



**COMMENT-RESPONSE DOCUMENT (CRD)
TO NOTICE OF PROPOSED AMENDMENT (NPA) 2012-06**

for an Opinion of the European Aviation Safety Agency

for a Commission Regulation amending Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

and

for a Decision of the Executive Director of the European Aviation Safety Agency

amending Decision 2012/017/R of the Executive Director of the European Aviation Safety Agency of 24 October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

'Acceptable Means of Compliance and Guidance Material to Part-ORO';

amending Decision 2012/018/R of the Executive Director of the European Aviation Safety Agency of 24 October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

'Acceptable Means of Compliance and Guidance Material to Part-CAT'; and

amending Decision 201x/xxx/R of the Executive Director of the European Aviation Safety Agency of xx Month 201x on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council

'Acceptable Means of Compliance and Guidance Material to Part-NCC, Part-NCO and Part-SPO';

Sterile Flight Deck Procedures

Executive Summary

The Agency's Notice of Proposed Amendment (NPA) 2012-06 on 'Sterile flight deck procedures' was published in July 2012 on the Agency's website. After the end of the comment period in October 2012, the Agency had received 134 comments from 25 National Aviation Authorities, professional organisations, and private companies. It can be concluded that some very valuable proposals for changes to the draft regulatory text of the NPA have been suggested by the commentators. However, no major revision of the text is needed.

This Comment-Response Document (CRD) contains the Agency's responses to the 134 comments (see Section V). In addition, in the Explanatory Note of this CRD, the major issues and also the proposals for changes are discussed (see Section IV). The revised regulatory text is presented at the end of the CRD (see Section VI).

In the NPA, the Agency asked the question whether taxiing of aeroplanes should be defined as a 'critical phase of flight' or not. The majority of the commentators, who responded to the question, stated that taxiing should not be defined as a 'critical phase of flight', but should be treated as a 'safety-critical activity'.

Explanatory Note

I. General

1. The purpose of the Notice of Proposed Amendment (NPA) 2012-06 'Sterile flight deck procedures', dated 6 July 2012, was to propose:
 - An Opinion for a Commission Regulation amending Commission Regulation (EU) No 965/2012¹; and
 - An Executive Director's Decision amending Decisions 2012/017/R², 2012/018/R³ and 201x/xxx/R⁴ of the Executive Director of the European Aviation Safety Agency.

II. Consultation

2. NPA 2012-06 was published on the Agency's website (<http://www.easa.europa.eu>) on 11 July 2012. By the closing date of 11 October 2012, the European Aviation Safety Agency ('the Agency') had received 134 comments from 25 National Aviation Authorities (NAAs), professional organisations, and private companies.

III. Publication of the CRD

3. All comments received have been acknowledged and incorporated into this Comment-Response Document (CRD) with the responses of the Agency.
4. In responding to comments, a standard terminology has been applied to attest the Agency's acceptance of the comment. This terminology is as follows:
 - **Accepted** — The comment is agreed by the Agency and any proposed amendment is wholly transferred to the revised text.
 - **Partially Accepted** — Either the comment is only agreed in part by the Agency, or the comment is agreed by the Agency, but any proposed amendment is partially transferred to the revised text.

¹ Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council (OJ L 296, 25.10.2012, p. 1).

² Decision 2012/017/R of the Executive Director of the European Aviation Safety Agency of 24 October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council, 'Acceptable Means of Compliance and Guidance Material to Part-ORO'. Available under <http://easa.europa.eu/agency-measures/agency-decisions.php#Rulemaking-2012>.

³ Decision 2012/018/R of the Executive Director of the European Aviation Safety Agency of 24 October 2012 on Acceptable Means of Compliance and Guidance Material to Commission Regulation (EU) No 965/2012 of 5 October 2012 laying down technical requirements and administrative procedures related to air operations pursuant to Regulation (EC) No 216/2008 of the European Parliament and of the Council, 'Acceptable Means of Compliance and Guidance Material to Part-CAT'. Available under <http://easa.europa.eu/agency-measures/agency-decisions.php#Rulemaking-2012>.

⁴ The Agency's Decision can only be published after the Commission Regulation has been amended. Therefore, for the resulting text at this stage see:

- (1) Annex VI (Part-NCC): CRD, dated 30 August 2011, to NPA 2009-02b;
- (2) Annex VII (Part-NCO): CRD, dated 30 August 2011, to NPA 2009-02b;
- (3) Annex VIII (Part-SPO): CRD, dated 27 October 2011, to NPA 2009-02b.

Available under <http://easa.europa.eu/rulemaking/r-archives.php>.

- **Noted** — The comment is acknowledged by the Agency, but no change to the existing text is considered necessary.
- **Not Accepted** — The comment or proposed amendment is not shared by the Agency.

The resulting text in Section VI of this CRD highlights the changes as compared to the current rule.

5. The Agency's Opinion and the Executive Director's Decision will be issued at least two months after the publication of this CRD to allow for any possible reactions of stakeholders regarding possible misunderstandings of the comments received and answers provided.
6. Such reactions should be received by the Agency not later than 13 April 2013 and should be submitted using the Comment-Response Tool at <http://hub.easa.europa.eu/crt>.

IV. Discussion and conclusion

7. The responses to the comments were drafted by the Agency and were reviewed by the Agency's Rulemaking Group of Rulemaking Tasks RMT.0416 and RMT.0417. The following paragraphs provide a summary and discussion of the comments, and conclusions regarding the main topics that have been identified in the consultation process. Section V below contains the CRD table of all comments and responses. The resulting regulatory text is provided in Section VI.

Question on taxiing of aeroplanes

8. One of the major items of the rulemaking tasks on sterile flight deck procedures was to come to a conclusion concerning the 'status' of taxiing of aeroplanes. Consequently, the Agency asked stakeholders to respond to the following question in NPA 2012-06 (see paragraph 27 of the NPA):

Question: Should taxiing of aeroplanes be:

- a) treated as a safety-critical activity, but not be defined as a critical phase of flight in the Implementing Rules;
 - b) defined as a critical phase of flight, with no restrictions to cabin crew activities (i.e. as of today cabin crew could provide service to passengers); or
 - c) defined as a critical phase of flight, restricting cabin crew to carry out safety-related duties only?
9. Out of all 25 commentators, 15 commentators responded explicitly to the question asked. The results are summarised in the table at the end of Section IV of this CRD.
 10. 12 out the 15 commentators who responded explicitly preferred 'Answer a)' ('taxiing as a safety-critical activity') as response to the question. This is clearly the majority of the commentators responding to the question. These commentators did not, in addition to the reasoning discussed in NPA 2012-06, provide additional reasoning to support their view. It should be noted that 'Answer a)' describes the option in which the proposed regulatory text was drafted in the NPA.
 11. 'Answer b)' ('taxiing as a critical phase of flight with no restrictions to cabin crew activities') was preferred by three commentators (plus DGAC France who agreed to 'Answer a) and b)'). The main items raised by the commentators in favour of 'Answer b)' were:

- 'Corporate and VIP operations specifically need the taxi time for preparation.'
 - 'On board of large aircraft, cabin crew activities must not be restricted. Free cabin crew movement during the taxi-phase is positive contribution to flight safety as a whole and has positive effect on passengers.'
 - This option 'would provide a fully consistent and coherent picture to the pilots'.
12. Finally, none of the commentators preferred 'Answer c)' ('taxiing as a critical phase of flight with restrictions to cabin crew activities').
13. Based on the responses received, the Agency concluded that, as proposed in the NPA, taxiing of aeroplanes should be treated as a safety-critical activity, but should not be defined as a critical phase of flight. Nevertheless, the Agency is of the opinion that no restrictions to cabin crew during taxiing might lead to a higher safety risk of the occupants of the aeroplane as the cabin crew could be distracted by other tasks from safety critical activities. Therefore, the Agency might initiate a rulemaking task in the future considering to restrict activities of the cabin crew during taxiing to safety critical activities.

Proposal concerning ground vehicle movement

14. One commentator proposed in several of his comments to expand the rulemaking tasks on sterile flight deck procedures towards ground vehicle movements and towards drivers of ground vehicles. The Agency agrees that the aspects of ground vehicle movement is a crucial element in the context of runway safety and runway incursion prevention. However, this matter is not subject to air operations, and, hence, not included in these rulemaking tasks. The intention is not to expand Rulemaking Tasks RMT.0416 and RMT.0417 to ground vehicle operations. The aspect of ground vehicle movement forms part of the future airport safety rules, which were presented in the Agency's NPA 2011-20 ('Authority, organisation and operations requirements for aerodromes') and in the subsequent CRD.

Proposal to define 'safety-critical activity'?

15. Two commentators proposed to provide a definition of the term 'safety-critical activity' which is new terminology and which has been introduced in the Guidance Material (GM)⁵. The justification for this proposal was that a definition of 'critical phases of flight' is included in Annex I of Commission Regulation (EU) No 965/2012 and subsequently, in their opinion, a definition of the related term 'safety-critical activity' is appropriate. The Agency does not share this opinion. Since taxiing of aeroplanes is not defined as a critical phase of flight, one other phrase (namely 'safety-critical activity') was chosen to be used in the GM in a descriptive manner to emphasise the contrast to 'critical phase of flight'. The intention was not to introduce a new kind of status to be explicitly determined.

Proposal to change the draft Implementing Rules

16. Based on the comments received, the Agency accepted the following proposals for changes of the Implementing Rules:
- Distracted: In NPA 2012-06 the Agency proposed the following definition: 'Sterile flight crew compartment' means any period of time when the flight crew members are not disturbed, except for matters critical to the safe operation of the aircraft and/or the safety of the occupants'. One commentator pointed out that the use of the phrase 'disturbed' could be interpreted as external to the flight deck. He suggested to add 'or distracted' to the definition to emphasise the distraction within

⁵ See GM2 CAT.GEN.MPA.126, GM1 NCC.GEN.121, GM2 NCO.GEN.115 and GM1 SPO.GEN.121 in VI.2 of this CRD.

the flight deck. The Agency agreed to this proposal and modified the definition accordingly.

- No link between 'sterile flight deck' and 'critical phases of flight': Some commentators suggested to split the last sentence of ORO.GEN.110(f) into two. The reason brought forward was to avoid linking the phrase 'sterile flight deck procedures' with 'critical phases of flight' only. The Agency agreed to this proposal and modified ORO.GEN.110(f) accordingly⁶.

Miscellaneous changes to the draft Acceptable Means of Compliance (AMC) and the Guidance Material (GM)

17. It should be noted that, compared to NPA 2012-06, the numbering system of the proposed AMC and GM in this CRD has been modified to be in line with the already published air operations AMC and GM.

18. Based on the comments received, the Agency incorporated the following changes towards the AMC and GM as proposed by the commentators:

- Safety and security matters vs critical situation/great urgency: One commentator pointed out that in AMC1 ORO.GEN.110(f) of NPA 2012-06, different phrases for the same issue related to the need of disturbing the flight crew are used than in the subsequent GM1 ORO.GEN.110(f). To give an example: The AMC restricts the disturbance of the flight crew to 'safety or security matters', while the GM limits a disturbance to 'cases of great urgency' or when 'the situation is critical'. In the opinion of the commentator, the GM seems to be more restrictive than the AMC which can lead to misunderstandings. In order to avoid such confusion, the Agency decided to follow the proposal of the commentator. In both, AMC and GM, the same phrase is now used, namely 'safety and security matters'⁷.
- Below 10 000 feet: Several commentators raised their concern in respect of sterile flight deck procedures to be applied 'below 10 000 feet above the aerodrome of departure or the aerodrome of destination, except for cruise flight'. Issues raised were:
 - This provision can only be valid for pressurised aircraft;
 - Because of the word 'or', it might be possible to choose between one of the two aerodromes;
 - A more specific definition of the height is needed; and
 - A definition of the height independently of the aerodrome is appropriate.

Taking these comments into consideration, the Agency came to the following conclusions:

- The phrase 'except for cruise flight' should make it clear that non-pressurised aircraft below 10 000 feet are excluded, except after take-off and during approach. By adding the phrases 'after take-off' and 'before landing', this should become even more clear;
- 'Or' needs to be replaced by 'and'; and
- Any other definition of the height has its own disadvantages. Therefore, it was decided to make no changes concerning the phrase 'below 10 000 feet'.

As a consequence of the conclusions, the proposed wording concerning the applicability of sterile flight deck procedures now reads: 'below 10 000 feet above

⁶ See VI.1.2 of this CRD.

⁷ See subparagraph (a)(2) of AMC1 ORO.GEN.110(f), and (a) and (c) of GM1 ORO.GEN.110(f).

the aerodrome of departure after take-off and the aerodrome of destination before landing, except for cruise flight⁸.

- Pre-flight briefing: Some commentators suggested to delete the provision in GM1 ORO.GEN.110(f) concerning pre-flight briefing which was proposed in NPA 2012-06 as follows: 'Prior to the flight, during the preparation phase, the pilot-in-command or commander recalls the objectives and importance of the sterile flight crew compartment'. The reasoning of the commentators was that such a provision would not be practical and is not needed from a safety point of view. In the opinion of the commentators, Standard Operating Procedures are part of the normal training courses, but should not always be repeated during pre-flight briefing. The Agency decided to follow the proposal of the commentators and deleted the pre-flight provisions concerning sterile flight deck procedures.
- Eating and drinking: Several commentators did not agree that drinking has been listed in GM1 ORO.GEN.110(f) as an example of activities that should not be performed by the flight crew during periods of time when sterile flight deck procedures are to be observed. One commentator pointed out that assigning 'eating and drinking' as examples of activities that should not be performed would be a restriction which goes too far. Instead, it was proposed to replace the Agency's original text proposal with the phrase 'preparing food or drinks, or eating from a plate or tray'. The Agency agreed to this proposal and changed the subparagraph accordingly⁹.
- Programming of the Flight Management System (FMS): Subparagraph (b)(2) of GM1 ORO.GEN.110(f) lists examples of activities that should not be performed during periods of time when sterile flight deck procedures have to be observed. One commentator, based on his personal experience, suggested to add to the text 'mass and balance corrections, performance calculations'¹⁰ the phrase 'and (navigational) programming of the Flight Management System (FMS)'. The Agency agreed to this proposal and incorporated the additional text in paragraph GM1 ORO.GEN.110(f).
- Electronic Flight Bag (EFB): In the regulatory text proposed in the NPA 2012-06, the use of EFBs has been listed in GM1 ORO.GEN.110(f) as an example of an activity that should not be performed unless urgently necessary. Several commentators raised concerns with this proposal and made suggestions to modify the wording. Taking into account these concerns and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags' the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).
- Unruly vs. disruptive: One commentator suggested that the flight crew should only be contacted if an 'unruly passenger' actually constitutes a threat to the safety of the flight. Therefore, it was suggested to replace the term 'unruly' with 'disruptive'. The Agency agreed to this proposal¹¹.
- Strobe lights, where fitted: One commentator pointed out that it is not a requirement for all aircraft to be fitted with strobe lights. Consequently, he suggested to modify the provision 'use of lights as follows: strobe lights, when entering or crossing a runway' concerning strobe lights as follows: '... strobe lights,

⁸ See subparagraph (b)(3) of AMC1 ORO.GEN.110(f).

⁹ See subparagraph (b)(2)(v) of GM1 ORO.GEN.110(f).

¹⁰ See subparagraph (b)(2)(vii) of GM1 ORO.GEN.110(f).

¹¹ See subparagraph (c)(9) of GM1 ORO.GEN.110(f).

where fitted, when entering ...'. Following this proposal the wording has been changed¹².

- Recorded vs. heard: Several commentators expressed their concern of using the term 'recorded' in the phrase 'all taxi clearances should be recorded ...' as proposed in NPA 2012-06. They pointed out that the pilot flying is not able to record taxi clearances during the flight. Therefore, they proposed to replace the term 'recorded' with 'heard'. One other commentator raised the concern that the term 'recorded' does not make it clear in which way taxi clearances should be recorded (e.g. copied in writing or recording on the Cockpit Voice Recorder (CVR)). The Agency, when made this proposal, meant that all taxi clearances should be documented e.g. on paper or on an Electronic Flight Bag (EFB), but not necessarily on a CVR. However, following the proposal of the several commentators, the Agency decided to replace 'recorded' by 'heard'¹³.
- To announce intentions: Several commentators suggested to add the following to the AMC concerning measures to enhance the situational awareness during taxiing: 'The pilot taxiing the aircraft should announce in advance his intentions to the pilot monitoring'. The Agency agreed to this proposal and added this text to the AMC in Part-CAT, Part-NCC and Part SPO¹⁴.
- Low visibility conditions: One commentator raised concerns on the proposed provision on low visibility conditions (in the AMC on measures to enhance the situational awareness during taxiing). In NPA 2012-06, the following wording was proposed: 'In low visibility conditions, additional cross-checks of flight instruments information should be carried out'. In the opinion of the commentator, this wording might lead to confusion and would need clarification. The Agency, after reconsidering the proposal, agreed to this position. Having in mind, that the Agency has initiated Rulemaking Tasks RMT.0379 and RMT.0380 on 'Low visibility operations', it was decided not to consider the measure in the present rulemaking tasks and consequently, delete the subparagraph¹⁵.
- Safety-critical activity — exclude helicopters: One commentator pointed out that taxiing of helicopters is defined as a 'critical phase of flight'. This includes certain restrictions as laid down in the Regulation on air operations and the associated AMC and GM. Therefore, in the opinion of the commentator, GM for taxiing of aircraft (i.e. including helicopters) under the heading 'safety-critical activity' might be confusing and might not be needed for helicopters. The Agency agreed to this position. Consequently, the GM describing taxiing as a safety-critical activity has been modified, and does not include helicopters any longer, i.e. the term 'aircraft' has been replaced by 'aeroplane'. As a consequence, the numbering of the paragraphs has also been adjusted¹⁶.
- Editorials: In addition to the changes listed above, some editorial errors have been corrected and some minor editorial changes have been made to the proposed AMC and GM.

19. All accepted changes to the AMC and GM were incorporated in the resulting text which is presented in Section VI of this CRD.

¹² See subparagraph (c)(1)) of AMC1 CAT.GEN.MPA.125, (c)(1) of AMC1 NCC.GEN.120, (d)(1) of GM1 NCO.GEN115 and (c)(1) of AMC1 SPO.GEN.120.

¹³ See subparagraph (d)(3) of AMC1 CAT.GEN.MPA125, (d)(3) of AMC 1 NCC.GEN.120, (e)(3) of GM NCO.GEN.115 and (d)(2) of AMC1 SPO.GEN.120.

¹⁴ See subparagraphs (d)(2) of AMC1 CAT.GEN.MPA.125, of AMC NCC.GEN120 and of AMC1 SPO.GEN.120.

¹⁵ See subparagraph (d) of AMC1 CAT.GEN.MPA.125, of AMC1 NCC.GEN.120 and of AMC1 SPO.GEN.120.

¹⁶ See GM2 CAT.GEN.MPA.126, GM1 NCC.GEN.121 and GM1.SPO.GEN.121.

No	Should taxiing of aeroplanes be	Response "Yes" by (comment # in brackets)
a)	treated as a safety-critical activity, but not be defined as a critical phase of flight in the Implementing Rules?	AEA (47), Brussels Airport (41), CAA-NL (45), DGAC France (104) ¹⁷ , ECA (53), ERA (130), IACA (115), IATA (61), NetJets Europe (85, 86), Swedish Transport Agency (91), Swiss International Airlines (42), UK CAA (132).
b)	defined as a critical phase of flight, with no restrictions to cabin crew activities (i.e. as of today cabin crew could provide service to passengers)?	AESA (122) ¹⁸ , DGAC France (104) ¹⁹ , Europe Air Sports (59), Pilatus Aircraft Company (2)
c)	defined as a critical phase of flight, restricting cabin crew to carry out safety-related duties only?	---

Table: Response to the question concerning taxiing of aeroplanes asked in NPA 2012-06

¹⁷ DGAC France also supports Option b).

¹⁸ AESA could also accept Option a) as a compromise.

¹⁹ DGAC France also supports Option a).

V. CRD table of comments, responses and resulting text

(General Comments)

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comment 33

comment by: *Brussels Airport - BRU/EBBR*

General Note: This general remark, expressed in the text here below, should not be considered as a "stand alone" remark on this NPA. Most of the remarks I've made on this NPA are based on or related to this general remark and the philosophy behind it. So, most of all the other remarks (with the exception of my remarks specifically related to helicopter operations) should not be considered as stand-alone remarks either, but as one bigger unity.

As a comment to the 3th paragraph in the Executive Summary, where it says: "One major aim is to enhance runway safety through the introduction of operational procedures and best practices for the taxi phase including sterile flight deck procedures. In this context taxiing of aeroplanes should be treated as a safety critical activity, but is not defined as a critical phase of flight.", I'd like to present my point of view.

I believe that it is a missed opportunity, if the "sterile flight deck procedures" are only applicable on flying crew members. I use the words flying crew members to indicate all those present in the aircraft, either as flight crew, cabin crew, or any other capacity, or specific crew member with an operational or technical duty/function on board of the aircraft.

What I mean is that quite a lot of 'issues' with regard to runway safety are not originating uniquely from aircraft. It says in the 'Executive Summary' that it is **one major aim to enhance runway safety**, through the introduction of operational procedures and best practices for the taxi phase including sterile flight deck procedures. But the introduction of operational procedures and best practices for vehicle drivers are at least of equal importance with regard to airside, and more particularly runway safety.

Appendix D of the ICAO Manual on the Prevention of Runway Incursions mentions under 1.2 : "As a result of local hazard analyses in Europe in 2001, the operation of vehicles on the aerodrome has been highlighted as a potentially high-risk activity which demands that a number of formal control measures be put in place to manage the risk.", which indicates that the problem is known. The ICAO Manual on the Prevention of Runway Incursions which is known to the rule making group since there is a reference to it under point 13 of the Explanatory Note. (See my remark specifically on this point 13.)

In "ATC Radio Use by Airside Vehicles" (a Skybrary publication) it states : "One national survey showed that in 2007, 26% of recorded runway incursion incidents involved vehicles and the majority were not intended errors by ATC but unintended errors by vehicle drivers."

One may believe that the runway incursions made by vehicle drivers are due to the fact that the language skills (of non-native English speakers) are not to the

same standard as compared to air crew. That may be a reason in some cases, but not in all of the cases. Since on Brussels Airport we do have a training program running, already for several years, on driving on the manoeuvring area, using standard ICAO phraseology, we have no data to prove that runway incursions are due to lower language skills (English) of the vehicle drivers. On the other hand, the reasons are more in the area of 'making (wrong) assumptions', being distracted by other situations, such as simultaneous inter-departmental communications on another frequency/radio set, distractions in the steering cabin of the vehicle, non-essential conversation in the steering cabin of the vehicle or procedures and infrastructural reasons in combination to non-unequivocal ATC-instructions.

