on page 34, is added here as well or included in Annex 1 for use in all Annexes.

Justification: Standardisation of terms and definitions.