Another 'view': The physical difference between the movement of an aircraft-on-tow and the movement of an aircraft taxiing, both over the manoeuvring area, is very limited as far as it is related to runway safety. But the person responsible for the movement during a towing, is usually not the same qualified, trained individual as the pilot who may perform the same repositioning on the manoeuvring area while taxiing. This means that there is a huge difference in '(human) performance' of this similar physical movement (towing vs taxiing).

I believe that the hazards presented by (tow-)drivers who may be less aware of certain pernicious situations and activities, who receive less formal training on subjects like human factors, situational awareness, sterile cockpit environment, runway incursion prevention, correct phraseology, etc., who perform less regularly these kind of repositioning, may be much more susceptible to the risks and pitfalls when not applying 'sterile cockpit principles, procedures', in comparison to the pilot who is used to taxiing frequently on manoeuvring areas of airports.

Therefore, I believe that extrapolating the principles of 'the sterile cockpit' (or 'sterile environment' as I call it) to all the vehicles that are driving on the manoeuvring area of an aerodrome are not at all 'overkill', but more a bare necessity. In the "Runway Safety – An Airside Driver's guide to Safe Aerodrome Surface Operations at controlled aerodromes" – Air services Australia, it mentions under "Situational Awareness" : 'maintaining a 'sterile' environment in your vehicle – you must be able to focus on your duties without being distracted by non-operational matters like engaging in conversation with a passenger'. The Australian Airside Driver's guide, is so far, the only public document where I've found that the 'sterile cockpit principle' is being extrapolated to the actions and operations of non-aviators, in the aviation (ground-) environment. Based on the Australian document, Brussels Airport has adopted the 'sterile cockpit principle' and has included it in its training curriculum for airside drivers. It would be much appreciated if this could, at least, be supported, yet, preferably be implemented via rulemaking.

I do realize that this NPA 2012-06 is limited to flight crew, but since I haven't found anything directly pointing to "a sterile environment" in the NPA 2011-20 (the aerodrome regulations), this is a plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012).

To support my point of view I'd like to indicate that in (EC) N° xxxx/201x [Air Operations – OPS], in Annex III Part-ORO (ORO.GEN.110), the responsibilities

of the operator are mentioned and that the first mentioned responsibility is to comply with (EC) 216/2008. In the same way, in NPA 2011-20 [Aerodromes], in Annex II Part-OR (ADR.OR.C005), the responsibilities of the operator are mentioned, and the first mentioned responsibility is to comply with (EC) 216/2008, which is, after all, the same, common basic regulation!

I would even go as far as to suggest to consider replacing the text "sterile flight crew compartment" with the words "sterile environment", throughout the texts that are subject to this NPA 2012-06.

Furthermore, in relation to Non-Commercial Air Operations with other than complex motor-powered aircraft, I disagree with the present text in NPA 2012-06 (see point 37. in the Explanatory Note), since persons involved in Non-Commercial Air Operations do make use of the same infrastructure (runways, taxiways) on airports. This means that there is a mix on (airport's) airside with highly trained professionals on the one hand, and a limited number of 'occasional participants' in aviation (= the people involved in Non-Commercial Air Operations). Comparable to the persons driving vehicles on airside, I believe that the hazards, presented by people, who may be less aware of certain negative influences, who receive less formal training on subjects like human factors, situational awareness, sterile cockpit environment, runway incursion prevention, correct phraseology, etc., due to the fact that they are less commonly or less regularly involved in air operations, are not to be minimized, since these persons may be much more prone to the risks and pitfalls when not applying 'sterile cockpit principles, procedures'.

When I read the first sentence under the 'Executive Summary' of this NPA: "During movement of the aircraft, the flight crew, whenever necessary, must be able to focus on their duties without being disturbed by non-flight related matters.", I believe that this is especially true for persons involved in Non-Commercial Air Operations of other-than-complex motor-powered aircraft, because those are the pilots who do take the occasional passenger on board, often and surely in that case where there are only front seats available, in the cockpit, (or where no physical separation exists between the cockpit and the passengers seats), and who are easily being disturbed, distracted by that passenger, the aviation enthusiast, who is so overwhelmed of all those big aircraft that are moving around the aircraft he is in, who asks continuously interesting questions about all the things he is experiencing, while the pilot is trying to concentrate on his taxi. On top of that he is not always as familiar with the airport lay-out as the pilots who have received training on this, during their area & route training programs. Therefore I disagree with the opinion of the Agency (see point 37 in the Explanatory Note), that such a rule is not needed for Part-NCO, since that would mean overregulation of taxiing of non-commercial operations of other-than-complex motor-powered aircraft. To the contrary I believe that the Agency has a responsibility to protect the persons involved in Part-NCO, for the same dangers that are faced by the other (regular professional) aviators. Next to that I believe that the operations that are being carried out under Part CAT, SPO & NCC, deserve to being protected against these hazards, originating from NCO operations (likewise for the vehicle drivers), when these are being mixed on the same airport, on the same manoeuvring areas.

response

Not accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

The comment contains two major proposals:

1. Include operational procedures and best practices for ground vehicle movements and for drivers of ground vehicles.
2. Introduce an additional Implementing Rule also for taxiing of aircraft of non-commercial air operations with other-than complex motor-powered aircraft (Part-NCO).

Regarding No1: It is agreed that the aspect of ground vehicle movement is a crucial element in the context of runway safety and runway incursion prevention. However, this matter is not subject to air operations, and, hence, not included in these rulemaking tasks entitled 'Sterile flight deck procedures'. It is not the intention to expand Rulemaking Tasks RMT.0416 and RMT.01417 to ground vehicle operations. The aspect of ground vehicle movement forms part of the future airport safety rules, which were presented in the Agency's NPA 2011-20 'Authority, organisation and operations requirements for aerodromes', and in the subsequent CRD and Opinion.

The proposal to amend NPA 2011-20 has been forwarded within the Agency, however, it should be addressed by the commentator directly towards that rulemaking activity.

Regarding No 2: The Agency agrees with the commentator that persons involved in non-commercial air operations with other-than complex motor-powered aircraft (Part-NCO operations) need to be protected against safety risks. Following this approach, although the Agency decided not to introduce an additional Implementing Rule on procedures for taxiing for Part-NCO operations, the safety concerns of the commentator have been considered in the proposed applicable framework. This can be explained as follows:

The comment made refers to paragraph 37 of the Explanatory Note of NPA 2012-06 where the following new Implementing Rule for 'Taxiing of aircraft' for Part-CAT, Part-NCC, and Part-SPO is discussed: 'The operator shall establish procedures for taxiing to ensure safe operation, and to enhance runway safety'. This Implementing Rule is accompanied by AMC on 'Procedures for taxiing', and GM on taxiing as a 'Safety-critical activity'.

During the establishment of the NPA, the Agency's Rulemaking Group made it clear that such a construction for Part-NCO would be considered as an overregulation, and would not be acceptable. One reason brought forward was that the majority of Part-NCO operations are carried out at small airfields and not, as described by the commentator, at large airports 'in the middle of' large passenger aircraft. Therefore, following the advice of the Rulemaking Group, the Agency came to the conclusion not to introduce a new Implementing Rule concerning taxiing of aircraft for Part-NCO. However, it has to be emphasised that the existing Implementing Rule NCO.GEN.115 'Taxiing of aeroplanes' already contains the following statement (Paragraph (b)(1) and (4) of NCO.GEN.115): 'An aeroplane shall only be taxied on the movement area of an aerodrome if the person at the controls is trained to taxi the aircraft and is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.'

In NPA 2012-06, it is proposed to accompany NCO.GEN.115 with GM on 'Procedures for taxiing' and on taxiing as a 'Safety-critical activity'. The text of the proposed GM for Part-NCO is similar to the AMC/GM for Part-CAT, Part-NCC, and Part-SPO. In particular, the GM for Part-NCO contains measures to enhance

the situational awareness of the pilot-in-command such as (see subparagraph (e)(6) of GM1 NCO.GEN.115): 'Any action, which may disturb the pilot-in-command from the taxi activity, should be avoided or done with the parking brake set.'

This guidance is in line with the first sentence of the Executive Summary of NPA 2012-06, referenced by the commentator: 'During movement of the aircraft, the flight crew, whenever necessary, must be able to focus on their duties without being disturbed by non-flight related matters.'

Therefore, the Agency is of the opinion that, although the structure of the applicable framework concerning taxiing differs when Part-NCO is compared with Part-CAT, Part-NCO, and Part-SPO, the necessary safety issues are sufficiently covered in Part-NCO.

comment

42

comment by: *Swiss International Airlines / Bruno Pfister*

SWISS Intl Air Lines supports the comments given below by AEA:

General AEA and SWISS Comments:

We would generally speaking question the need for additional rules in this field. The issue of sterile flight deck procedures is today already properly addressed as part of individual airline procedures within their Safety Management System. In our view sterile flight deck procedures are a tool for the operator/Commander when conducting safety critical activities but this does not mean a critical phase of flight. There is therefore no justification to impose cabin crew to be seated during sterile flight deck procedures. For example, during a diversion to the destination alternate in minimum fuel condition, the flight crew might need a sterile flight deck but cabin crew can still work normally. Sterile Flight Crew Compartment procedures should also exclude periods when aircraft are stopped during long ground delays

In respect to the question on page 10), the AEA view is a) that taxiing is a safety critical activity but not a critical phase of flight (therefore any EASA decision to treat taxiing as a critical phase of flight would be outside the scope of this NPA).

There is no need to talk about Sterile Flight Deck Procedures during each pre-flight briefing. This would not be practical and is not needed from a safety point of view. Standard Operation Procedures (SOP) are part of normal training courses but should not always be repeated during the pre flight briefing.

There is also no justification for not allowing drinking during Sterile Flight Deck Procedures and for not allowing the use of Electronic Flight Bags if needed for the current flight phase

Specific AEA comments:

Page 1

Title (Sterile Flight Deck Procedures)

AEA comment:

The issue is explained in note 11. We would therefore – for consistency reasons – suggest to change the title into 'Sterile Flight Crew Compartment Procedures' to align with the wording in the AMC and GM as well as IR.

Page 16

ORO.GEN.110 Operator Responsibilities

(f) An operator shall establish procedures and instructions for the safe

operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all type of operations and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed.

AEA Comment:

We suggest to split the last sentence in two in order to avoid linking sterile flight crew compartments with critical phases of flight only.

(f) An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all type of operations and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft ~~and ensure that the sterile flight crew compartment procedures be observed.~~ These procedures shall establish when sterile flight crew compartment procedures shall be observed.

Page 17

NCO.GEN.115 (Taxiing of Aeroplanes)

AEA Comment:

We note that there are no changes to this part. We do not understand why it is therefore part of this NPA. Please clarify.

Page 18

AMC1 ORO.GEN.110(f) Operator Responsibilities (Sterile Flight Crew Compartment)

1....

b cabin crew and technical crew communications to or entry into the flight crew compartment are restricted to safety or security matters

AEA Comment:

Editorial comment. The wording should be changed (deleting 'to') 'b cabin crew and technical crew communications to or entry into the flight crew compartment are restricted to safety and security matters'

Page 18

AMC1 ORO.GEN.110(f) Operator Responsibilities (Sterile Flight Crew Compartment)

AEA comment:

We suggest to add 'd) whenever deemed necessary by the Commander'. This is intended for abnormal situations (diversions, technical failures in flight, very bad weather conditions etc) when the flight crew needs full concentration.

Page 18

GM1.ORO.GEN.110(f) OPERATOR RESPONSIBILITES (STERILE FLIGHT CREW COMPARTMENT)

1. Establish Procedures

...

2. Pre-Flight Briefing

...

AEA Comment

There is no need to talk about Sterile Flight Deck Procedures during each pre-flight briefing. This would not be practical and is not needed from a safety point of view. Standard Operation Procedures (SOP) are part of normal training courses but should not always be repeated during the pre flight briefing.

Paragraph 2 (pre-flight briefing) should therefore be deleted and replaced with the responsibility of the Commander to order a Sterile Flight Crew Compartment when deemed necessary eg 'Beyond declared periods of application, the pilot in command or commander orders sterile flight crew compartment procedures each time he considers it necessary for the safe conduct of flight'

Page 18

GM1 ORO.GEN.110(f) Operator responsibilities
3 flight crew activities

...

b. v. Eating and drinking

AEA Comment:

There is no justification for not allowing drinking during a Sterile Flight Crew Compartment procedure. Delete 'and drinking'

Page 19

GM1 ORO.GEN.110(f) Operator responsibilities
3 flight crew activities

...

Viii any use of Electronic Flight Bags (EFB) unless urgently necessary

AEA Comment

This does not make any sense. EFB often include aeronautical charts (for example airport moving maps during taxiing) which are essential for the safe conduct of flight. Paragraph 3 viii should therefore be amended to read as 'any use of Electronic Flight Bags (EFB) not directly necessary for the current flight phase'

Page 19

GM1 ORO.GEN.110(f) Operator responsibilities
3 flight crew activities

...

c Examples of activities which may be performed are:

...

AEA comment

Paragraph c) (Examples of activities which may be performed are) should be deleted. All items which are not listed in paragraph b) are allowed. The Commander is responsible to sort this out!

Page 20

AMC1 CAT.GEN.MPA.125 (Taxiing of aircraft)

4 .. b. all taxi clearances should be recorded and should be understood by each flight crew member

AEA Comment

The idea of the former JAA OPSG was that the two pilots must have heard and understood the same clearance. If one did not, ATC shall be asked to repeat. The PF cannot record during taxiing. Duplicate same comment for b) in Part NCC, NCO and SPO.

Therefore the paragraph should be amended to read:

'all taxi clearances should be heard and should be understood by each flight crew member'

Page 20

AMC1 CAT.GEN.MPA.125 (Taxiing of aircraft)

4e If the pilot taxiing the aircraft is unsure of his/her position, he/she should stop the aircraft and contact air traffic control

	<p><u>AEA Comment</u></p> <p>In line with the best practice of several major airlines and the former JAA OPS proposal, the pilot taxiing the aeroplane should announce in advance his intentions to the pilot monitoring (e.g. I will turn to the right at the second intersection)</p> <p>The AEA therefore suggests to add an additional point before e) 'The pilot taxiing the aeroplane should announce in advance his intentions to the pilot monitoring'</p>
response	<p>Partially accepted</p> <p>Please see the responses to the comments made by AEA (e.g. comment No 51).</p>
comment	<p>44 comment by: <i>Luftfahrt-Bundesamt</i></p> <p>The LBA has no comments on NPA 2012-06.</p>
response	<p>Noted</p> <p>The support of the LBA is appreciated.</p>
comment	<p>47 comment by: <i>AEA</i></p> <p>We would generally speaking question the need for additional rules in this field. The issue of sterile flight deck procedures is today already properly addressed as part of individual airline procedures within their Safety Management System. In our view sterile flight deck procedures are a tool for the operator/Commander when conducting safety critical activities but this does not mean a critical phase of flight. There is therefore no justification to impose cabin crew to be seated during sterile flight deck procedures. For example, during a diversion to the destination alternate in minimum fuel condition, the flight crew might need a sterile flight deck but cabin crew can still work normally. Sterile Flight Crew Compartment procedures should also exclude periods when aircraft are stopped during long ground delays.</p> <p>In respect to the question on page 10), the AEA view is a) that taxiing is a safety critical activity but not a critical phase of flight (therefore any EASA decision to treat taxiing as a critical phase of flight would be outside the scope of this NPA).</p> <p>There is no need to talk about Sterile Flight Deck Procedures during each pre-flight briefing. This would not be practical and is not needed from a safety point of view. Standard Operation Procedures (SOP) are part of normal training courses but should not always be repeated during the pre-flight briefing.</p> <p>There is also no justification for not allowing drinking during Sterile Flight Deck Procedures and for not allowing the use of Electronic Flight Bags if needed for the current flight phase.</p>
response	<p>Accepted</p> <p>The overall position of AEA is noted.</p> <p>The Agency has considered the proposals for changes concerning:</p> <ul style="list-style-type: none"> • Pre-flight briefing;

- Drinking during periods of time of sterile flight deck procedures; and
- The use of electronic flight bags.

The GM has been modified accordingly, by also taking into consideration other comments made (see GM1 ORO.GEN.110(f)). For details, see the responses to comment No 51 from AEA.

comment

61

comment by: IATA

General Comments

The issue of sterile flight deck procedures is today already properly addressed as part of individual airline procedures within their Safety Management System and as an established IATA Operational Safety Audit (IOSA) standard; therefore IATA would question the need for additional rules in this field.

IATA believes that sterile flight deck procedures are a tool for the operator/Commander when conducting safety critical activities but this does not mean that there is always a direct relationship with a critical phase of flight. There is therefore no justification to impose cabin crew to be seated during sterile flight deck procedures. For example, during a diversion to the destination alternate in minimum fuel condition, the flight crew might need a sterile flight deck but cabin crew can still work normally. Sterile Flight Crew Compartment procedures should also exclude periods when aircraft are stopped during long ground delays.

In respect to the question on page 10), the IATA view is a) that taxiing is a safety critical activity but not a critical phase of flight (therefore any EASA decision to treat taxiing as a critical phase of flight would be outside the scope of this NPA).

There is no need to talk about Sterile Flight Deck Procedures during each pre-flight briefing. This would not be practical and is not needed from a safety point of view. Standard Operation Procedures (SOP) are part of normal training courses but should not always be repeated during the pre-flight briefing.

There is also no justification for not allowing drinking during Sterile Flight Deck Procedures and for not allowing the use of Electronic Flight Bags if needed for the current flight phase.

response

Accepted

The overall position of IATA is noted. Concerning the proposals for changes, see the response to comment No 51 from AEA.

comment

85

comment by: NetJets Europe

NetJets supports the introduction of the Sterile Flight Crew Compartment Procedures.

NetJets supports the findings regarding taxiing.

response

Noted

The support from NetJets Europe is appreciated.

comment 91 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

General comment

The Swedish Transport Agency finds the proposal acceptable with some comments which is explained in more detail in the relevant part of the NPA.

Question from EASA

As regards EASA's question regarding taxiing of aeroplanes in item 30 on page 11 in the NPA, the Swedish Transport Agency supports EASA's proposal "a" item 27 on page 10 on the grounds explained in item 28 i.e. taxiing of aeroplanes should be "treated as a safety-critical activity, but not be defined as a critical phase of flight in the Implementing Rules".

response Noted

The general acceptance from the Swedish Transport Agency is appreciated. The response to the question asked by the Agency is noted.

comment 128 comment by: *ERA*

The European Regions Airline Association [ERA] represents some 60 intra-European airlines which annually carry 70.6m passengers on 1.6m flights to 426 destinations in 61 European countries. ERA supports the main EASA principal reasons for this NPA which is that flight crew must be able to focus on their duties without being disturbed by non-flight related matters, whenever necessary during movement of the aircraft.

response Noted

The support of ERA concerning NPA 2012-06 is appreciated.

comment 131 comment by: *ECOGAS*

Dear Sir/Madam

I have not been able to use the CRD for NPA 2012-06 Sterile Flight Deck Procedures so I would like to submit some comments from one of our members by email please.

"Whilst we all recognise that there should be increased emphasis on sterile flight decks during taxi, as a group there was mixed opinion about which option to pursue in the Summary Regulatory Impact Assessment (para 50). Several instructors/examiners felt that option 0 or 1 are preferable, rather than the more demanding options and urged caution about including the cabin crew in this. However the majority preferred Option 2 as the safer option **provided** that the IR, AMC and GM recognise the human dimension and physiological issues, for instance, no drinking or eating: if a crew encounter extended holding they should be allowed to take refreshment/drink and no rule should prevent

this. But reading the newspaper is definitely not tolerated! The IR should also stipulate that aircraft should taxi immediately they are given clearance – we are aware that some airline crews ask for taxi early (before they are fully ready) and this creates delays for other users, who then become prone to taxiing at speed to get to the runway holding point... which then exacerbates all of the hazards associated with taxiing! "

If you could please note that these are not the direct view of BBGA but of a BBGA Member company that would be great.

response Noted

The general support of ECOGAS towards NPA 2012-06 is appreciated. The comment concerning 'drinking' has been taken into consideration. The AMC has been modified accordingly, by also taking into consideration other comments made (see GM1 ORO.GEN.110(f)).

TITLE PAGE

p. 1

comment 48

comment by: AEA

The issue is explained in note 11. We would therefore – for consistency reasons – suggest to change the title into 'Sterile Flight Crew Compartment Procedures' to align with the wording in the AMC and GM as well as IR.

response Not accepted

Since the rulemaking task is already under way, and NPA 2012-06 was entitled 'Sterile Flight Deck Procedures', the Agency does not agree to rename the title of the rulemaking tasks at this stage. As the commentator pointed out, an explanation was given in paragraph 11 of NPA 2012-06. The Agency's opinion is that renaming the rulemaking tasks at this stage would cause confusion.

comment 58

comment by: René Meier, Europe Air Sports

Europe Air Sports, on behalf of the member organisations, thanks the Agency for the preparation of NPA 2012-06 Sterile Flight Deck Procedures.

As a general comment we would like to add that in our view most of the proposals are "good sense".

We add some remarks to ask for clarification, to answer your questions, and to support your proposals, filling-in our comments in the appropriate text-fields.

response Noted

The general support of Europe Air Sports is appreciated.

comment 62

comment by: IATA

	The issue is explained in note 11. We would therefore – for consistency reasons – suggest to change the title into 'Sterile Flight Crew Compartment Procedures' to align with the wording in the AMC and GM as well as IR.
response	Not accepted See the response to comment No 48 from AEA.

comment	126 comment by: <i>René Meier, Europe Air Sports</i> The position of Europe Air Sports is expressly supported by the Aero-Club of Switzerland with its 23 000 members active in all fields of sports and recreational activities except hang-gliding.
response	Noted The information provided is noted.

EXECUTIVE SUMMARY

p. 2

comment	108 comment by: <i>Boeing</i> General comment: Boeing supports EASA in the effort to have operators establish procedures, rather than OEMs. As these procedures are specific to the operations, not the airplanes, this should not become an OEM task.
response	Noted Indeed, the sterile flight deck procedures are specific to operations. It is not the Agency's intention that the present rulemaking tasks become an Original Equipment Manufacturer (OEM) task.

A. Explanatory Note - I. Introduction

p. 4

comment	6 comment by: <i>Brussels Airport - BRU/EBBR</i> Comment to A. Explanatory Note, I. Introduction, 1. Runway transgressions are not a phenomenon limited to aircraft only, it also includes vehicles. (In support to my plea to incorporate vehicle movements on the manoeuvring area in the "sterile cockpit concept". - See, my general remark on this NPA). The fact that runway transgressions are being mentioned in the text, proves that the rule making groups are aware of the issues related to it. See also point 17., where is being referred to 4th sentence: "This includes aerodrome operator issues, ..."
response	Not accepted

It is agreed that the aspects of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

comment 8 comment by: *Brussels Airport - BRU/EBBR*

A. Explanatory Note, I. Introduction, 2.

In the light of my proposition to extrapolate the subject to vehicle movements on the manoeuvring area (see my general remark on this NPA), I propose the text as follows :

"... However, even then the following elements will not be included in the regulatory framework :

- a) the concept of a sterile ~~flight-deck~~ environment
- b) the phase of aeroplanes, as well as the movements of vehicles on the manoeuvring area, as a safety-critical activity, and
- c) procedures for taxiing and driving on the manoeuvring area to enhance runway safety.

The need for considering these elements will be explained in detail below. The Agency summarised the present rulemaking tasks under the header 'Sterile ~~flight-deck~~ environment procedures'. These tasks are focused on air and ground operations. One major aim is to enhance runway safety through the introduction of operational procedures and best practices for the ~~taxi~~ ground movement phase including sterile ~~flight-deck~~ environment procedures.

...

- all critical ...
- for aeroplanes ...
- below 10 000 feet ...
- for vehicles on the manoeuvring area of an airport.

response Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in the present rulemaking tasks.

A. Explanatory Note - III. Overview of the changes proposed in this NPA - General background (paragraph 6-11)

p. 5-6

comment 5 comment by: *Brussels Airport - BRU/EBBR*

Under point 7 there is a disturbing typing mistake: "casual factors" should be replaced by "causal factors". The second sentence should read: It is a safety intervention that directly addresses ~~casual~~ causal factors in runway incursion occurrences.

response Accepted

Thank you for pointing out this typographical error. Indeed, it should read

'causal factors' instead of 'casual factors'. When reference of the justification of the OPSG will be provided in follow-up documents, this error will be corrected.

comment

10

comment by: *Brussels Airport - BRU/EBBR*

Remark on A. Explanatory note, III. Overview of the changes proposed in this NPA, General background, **point 6**.

I regret to see that the background (description of the problem) to the rule making proposal from the JAA 'Operations Procedures Steering Group', which is in the Rulemaking Proposal Form of the OPSG, was not being copied in the Explanatory Note of this NPA, since it really points to the (bottom line of the) problem and since it indicates that it is not a problem limited to aircrew only.

The text in the OPSG doc reads : "Runway incursions have the potential to be catastrophic and therefore there is a clear need for regulation to improve safety in ground operations." This sentence, points directly to runway safety, it points to the need for regulation and it points to the safety in ground operations. Ground operations, in general; it does not say ground operations of aircraft! But, I admit, further in the text they only follow the path of the aircrew, regrettably, to what the need for regulation is concerned. But I believe that the need for regulation on the vehicles on the manoeuvring area is at least of the same degree of importance, in the context of runway safety.

In fact, the Description of problem/Background described in the OPSG doc, supports my view to extend the concept of 'sterile cockpit' (or 'sterile environment' as I call it), to all ground operations in the manoeuvring area on airports airside, thus including vehicle movements. (See also my general remark on this NPA.)

response

Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

comment

12

comment by: *Brussels Airport - BRU/EBBR*

Remark on A. Explanatory note, III. Overview of the changes proposed in this NPA, General background, **point 8**. (See also my general remark on this NPA.)

I would add to the text as follows (underlined text) :

8. Concerning taxiing, the original proposal of the OPSG suggested the following wording: "Taxiing is not a critical phase of flight, but it should be treated as a safety-critical activity". This wording defines taxiing as being a 'close-to-critical phase of flight'. Towing of aircraft and driving with vehicles on the manoeuvring area (especially on and in the vicinity of runways) in general, should also be treated as a safety-critical activity.

response

Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these

rulemaking tasks.

comment 13 comment by: *Brussels Airport - BRU/EBBR*

Remark on A. Explanatory note, III. Overview of the changes proposed in this NPA, General background, **point 10**. (See also my general remark on this NPA.)

I do understand that the 'operator's responsibilities', mentioned in the last sentence, are concerning the air operators, but what about the airport operators responsibilities with regard to vehicle movements on the manoeuvring area? Therefore, I'd like to repeat my suggestion mentioned in my general remark: a plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012).

response Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

The proposal to amend NPA 2011-20 has been forwarded within the Agency, however, it should be addressed by the commentator directly towards that rulemaking activity.

comment 52 comment by: *European Cockpit Association*

This should read "addresses **CAUSAL** factors" instead of "**CASUAL**".

response Accepted

Thank you for pointing out this typographical error. Indeed, it should read 'causal factors' instead of 'casual factors'. When reference of the justification of the OPSG will be provided in follow-up documents, this error will be corrected.

**A. Explanatory Note - III. Overview of the changes proposed in this NPA -
Concept of sterile flight deck (paragraph 12-22)**

p. 6-9

comment 7 comment by: *Brussels Airport - BRU/EBBR*

Comment to A. Explanatory Note, I. Introduction, 1.

Runway transgressions are not a phenomenon limited to aircraft only, it also includes vehicles. (In support to my plea to incorporate vehicle movements on the manoeuvring area in the "sterile cockpit concept". - See, my general remark on this NPA). The fact that runway transgressions are being mentioned

in the text, proves that the rule making groups are aware of the issues related to it. See also point 17., where is being referred to 4th sentence: "This includes aerodrome operator issues, ..." (connected to my remark on A. Explanatory Note, I. Introduction, 1.).

response Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

comment 9 comment by: *Brussels Airport - BRU/EBBR*

Still in relation to my general remark on this NPA. (See my General Remark)

A. Explanatory Note, III. Overview of the changes in this NPA, Background information on the concept of sterile flight deck, point 16:
Text to be added under point 16 (the text that I'd like to add, is the underlined text :

"Following this approach ...

- a. ...
- b. ...
- c. At any other times determined and announced by the flight crew (e.g. in-flight emergency, security alert), and, although it is not concluded in the ICAO manual, but it is still generally accepted that the need for a sterile environment in vehicles on airside is commenced, the moment these vehicles are entering the manoeuvring area."

Bearing in mind that the manoeuvring area is being defined in NPA 2011-20 (B.I) Cover Regulation, Article 2 Definitions, as : that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.

response Not accepted

It is agreed that the aspects of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

comment 11 comment by: *Brussels Airport - BRU/EBBR*

Remark on A. Explanatory note, III. Overview of the changes proposed in this NPA, Background information on the concept of sterile flight deck, **point 13**.

It is a good thing to indicate that the concept of sterile flight deck procedures was introduced in the ICAO 'Manual on the Prevention of Runway Incursions', and to refer to that. It also mentions Appendix B of this manual (Best Practices on the Flight Deck), where sterile flight deck is being defined.

But it is not mentioned under point 13. that in the same ICAO 'Manual on the Prevention of Runway Incursions', there is another Appendix, (Appendix D) that covers 'Airside Vehicle Driving Best Practices'.

The fact that Appendix D exists in the ICAO manual, proves that ICAO is aware of the issues related to airside vehicles in relation to runway safety. But I regret that in that Appendix D, the step has not been taken to introduce the concept of 'sterile environment in steering cabins of airside vehicles', similarly to what was done in Appendix B with 'sterile flight deck'. That was in my opinion a missed opportunity.

Therefore, omitting it in this NPA, is to be considered a missed opportunity as well. So, why not including the 'sterile environment in steering cabins of airside vehicles' in this NPA, and 'present' it to the ICAO at the same time?

A definition for 'sterile environment in the steering cabins of airside vehicles' might be as follows: "any period of time when the driver, driving crew, vehicle operator(s) should not be disturbed, except for matters critical to the safe operation of the vehicle". (See also my remark on point 16 and my general remark on this NPA.)

response Not accepted

It is agreed that the aspects of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

comment 41

comment by: *Brussels Airport - BRU/EBBR*

I agree with the proposal to consider the taxi phase of aeroplanes as a safety critical activity and not as a critical phase of flight. I also agree with the proposal to consider taxiing of helicopters as a critical phase of flight, even so for helicopters equipped with (retractable) a wheel-type landing gear that are able to taxi, not being airborne, and moving under the power of its rotor system(s). So I consider a ground taxi, as well as hover or air taxi, to be included in the taxiing of helicopters as a critical phase of flight, the way it is being mentioned under point 21, the Rulemaking proposal No 3.

What I do miss, is a paragraph on other safety critical activities of helicopters. Under point 31, Rulemaking proposal No 4 it says that the Agency felt the need to give some explanation why taxiing of aeroplanes should be treated as a safety critical activity. For helicopters there are equally some activities possible while on the ground (or on a deck) that requires the full attention of the flight crew, activities that equally deserve to receive the full attention of the flight crew and this while maintaining sterile environment (sterile flight deck) principles.

Some examples:

- Rotors running (hot) refuelling, onshore and offshore
- Embarkation & disembarkation of passengers and/or cargo while rotors are running, onshore and offshore

As is described under point 23 (background information on taxiing of aeroplanes as a safety-critical activity) that it is generally accepted that flight begins from the moment the parking brake is released, it is equally generally accepted that helicopter flight begins from the moment the rotor starts turning with the intention of performing a flight. But I couldn't find a document saying that this is the correct way of defining (a) flight (time). In ICAO Annex 6 it

defines the flight time for helicopters as follows:

"The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

Note 1.— The State may provide guidance in those cases where the definition of flight time does not describe or permit normal practices. Examples are: crew change without stopping the rotors; and rotors running engine wash procedure following a flight. In any case, the time when rotors are running between sectors of a flight is included within the calculation of flight time.

Note 2.— This definition is intended only for the purpose of flight and duty time regulations."

Without Note 2, this definition is in my opinion very useful, and would facilitate to consider the times, for instance on offshore decks, rotors running, during (dis)embarkation, refuelling or for any other reason, as being "one of any other phases of flight as determined by the PIC".

If any regulatory text defines 'helicopter flight' as here above, but without the Note 2, then the whole period, from rotor start to rotor stop, with some airborne time in between should be considered as a flight.

To further support my 'idea' of defining clearly 'flight time', I'd like to bring under the attention the following.

As you know, the European Helicopter Safety Team ([EHEST](#)) brings together manufacturers, operators, research organisations, regulators, accident investigators and a few military operators from across Europe. EHEST is the helicopter branch of the [ESSI](#), and also the European component of the International Helicopter Safety Team ([IHST](#)).

The basic principle is to improve aviation safety by complementing regulatory action by voluntarily encouraging and committing to cost-effective safety enhancements. Analysis of occurrence data, coordination with other safety initiatives and implementation of cost-effective action plans are carried out to achieve specific safety goals. In addition, the EHEST initiative implements actions of the [European Aviation Safety Plan 2012-2015 \(EASp\)](#).

In leaflet HE2 issued by EHEST under the title "Helicopter Airmanship v.1", published in December 2011 (recently republished by Eurocopter under Safety Information Note 2418-S-00 on September, 28th 2012), we read in paragraph 3.15 (page 17) the fourth sentence : "Remember, the flight isn't over until the engine(s) are shut down and all checks completed and the rotors have stopped."

So, I believe I may say that it is generally accepted that flight time is (at least) the time as from rotors start until rotors stopped.

So, anything happening in between rotor start and rotor stop may be considered as a critical phase of flight. In that case the text of this NPA 2012-06 is usable and covers it all, if this reasoning or argumentation is 'covered' under the definition of 'Critical phases of flight in the case of helicopters'. But in the definition of 'Critical phases of flight in the case of helicopters' from Annex I (Definitions) of the Agency's Opinion 04/2011, it leaves some room for

interpretation, especially where it mentions "and any other phase of flight as determined by the PIC or commander". The way I understand it, is that the PIC or commander will decide whether, e.g. a rotors running refuelling is a critical phase of flight. I do not agree with this, since this should not be a decision, determination made by the PIC or commander. It should be clearly defined in a regulatory text (by the regulator) or in the Operations Manual (of the operator), so that the responsibility in making such a determination is not the PIC's responsibility.

So, if there is any discussion, ambiguity or uncertainty to what is considered as (helicopter) flight, critical phase of flight (determined by the PIC/commander), then, something should be written about 'other helicopter safety-critical activities'.

But maybe this is outside the scope of this NPA, it may be more suitable to define it clearly in Opinion 04/2011.

Therefore, I would have liked to see a paragraph to be added after point 31. in the way of a "Rulemaking proposal concerning some activities of helicopters as safety-critical activities + background information on this subject".

response Not accepted

The position of Brussels Airport is noted. The responses to the question are discussed in more detail in the Explanatory Note of this CRD. The proposal to amend NPA2012-06 is not accepted.

In these rulemaking tasks, the attempt of the Agency is to define the term 'Sterile flight crew compartment' in the proposed regulatory framework, and by doing so, introduce the measures needed at periods of time during the flight including taxiing. In these rulemaking tasks, it is not the intention of the Agency to define different levels of safety risks such as

- (a) high safety risk = critical phase of flight;
- (b) medium safety risk = safety-critical activity; and
- (c) lower safety risk = all other phases of operation.

The term 'safety-critical activity' is meant to be used in a descriptive manner to emphasise the contrast to 'critical phases of flight'. The Agency does not see the need of defining the term in the applicable framework. This holds although the term 'safety-related activity' is used in the GM.

The comments concerning helicopter related activities (e.g. (dis)embarking of passenger while rotors are running, hot refuelling, etc.) are noted. It is, however, outside the scope of these rulemaking tasks to cover these activities. They are regulated elsewhere in the air operations regulatory framework (e.g. for refuelling/defueling with passengers embarking, on board or disembarking, see CAT.OP.MPA.195 and the associated AMC).

comment 133

comment by: Anthony EAGLES

Page No: 7

Paragraph No: 16

Comment: The criteria of 10,000 ft is not supportable for unpressurised aircraft and therefore this consideration should be reviewed in respect of such aircraft. (See later comments).

Justification: Recognition of differing types of aircraft intended to be covered by this proposal

Proposed Text: n/a

response Noted

It should be noted that in paragraph 16 of NPA 2012-06, the wording of paragraph 6.3.9 of Appendix B of ICAO Doc 9870 is simply quoted.

comment 134

comment by: Anthony EAGLES

Page No: 8

Paragraph No: 19

Comment: The development of the definition for "Sterile flight crew compartment" is understood but it is felt that the resulting text deals with the issues of 'disturbance', which could be interpreted as external to the cockpit, rather than also of those of 'distraction' within it. It is therefore proposed that the definition, be amended as shown below.

Justification: Clarity and better describes the intent of the procedures.

Proposed Text:

'Sterile flight crew compartment' means any period of time when the flight crew members are not disturbed **or distracted**, except for matters critical to the safe operation of the aircraft and/or the safety of the occupants.

response Accepted

The definition has been modified accordingly (see Section VI of this CRD).

comment 135

comment by: Anthony EAGLES

Page No: 9**Paragraph No:** 21

Comment: The criteria of 10,000 ft is not appropriate for unpressurised aircraft and therefore this consideration should be reviewed in respect of such aircraft. The requirements require application of the Sterile Flight Crew Compartment procedures for 'critical phases of flight' and perhaps this is sufficient for less complex aircraft operation. If the 10, 000 ft was made applicable only to pressurised a/c then it might be more appropriate.

Justification: Recognition of differing types of aircraft intended to be covered by this proposal

Proposed Text:

For pressurised aircraft, below 10,000 feet above the aerodrome

response Not accepted

The Agency is of the opinion that the phrase 'except for cruise flight' addresses the needs for non-pressurised aircraft, i.e. below 10 000 ft, the sterile flight deck procedures are not applicable when the aircraft is in cruise flight.

A. Explanatory Note - III. Overview of the changes proposed in this NPA - Taxiing of aeroplanes as a safety-critical activity (paragraph 23-31)

p. 9-11

comment 2

comment by: *Pilatus Aircraft Company*

Item 27 Question section b is preferred. Corporate and VIP operations specifically need the taxi time for preparation. To prevent taxi incidents with cabin crew it is imperative that such activities are briefed and coordinated between the flight deck and the cabin.

response Noted

The position of Pilatus Aircraft Company is noted. The responses to the question are discussed in more detail in the Explanatory Note of this CRD.

comment 14

comment by: *Brussels Airport - BRU/EBBR*

Remark on A. Explanatory note, III. Overview of the changes proposed in this NPA, Background information on taxiing of aeroplanes as a safety-critical activity, **point 23**. (See also my general remark on this NPA.)

In the last sentence, I would add (see underlined text):

	<p>Consequently, the taxi phase needs to be treated as a safety-critical activity, <u>as is the movement of vehicles on the manoeuvring area.</u></p> <p>(Bearing in mind that the manoeuvring area is being defined in NPA 2011-20 (B.I) Cover Regulation, Article 2 Definitions, as : that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.)</p>
response	<p>Not accepted</p> <p>It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.</p>
comment	<p>45 comment by: CAA-NL</p> <p>Please be advised that the Netherlands agrees with the conclusion from the Agency to follow the rulemaking group in treating taxiing as a safety critical activity and not as a critical phase of flight.</p>
response	<p>Noted</p> <p>The response from CAA-NL to the Agency's question is noted.</p>
comment	<p>53 comment by: European Cockpit Association</p> <p>ECA favours answer A.</p>
response	<p>Noted</p> <p>The response from ECA is noted.</p>
comment	<p>59 comment by: René Meier, Europe Air Sports</p> <p>Pt. 27, Question "Should taxiing of aeroplanes be:...": We favour the Agency's proposal b).</p> <p>Rationale b) is critical phase of flight, distraction may result in mistakes. However, risks will be mitigated applying appropriate training procedures from the start of any flight training.</p> <p>During the Passenger Briefing a PiC of aircraft up to ELA 1 or CS-23 will instruct the passengers about the "do's" and the "do not's". In doing so probable interferences will be minimised.</p> <p>On board large aircraft, cabin crew activities must not be restricted. Free cabin crew movement during the taxi-phase is positive contribution to flight safety as a whole and has positive effect on passengers.</p>
response	<p>Noted</p> <p>The response from Europe Air Sports is noted.</p>

comment	86	comment by: <i>NetJets Europe</i>
	<p>27. NetJets supports paragraph a) which treats taxiing as a safety-critical activity.</p> <p>28. NetJets supports this paragraph which treats taxiing as a safety-critical activity.</p>	
response	<p>Noted</p> <p>The response of NetJets Europe is noted.</p>	
comment	104	comment by: <i>DGAC France</i>
	<p>Concerning question on taxiing of aeroplanes, solution a) or b) are supported. c) should be disregarded.</p> <p>Rationale for this choice is the same as developed page 10 of the NPA 2012-06 by the Agency</p>	
response	<p>Noted</p> <p>The response of DGAC France is noted.</p>	
comment	115	comment by: <i>IACA International Air Carrier Association</i>
	<p>IACA answer to the Question on page 10: Answer a): IACA agrees with the NPA as recommended by the rulemaking group: taxiing should be treated as a safety-critical activity, but not defined as a critical phase of flight</p>	
response	<p>Noted</p> <p>The response of IACA is noted.</p>	
comment	122	comment by: <i>AESA</i>
	<p>AESA favours option b), define taxiing as a critical phase of flight, with no restrictions to cabin crew activities, as of today, including in the NPA any additional regulatory change necessary for that. That would provide a fully consistent and coherent picture to the pilots.</p> <p>Going forward with option a), as proposed in the NPA, could be a compromise solution. We are providing detailed comments on it, in case that is the option finally retained.</p>	
response	<p>Noted</p> <p>The response of AESA is noted.</p>	
comment	130	comment by: <i>ERA</i>
	<p>The European Regions Airline Association [ERA] notes the interest from EASA in</p>	

stakeholders views on the questions raised regarding taxiing of aeroplanes as a safety-critical activity. ERA would urge EASA to recognise the advice of, the majority of the corresponding expert Rulemaking Group during the drafting process of the present NPA, to treat taxiing of aeroplanes as a safety-critical activity, whilst being strongly opposed to any pressure on re-defining taxiing as a critical phase of flight as this would severely restrict cabin crew activity. Therefore, ERA response to the EASA question of what taxiing of aeroplanes should be, is answer a) *treated as a safety-critical activity, but not be defined as a critical phase of flight in the Implementing Rules.*

response Noted

The response of ERA is noted.

A. Explanatory Note - III. Overview of the changes proposed in this NPA - Procedures for taxiing to enhance runway safety (paragraph 32-42)

p. 11-13

comment

3
4

comment by: *Brussels Airport - BRU/EBBR*

Remark on A. Explanatory Note, III. Overview of the changes proposed in this NPA, Rulemaking proposals concerning procedures for taxiing to enhance runway safety, 37. **Rulemaking proposal N° 5:**

In relation to Non-Commercial Air Operations with other than complex motor-powered aircraft, I disagree with the present text in NPA 2012-06 (see point 37. in the Explanatory Note), since persons involved in Non-Commercial Air Operations do make use of the same infrastructure (runways, taxiways) on airports. This means that there is a mix on (airport's) airside with highly trained professionals on the one hand, and a limited number of 'occasional participants' in aviation (= the people involved in Non-Commercial Air Operations of other-than-complex motor-powered aircraft). Comparable to the persons driving vehicles on airside (see my General Remark on this NPA), I believe that the hazards, presented by people, who may be less aware of certain negative influences, who receive less formal training on subjects like human factors, situational awareness, sterile cockpit environment, runway incursion prevention, correct phraseology, etc., due to the fact that they are less commonly or less regularly involved in air/ground operations on airports, are not to be minimized, since these persons may be much more prone to the risks and pitfalls when not applying 'sterile cockpit - sterile environment principles, procedures'.

When I read the first sentence under the 'Executive Summary' of this NPA : "During movement of the aircraft, the flight crew, whenever necessary, must be able to focus on their duties without being disturbed by non-flight related matters.", I believe that this is especially true for persons involved in Non-Commercial Air Operations of other-than-complex motor-powered aircraft, because those are the pilots who do take the occasional passenger on board, often and surely in that case where there are only front seats available, in the cockpit, (or where no physical separation exists between the cockpit and the passengers seats), and who are easily being disturbed, distracted by that passenger, the aviation enthusiast, who is so overwhelmed of all those big

aircraft that are moving around the aircraft he is in, who asks continuously interesting questions about all the things he is experiencing, while the pilot is trying to concentrate on his taxi. On top of that those pilots are not always as familiar with the airport lay-out as the pilots who have received training on this, during their area & route training programs. Therefore I disagree with the opinion of the Agency (see point 37 in the Explanatory Note), that such a rule is not needed for Part-NCO, since that would mean overregulation of taxiing of non-commercial operations of other-than-complex motor-powered aircraft. To the contrary, I believe that the Agency has a responsibility to protect the persons involved in Part-NCO, for the same hazards that are faced by the other (regular professional) aviators. Next to that I believe that the operations that are being carried out under Part CAT, SPO & NCC, equally deserve to being protected against the hazards, originating from NCO operations (likewise for the vehicle drivers), when these are being mixed on the same airport, on the same manoeuvring areas.

To illustrate my point of view, I'd like to refer to a training video used by the FAA, showing a runway incursion by an airplane being operated under NCO-conditions :
http://www.faa.gov/airports/runway_safety/videos/media/FlvPlayer.swf?allowFullscreen=false&allowScriptAccess=sameDomain&width=640&height=411&VIDEOFILENAME=../../media/videos/runway_high_2.flv&AUTOPLAY=0&SKINPATH=../SkinOverAll.swf

response

Not accepted

Please see the response to comment No 33 concerning Part-NCO operations.

comment

87

comment by: *NetJets Europe*

39. NetJets supports the re-enforcement of the use of RTF standard phraseology

response

Noted

The support of NetJets Europe is appreciated.

comment

106

comment by: *DGAC France*

About paragraph 37 and 38:

We wonder why Complex Motor Powered Aircraft (CMPA) and other than CMPA:
 - are subject to the same regulatory provisions in the framework of part SPO on the one hand,
 - are treated differently when they are general aviation (non SPO) aircraft on the other hand (indeed, rules are a little bit more comprehensive for part NCC than for part NCO)

Proposition : it seems more logical to implement common provisions for CMPA, whether falling under part NCC or SPO, and other common provisions for other than CMPA, whether falling under part NCO or SPO.

Overregulation for other than CMPA falling under part SPO should also be avoided, just as for aircraft complying with part NCO.

response

Noted

DGAC France raises an interesting but more general question which cannot be solved or decided upon by the present, quite specific rulemaking tasks. In order to be in line with the overall proposed regulatory framework of the Agency, as laid down in the Agency's Opinions No 04/2011, 01/2012, and 02/2012, it was decided to distinguish for other-than CMPA between Part-NCO and Part-SPO, depending on the kind of operation. Following this approach, the Implementing Rules, AMC, and GM have been proposed as presented in NPA 2012-06.

comment	<p>109 comment by: <i>Boeing</i></p> <p>Boeing agrees with the four areas mentioned, however, these seem to exceed the concept of "sterile flight deck" and should possibly be addressed or communicated separately.</p> <p>Boeing recommends the Agency issue an NPA defining "Critical phases of flight", addressing wider Flight, Cabin Crew and Technical Staff implications.</p>
response	<p>Not accepted</p> <p>As pointed out in paragraph 2 of the Explanatory Note of NPA 2012-06, it was intended to include 'Procedures for taxiing to enhance runway safety' in the present rulemaking tasks. Therefore, the Agency is of the opinion that the four areas listed in paragraph 38 are not exceeding the purpose of the present rulemaking tasks, although the term 'Sterile flight deck' is only mentioned explicitly in one of them.</p> <p>The Agency does not see the need to initiate a rulemaking task on critical phases of flight, since this item is already included in the Regulation on Air Operations and the associated AMC and GM.</p>

comment	<p>136 comment by: <i>Anthony EAGLES</i></p> <p>Page No: 12</p> <p>Paragraph No: 40</p> <p>Comment: The use of aircraft lighting to enhance visibility is understood but such lighting must also comply with Part-SERA.3215.</p> <p>Justification: Lighting requirements must reflect appropriate legislation</p> <p>Proposed Text: n/a</p>
response	<p>Noted</p> <p>Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.</p> <p>The wording used concerning the use of lights (see subparagraph (c) in AMC1 CAT.GEN.MPA.125, (c) in AMC1 NCC.GEN.120, (d) in GM1 NCO.GEN.115 and (c) in AMC1 SPO.GEN.120) does not contradict to the wording in SERA.3215. Instead, the provisions provided with the present rulemaking tasks are complementing SERA.3215. In this context, it should be noted that the Agency's NPA 2012-14, containing AMC and GM for SERA, proposes the</p>

following GM:

'GM1 SERA.3215(a);(b) Lights to be displayed by aircraft

GENERAL

Lights fitted for other purposes, such as landing lights and airframe floodlights, may be used in addition to the anti-collision lights to enhance aircraft conspicuity.'

A. Explanatory Note - III. Overview of the changes proposed in this NPA - The Agency's duty to address safety recommendations (paragraph 43-45) p. 13-14

comment	88	<p style="text-align: right;">comment by: <i>NetJets Europe</i></p> <p>42. Rulemaking proposal No 7: Netjets supports the introduction of GM for PART-NCO</p>
response	Noted	<p>The support of NetJets Europe is appreciated.</p>

B. Draft Opinion and Decision p. 16

comment	49	<p style="text-align: right;">comment by: <i>AEA</i></p> <p>B.I.2 Annex III: Part-ORO - organisations requirements for air operations ORO.GEN.110 Operator Responsibilities</p> <p>(f) An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all type of operations and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed.</p> <p><u>AEA Comment:</u> We suggest to split the last sentence in two in order to avoid linking sterile flight crew compartments with critical phases of flight only.</p> <p>(f) An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all type of operations and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed. <u>These procedures shall establish when sterile flight crew compartment procedures shall be observed.</u></p>
response	Partly accepted	

Following the proposal made, the last sentence has been split into two. However, a different wording than the one proposed has been used. The reason is that it is not up to the procedures of the operators to decide 'when sterile flight crew compartment procedures shall be observed'. Instead, this is laid down in AMC1 ORO.GEN.110(f).

comment

92

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

B.I.1 Annex I: Definitions for terms used in Annexes II-VIII

Change the proposed definition to:

'Sterile flight crew compartment' means any period of time when the flight crew members **will not be** disturbed, except for matters critical to the safe operation of the aircraft and/or the safety of the occupants.

or

'Sterile flight crew compartment' means any period of time when the flight crew members **cannot be** disturbed, except for matters critical to the safe operation of the aircraft and/or the safety of the occupants.

Justification:

The wording of the definition are not clear regarding flight crew disturbing each other. The proposed change of the wording makes it somewhat clearer (see underlined text above).

response

Not accepted

Since this is the definition of sterile flight crew compartment, the Agency prefers to stay with the 'most neutral term'. It is the opinion of the Agency that the phrase 'are not disturbed' fulfils this purpose better than the wording proposed by the Swedish Transport Agency.

B. Draft Opinion and Decision - I. Draft Opinion

p. 16-17

comment

15

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Opinion, FOR AMENDING COMMISSION REGULATION (EC) N° xxxx/201x, B.I.1 Annex I : Definitions for terms used in Annexes II-VIII :
I propose to add the following definition:

'Sterile environment' means any period of time when the flight crew members or airside ground staff (including vehicle drivers such as tow truck drivers, ARFF-crew, aerodrome airside operations staff, etc.) are not disturbed except for matters critical to the safe operation of aircraft, airside based vehicles or equipment and/or the safety of the occupants, users or operators.

(See also my general remark on this NPA and my suggestion, my plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012).

Throughout all the texts subject to this NPA 2012-06, I would even suggest to consider replacing the text "sterile flight crew compartment" with the words "sterile environment".)

response Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

comment

16

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Opinion, FOR AMENDING COMMISSION REGULATION (EC) N° xxxx/201x, B.I.2 Annex III : Part-ORO – organizations requirements for air operations, ORO.GEN.110 Operator responsibilities (f):

I propose to change the text as follows (change is underlined):

'An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight or during safety-critical activities other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed.'

Furthermore, in view of my general remark on this NPA and my suggestion, my plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012), I would even propose two options.

First option, in case the choice is being made to enlarge the scope of this present NPA on Sterile Flight Deck Procedures. In this case I would suggest the text as follows :

'An operator shall establish procedures and instructions for the safe operation of each aircraft type, airside based vehicles or equipment, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. These procedures and instructions shall not require crew members or airside ground staff to perform any activities during critical phases of flight or during safety-critical activities other than those required for the safe operation of the aircraft, airside based vehicle or equipment, and ensure that the sterile environment procedures be observed.'

Second option, in case the choice is being made to amend NPA 2011-20 'accordingly'. I propose the following text for this NPA 2012-06):

'An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight or during safety-critical activities other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed.'

And I propose the following text for NPA 2011-20 (or an amendment to it) :
'ADR.OR.C.005 (d) An aerodrome operator shall establish procedures and instructions for the safe operation of airside based vehicles or equipment, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground. These procedures and instructions shall not require crew members or airside ground staff to perform any activities during safety-critical activities other than those required for the safe operation of aircraft, airside based vehicles or equipment, and ensure that the sterile environment procedures be observed.'

(See also my remark on the definition of 'sterile environment'.)

response

Not accepted

1. Proposal to add the phrase 'or during safety-critical activities'.

The attempt of the Agency is to define the term 'Sterile flight crew compartment' in the proposed regulatory framework, and by doing so, to introduce the measures needed at certain times of the flight including taxiing. Consequently, there is no need to introduce the term 'safety-related activity'. The phrase '... ensure that the sterile flight crew compartment procedures be observed' in ORO.GEN.110(f) is the appropriate hook.

The term 'safety-critical activity' is meant to be used in a descriptive manner to emphasise the contrast to 'critical phases of flight'. The Agency does not see the need of defining the term in the applicable framework. This holds although the term "safety-related activity" is used in the GM.

Adding the phrase 'safety-critical phase' as proposed by the commentator, and in the sense it was used to describe taxiing in the Explanatory Note of NPA 2012-06, would mean that e.g. cabin crew would not any longer be allowed to carry out any non-safety related task during taxiing. The majority of the Agency's Rulemaking Group made it very clear that such an 'indirect rulemaking' towards the cabin crew could not be accepted.

2. Proposal to consider ground vehicle movements.

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

The proposal to amend NPA 2011-20 has been forwarded within the Agency, however, it should be addressed by the commentator directly towards that rulemaking activity.

comment	<p>40 comment by: <i>Brussels Airport - BRU/EBBR</i></p> <p>Comment on Draft Opinion, FOR AMENDING COMMISSION REGULATION (EC) N° xxxx/201x, B.I.2 Annex VII : Part-NCO, NCO.GEN.115 Taxiing of aeroplanes.</p> <p>I suggest to change the text under B.I.5 Annex VII : Part-NCO – non-commercial operations of other-than-complex motor-powered aircraft, NCO.GEN.115 Taxiing of aeroplanes, although I have read the foot note 33, saying that it is not planned to modify NCO.GEN.115. I suggest to add the following sentence (see underlined text), right before the first sentence of that paragraph :</p> <p><u>“If applicable (= where there is an operator who is responsible for the operation), the operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.</u> An aeroplane shall only be taxied ...”</p> <p>For a full explanation on this proposed change, see also my comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x, B.II.4 AMC/GM to Annex VII : Part-NCO – non-commercial operations of other-than-complex motor-powered aircraft, GM1 NCO.GEN.115 Taxiing of aircraft.</p>
response	<p>Not accepted</p> <p>Concerning the ‘simplification’ of the text for Part-NCO operation, it is stated in paragraph 42 of NPA 2012-06: ‘The proposed GM for Part-NCO is based on the AMC for Part-CAT, Part-NCC and Part-SPO as described above, but the text has been adjusted and simplified to better reflect non-commercial operations of other-than-complex motor-powered aircraft’. It has to be emphasised that the reason for adjusting and simplifying the text is not to lower the safety standard, but to better address Part-NCO operational needs. To give some examples:</p> <ul style="list-style-type: none"> • As the commentator already pointed out, the term ‘pilot-in-command’ is used in Part-NCO instead of ‘flight crew members’ for obvious reason; • The phrase ‘if applicable’ is added in Part-NCO (‘if applicable, all taxi clearances should be heard...’), since not every small airfield has taxi clearances; and • The phrase ‘e.g. announcement by public address’ used in Part-CAT and in Part-NCC has not been used in Part-NCO, since it is not expected that during Part-NCO operations announcements by public address are to be made. <p>For further explanation, please see the response to comment No 33 concerning Part-NCO operations.</p>

comment	<p>50 comment by: <i>AEA</i></p> <p>B.I.5 Annex VII: Part-NCO – non-commercial operations of other-than complex motor-powered aircraft NCO.GEN.115 (Taxiing of Aeroplanes)</p> <p><u>AEA Comment:</u> We note that there are no changes to this part. We do not understand why it is</p>
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	therefore part of this NPA. Please clarify.
response	<p>Noted</p> <p>Please see footnote No 33 in NPA 2012-06 which gives the explanation as follows: 'It is not planned to modify NCO.GEN.115. However, since GM to NCO.GEN115 is introduced, the present text is provided for ease of reference'.</p>
comment	<p>57 comment by: <i>René Meier, Europe Air Sports</i></p> <p>Europe Air Sports wishes the currently proposed text to be changed.</p> <p>Rationale: In our community in most of the cases we do not distinguish between an operator and a pilot-in-command, the latter mostly being the operator. There is, for us, no need to establish procedures for taxiing, particularly not keeping in mind the aerodromes used and the type of aircraft flown.</p> <p>Proposed text: All pilots-in-command shall follow procedures for taxiing to ensure safe operation on ground to enhance runway safety. Such procedures shall be established by aerodrome operators and published by appropriate communication means.</p>
response	<p>Not accepted</p> <p>Footnote No 33 on page 17 of NPA 2012-06 explains that concerning the Implementing Rule NCO.GEN.115 on 'taxiing of aeroplanes', no modifications are planned. The commentator sees no need to establish procedures for taxiing at all to be laid down as GM. In contrast, other commentators request for Part-NCO to introduce an additional Implementing Rule for taxiing of aircraft similar to the ones proposed for Part-CAT, Part-NCC, and Part-SPO. Consequently, the way forward as proposed by the Agency can be seen as a reasonable compromise.</p>
comment	<p>63 comment by: <i>IATA</i></p> <p>We suggest to split the last sentence in two in order to avoid linking sterile flight crew compartments with critical phases of flight only:</p> <p>(f) An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all type of operations and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed. These procedures shall establish when sterile flight crew compartment procedures shall be observed.</p>
response	<p>Partly accepted</p> <p>It is our understanding that this comment refers to ORO.GEN.110(f).</p> <p>Following the proposal made, the last sentence has been split into two. However, a different wording than the one proposed has been used. The reason is that it is not up to the procedures of the operators to decide 'when sterile</p>

flight crew compartment procedures shall be observed'. Instead this is laid down in AMC1 ORO.GEN.110(f).

comment	64	comment by: IATA
	We note that there are no changes to this part. We do not understand why it is therefore part of this NPA. Please clarify.	
response	Noted	
	Please see footnote No 33 in NPA 2012-06 which gives the explanation as follows: 'It is not planned to modify NCO.GEN.115. However, since GM to NCO.GEN115 is introduced, the present text is provided for ease of reference.'	

comment	93	comment by: Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)
	<p>B.I.2 Annex III: Part-ORO organisations requirements for air operations</p> <p>...</p> <p>ORO.GEN.110 Operator responsibilities</p> <p>(f) An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed adhered to.</p> <p>Change the two last words in the last sentence to "adhered to".</p> <p>Justification:</p> <p>The change of the wording from "observed" to "adhered to" is needed in order to better reflect the mandatory nature of the regulation (see underlined text above).</p>	
response	Not accepted	
	The Agency sees no difference concerning the mandatory nature when comparing 'observed' and 'adhered to'. In our opinion, both terms mean that one has to follow the rule.	

comment	110	comment by: Boeing
	<p><u>The proposed text states:</u> "Sterile Flight Crew Compartment.....of the occupants"</p> <p>REQUESTED CHANGE: "Sterile Flight Crew Compartment operation/procedures.....of the occupants"</p>	

JUSTIFICATION: The compartment (Flight Deck) is an incorrect reference; the operation or procedures should be referred to.

response Not accepted

As pointed out in NPA 2012-06, the definition (without 'operation/procedures') is in line with ICAO Doc 9870 and the 'European Action Plan for the Prevention of Runway Incursions'. The Agency decided to stay in line with these two documents.

comment 123

comment by: AESA

We consider that, to ensure proper implementation, the treatment of taxiing as a safety critical activity must be in the rule itself, not in the GM. The text as proposed does not preclude the operator to require flight crew member to perform during taxiing activities other than those required for the safe operation of the aircraft.

The text as proposed does not specify when the sterile flight crew compartment procedures must be observed. We think this should be in the rule itself, not in an AMC.

We therefore propose the following alternative text:

ORO.GEN.110 Operator responsibilities

...

(f) An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. These procedures and instructions shall not require crew members ~~to perform any activities~~ during critical phases of flight, and flight crew members also during taxiing, to perform any activities other than those required for the safe operation of the aircraft and ensure that the sterile flight crew compartment procedures be observed during taxiing and critical phases of flight.

response Not accepted

The Agency, in contrast to the commentator, does not see the need to implement details concerning sterile flight deck procedures in the Implementing Rules.

It is the Agency's opinion that the proposal made by the commentator further complicates the overall structure of the paragraph. This is in contrast to the Agency's general position to avoid modifications which are not a necessity. In addition, the EASA Rulemaking Group during the development of NPA 2012-06 did not agree including any details concerning sterile flight deck procedures in the Implementing Rules. Following this approach, the Agency proposes to provide these details in the AMC and GM.

comment

137

comment by: Anthony EAGLES

Page No: 16**Paragraph No:** B.I.1 Annex I: Definitions GM1 ORO.GEN.110(f) 4 i

Comment: The development of the definition for "Sterile flight crew compartment" is understood but it is felt that the resulting text deals with the issues of 'disturbance', which could be interpreted as external to the cockpit, rather than also of those of 'distraction' which could be within it. It is therefore proposed that the definition, be amended as shown below.

Justification: Clarity and better describes the intent of the procedures.

Proposed Text:

'Sterile flight crew compartment' means any period of time when the flight crew members are not disturbed **or distracted**, except for matters critical to the safe operation of the aircraft and/or the safety of the occupants.

response

Accepted

The definition has been modified accordingly (see Section VI of this CRD).

comment

138

comment by: Anthony EAGLES

Page No: 17**Paragraph No:** SPO.GEN.120

Comment: As has been established in the NPA, application of these procedures are not applicable to NCO type operations. Under Part-SPO all levels of operation are possible so it is recommended that this section is realigned to those operators complying with Part-ORO only. The headings of the associated AMC and GM would also require alignment.

Justification: Appropriate application of procedure and intent.

Proposed Text: Amend paragraph heading to read:

SPO.GEN.120 Taxiing of aircraft – commercial operations and operations with complex motor powered aircraft

response

Not accepted

The commentator raises an interesting, but more general issue, not limited to the present rulemaking tasks. This issue cannot be solved or decided upon by the present, quite specific rulemaking tasks. In order to be in line with the overall proposed regulatory framework of the Agency, as laid down in the Agency's Opinions No 04/2011, 01/2012 and 02/2012, it was decided for the present rulemaking tasks not to distinguish within Part-SPO as described above. Following this approach, the Implementing Rules, AMC, and GM have been proposed as presented in NPA 2012-06.

B. Draft Opinion and Decision - II. Draft Decision

p. 18-23

comment	<p>1 comment by: <i>Luftsport Club Dümpel e.V.</i></p> <p>Examples of activities that should not performed include drinking. This restriction seems to go too far, as the disturbing effect of taking a sip of water in an airliner flight deck with conveniently located cup holders is negligible, however for me even necessary now and then after a 10h flight in dry cabin air to get back with a clear voice on the radio. Proposal: Replace point v. by:</p> <p>"v. preparing food or drinks or eating from a plate or tray"</p> <p>That should be clear enough to state below 10000 ft it is not the right time for a tea ceremony or to mix a apple spritzer.</p>
response	<p>Accepted</p> <p>The Agency has considered this and other comments on the subject matter. subparagraph (c)(2)(5) of GM1 ORO.GEN.110(f) has been changed accordingly.</p>

comment	<p>3 comment by: <i>Tim SINDALL</i></p> <p>The Altitude Constraint</p> <p>The text in paragraph 2c does not reflect accurately earlier texts in NPA 2012-06 in which the altitude constraint is described simply as 'flight below 10 000 feet' without the qualification 'above the aerodrome of departure or the aerodrome of destination'.</p> <p>If this qualification is retained, (a) this will not be consistent with FAR 121.542 or FAR 135.100 (neither of which contain it); and (b) will create enormous practical difficulties for pilots who will have to remember to add the elevation of the aerodrome of departure or destination (as appropriate) on every climb or descent that passes through 10 000 feet or Flight Level 100 (as appropriate) if they are to comply accurately with this Regulation as currently proposed.</p> <p>The simple solution - as expressed in some parts of this NPA as in the two above-mentioned FARs - is to delete the qualification and state simply ' flight below 10 000 feet' (although it might be desirable to add 'or Flight Level 100' bearing in mind that in many parts of the world Flight Levels below 100 are likely to remain in use for an indeterminate period).</p> <p>The result will be a procedure that is easy to apply.</p> <p>I support fully all the remaining proposals.</p>
response	<p>Not accepted</p> <p>Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.</p> <p>The proposal of the commentator to use in subparagraph (b)(3) (former 2.c.) of AMC1 ORO.GEN.110(f) the wording as in FAR 121.542 and FAR 135.100 ('below</p>

10 000 feet') has been considered, however, cannot be accepted, since it lacks precision. It would be possible to use wording such as 'below 10 000 mean sea level (MSL)'. However, this would mean that the safety measure would depend on the altitude of the airport, which is an unwanted effect (e.g. for an airport at a high altitude above sea level the safety margin would be lower).

Both, ICAO Doc 9870 (AN/463) and the 'European Action Plan for the Prevention of Runway Incursions', recommend to refer the altitude to the aerodrome of departure and the aerodrome of destination (see paragraphs 16 and 17 of the Explanatory Note of NPA 2012-06).

The discussion within the Agency's Rulemaking Group showed that this approach would mean an additional work item for the flight crew, however, would not 'create enormous practical difficulties', as described by the commentator.

However, since this issue obviously causes concern, the Agency decided to modify the wording as follows:

'(b) The sterile flight crew compartment procedures should be applied:

...
(3) below 10 000 feet above the aerodrome of departure after take-off and the aerodrome of destination before landing, except for cruise flight.'

comment

21

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x,

B.II.1 AMC/GM to Annex III : Part-ORO – organizations requirements for air operations, AMC1 ORO.GEN.110(f) Operator responsibilities:

I propose to change the text as follows (change is underlined):

"...

b. during taxiing and during safety-critical activities

..."

Argumentation for this proposed change :

In points 27, 28, 29. of the A. Explanatory Note, III. Overview of the changes proposed in this NPA, Background information on taxiing of aeroplanes as a safety-critical activity, and the Rulemaking proposal concerning taxiing of aeroplanes as a safety-critical activity point 31. Rulemaking proposal n° 4, it is being made clear that taxiing should be considered as a safety-critical activity.

But what I miss in this 'discussion' is the fact that there may be other safety-critical activities. In this context I'm especially thinking of certain activities with helicopters. I do know that the text as referred to, under points 27, 28, 29 & 31 only refers to aeroplanes and that the taxiing of helicopters is being covered under the 'title' of critical phase of flight as is explained under point 25, based on Annex I (Definitions) of the Agency's Opinion 04/2011. But what I mean is that I miss certain helicopter related activities (e.g. the (dis)embarkation of passengers rotors running, hot refuelling, etc.) that I consider as safety-critical activities, which in my opinion are not being covered in the definition of 'critical phases of flight in the case of helicopters', since these activities are to me not clear if they are covered under the activities that happen during "any other phases of flight as determined by the pilot-in-command or commander". It may be that it is actually covered as a phase of flight, but then I would like to see a definition of 'flight in the case of helicopters'. I could not find such a definition in Annex I (Definitions) of the Agency's Opinion 04/2011; if there is

such a definition, I would appreciate if somebody could indicate me where it is described in that Opinion or any other official (EASA or EC) document. And if it states that flight, in the case of helicopters, is defined as having started when the rotors have started to turn (with the intention of performing a flight) and ends when the rotors have come to a complete stop, then I rest my case, since in that case the landings performed on offshore helidecks during shuttling between oil & gas platforms, could be explained as "any other phase of flight as determined by the PIC". On the other hand, if no such a definition exists, I believe that something should be done about it.

ICAO Annex 6 defines the flight time for helicopters as follows, but Note 2 is important in this present context, rendering the definition 'unusable' (if ICAO is followed completely, in its entirety) in this context:

"The total time from the moment a helicopter's rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

Note 1.— The State may provide guidance in those cases where the definition of flight time does not describe or permit normal practices. Examples are: crew change without stopping the rotors; and rotors running engine wash procedure following a flight. In any case, the time when rotors are running between sectors of a flight is included within the calculation of flight time.

Note 2.— This definition is intended only for the purpose of flight and duty time regulations."

Without Note 2, this definition is in my opinion very useful, and would facilitate to consider the times, for instance on offshore decks, rotors running, during (dis)embarkation, refuelling or for any other reason, as being "one of any other phases of flight as determined by the PIC". But then the definition should be included in the appropriate EASA regulation (Opinion 04/2011 ?) and reference should be made in this NPA 2012-06 to that definition.

To further support my 'idea' of defining clearly 'flight time', I'd like to point out the following.

As you know, the European Helicopter Safety Team (EHEST) brings together manufacturers, operators, research organisations, regulators, accident investigators and a few military operators from across Europe. EHEST is the helicopter branch of the ESSI, and also the European component of the International Helicopter Safety Team (IHST).

The basic principle is to improve aviation safety by complementing regulatory action by voluntarily encouraging and committing to cost-effective safety enhancements. Analysis of occurrence data, coordination with other safety initiatives and implementation of cost-effective action plans are carried out to achieve specific safety goals. In addition, the EHEST initiative implements actions of the European Aviation Safety Plan 2012-2015 (EASp).

In leaflet HE2 issued by EHEST under the title "Helicopter Airmanship v.1", published in December 2011 (recently republished by Eurocopter under Safety Information Note 2418-S-00 on September, 28th 2012), we read in paragraph 3.15 (pag. 17) the fourth sentence : "Remember, the flight isn't over until the engine(s) are shut down and all checks completed and the rotors have stopped." So, I believe I may say that it is generally accepted that flight time

is (at least) the time as from rotors start until rotors stopped.

Now, in respect of the text of this opinion, under AMC1 ORO.GEN.110(f) Operator responsibilities I would suggest to add (see underlined text) :

"2. The sterile flight crew compartment procedures should be applied:
 a. during critical phases of flight;
 b. during taxiing and during safety-critical activities ;
 c. below 10 000 feet above the aerodrome of departure or the aerodrome of destination, except for cruise flight."

Using the text "safety critical activities" may present a way of avoiding the discussion whether the time spent on a helideck, for helicopters, rotors running, should be considered as a phase of flight.

response Not accepted

The proposal to add the phrase '... and during safety-critical activities' to paragraph 2.b. of AMC1 ORO.GEN.110(f) is not accepted.

In these rulemaking tasks the attempt of the Agency is to define the term 'Sterile flight crew compartment' in the proposed regulatory framework, and by doing so, introduce the measures needed at periods of time during the flight including taxiing. In these rulemaking tasks it is not the intention of the Agency to define different levels of safety risks such as

- (a) high safety risk = critical phase of flight;
- (b) medium safety risk = safety-critical activity; and
- (c) lower safety risk = all other phases of operation.

The term 'safety-critical activity' is meant to be used in a descriptive manner to emphasise the contrast to 'critical phases of flight'. The Agency does not see the need defining the term in the applicable framework. This holds although the term 'safety-related activity' is used in the GM.

The comments concerning helicopter related activities (e.g. (dis)embarking of passenger while rotors are running, hot refuelling, etc.) are noted. It is, however, outside the scope of these rulemaking tasks to cover these activities. They are regulated elsewhere in the air operations regulatory framework (e.g. for refuelling/defueling with passengers embarking, on board or disembarking see CAT.OP.MPA.195 and the associated AMC).

comment 22

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x,

B.II.1 AMC/GM to Annex III : Part-ORO – organizations requirements for air operations, GM1 ORO.GEN.110(f) Operator responsibilities :

I propose to change the text as follows (change is underlined) :

"...

3. Flight crew activities

- a. When the ...
- b. Examples of activities that should not be performed are :
 - i. radio calls ...;

- ii. announcements ...;
 - iii. non-critical ...;
 - iv. reading ...;
 - v. eating ...;
 - vi. non-essential ...;
 - vii. mass and balance corrections, performance calculations, unless required for safety reasons; ~~and~~
 - viii. any use of Electronic Flight Bags (EFB) unless urgently necessary; ~~and~~
 - ix. any other unnecessary "heads down activities".
- c. Examples of activities that may be performed are :
- i. use of ...;
 - ii. crew coordination procedures; ~~and~~
 - ~~iii. discussion of minimum equipment list (MEL) items with the company or other personnel; and~~
 - iii. communications inside or outside the aircraft essential to the safe operation of the aircraft and the safety of occupants ."

The first change under 3. b. is in my opinion obvious and self-explaining. As for the change under 3. c., my argumentation is as follows :

I don't think that it is a good idea to discuss MEL-items with the company or other personnel during the times when a "sterile environment" should be maintained, neither during critical phases of flight, neither during taxiing or other safety critical activities, nor below 10.000 ft, except for cruise flight.

MEL-items, and only those that are relevant to the (safe conduct of the) flight or operation at hand, may be discussed only during cruise flight in case the item fails during this phase of flight. In case the item fails during a critical phase of flight, the appropriate (emergency, non-normal or any other) checklist or procedure should be used, while respecting the sterile environment (sterile flight crew compartment) principles. In no case, I believe, MEL-items should be discussed with the company or any other personnel, during taxiing or another safety critical activity.

If an item fails, after start-up of the aircraft, but before the aircraft has started its taxi, then the item should be discussed before starting the taxi and the discussion should be finished (a decision must be made) before taxiing (or in the case where the MEL indicates a 'no-go', the taxi - with the intention of flight - shouldn't be started at all).

If an item fails after taxiing has started, the procedures should be such that either a decision is made immediately based on a 'straight forward' MEL, or as an alternative, if the MEL is not clear enough or the problem is complicated, the decision should be made to stop the taxiing or to taxi back to the parking stand. In no way a discussion should be started with the company or other personnel during taxiing.

If an item fails, during the approach or landing, then the item shouldn't be discussed, not during this critical phase of flight and neither, during the following taxi to the aircraft stand or parking area. There is ample time available, once at the stand or after parking the aircraft, to discuss MEL-items with the company or other personnel.

Moreover, I believe that any MEL should be made, edited in such a way that a fast and correct decision may be made by the flight crew, without any

ambiguity, not requiring any discussion at all, in order to determine whether the aircraft is fit for the operation at hand. It should be a simple means of help to the flight crew. Therefore a MEL should be straight forward, simple and practical in use and leaving no room for discussion. That is what I mean with a 'straight forward' MEL.

(As to my (As to my use of the wording 'sterile environment' versus 'sterile flight crew compartment', see my General Remark on this NPA.)

response Not accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

1. 'Heads down activities': Although the term 'heads down activities' is self-explanatory, the Agency does not agree to the proposal made, since it lacks precision and provides no really new information. In AMC1 ORO.GEN.110(f) on 'Sterile flight crew compartment', it is already pointed out that 'flight crew activities are restricted to essential operational activities'. Therefore, it is not necessary to repeat in the GM that "any other unnecessary 'heads down activities'" should not be performed.

2. Minimum Equipment List: Concerning the 'discussion of Minimum Equipment List (MEL) items with the company or other personnel', the Agency does not accept the proposal to delete this item as an activity that may be performed. The discussion within the Agency's Rulemaking Group made it clear that in certain cases, it is necessary for the safe continuation of the flight to discuss and/or confirm MEL issues e.g. during taxiing. In practical terms, it is not possible for a passenger aircraft close to be ready for take-off to return to the gate if a confirmation concerning an MEL issue is needed. However, in such a case, the provision e.g. in subparagraph (d)(7) of AMC1 CAT.GEN.MPA.125 should be observed, stating that 'any action that may disturb the flight crew from the taxi activity should be avoided or done with the parking brake set'.

comment 23

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x,

B.II.2 AMC/GM to Annex IV : Part-CAT – commercial air transport,
AMC1 CAT.GEN.MPA.125 Taxiing of aircraft

"...

4.b) all taxi clearances should be **recorded** and..."

The text doesn't mention in what way taxi clearances should be recorded. Is this meant as copied in writing or is a recording on the CVR (cockpit voice recorder) acceptable, or are there other means acceptable ? It doesn't say in this Acceptable Means of Compliance-paragraph. I would expect to see some guidance on this matter under the form of an accompanying Guidance Material-paragraph, specifying under what form taxi clearances should be recorded, but under the GM1 CAT.GEN.MPA.125 nothing is mentioned either.

I suggest to add a GM-paragraph on this matter, to describe what way of recording is acceptable, bearing in mind that for a helicopter being flown single pilot, it is not obvious to record taxi clearances in writing, let's say after arrival at an airport when taxi instructions are being issued while performing an air or

	hover taxi. That's no sinecure.
response	<p>Not accepted</p> <p>The Agency, when made this proposal in NPA 2012-06, meant that all taxi clearances should be documented e.g. on paper or on an Electronic Flight Bag (EFB), but not necessarily on a CVR. However, following the proposal of several other commentators, the Agency decided to replace 'recorded' by 'heard'. Paragraphs AMC1 CAT.GEN.MPA125, AMC 1 NCC.GEN.120, GM NCO.GEN.115, and AMC1 SPO.GEN.120 have been changed accordingly. The Agency is of the opinion that no additional GM is needed for further explanation.</p>

comment	<p>24 comment by: <i>Brussels Airport - BRU/EBBR</i></p> <p>Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x, B.II.2 AMC/GM to Annex IV : Part-CAT – commercial air transport, AMC1 CAT.GEN.MPA.125 Taxiing of aircraft</p> <p>In view of my general remark, the parallel between taxiing aircraft and vehicles proceeding on the manoeuvring area, most of the text mentioned under this paragraph, is equally usable for vehicle drivers during their itinerary on the manoeuvring area.</p> <p>I would suggest to adjust the text accordingly, to make it usable for vehicle drivers:</p> <p><u>“PROCEDURES FOR TAXIING AND DRIVING ON THE MANOEUVRING AREA</u> Procedures for taxiing <u>and driving on the manoeuvring area</u> should include at least the following:</p> <ol style="list-style-type: none"> 1. application of the sterile flight crew compartment <u>environment</u> procedures; 2. use of standard radiotelephony (RTF) phraseology; 3. use of <u>aircraft</u> lights as follows: <ol style="list-style-type: none"> a. strobe lights, when entering or crossing a runway (active or inactive); and b. landing lights for take-off; 4. measures to enhance the situational awareness of the minimum required flight crew members <u>or airside manoeuvring area vehicle drivers</u>, such as: <ol style="list-style-type: none"> a. each flight crew member <u>or airside manoeuvring area vehicle driver</u> should have the necessary aerodrome layout charts available; b. all taxi clearances <u>or driving instructions</u> should be recorded and should be understood by each flight crew member <u>or airside manoeuvring area vehicle driver</u>; c. all taxi clearances <u>or driving instructions</u> should be crosschecked against the aerodrome chart and aerodrome surface markings, signs and lights; d. an aircraft taxiing <u>or a vehicle driving</u> on the manoeuvring area shall stop and hold at all lighted stop bars, and may proceed further when an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower and when the stop bar lights are switched off; e. if the pilot taxiing the aircraft <u>or an airside manoeuvring area vehicle driver</u> is unsure of his/her position, he/she should stop the aircraft <u>or vehicle</u> and contact air traffic control;
---------	---

- f. the pilot monitoring or the co-driver should monitor the taxi progress and adherence to the clearances and instructions and should assist the pilot taxiing, resp. the driver;
- g. any action which may disturb the flight crew from the taxi activity or the driver from his movement should be avoided or done with the parking brake set (e.g. announcements by public address, other duty related communications on other communication channels); and
- h. in low visibility conditions, additional crosschecks of flight instruments information should be carried out."

Or, if the option is taken to amend NPA 2011-20 in line with the 'Sterile environment'-principle, I would suggest to use the following text :

"PROCEDURES FOR DRIVING ON THE MANOEUVRING AREA

Procedures for driving on the manoeuvring area should include at least the following:

1. application of the sterile environment procedures;
2. use of standard radiotelephony (RTF) phraseology;
3. measures to enhance the situational awareness of airside manoeuvring area vehicle drivers, such as:
 - a. each airside manoeuvring area vehicle driver and co-driver should have the necessary aerodrome layout charts available;
 - b. all clearances or driving instructions should be recorded and should be understood by each airside manoeuvring area vehicle driver and co-driver;
 - c. all clearances or driving instructions should be crosschecked against the aerodrome chart and aerodrome surface markings, signs and lights;
 - d. a vehicle driving on the manoeuvring area shall stop and hold at all lighted stop bars, and may proceed further when an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower and when the stop bar lights are switched off;
 - e. if an airside manoeuvring area vehicle driver is unsure of his/her position, he/she should stop the vehicle and contact air traffic control;
 - f. the co-driver should monitor the progress of the journey and adherence to the clearances and instructions, and should assist the airside manoeuvring area vehicle driver;
 - g. any action which may disturb the airside manoeuvring area vehicle driver from his trans positioning activity should be avoided or done with the parking brake set (e.g. other duty or operations related communications on other communication channels)"

(See also my general remark on this NPA and my suggestion, my plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012).

response

Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.

The proposal to amend NPA 2011-20 has been forwarded within the Agency, however, it should be addressed by the commentator directly towards that rulemaking activity.

comment	<p>25 comment by: <i>Brussels Airport - BRU/EBBR</i></p> <p>Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x, B.II.2 AMC/GM to Annex IV : Part-CAT – commercial air transport, GM1 CAT.GEN.MPA.125 Taxiing of aircraft</p> <p>I suggest to change the text under n° 2 where taxiing is described as a phase of flight, which is not in line with what is written in the Explanatory Note, under point 29 and point 31 where it is explained that taxiing is not to be considered as a phase of flight (except for helicopters) but as a high-workload phase and a safety-critical activity.</p> <p>So I suggest to change the text as follows (see underlined text) : "Safety-Critical Activity 1. ... 2. Taxiing is a high-workload phase <u>of flight</u> that requires the full attention of the flight crew. ..."</p>
response	<p>Not accepted</p> <p>There might exist a misunderstanding. Taxiing of aircraft per definition is a phase of flight. In paragraphs 29 and 31 of the Explanatory Note of NPA 2012-06, it is stated that taxiing of aeroplanes is not defined as a '<u>critical</u> phase of flight'. Nevertheless, taxiing of aeroplanes remains a phase of flight.</p>
comment	<p>26 comment by: <i>Brussels Airport - BRU/EBBR</i></p> <p>Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x, B.II.3 AMC/GM to Annex VI : Part-NCC – non-commercial operations of complex motor-powered aircraft, AMC1 NCC.GEN.120 Taxiing of aircraft</p> <p>See my remark on: B.II.2 AMC/GM to Annex IV : Part-CAT – commercial air transport, AMC1 CAT.GEN.MPA.125 Taxiing of aircraft.</p>
response	<p>Not accepted</p> <p>Please see the responses to comments No 23 and 24.</p> <p>Taking into consideration the comments of several other commentators, the term 'recorded' in paragraph AMC1 SPO.GEN.120 has been replaced by 'heard'.</p>
comment	<p>27 comment by: <i>Brussels Airport - BRU/EBBR</i></p> <p>Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x, B.II.3 AMC/GM to Annex VI : Part-NCC – non-commercial operations of complex motor-powered aircraft, GM1 NCC.GEN.120 Taxiing of aircraft</p>

response

See my remark on: B.II.2 AMC/GM to Annex IV : Part-CAT – commercial air transport, GM1 CAT.GEN.MPA.125 Taxiing of aircraft.

Not accepted

Please see the response to comment No 25.

comment

28

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x,
B.II.4 AMC/GM to Annex VII : Part-NCO – non-commercial operations of other-than-complex motor-powered aircraft,
GM2 NCO.GEN.115 Taxiing of aircraft. See my remark on : B.II.2 AMC/GM to Annex IV: Part-CAT – commercial air transport, GM1 CAT.GEN.MPA.125 Taxiing of aircraft.

response

Not accepted

Please see the response to comment No 25.

comment

29

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x,
B.II.5 AMC/GM to Annex VIII : Part-SPO – specialized operations,
AMC1 SPO.GEN.120 Taxiing of aircraft

See my remark on: B.II.2 AMC/GM to Annex IV : Part-CAT – commercial air transport, AMC1 CAT.GEN.MPA.125 Taxiing of aircraft.

response

Not accepted

Please see the responses to comments No 23 and 24.

Taking into consideration the comments of several other commentators, the term 'recorded' in paragraph AMC1 SPO.GEN.120 has been replaced by 'heard'.

comment

30

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x,
B.II.5 AMC/GM to Annex VIII : Part-SPO – specialized operations,
GM1 SPO.GEN.120 Taxiing of aircraft

See my remark on: B.II.2 AMC/GM to Annex IV : Part-CAT – commercial air transport, GM1 CAT.GEN.MPA.125 Taxiing of aircraft.

response

Not accepted

Please see the response to comment No 25.

comment	<p>31 comment by: <i>Brussels Airport - BRU/EBBR</i></p> <p>Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x, B.II.1 AMC/GM to Annex III : Part-ORO – organizations requirements for air operations, GM1 ORO.GEN.110(f) Operator responsibilities:</p> <p>I propose to change the text as follows (change is underlined) :</p> <p>"... 4. Communication to the flight crew ... n. <u>a safety threat or</u> any other condition deemed relevant by a cabin crew or technical crew member."</p>
response	<p>Not accepted</p> <p>Different possible safety threats are listed in subparagraphs (d)(1) to (d)(9) and (d)(11) to (d)(13) of GM1 ORO.GEN.110(f). Therefore, the Agency sees no need to emphasise/repeat the phrase 'safety threats' in general in subparagraph (d)(14).</p>
comment	<p>36 comment by: <i>Vereinigung Cockpit e.V. (AG FDT)</i></p> <p>On various occasions, while comfortably on stand, I have unnecessarily been pressured to postpone the programming of available navigational data into the FMS to the taxi-phase of the flight merely to "just get moving as expeditiously as possible".</p> <p>I, thus, recommend item 3.b. vii to be worded</p> <p>"mass and balance corrections, performance calculations, (navigational) programming of the FMS (whilst taxiing), unless required for safety reasons". (or similar wording that might appear acceptable to you)</p>
response	<p>Accepted</p> <p>Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.</p> <p>Following the proposal made, subparagraph (c)(2)(vii) of GM1 ORO.GEN.110(f) has been modified as follows: '(c)(2)(vii) mass and balance corrections, performance calculations, <u>(navigational) programming of the Flight Management System (FMS)</u>, unless required for safety reasons; and'.</p>
comment	<p>37 comment by: <i>Vereinigung Cockpit e.V. (AG FDT)</i></p> <p>4.g. (e.g. announcements by public address, programming of the FMS) (or similar wording that might appear acceptable to you)</p>

response

Not accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

Following comment No 36 '(navigational) programming of the Flight Management System (FMS)' is now listed in subparagraph (c)(2)(vii) of GM1 ORO.GEN.110(f) as an activity which should not be performed by the flight crew unless required for safety reasons, during any period of time when the sterile flight deck procedures have to be observed. Sterile flight deck procedures should also be applied during taxiing. Therefore, the Agency does not see a need to repeat this activity as an example of an activity to be avoided during taxiing by introducing this phrase in subparagraph (d)(7) of AMC1 CAT.GEN.MPA.125, as proposed by the commentator.

In addition, the Agency came to the conclusion that avoiding programming of the FMS should be introduced as GM (GM1 ORO.GEN.110(f)), but not as AMC (AMC1 CAT.GEN.MPA.125).

comment

38

comment by: *Vereinigung Cockpit e.V. (AG FDT)*

4.g. (e.g. announcements by public address, **programming of the FMS**)

(or similar wording that might appear acceptable to you)

response

Not accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

Following comment No 36 '(navigational) programming of the Flight Management System (FMS)' is now listed in subparagraph (c)(2)(vii) of GM1 ORO.GEN.110(f) as an activity which should not be performed by the flight crew, unless required for safety reasons, during any period of time when the sterile flight deck procedures have to be observed. Sterile flight deck procedures should also be applied during taxiing. Therefore, the Agency does not see a need to repeat this activity as an example for an activity to be avoided during taxiing by introducing this phrase in subparagraph (d)(7) of AMC1 CAT.GEN.MPA.125, as proposed by the commentator.

In addition, the Agency came to the conclusion that avoiding programming of the FMS should be introduced as GM (GM1 ORO.GEN.110(f)), but not as AMC (AMC1 CAT.GEN.MPA.125).

comment

39

comment by: *Brussels Airport - BRU/EBBR*

Comment on Draft Decision, FOR AMENDING DECISION N° 201x/xxx/R OF THE EXECUTIVE DIRECTOR OF THE EUROPEAN AVIATION SAFETY AGENCY OF dd MONTH 201x,

B.II.4 AMC/GM to Annex VII : Part-NCO – non-commercial operations of other-than-complex motor-powered aircraft,
GM1 NCO.GEN.115 Taxiing of aircraft

It is not because this part considers non-commercial operations of other-than-complex motor-powered aircraft, that taxiing of aircraft may be 'neglected', or treated 'step motherly' or being considered as less hazardous, in comparison to commercial and non-commercial operations with complex motor-powered

aircraft. Where a runway incursion has led to an accident, the result is always disastrous, no matter whether the incursion is originating from a small aircraft (operated under Part-NCO) or from another commercially operated aircraft. Only the total number of casualties may be less where a small aircraft is involved. Is that a reason enough, to 'simplify' the text on the Taxiing of aeroplanes. It is not because this small aircraft is operated under Part-NCO, that the issues may be minimized.

I even believe, as I have mentioned already in one of my general remarks, that the presence of aircraft operated under Part-NCO present a higher risk, when they are mixed on the same manoeuvring area with aircraft operated under Part-CAT or with complex motor-powered aircraft. The pilots operating under Part-NCO who come (occasionally ?) on the manoeuvring area of big airports, are usually less prepared to operate in such a 'high intensity of traffic' environment, where they mix with highly trained professionals, who are used to operate in such a busy environment.

Therefore I do not completely agree with the proposed text.

I do understand why the text mentions 'pilot-in-command' instead of 'flight crew', since the pilot-in-command in NCO-operations is mostly the only, single person performing flight crew tasks on board. But if the text (the whole text of this NPA) should be changed with my proposal, which I explained in some of my other remarks on this NPA as changing the wording of "sterile flight crew compartment" to "sterile environment", than this general principal of "sterile environment procedures" would be equally applicable to all aircraft, no matter under what Part (CAT, NCC, NCO, SPO) they are being operated and no matter whether it concerns complex or other-than-complex motor-powered aircraft. Therefore I suggest to change the text under B.II.4 AMC/GM to Annex VII : Part-NCO – non-commercial operations of other-than-complex motor-powered aircraft accordingly and in line with the other Parts. Even so, I suggest to change the text under B.I.5 Annex VII : Part-NCO – non-commercial operations of other-than-complex motor-powered aircraft, NCO.GEN.115 Taxiing of aeroplanes, although I have read the foot note 33, saying that it is not planned to modify NCO.GEN.115. I suggest to add the following sentence (see underlined text), right before the first sentence of that paragraph :

"If applicable (= where there is an operator who is responsible for the operation), the operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.

An aeroplane shall only be taxied ..."

See also my remark on B. Draft Opinion and Decision, I. Draft Opinion, B.I.5 Annex VII : Part-NCO - non-commercial operations other-than-complex motor-powered aircraft.

response

Not accepted

Concerning the 'simplification' of the text for Part-NCO operation, it is stated in paragraph 42 of NPA 2012-06: 'The proposed GM for Part-NCO is based on the AMC for Part-CAT, Part-NCC and Part-SPO as described above, but the text has been adjusted and simplified to better reflect non-commercial operations of other-than-complex motor-powered aircraft.' It has to be emphasised that the reason for adjusting and simplifying the text is not to lower the safety standard, but to better address Part-NCO operation needs. To give some examples:

- As the commentator already pointed out, the term 'pilot-in-command' is used in Part-NCO instead of 'flight crew members' for obvious reason;
- The phrase 'if applicable' is added in Part-NCO ('if applicable, all taxi clearances should be recorded/documented...'), since not every small airfield has taxi clearances;

- The phrase 'e.g. announcement by public address' used in Part-CAT and in Part-NCC has not been used in Part-NCO, since it is not expected that during Part-NCO operations announcements by public address are to be made.

For further explanation, please see the response to comment No 33 concerning Part-NCO operations.

comment

51

comment by: AEA

No. 1: Page 18**AMC1 ORO.GEN.110(f) Operator Responsibilities (Sterile Flight Crew Compartment)**

1....

b cabin crew and technical crew communications to or entry into the flight crew compartment are restricted to safety or security matters

AEA Comment:

Editorial comment. The wording should be changed (deleting 'to') 'b cabin crew and technical crew communications to or entry into the flight crew compartment are restricted to safety and security matters'.

No. 2: AMC1 ORO.GEN.110(f) Operator Responsibilities (Sterile Flight Crew Compartment)AEA comment:

We suggest to add 'd) whenever deemed necessary by the Commander'. This is intended for abnormal situations (diversions, technical failures in flight, very bad weather conditions etc) when the flight crew needs full concentration.

No. 3: GM1.ORO.GEN.110(f) OPERATOR RESPONSIBILITIES (STERILE FLIGHT CREW COMPARTMENT)

1. **Establish Procedures**
2. **Pre-Flight Briefing**

...

AEA Comment

There is no need to talk about Sterile Flight Deck Procedures during each pre-flight briefing. This would not be practical and is not needed from a safety point of view. Standard Operation Procedures (SOP) are part of normal training courses but should not always be repeated during the pre-flight briefing. Paragraph 2 (pre-flight briefing) should therefore be deleted and replaced with the responsibility of the Commander to order a Sterile Flight Crew Compartment when deemed necessary e.g. 'Beyond declared periods of application, the pilot in command or commander orders sterile flight crew compartment procedures each time he considers it necessary for the safe conduct of flight'.

**No. 4: GM1 ORO.GEN.110(f) Operator responsibilities
3 flight crew activities**

...

b. v. Eating and drinking

AEA Comment:

There is no justification for not allowing drinking during a Sterile Flight Crew

Compartment procedure. Delete 'and drinking'.

No. 5: Page 19

**GM1 ORO.GEN.110(f) Operator responsibilities
3 flight crew activities**

...

Viii any use of Electronic Flight Bags (EFB) unless urgently necessary

AEA Comment

This does not make any sense. EFB often include aeronautical charts (for example airport moving maps during taxiing) which are essential for the safe conduct of flight. Paragraph 3 viii should therefore be amended to read as 'any use of Electronic Flight Bags (EFB) not directly necessary for the current flight phase'.

**No. 6: GM1 ORO.GEN.110(f) Operator responsibilities
3 flight crew activities**

...

c Examples of activities which may be performed are:

...

AEA comment

Paragraph c) (Examples of activities which may be performed are) should be deleted. All items which are not listed in paragraph b) are allowed. The Commander is responsible to sort this out!

No. 7: Page 20

AMC1 CAT.GEN.MPA.125 (Taxiing of aircraft)

4 .. b. all taxi clearances should be recorded and should be understood by each flight crew member

AEA Comment

The idea of the former JAA OPSG was that the two pilots must have heard and understood the same clearance. If one did not, ATC shall be asked to repeat. The PF cannot record during taxiing. Duplicate same comment for b) in Part NCC, NCO and SPO.

Therefore the paragraph should be amended to read:

'all taxi clearances should be heard and should be understood by each flight crew member'

No. 8: AMC1 CAT.GEN.MPA.125 (Taxiing of aircraft)

4e If the pilot taxiing the aircraft is unsure of his/her position, he/she should stop the aircraft and contact air traffic control

AEA Comment

In line with the best practice of several major airlines and the former JAA OPS proposal, the pilot taxiing the aeroplane should announce in advance his intentions to the pilot monitoring (e.g. I will turn to the right at the second intersection)

The AEA therefore suggests to add an additional point before e) 'The pilot taxiing the aeroplane should announce in advance his intentions to the pilot monitoring'

response

Partially accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

The proposals made were considered as follows:

Regarding No 1: Subparagraph (a)(2) of AMC1 ORO.GEN.110(f): In order to clarify, the subparagraph has been modified as follows: 'Cabin crew and technical crew communications to flight crew or entry into the flight crew compartment are restricted to safety or security matters.'

Regarding No 2: Subparagraph (b) of AMC1 ORO.GEN.110(f): The proposal to add '(4) whenever deemed necessary by the commander' has not been accepted. The reason is that the definition of 'critical phases of flight' (see Annex I – Definitions of Commission Regulation (EU) No 965/2012) already contains the provision '... and any other phases of flight as determined by the pilot-in-command or commander'. Since 'critical phases of flight' is already listed as subparagraph (b)(1), the Agency is of the opinion that there is no need to repeat.

Regarding No 3: The Agency accepts to delete the GM concerning pre-flight briefing. As explained above, the Agency sees no need to add the phrase, as proposed, 'Beyond declared periods of application, the pilot in command or commander orders sterile flight crew compartment procedures each time he considers it necessary for the safe conduct of flight.'

Regarding No 4: The Agency accepted the proposal made to allow drinking. However, following one other commentator's proposal, the Agency modified the wording of this subparagraph of GM1 ORO.GEN.110(f) describing examples of activities that should not be performed, as follows: 'Preparing food or drinks or eating from a plate or tray.'

Regarding No 5: Taking into account several comments and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags' the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

Regarding No 6: The Agency does not agree to delete examples of activities which may be performed as listed in subparagraph (b)(3) of GM1 ORO.GEN.110(f). The Agency is of the opinion that this list as GM might be useful for flight crews illustrating the contrast to activities that should not be performed.

Regarding No 7: The proposal to replace the phrase 'All taxi clearances should be recorded ...' in subparagraph (d)(2) of AMC1 CAT.GEN.MPA.125 by 'All taxi clearances should be heard ...' has been accepted. The text has been modified accordingly. This also applies to Part-NCC, Part-NCO, and Part-SPO.

Regarding No 8: The proposal to add one additional item concerning the pilot taxiing announcing his intentions to the pilot monitoring has been accepted. In subparagraphs (d) of AMC1 CAT.GEN.MPA.125, of AMC1 NCC.GEN.120 and AMC1 SPO.GEN.120 on procedures for taxiing, the following wording has been introduced: 'The pilot taxiing the aircraft should announce in advance his intentions to the pilot monitoring.'

comment	54 comment by: <i>European Cockpit Association</i>
	As regards point 3.v., ECA is of the opinion that it should be always allowed to drink water, for example, even during a critical phase of the flight. Taxi-times of more than one hour are mentioned in another section of the document and it should not be forbidden to drink water either during such long taxi-times
response	Accepted The Agency accepted the proposal made to allow drinking. However, following one other commentator's proposal, the Agency modified the wording of this subparagraph of GM1 ORO.GEN.110(f) describing examples of activities that should not be performed, as follows: 'Preparing food or drinks or eating from a plate or tray.'
comment	55 comment by: <i>European Cockpit Association</i>
	This point is very much appreciated, nevertheless it needs further guidance in case of inoperative stop bars, stucked in the ON-position. From ECA's point of view in this case there should be a marshaller available to guide aircraft across the stop bar.
response	Noted The commentator raised an important issue. However, the Agency is of the opinion that this item should not be regulated under the present rulemaking tasks related to sterile flight deck procedures.
comment	56 comment by: <i>Federal Office of Civil Aviation FOCA</i>
	B.II.2 AMC1CAT/GEN.MPA.125 Taxiing of aircraft (paragraph 1-4): FOCA suggests to delete this item. Explanation: The procedure of taxiing relates to flight procedures and is as such not an item within the flight deck issue. Therefore, it should be deleted, however it must be mentioned adequately in the flight procedure part. If this is not already the case, it should be amended respectively.
response	Not accepted As described in detail in NPA 2012-06, the Agency is of the opinion that EASA rulemaking tasks RMT.0416 and RMT.0417 should include 'Procedures for taxiing to enhance runway safety'.
comment	65 comment by: <i>IATA</i>
	Editorial comment. The wording should be changed (deleting 'to'): 'b cabin crew and technical crew communications or entry into the flight crew compartment are restricted to safety and security matters'
response	Partly accepted Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

In order to clarify subparagraph (a)(2) of AMC1 ORO.GEN.110(f), it has been modified as follows: 'Cabin crew and technical crew communications to flight crew or entry into the flight crew compartment are restricted to safety or security matters.'

comment

66

comment by: IATA

We suggest to add 'd) whenever deemed necessary by the Commander'. This is intended for abnormal situations (diversions, technical failures in flight, very bad weather conditions etc) when the flight crew needs full concentration.

response

Not accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

This comment refers to subparagraph (b) of AMC1 ORO.GEN.110(f). The proposal to add '(4) whenever deemed necessary by the commander' has not been accepted. The reason is that the definition of 'critical phases of flight' (see Annex I – Definitions of Commission Regulation (EU) No 965/2012) already contains the provision '... and any other phases of flight as determined by the pilot-in-command or commander'. Since 'critical phases of flight' is already listed as subparagraph (b)(1), the Agency is of the opinion that there is no need to repeat.

comment

67

comment by: IATA

There is no need to talk about Sterile Flight Deck Procedures during each pre-flight briefing. This would not be practical and is not needed from a safety point of view. Standard Operation Procedures (SOP) are part of normal training courses but should not always be repeated during the pre-flight briefing. Paragraph 2 (pre-flight briefing) should therefore be deleted and replaced with the responsibility of the Commander to order a Sterile Flight Crew Compartment when deemed necessary e.g. 'Beyond declared periods of application, the pilot in command or commander orders sterile flight crew compartment procedures each time he considers it necessary for the safe conduct of flight'

response

Accepted

The Agency accepts to delete the GM concerning pre-flight briefing. As explained in the response to comment No 51 from AEA, the Agency sees no need to add the phrase, as proposed, 'Beyond declared periods of application, the pilot in command or commander orders sterile flight crew compartment procedures each time he considers it necessary for the safe conduct of flight.'

comment

68

comment by: IATA

There is no justification for not allowing drinking during a Sterile Flight Crew Compartment procedure. Delete 'and drinking'

response

Accepted

The Agency accepts the proposal made to allow drinking. However, following one other commentator's proposal, the Agency modified the wording of this subparagraph of GM1 ORO.GEN.110(f) describing examples of activities that should not be performed, as follows: 'Preparing food or drinks or eating from a plate or tray'.

comment

69

comment by: IATA

EFB often include aeronautical charts (for example airport moving maps during taxiing) which are essential for the safe conduct of flight. Paragraph 3 viii should therefore be amended to read as 'any use of Electronic Flight Bags (EFB) not directly necessary for the current flight phase'

response

Partially accepted

Taking into account several comments and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment

70

comment by: IATA

Paragraph c) (Examples of activities which may be performed are) should be deleted. All items which are not listed in paragraph b) are allowed. The Commander is responsible to make this determination.

response

Not accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

The Agency does not agree to delete examples of activities which may be performed as listed in subparagraph (b)(3) of GM1 ORO.GEN.110(f). The Agency is of the opinion that this list as GM might be useful for flight crews illustrating the contrast to activities that should not be performed.

comment

71

comment by: IATA

The idea of the former JAA OPSG was that the two pilots must have heard and understood the same clearance. If one did not, ATC shall be asked to repeat. The PF cannot record during taxiing. Duplicate same comment for b) in Part NCC, NCO and SPO.

Therefore the paragraph should be amended to read:

'all taxi clearances should be heard and should be understood by each flight crew member'

response

Accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

The proposal to replace the phrase 'All taxi clearances should be recorded ...' in subparagraph (d)(2) of AMC1 CAT.GEN.MPA.125 by 'All taxi clearances should be heard ...' has been accepted. The text has been modified accordingly. This also applies to Part-NCC, Part-NCO, and Part-SPO.

comment 72 comment by: IATA

In line with the best practice of several major airlines and the former JAA OPS proposal, the pilot taxiing the aeroplane should announce in advance his intentions to the pilot monitoring (e.g. I will turn to the right at the second intersection)

IATA therefore suggests to add an additional point before e) 'The pilot taxiing the aeroplane should announce in advance his intentions to the pilot monitoring'

response Accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

The proposal to add one additional item concerning the pilot taxiing announcing his intentions to the pilot monitoring has been accepted. In subparagraphs (d) of AMC1 CAT.GEN.MPA.125, AMC1 NCC.GEN120 and AMC1 SPO.GEN.120, the following wording has been introduced: 'The pilot taxiing the aircraft should announce in advance his intentions to the pilot monitoring'.

comment 73 comment by: British Airways Flight Operations

We favour replacing this subparagraph with 'eating a meal'. Neither eating a snack, nor drinking a cup of coffee is likely to be a distracting activity. Such things commonly happen today and it should be borne in mind that at some stations taxi times can be as long as an hour.

response Partly accepted

The Agency accepts the proposal made to allow eating. However, following one other commentators' proposal, the Agency modified the wording of this subparagraph of GM1 ORO.GEN.110(f) describing examples of activities that should not be performed, as follows: 'Preparing food or drinks or eating from a plate or tray'.

comment 74 comment by: British Airways Flight Operations

Certain EFB applications, e.g. airport moving map, airport charts, may be specifically designed for the taxi phase. Therefore, this sub para is overly prescriptive as it stands.

response Partly accepted

Taking into account several comments and considering the Agency's NPA 2012-

02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment	75	comment by: <i>British Airways Flight Operations</i>
	Standard Operating Procedures are not briefed specifically before each flight. Therefore, reference to the appropriate procedures in the Operations Manual Part A would suffice. This paragraph should be removed.	
response	Accepted	
	The subparagraph of GM1 ORO.GEN.110(f) has been deleted.	

comment	77	comment by: <i>UK CAA</i>
	Page No: 18/19	
	Paragraph No: AMC1 ORO.GEN.110 (f) and GM1.ORO.GEN.110 (f), Operator responsibilities	
	Comment: Text in different sections has varying words with the same intent.	
	Justification: Limitations in communication with the flight crew includes cases of great urgency, critical situations, essential to safe operation and restricted to safety/security matters.	
	Proposed Text: Align text to use the same words so that there is no confusion in interpretation.	
response	Partly accepted	
	The wording has been changed by using now the phrase 'to safety and security matters' in GM1.ORO.GEN.110 (f), as in AMC1 ORO.GEN.110 (f). It has to be pointed out, however, that the Agency on purpose occasionally uses different wording in AMC and GM. The reason is that AMC and GM are different in character, and in several cases it makes sense to use different phrases in order to illustrate in the GM what was stated in the AMC. Following this approach, the Agency decided not to modify the wording in subparagraph (b)(3)(iv) of GM1.ORO.GEN.110 (f) ('essential to the safe operation of the aircraft and the safety of occupants').	

comment	78	comment by: <i>UK CAA</i>
	Page No: 18	
	Paragraph No: GM1.ORO.GEN.110 (f) Operator responsibilities (1. Establishment of procedures)	
	Comment: Guidance suggests that cabin and technical crew can only	

communicate with the flight crew in cases of great urgency.

Justification: The GM appears to be more restrictive than AMC1.ORO.GEN.110 (f) which restricts communication to safety or security matters. This would prevent cabin crew from giving checks such as cabin secure, which would invariably be during taxi or after descent through 10,000 feet.

Proposed Text: Remove the term 'great urgency' and replace with terminology used in the AMC. Suggest text – "..... call or enter the flight crew compartment to pass on required safety or security information or in critical situations. In such"

response Partly accepted

Based on the proposal made in this comment and also following the proposal of comment No 77, the Agency decided to rephrase as follows: '... call or enter the flight crew compartment only in cases related to safety or security matters'.

comment

79

comment by: UK CAA

Page No: 18

Paragraph No: GM1.ORO.GEN.110 (f) Operator responsibilities (2. Pre-flight briefing)

Comment: The need to recall the objectives/importance of the sterile flight crew compartment was not crew specific.

Justification: Clarification would assist understanding.

Proposed Text: Include clarification as to whether this is a flight crew briefing or a briefing to all crew members.

response Noted

Taking into consideration the comments made by other commentators, the GM on pre-flight briefing related to sterile flight deck procedures in GM1 ORO.GEN.110(f) has been deleted.

comment

80

comment by: UK CAA

Page No: 18

Paragraph No: GM1 ORO.GEN.110(f) 3 b v

Comment: Prohibiting eating and drinking is unnecessarily punitive.

Justification: Flight crew are able to make a decision if this activity is appropriate at a particular stage of flight.

Proposed Text: Delete paragraph 3 b v 'eating and drinking' in its entirety.

response Partially accepted

The Agency accepts the proposal in general. However, following one other

commentator's proposal, the Agency did not delete, but modified the wording of this subparagraph of GM1 ORO.GEN.110(f) describing examples of activities that should not be performed, as follows: 'Preparing food or drinks or eating from a plate or tray'.

comment

81

comment by: UK CAA

Page No: 19**Paragraph No:** GM1 ORO.GEN.110(f) 3 b viii**Comment:** Prohibiting use of Electronic Flight Bag unless 'urgently necessary' is inappropriate.**Justification:** If the Electronic Flight Bag is the primary source of navigation charts it will always be required during departure, climb, approach and landing phases of flight.**Proposed Text:** Delete the word 'urgently'.

response

Partly accepted

The Agency took into consideration several comments concerning EFBs listed as an example for an activity that should not be performed unless urgently necessary. The Agency came to the conclusion that mentioning EFBs in this context is not needed. Therefore, the statement on the use of an EFB has been deleted from the list.

comment

82

comment by: UK CAA

Page No: 19**Paragraph No:** GM1.ORO.GEN.110 (f) Operator responsibilities (4. Communication to the flight crew)**Comment:** Guidance suggests that cabin and technical crew can only communicate with the flight crew in critical situations.**Justification:** The GM appears to be more restrictive than AMC1 ORO.GEN.110 (f) which restricts communication to safety or security matters. This would prevent cabin crew from giving checks such as cabin secure, which would invariably be during taxi or after descent through 10,000 feet.**Proposed Text:** Add another section to permit communication when required to pass on safety or security information.

response

Partially accepted

Following the proposal made in comment No 77 of the same commentator, the Agency decided to rephrase as follows: 'Cabin crew and technical crew use their own discretion to determine whether the situation ~~is critical~~ related to safety or security matters and whether to call the flight crew.'

comment	<p data-bbox="351 201 391 235">83</p> <p data-bbox="1133 201 1436 235">comment by: UK CAA</p> <p data-bbox="351 257 534 291">Page No: 19</p> <p data-bbox="351 324 917 358">Paragraph No: GM1 ORO.GEN.110(f) 4 i</p> <p data-bbox="351 392 1444 459">Comment: Contacting the flight crew for 'unruly passenger' may be inappropriate.</p> <p data-bbox="351 481 1444 582">Justification: Flight crew should only be contacted if the 'unruly passenger' actually constitutes a threat to the safety of the flight, not for bad behaviour such as using offensive language.</p> <p data-bbox="351 616 1444 683">Proposed Text: Replace 'unruly passenger' with 'disruptive passenger who poses a threat to flight safety'</p>
response	<p data-bbox="351 705 478 739">Accepted</p> <p data-bbox="351 750 853 784">The proposal has been incorporated.</p>

comment	<p data-bbox="351 873 391 907">84</p> <p data-bbox="1133 873 1436 907">comment by: UK CAA</p> <p data-bbox="351 929 534 963">Page No: 20</p> <p data-bbox="351 996 1157 1030">Paragraph No: GM1.CAT.GEN.MPA.125 Taxiing of aircraft</p> <p data-bbox="351 1064 1444 1131">Comment: Safety-critical activity is new terminology which has no associated definition.</p> <p data-bbox="351 1153 1444 1232">Justification: Critical phases of flight has a definition included in Annex 1 of the Air Operations Regulation and this new term is directly related to that.</p> <p data-bbox="351 1254 1204 1288">Proposed Text: Include a definition of Safety-critical activity.</p>
response	<p data-bbox="351 1310 534 1344">Not accepted</p> <p data-bbox="351 1366 1444 1534">In these rulemaking tasks, the attempt of the Agency is to define the term 'Sterile flight crew compartment' in the proposed regulatory framework, and by doing so, to introduce the measures needed at periods of time during the flight including taxiing. In these rulemaking tasks, it is not the intention of the Agency to define different levels of safety risks such as:</p> <ul data-bbox="351 1556 1077 1691" style="list-style-type: none"> (1) high safety risk = critical phase of flight; (2) medium safety risk = safety-critical activity; and (3) low safety risk = all other phases of operation. <p data-bbox="351 1702 1444 1825">The term 'safety-critical activity' is meant to be used in a descriptive manner to emphasise the contrast to 'critical phases of flight'. Therefore, the Agency does not see the need of defining the term in the applicable framework. This holds although the term 'safety-related activity' is used in the GM.</p> <p data-bbox="351 1836 1444 2027">ICAO Document 9870 and the 'European Action Plan for the Prevention of Runway Incursions' state that 'The taxi phase should be treated as a <u>critical phase of flight</u>'. The Agency originally would have preferred this phrase instead of 'Taxiing should be treated as a <u>safety-critical activity</u>' as it is now in the proposed regulatory framework. However, the EASA Rulemaking Group did not agree to such a proposal. In addition, the responses to the question asked in</p>

NPA 2012-06 showed that the majority of commentators responding also prefer the phrase 'taxiing to be treated as a safety-critical activity'.

comment

90

comment by: *NetJets Europe*

Reference/Paragraph	Proposal / Comment	Justification
AMC1 ORO.GEN.110(f) 2 c.	NetJets suggests revising paragraph c and adding paragraph as follows: c. below 10 000 feet above the aerodrome of departure and aerodrome of destination or applicable aerodrome MSA whichever is higher, except for cruise flight d. When determined by the pilot in command	The statement in the NPA ' <i>below 10 000 feet above the aerodrome of departure or the aerodrome of destination, except for cruise flight</i> ' may be interpreted as being either one or the other. Changing 'or' to 'and' will require it for both. The addition of 'or applicable aerodrome MSA whichever is higher' is justified when operating to aerodromes surrounded by high terrain and in some cases where the FAP is more than 10 000 feet above the aerodrome e.g. LSGS. It is paramount when operating in areas of high terrain that flight crew are not distracted by non-essential operational activities and thus sterile flight crew compartment is essential. The addition of 'When so determined by the pilot in command' is to allow the commander to establish a sterile flight crew compartment when deemed necessary. This is similar to the ICAO designation in the ICAO Manual.
GM1 ORO.GEN110(f) 3. b. viii.	NetJets suggests revising point viii as follows: viii. any use of Electronic Flight Bags (EFB) unless critical for the operation	The word urgent may suggest that it can only be used for urgency and emergency situations. The normal use of EFB during critical phases of flight is required e.g. for reviewing and changing of aerodrome charts, performance for runway changes. These are critical to the normal operation and may not be considered urgently necessary.

response Partially accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

Subparagraph (b)(3) (former 2.c.) of AMC1 ORO.GEN.110(f): The commentator identifies one issue which obviously causes confusion. However, the Agency is of the opinion that the wording, as proposed, further complicates the issue. Taking into account the concern raised, the Agency decided to modify the wording as follows:

\(b) The sterile flight crew compartment procedures should be applied:

...

(3) below 10 000 feet above the aerodrome of departure after take-off and the aerodrome of destination before landing, except for cruise flight.'

The Agency does not see a need to add 'When so determined by the pilot-in-command'. The reason is as follows: The listing when sterile flight deck procedures are to be observed, includes 'during critical phases of flight'. The definition of 'critical phases of flight' contains the provision '... and any other phases of flight as determined by the pilot-in-command or commander'. Therefore, the Agency does not see a reason to repeat this provision.

Subparagraph (b)(2)(viii) (former 3.b.viii) of GM1 ORO.GEN.110(f): Taking into account several comments and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment

94

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**B.II.1 AMC/GM to Annex III: Part-ORO
– organisations requirements for
air operations**

GM1 ORO.GEN.110(f) Operator responsibilities

3. Flight crew activities

b. Examples of activities that should not be performed are:

viii. ~~any~~ **the** use of Electronic Flight Bags (EFB) unless **required by standard operating procedures** ~~urgently necessary~~.

Justification:

response

When operating aircraft that are equipped with EFB, the use of the EFB might be part of the standard operating procedures (SOP). The wording as it stands right now might cause uncertainty. Therefore the text need to be changed.

Partially accepted

Taking into account several comments and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment

95

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

**B.II.2 AMC/GM to Annex IV: Part-CAT
– commercial air transport**

...

AMC1 CAT.GEN.MPA.125 Taxiing of aircraft

PROCEDURES FOR TAXIING

Procedures for taxiing should include at least the following:

4. measures to enhance the situational awareness of the minimum required flight crew members, such as:

b. all taxi clearances should be recorded **unless it would jeopardise the safety of flight** and should be understood by each flight crew member;

Justification:

The text need to be adapted to single pilot helicopter operations with helicopters that hasn't an autopilot installed. It is obvious that pilots cannot let go of the controls in order to record a clearance as this would lead to potential unsafe condition. One example would be to add a text in accordance with the underlined.

response

Partially accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

Taking this and also other comments on this issue into account, the Agency decided to modify the wording of subparagraph (d)(2) (former 4.b.) of AMC1 CAT.GEN.MPA.125 as follows: 'All taxi clearances should be ~~recorded~~heard and should be understood by each flight crew member.'

comment

96

comment by: *Swedish Transport Agency, Civil Aviation Department*

(Transportstyrelsen, Luftfartsavdelningen)

GM1 CAT.GEN.MPA.125 Taxiing of aircraft aeroplanes

SAFETY-CRITICAL ACTIVITY

1. Taxiing should be treated as a safety-critical activity due to the risks related to the movement of the aircraft and the potential for a catastrophic event on the ground.
2. Taxiing is a high-workload phase of flight that requires the full attention of the flight crew.

Justification:

The definition of "Critical phase of flight " for helicopters in Annex I to the OPS-regulation contains taxiing as part of a critical phase of flight. If this GM is applicable to helicopters the GM changes the importance of the definition which is not allowed. It might be needed to redraft another GM in order to adapt to helicopters. If this GM is only applicable to aeroplanes the heading needs to be changed.

response

Accepted

The Agency appreciates this comment. The headline has been changed as proposed. As mentioned by the commentator, taxiing of helicopters is defined as a critical phase of flight with corresponding requirements. Therefore, the Agency is of the opinion that, for the time being, no guidance for helicopters is needed.

comment

97

comment by: *Swedish Transport Agency, Civil Aviation Department*
(Transportstyrelsen, Luftfartsavdelningen)

GM1 NCC.GEN.120 Taxiing of aircraft aeroplanes

SAFETY-CRITICAL ACTIVITY

3. Taxiing should be treated as a safety critical activity due to the risks related to the movement of the aircraft and the potential for a catastrophic event on the ground.
4. Taxiing is a high workload phase of flight that requires the full attention of the flight crew.

Justification:

The definition of "Critical phase of flight " for helicopters in Annex I to the OPS-regulation contains taxiing as part of a critical phase of flight. If this GM is applicable to helicopters the GM changes the importance of the definition which is not allowed. It might be needed to redraft another the GM in order to adapt to helicopters. If this GM is only applicable to aeroplanes the heading needs to be changed.

response

Accepted

The Agency appreciates this comment. The headline has been changed as proposed. As mentioned by the commentator, taxiing of helicopters is defined as a critical phase of flight with corresponding requirements. Therefore, the Agency is of the opinion that, for the time being, no guidance for helicopters is

needed.

comment

98

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

GM1 SPO.GEN.120 Taxiing of aircraft ~~aircraft~~ aeroplanes

SAFETY-CRITICAL ACTIVITY

1. Taxiing should be treated as a safety critical activity due to the risks related to the movement of the aircraft and the potential for a catastrophic event on the ground.
2. Taxiing is a high workload phase of flight that requires the full attention of the flight crew.

Justification:

The definition of "Critical phase of flight " for helicopters in Annex I to the OPS-regulation contains taxiing as part of a critical phase of flight. If this GM is applicable to helicopters the GM changes the importance of the definition which is not allowed. It might be needed to redraft another GM in order to adapt to helicopters. If this GM is only applicable to aeroplanes the heading needs to be changed.

response

Accepted

The Agency appreciates this comment. The headline has been changed as proposed. As mentioned by the commentator, taxiing of helicopters is defined as a critical phase of flight with corresponding requirements. Therefore, the Agency is of the opinion that, for the time being, no guidance for helicopters is needed.

comment

101

comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

B.II.3 AMC/GM to Annex VI: Part-NCC – non-commercial operations of complex motor-powered aircraft

...

AMC1 NCC.GEN.120 Taxiing of aircraft

PROCEDURES FOR TAXIING

4. measures to enhance the situational awareness of the minimum required flight crew members, such as:

b. all taxi clearances should be recorded **unless it would jeopardise the safety of flight** and should be understood by each flight crew member;

Justification:

The text need to be adapted to single pilot helicopter operations with helicopters that hasn't an autopilot installed. It is obvious that pilots cannot let go of the controls in order to record a clearance as this would lead to potential unsafe condition. One example would be to add a text in accordance with the underlined.

response Partially accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

Taking this and also other comments on this issue into account, the Agency decided to modify the wording of subparagraph (d)(2) (former 4.b.) of AMC1 CAT.GEN.MPA.125 as follows: 'All taxi clearances should be ~~recorded~~heard and should be understood by each flight crew member.'

comment 102 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

B.II.4 AMC/GM to Annex VII: Part-NCO – non-commercial operations of other than complex motor-powered aircraft

...

GM1 NCO.GEN.115 Taxiing of aeroplanes
PROCEDURES FOR TAXIING

5. measures to enhance the situational awareness of the pilot-in-command, such as:

b. if applicable, all taxi clearances should be recorded, unless it would jeopardise the safety of flight and should be understood by the pilot-in-command;

Justification:

The text need to be adapted to single pilot helicopter operations with helicopters that hasn't an autopilot installed. It is obvious that pilots cannot let go of the controls in order to record a clearance as this would lead to potential unsafe condition. One example would be to add a text in accordance with the underlined.

response Partially accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

Taking this and also other comments on this issue into account, the Agency decided to modify the wording of subparagraph (d)(2) (former 4.b.) of AMC1 CAT.GEN.MPA.125 as follows: 'All taxi clearances should be ~~recorded~~heard and should be understood by each flight crew member.'

comment 103 comment by: *Swedish Transport Agency, Civil Aviation Department (Transportstyrelsen, Luftfartsavdelningen)*

B.II.5 AMC/GM to Annex VIII: Part-SPO – specialised operations

...

AMC1 SPO.GEN.120 Taxiing of aircraft
PROCEDURES FOR TAXIING

4. measures to enhance the situational awareness of the pilot-in-command,

such as:

b. if applicable, all taxi clearances should be recorded **unless it would jeopardise the safety of flight**, and should be understood by the pilot-in-command;

Justification:

The text need to be adapted to single pilot helicopter operations with helicopters that hasn't an autopilot installed. It is obvious that pilots cannot let go of the controls in order to record a clearance as this would lead to potential unsafe condition. One example would be to add a text in accordance with the underlined.

response

Partially accepted

Note: The numbering system of the regulatory text in this CRD has been changed when compared to NPA 2012-06.

Taking this and also other comments on this issue into account, the Agency decided to modify the wording of subparagraph (d)(2) (former 4.b.) of AMC1 CAT.GEN.MPA.125 as follows: 'All taxi clearances should be recorded heard and should be understood by each flight crew member.'

comment

105

comment by: DGAC France

GM1 ORO.GEN.110

Proposition:

Deletion of 3. b. viii. " *any use of Electronic Flight Bags (EFB) unless urgently necessary.*" from GM1 ORO.GEN.110

Justification:

As far as "GM1 ORO.GEN.110(f) Operator responsibilities" is concerned, the guidance material indicates :

"STERILE FLIGHT CREW COMPARTMENT

3. *Flight crew activities*

...

b. Examples of activities that should not be performed are:

...

viii. any use of Electronic Flight Bags (EFB) unless urgently necessary."

Though, NPA 2012-02 concerning "Airworthiness and operational criteria for the approval for Electronic Flight Bags (EFBs)" completely diverges from the 3. b. viii guidance as it implements use of EFB during taxiing of aeroplanes or even during all critical phases of flight; three examples are given below :

1. For class 1 EFB:

"Class 1 EFB systems are stowed during critical phases of flight. However, in the case of electronic aeronautical chart applications, the competent authority may allow its use during critical phases of flight, provided the Class 1 EFB is used with a kneeboard system"

(see NPA 2012-02, 5.1 Hardware Classes of EFB Systems, 5.1.1 Class 1, paragraph "Complementary characteristics")

2. In the same NPA 2012-02, use of other than class 1 EFB is clearly not

forbidden, even during the critical phases of flight:

"The positioning, of the EFB should not result in unacceptable flight crew workload. Complex, multi-step data entry tasks should be avoided during take-off, landing, and other critical phases of flight."

(see Appendix D, paragraph D.2.10 Flight Crew Workload)

3. Lastly, NPA 2012-02 indicates that the objective of certain EFB functions is precisely helping the crew in the taxiing phase. That is the case of EFB hosted Airport Moving Map Display (AMMD) applications:

"An AMMD application shall not be used as the primary means of taxiing navigation and shall only be used in conjunction with other materials and procedures identified within the Operating Concept – see paragraph H.3.3.

Note: When an AMMD is in use, the primary means of taxiing navigation remains the use of normal procedures and direct visual observation out of the cockpit window." (See Appendix H, paragraph H.1.2 Assumptions of intended use of an AMMD.)

As a conclusion, the EFB utilisation as per NPA 2012-02 is foreseen outside any "urgent need" ("urgent need" being the only exception accepted in GM1 ORO.GEN.110). Fact is that NPA 2012-06 does not match NPA 2012-02.

The fact that NPA 2012-02 is under review and that major changes may be implemented in the future EFB text (deletion of classes...) will most probably not change this mismatch.

It is then proposed to delete 3. b. viii. " any use of Electronic Flight Bags (EFB) unless urgently necessary." From GM1 ORO.GEN.110.
Note: For EFB which use shall be approved, it should be easier to authorise/forbid the use of EFB during critical phases of flight and/or taxing of aeroplanes.

response

Accepted

The Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags' does, as the commentator correctly pointed out, contain specific provisions for the use of EFBs during critical phases of flight and during taxiing. The Agency agrees with the commentator that, aside of these specific provisions and also aside of the envisaged new paragraph CAT.OP.MPA.325 on EFBs (to be included in the Regulation air operations), EFBs do not need to be mentioned in the present context. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment

107

comment by: DGAC France

GM1 and GM2 to NCO.GEN.115 :

Part NCO is changed through the introduction of GM for aeroplanes only. It seems quite logical: taxiing for helicopters being included in critical phases of the flight, the pilot in command shall comply with NCO.GEN.105 Pilot-in-command responsibilities and authority, which provides: *"(b) The pilot-in-command shall ensure that during critical phases of flight...all crew members are seated at their assigned stations and do not perform any activities other than those required for the safe operation of the aircraft."*
This provision seems sufficient indeed.

Based on the same principle, wouldn't it be justified that all new provisions concerning taxiing and « sterile flight crew compartment » be limited to aeroplanes only (e.g. CAT.GEN.MPA125 Taxiing of aircraft or NCC.GEN.120 Taxiing of aircraft...) as soon the helicopter case is already covered ? E.g. ORO.GEN.110 Operator responsibilities: "(f) The operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties.... These procedures shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft"

We may have missed the point...

Other examples can be provided... E.g. : is the following guidance needed for helicopters considering taxiing is a critical phase of flight:

GM1 NCC.GEN.120 Taxiing of aircraft SAFETY CRITICAL ACTIVITY

3. Taxiing should be treated as a safety critical activity due to the risks related to the movement of the aircraft and the potential for a catastrophic event on the ground.

4. Taxiing is a high workload phase of flight that requires the full attention of the flight crew.

Proposition : review new requirements to decide if all are really needed for helicopters, in consideration of the fact that taxiing is already a critical phase of the flight and having in mind that proposed new provisions could then be uselessly burdensome (in terms of procedures) for helicopters operators

response Partly accepted

The comment is appreciated. The Agency agrees that certain measures do not need to cover helicopters, since for helicopters taxiing is defined as a critical phase of flight. Consequently, the GM describing taxiing as a safety-critical activity has been modified and does not include helicopters any longer (the term 'aircraft' has been replaced by 'aeroplane', see GM2 CAT.GEN.MPA.126, GM1 NCC.GEN.121, and GM1.SPO.GEN.121).

Concerning the AMC on 'Procedures for taxiing' in Part-CAT, Part-NCC, and Part-SPO (see AMC1 CAT.GEN.MPA.125, AMC1 NCC.GEN.120 and AMC1 SPO.GEN.120), the Agency came to the conclusion that it is reasonable to cover both, aeroplanes and helicopters (i.e. to leave the text as it is). The reasons are as follows:

- The AMC contain detailed provisions for taxiing to ensure safe operation and to enhance runway safety. This holds for aeroplanes and helicopters; there is no reason to exclude helicopters.
- The AMC emphasise that sterile flight deck procedures have to be observed during taxiing, and this is listed as one out of four elements of the procedures for taxiing. This holds for aeroplanes and helicopters; there is no reason to exclude helicopters.

comment 111

comment by: Boeing

The proposed text states: STERILE FLIGHT CREW COMPARTMENT

REQUESTED CHANGE: STERILE FLIGHT CREW COMPARTMENT
OPERATIONS/PROCEDURES

JUSTIFICATION: The compartment (Flight Deck) is an incorrect reference; the operation or procedures should be referred to.

response Not accepted

As pointed out in NPA 2012-06, the definition (without 'operation/procedures') is in line with ICAO Doc 9870 and the 'European Action Plan for the Prevention of Runway Incursions'. The Agency decided to stay in line with these two documents.

comment 112

comment by: *Boeing*

Page: 18
 Paragraph: *GM1 ORO.GEN.110(f) 2*

The proposed text states: Prior to the flight, during the preparation phase, the pilot in command or commander recalls the objectives and importance of the sterile flight crew compartment.

REQUESTED CHANGE: Prior to the flight, during the preparation phase, the pilot in command or commander **briefs** the objectives and importance of the sterile flight crew compartment **operations/procedures**.

JUSTIFICATION: There is a difference between briefing (interactive) and recalling. Add operations/procedures as indicated previously.

response Noted

The comment is appreciated. However, following the proposals of other commentators, this subparagraph has been deleted.

comment 113

comment by: *Boeing*

Page: 18
 Paragraph: *GM1 ORO.GEN.110(f) 3*

The proposed text states: When the sterile flight crew compartment procedures are applied, the flight crew are focused on their essential operational activities without being disturbed by non-flight related matters.

REQUESTED CHANGE: When the sterile flight crew compartment procedures are applied, the flight crew **is** focused on their essential operational activities without being disturbed by non-**safety** related matters.

JUSTIFICATION: Editorial, and safety related issues should be addressed whether they are flight or non-flight related

response Partly accepted

In order to avoid any confusion concerning 'flight crew are' or 'flight crew is' the term 'member' has been introduced. The phrase then is 'flight crew members are'.

Following the proposal of the commentator, 'non-flight' has been replaced by 'non-safety'.

comment 114

comment by: *Boeing*

Page: 18
 Paragraph: *GM1 ORO.GEN.110(f) 3*

The proposed text states: b. Examples of activities that should not be performed are:

v. eating and drinking;

viii. any use of Electronic Flight Bags (EFB) unless urgently necessary.

REQUESTED CHANGE: Eliminate these 2 examples

JUSTIFICATION: Eating or drinking activities are not affecting safety of flight, while EFB may be required for normal operational tasks such as performance or routing, and should be allowed.

response Partially accepted

Eating and drinking: Following the proposal of several commentators, the wording concerning eating and drinking has been modified, now stating that 'preparing food or drinks or eating from a plate or tray' are activities that should not be performed.

Electronic Flight Bags (EFB): Taking into account several comments and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment 116

comment by: Boeing

Page: 19

Paragraph: AMC1 CAT.GEN.MPA.125 Taxiing of aircraft 4 etc.

The proposed text states: all taxi clearances should be recorded and should be understood by each flight crew member;

REQUESTED CHANGE: Clarification needed

JUSTIFICATION: Clarification of the use of the word "recorded". Will this be part of the required post flight documentation.

response Noted

Taken into account the concerns of other commentators, the phrase 'recorded' has been replaced by 'heard'.

comment 117

comment by: Boeing

Page: 19

Paragraph: AMC1 CAT.GEN.MPA.125 Taxiing of aircraft 4 etc.

The proposed text states: in low visibility conditions, additional crosschecks of flight instruments information should be carried out.

REQUESTED CHANGE: Clarification needed

JUSTIFICATION: What additional instrument crosschecks are needed, and for what reason? This would possibly distract crews rather than add safety.

response Accepted

The Agency agrees that for low visibility conditions the wording ('cross-checks of flight instruments information') might cause confusion. Having in mind, that the Agency has initiated Rulemaking Tasks RMT.0379 and RMT.0380 on 'Low visibility operations', it was decided not to consider the measure in the present rulemaking tasks and consequently, to delete the subparagraph.

comment

118

comment by: *IACA International Air Carrier Association*

IACA comment to GM1 ORO.GEN.110(f) Operator responsibilities

STERILE FLIGHT CREW COMPARTMENT

2. Preflight briefing

As the sterile flight deck concept is trained and its importance and details are laid out in the Operations Manual, there is no need to address the sterile flight deck concept's objectives and importance in every pre-flight briefing. As a standard operating procedure, the concept should be well known and should therefore not represent a requirement to be addressed on every flight, the more so as it is a procedure to be adhered to on every flight.

Proposal:

Delete GM1 ORO.GEN.110(f).

response

Accepted

Following the proposal of this and also of other commentators, the subparagraph has been deleted.

comment

119

comment by: *IACA International Air Carrier Association*

IACA comment to GM1 ORO.GEN.110(f) Operator responsibilities

STERILE FLIGHT CREW COMPARTMENT

3. Flight crew activities

b. Examples of activities that should not be performed are:

viii. any use of Electronic Flight Bags (EFB) unless urgently necessary.

The use of EFB is either necessary or not (e.g. switching to a different runway during approach). Stating that it needs to be urgently necessary may create confusion as to the meaning of the word urgently. '

Proposal:

Reword GM1 ORO.GEN.110(f)3.b.viii:

"any use of Electronic Flight Bags (EFB) unless ~~urgently~~ necessary"

response

Partly accepted

Taking into account several comments and considering the Agency's NPA 2012-

02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment

120

comment by: AIRBUS

This comment relates to:

**GM1 ORO.GEN.110(f) Operator responsibilities
STERILE FLIGHT CREW COMPARTMENT**

The paragraph 3 reads:

"3. Flight crew activities

[...]

b. Examples of activities that should not be performed are:

[...]

viii. any use of Electronic Flight Bags (EFB) unless urgently necessary.

c. Examples of activities that may be performed are:

i. use of checklists;

ii. crew coordination procedures;

iii. discussion of minimum equipment list (MEL) items with the company or other personnel; and

iv. communications inside or outside the aircraft essential to the safe operation of the aircraft and the safety of occupants."

There is an inconsistency between sub-paragraphs b and c since check lists and MEL may be on EFB. it is acceptable to consult them in accordance with c but EFB cannot be used in accordance with b.

Airbus suggests, either to delete viii or to modify that paragraph to read: "viii. use of the EFB except as necessary/required to complete established flight crew procedures and duties." The wording "unless urgently necessary" should be deleted. With this modification, paragraph c would then be acceptable.

response

Accepted

Taking into account several comments and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment

121

comment by: AIRBUS

This comment relates to:

**AMC1 NCC.GEN.120 Taxiing of aircraft
PROCEDURES FOR TAXIING**

The content of the paragraph 4 is too prescriptive and may interfere with measures that are already part of current/routine/standard pilot procedures and training. The content of the paragraph 4 should be limited to the following wording:

"4. measures to enhance the situational awareness of the minimum required flight crew members."

response Not accepted

The Agency understands the concern raised, and is aware that the measures in parts are included in the current pilot procedures and training manuals. However, no such measures exist in the air operations applicable framework. With the present rulemaking tasks, sterile flight deck procedures are introduced which have to be, aside of other phases of flight, applied during taxiing. The Agency is of the opinion that, consequently, it makes sense to provide AMC concerning procedures for taxiing emphasising that the 'application of the sterile flight crew compartment procedures' is one element.

comment 124

comment by: AESA

Experience has shown that use of cell phones or other portable electronic devices can be another source of distraction for the flight crew. (See recommendation 23/11 from the CIAIAC accident report of Spanair MD-80 at Madrid on 20/08/08: "it is recommended that EASA ensures that national authorities require commercial air transport operators to prohibit their crews from using portable electronic devices on the flight deck").

Therefore, we purpose to add an item in GM1 ORO.GEN.110(f).3.b, examples of activities that should not be performed:

ix. any use of cell phones. or other portable electronic devices unless required for safety reasons

response Partially accepted

The Agency agrees with the commentator that portable electronic devices including cell phones can be a source of distraction for the flight crew. However, since detailed provisions concerning portable electronic devices are provided in CAT.GEN.MPA.140 of Commission Regulation (EU) No 965/2012, and in AMC1 CAT.GEN.MPA.140 and GM1 CAT.GEN.MPA.140, the Agency came to the conclusion that no further provisions are needed.

comment 125

comment by: AESA

We cannot preclude future developments of EFB to make them necessary for taxiing.

Therefore, we suggest adding at the end of GM1 ORO.GEN.110(f)Operator responsibilities, 3.b.viii the words "or required for safety reasons".

response Accepted

Taking into account several comments and considering the Agency's NPA 2012-02 on 'Airworthiness and operational criteria for the approval for Electronic

Flight Bags', the Agency came to the conclusion that mentioning EFBs in the present context is not needed. The reason is that NPA 2012-02 contains proposals for specific provisions for the use of EFBs during critical phases of flight and during taxiing. Consequently, the statement on the use of an EFB has been deleted in GM1 ORO.GEN.110(f).

comment 139

comment by: Anthony EAGLES

Page No: 18**Paragraph No:** AMC1 ORO.GEN.110(f) 2(c)

Comment: The criteria of 10,000 ft is not appropriate for unpressurised aircraft and therefore this consideration should be reviewed in respect of such aircraft. The requirements require application of the Sterile Flight Crew Compartment procedures for 'critical phases of flight' and perhaps this is sufficient for less complex aircraft operation. If the 10, 000 ft was made applicable only to pressurised a/c then it might be more appropriate.

Justification: Recognition of differing types of aircraft intended to be covered by this proposal

Proposed Text:

c. **For pressurised aircraft,** below 10,000 feet above the aerodrome

response Not accepted

The Agency is of the opinion that the phrase 'except for cruise flight' addresses the needs of non-pressurised aircraft, i.e. below 10 000 ft, the sterile flight deck procedures are not applicable when the aircraft is in cruise flight.

comment 140

comment by: Anthony EAGLES

Page No: 20**Paragraph No:** AMC1 CAT.GEN.MPA.125 sub-para 3 - Use of lights

Comment: The mention of 'strobe lights' assume that they are fitted. Such lights are not a requirement so this statement may be misleading. It is suggested that the text is amended as shown below. Also, lights must be displayed in accordance with Rules of the Air and now as detailed in Part-SERA.3215.

Justification: Clarification.**Proposed Text:** Amend to read:

	3. use of lights as follows: a. strobe lights (where fitted), when entering or crossing
response	Accepted The wording has been changed accordingly.

comment	141 comment by: Anthony EAGLES Page No: 20 Paragraph No: AMC1 NCC.GEN.120 sub-para 3 - Use of lights Comment: The mention of 'strobe lights' assume that they are fitted. Such lights are not a requirement so this statement may be misleading. It is suggested that the text is amended as shown below. Also, lights must be displayed in accordance with Rules of the Air and now as detailed in Part-SERA.3215. Justification: Clarification. Proposed Text: Amend to read: 3. use of lights as follows: a. strobe lights (where fitted), when entering or crossing
response	Accepted The wording has been changed accordingly.

comment	142 comment by: Anthony EAGLES Page No: 21 Paragraph No: GM1 NCO.GEN.115 sub-para 4 - Use of lights Comment: The mention of 'strobe lights' assume that they are fitted. Such lights are not a requirement so this statement may be misleading. It is suggested that the text is amended as shown below. Also, lights must be displayed in accordance with Rules of the Air and now as detailed in Part-SERA.3215. Justification: Clarification. Proposed Text: Amend to read: 4. use of lights as follows: a. strobe lights (where fitted), when entering or crossing
response	Accepted The wording has been changed accordingly.

comment

143

comment by: Anthony EAGLES

Page No: 22**Paragraph No:** AMC1 SPO.GEN.120 sub-para 3 - Use of lights

Comment: The mention of 'strobe lights' assume that they are fitted. Such lights are not a requirement so this statement may be misleading. It is suggested that the text is amended as shown below. Also, lights must be displayed in accordance with Rules of the Air and now as detailed in Part-SERA.3215.

Justification: Clarification.**Proposed Text:** Amend to read:

3. use of lights as follows:

a. strobe lights (**where fitted**), when entering or crossing

response

Accepted

The wording has been changed accordingly.

C. Regulatory Impact Assessment - 2 Issue analysis and risk assessment

p. 24-27

comment

18

comment by: Brussels Airport - BRU/EBBR

Remark on C. Regulatory Impact Assessment, 2 Issue analysis and risk assessment, 2.1 What is the issue and the current regulatory framework ?

After the first sentence in the 1st paragraph, I would add (in view of my General Remark on this NPA):

"The same is true for vehicle drivers on the manoeuvring area."

Argumentation : On Brussels Airport some runway incursions were done by vehicles, where investigation has shown that the non-compliance to the 'sterile environment' concept in the vehicle (by the driver and his co-driver or other occupants of the vehicle) has been a contributing factor. In the same way like the mentioned flight crew, the attention of the airside manoeuvring area vehicle drivers was diverted from the task at hand (in this case the crossing of an active runway), and became occupied with activities not directly related to the safe crossing of the active runway.

In the 7th paragraph I would also add the following text after the first sentence:

"So has the workload of airside manoeuvring area vehicle drivers equally increased during their movements on the manoeuvring area."

In the 8th paragraph I would add the following text (see underlined text) :

"As a consequence, the safety of ground operations, not limited to aircraft operations only, needs to be improved. A key point in enhancing runway safety

is to apply better preventative measures during the aircrafts taxi phase and during the movements of vehicles on the manoeuvring area. This includes operating procedures for taxiing (Item (c) on the list above) and for driving on the manoeuvring area. By improving the workload management, the situational awareness and the attention of the flight crew and airside manoeuvring area vehicle drivers to the conduct of these safety critical activities will also be increased.”

(See also also my general remark on this NPA and my suggestion, my plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency’s Opinions 04/2011, 01/2012 & 02/2012).

response Not accepted

It is agreed that the aspect of ground vehicle movements is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks. Consequently, issues concerning ground vehicle movements and concerning ground vehicle drivers are not discussed in the Regulatory Impact Assessment of NPA 2012-06.

The proposal to amend NPA 2011-20 has been forwarded within the Agency, however, should be addressed by the commentator directly towards that rulemaking activity.

comment

19

comment by: *Brussels Airport - BRU/EBBR*

Remark on C. Regulatory Impact Assessment, 2 Issue analysis and risk assessment, 2.2 Who is affected ?

The 2nd sentence says : “Under certain circumstances airports are also affected (see below).” To what part of the text is “see below” referring to ?

Airports are always affected during taxi operations and when runway safety is being considered.

response

Noted

The Agency agrees that airports are always affected during taxi operations and when runway safety is being considered.

The statement ‘see below’ in the sentence ‘Under certain circumstances airports are also affected (see below)’ in NPA 2012-06 refers especially to the last sentence of the second bullet point of paragraph 5.4. It is related to the economic impact in case taxiing of aeroplanes would be defined as a critical phase of flight and reads: ‘This would increase the turn-around times at airports and, therefore, would lead to significantly higher costs for air operators and/or airports.’

comment

20

comment by: *Brussels Airport - BRU/EBBR*

Remark on C. Regulatory Impact Assessment, 2 Issue analysis and risk

assessment, 2.3 What are the safety risks ?

In line with my general remark on this NPA and my suggestion, my plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012), I suggest to add a point d. : see underlined text :

"At this stage no EU regulatory measures are in place concerning :

- a. Sterile flight deck procedures;
- b. Taxiing of aeroplanes as a safety-critical activity; ~~and~~
- c. Procedures for taxiing to enhance runway safety; ~~and~~
- d. Procedures for vehicles on the manoeuvring area to enhance runway safety."

response Not accepted

It is agreed that the aspect of ground vehicle movement is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks. Consequently, issues concerning ground vehicle movements are not discussed in the Regulatory Impact Assessment of NPA 2012-06.

The proposal to amend NPA 2011-20 has been forwarded within the Agency, however, it should be addressed by the commentator directly towards that rulemaking activity.

C. Regulatory Impact Assessment - 5 Analysis of impacts

p. 27-29

comment

17

comment by: *Brussels Airport - BRU/EBBR*

Remark on C. Regulatory Impact Assessment, 5 Analysis of impacts, 5.6 Impact on regulatory coordination and harmonization.

I'd like to add the following text (underlined) :

"As mentioned above, the ICAO Manual contains detailed information on best practices on the flight deck, as well as detailed information on best practices for airside vehicle drivers. The European ..."

(See also also my general remark on this NPA and my suggestion, my plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012).)

response

Not accepted

It is agreed that the aspect of ground vehicle movement is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks. Consequently, issues concerning ground vehicle movements

and concerning ground vehicle drivers are not discussed in the Regulatory Impact Assessment of NPA 2012-06.

comment 46 comment by: CAA-NL

Regulatory Impact Assessment 5.1 Safety impact.

Related to option 1; We find the argumentation missing why it is expected that an action to encourage operators would only lead to small reduction of the safety risks. Not only regulatory material can make operators aware of the (new or increasing) risks of operations, and thus trigger action to include new best practices into their operating procedures.

Related to option 2; The conclusion that this option would lead to a major reduction of the safety risks, certainly compared with option 0 or 1, is not substantiated by facts or figures, there are no arguments given and it looks like reasoning towards the intended conclusion.

response Noted

The Agency is of the opinion that 'to encourage air operators to establish procedures, as needed' (Option 1) is different than 'rulemaking for sterile flight deck procedures' (Option 2). Option 1 will have the effect that some operators increase their safety standards to some extent, while some operators do nothing to save costs. In contrast, Option 2 will establish a uniform safety standard for all operators. It is the opinion of the Agency that Option 2 is 'more strict' than Option 1 and consequently, will lead to a higher safety standard.

comment 132 comment by: UK CAA

Page No: **28**

Paragraph: **Section 5.1 Safety impact**

Comment: **The UK CAA supports Option 2**

response Noted

The support of UK CAA is appreciated.

C. Regulatory Impact Assessment - 6 Conclusion and preferred option

p. 29-31

comment 32 comment by: Brussels Airport - BRU/EBBR

Remark on C. Regulatory Impact Assessment, 6 Conclusion and preferred option:

Agreement with Option 2 as the preferred option; taking into account my General Remark on this NPA and my suggestion, my plea to either enlarge the scope of this NPA on Sterile Flight Deck Procedures to include the airside

	<p>manoeuvring area vehicle drivers, or to amend NPA 2011-20 by a new NPA (similar to the issuance of NPA 2012-06 in relation to the adoption of the Agency's Opinions 04/2011, 01/2012 & 02/2012).</p>
response	<p>Not accepted</p> <p>It is agreed that the aspect of ground vehicle movement is a crucial element in the context of runway safety. In the response to comment No 33, however, it is explained why ground vehicle movements are not considered in these rulemaking tasks.</p> <p>The proposal to amend NPA 2011-20 has been forwarded within the Agency, however, it should be addressed by the commentator directly towards that rulemaking activity.</p>
comment	<p>60 comment by: <i>René Meier, Europe Air Sports</i></p> <p>Option 2 also is the preferred option of Europe Air Sports. Rationale: Taxiing of aeroplanes indeed is a safety-critical activity, but it is not a critical phase of flight.</p>
response	<p>Noted</p> <p>The support of Europe Air Sports is appreciated.</p> <p>Option 2 describes 'taxiing of aeroplanes as a safety-critical activity, but <u>not defined as a critical phase of flight</u>'. On the other hand, the same commentator, when asked to respond to the question in NPA 2012-06, stated that the Agency's 'Answer b)' is preferred (see comment No 59 of the commentator). 'Answer b)', however, is the proposal stating that 'taxiing of aeroplanes should be <u>defined as a critical phase of flight</u>'. This to some extent is confusing.</p>

VI. Resulting text

The text of the amendment is arranged to show deleted text, new text, or new paragraph as shown below:

1. deleted text is shown with a strike through: ~~deleted~~
2. new text is highlighted with grey shading: **new**
3. '...' indicates that remaining text is unchanged in front of or following the reflected amendment.

VI.1 Draft Opinion**Amending Commission Regulation (EU) No 965/2012****VI.1.1 Annex I: Definitions for terms used in Annexes II-VIII**

...

'Sterile flight crew compartment' means any period of time when the flight crew members are not disturbed or distracted, except for matters critical to the safe operation of the aircraft and/or the safety of the occupants.

...

VI.1.2 Annex III: Part-ORO — organisations requirements for air operations

...

ORO.GEN.110 Operator responsibilities

...

- (f) An operator shall establish procedures and instructions for the safe operation of each aircraft type, containing ground staff and crew member duties and responsibilities, for all types of operation on the ground and in flight. These procedures and instructions shall not require crew members to perform any activities during critical phases of flight other than those required for the safe operation of the aircraft. The procedures and instructions shall include sterile flight crew compartment procedures.

...

VI.1.3 Annex IV: Part-CAT — commercial air transport

...

CAT.GEN.MPA.125 Taxiing of aircraft

The operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.

CAT.GEN.MPA.~~125~~126 Taxiing of aeroplanes

...

VI.1.4 Annex VI: Part-NCC — non-commercial operations of complex motor-powered aircraft

...

NCC.GEN.120 Taxiing of aircraft

The operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.

CAT.GEN.MPA.~~120~~121 Taxiing of aeroplanes

...

VI.1.5 Annex VIII: Part-SPO – specialised operations

...

SPO.GEN.120 Taxiing of aircraft

The operator shall establish procedures for taxiing to ensure safe operation and to enhance runway safety.

SPO.GEN.~~120~~121 Taxiing of aeroplanes

...

VI.2 Draft Decision

Amending Decisions 2012/017/R, 2012/018/R and 201x/xxx/R of the Executive Director of the European Aviation Safety Agency

VI.2.1 AMC/GM to Annex III: Part-ORO – organisations requirements for air operations

...

AMC1 ORO.GEN.110(f) Operator responsibilities

STERILE FLIGHT CREW COMPARTMENT

- (a) Sterile flight crew compartment procedures should ensure that:
- (1) flight crew activities are restricted to essential operational activities; and
 - (2) cabin crew and technical crew communications to flight crew or entry into the flight crew compartment are restricted to safety or security matters.
- (b) The sterile flight crew compartment procedures should be applied:
- (1) during critical phases of flight;
 - (2) during taxiing; and
 - (3) below 10 000 feet above the aerodrome of departure after take-off and the aerodrome of destination before landing, except for cruise flight.
- (c) All crew members should be trained on sterile flight crew compartment procedures established by the operator, as appropriate to their duties.

GM1 ORO.GEN.110(f) Operator responsibilities

STERILE FLIGHT CREW COMPARTMENT

- (a) Establishment of procedures

The operator should establish procedures for flight, cabin, and technical crew that emphasise the objectives and importance of the sterile flight crew compartment. These procedures should also emphasise that, during periods of time when the sterile flight deck compartment procedures are applied, cabin crew and technical crew members should call the flight crew or enter the flight crew compartment only in cases related to safety or security matters. In such cases, information should be timely and accurate.

- (b) Flight crew activities

- (1) When the sterile flight crew compartment procedures are applied, the flight crew members are focused on their essential operational activities without being disturbed by non-safety related matters.
- (2) Examples of activities that should not be performed are:
 - (i) radio calls concerning passenger connections, fuel loads, catering, etc.;
 - (ii) announcements concerning sights of interest, proposed route, etc.;
 - (iii) non-critical paperwork;
 - (iv) reading publications not related to the conduct of the flight;
 - (v) preparing food or drinks or eating from a plate or tray;

- (vi) non-essential conversations (remarks not pertinent to safe aircraft operation) within the flight crew compartment and non-essential communications between the cabin and the flight crew; and
 - (vii) mass and balance corrections, performance calculations and (navigational) programming of the Flight Management System (FMS), unless required for safety reasons.
- (3) Examples of activities that may be performed are:
- (i) use of checklists;
 - (ii) crew coordination procedures;
 - (iii) discussion of minimum equipment list (MEL) when needed to cope with failures occurring during taxiing; and
 - (iv) communications inside or outside the aircraft essential to the safe operation of the aircraft and the safety of occupants.

(c) Communication to the flight crew

Cabin crew and technical crew use their own discretion to determine whether the situation is related to safety or security matters and whether to call the flight crew. Situations requiring information to the flight crew may include:

- (1) any outbreak of fire inside the cabin or in an engine;
- (2) a burning smell in the cabin or presence of smoke inside or outside;
- (3) fuel or fluid leakage;
- (4) exit door unable to be armed or disarmed;
- (5) localised extreme cabin temperature changes;
- (6) evidence of airframe icing;
- (7) cabin/galley equipment or furniture malfunction/breakage posing a hazard to the occupants;
- (8) suspicious object;
- (9) disruptive passenger;
- (10) security threat;
- (11) abnormal vibration or noise;
- (12) medical emergency;
- (13) general drop-down of the oxygen masks in the cabin; and
- (14) any other condition deemed relevant by a cabin crew or technical crew member.

...

VI.2.2 AMC/GM to Annex IV: Part-CAT – commercial air transport

...

AMC1 CAT.GEN.MPA.125 Taxiing of aircraft

PROCEDURES FOR TAXIING

Procedures for taxiing should include at least the following:

- (a) application of the sterile flight crew compartment procedures;

- (b) use of standard radiotelephony (RTF) phraseology;
- (c) use of lights as follows:
 - (1) strobe lights, where fitted, when entering or crossing a runway (active or inactive); and
 - (2) landing lights for take-off;
- (d) measures to enhance the situational awareness of the minimum required flight crew members, such as:
 - (1) each flight crew member should have the necessary aerodrome layout charts available;
 - (2) the pilot taxiing the aircraft should announce in advance his intentions to the pilot monitoring;
 - (3) all taxi clearances should be heard and should be understood by each flight crew member;
 - (4) all taxi clearances should be cross-checked against the aerodrome chart and aerodrome surface markings, signs, and lights;
 - (5) an aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars, and may proceed further when an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower, and when the stop bar lights are switched off;
 - (6) if the pilot taxiing the aircraft is unsure of his/her position, he/she should stop the aircraft and contact air traffic control;
 - (7) the pilot monitoring should monitor the taxi progress and adherence to the clearances, and should assist the pilot taxiing;
 - (8) any action which may disturb the flight crew from the taxi activity should be avoided or done with the parking brake set (e.g. announcements by public address).

GM2 CAT.GEN.MPA.126 Taxiing of aeroplanes

SAFETY-CRITICAL ACTIVITY

- (a) Taxiing should be treated as a safety-critical activity due to the risks related to the movement of the aeroplane and the potential for a catastrophic event on the ground.
- (b) Taxiing is a high-workload phase of flight that requires the full attention of the flight crew.

...

VI.2.3 AMC/GM to Annex VI: Part-NCC — non-commercial operations of complex motor-powered aircraft

...

AMC1 NCC.GEN.120 Taxiing of aircraft

PROCEDURES FOR TAXIING

Procedures for taxiing should include at least the following:

- (a) application of the sterile flight crew compartment procedures;

- (b) use of standard radiotelephony (RTF) phraseology;
- (c) use of lights as follows:
 - (1) strobe lights, where fitted, when entering or crossing a runway (active or inactive); and
 - (2) landing lights for take-off;
- (d) measures to enhance the situational awareness of the minimum required flight crew members, such as:
 - (1) each flight crew member should have the necessary aerodrome layout charts available;
 - (2) the pilot taxiing the aircraft should announce in advance his intentions to the pilot monitoring;
 - (3) all taxi clearances should be heard, and should be understood by each flight crew member;
 - (4) all taxi clearances should be cross-checked against the aerodrome chart and aerodrome surface markings, signs, and lights;
 - (5) an aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars, and may proceed further when an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower, and when the stop bar lights are switched off;
 - (6) if the pilot taxiing the aircraft is unsure of his/her position, he/she should stop the aircraft and contact air traffic control;
 - (7) the pilot monitoring should monitor the taxi progress and adherence to the clearances, and should assist the pilot taxiing;
 - (8) any action which may disturb the flight crew from the taxi activity should be avoided or done with the parking brake set (e.g. announcements by public address).

GM1 NCC.GEN.121 Taxiing of aeroplanes

SAFETY-CRITICAL ACTIVITY

- (a) Taxiing should be treated as a safety-critical activity due to the risks related to the movement of the aeroplane and the potential for a catastrophic event on the ground.
- (b) Taxiing is a high-workload phase of flight that requires the full attention of the flight crew.

...

VI.2.4 AMC/GM to Annex VII: Part-NCO – non-commercial operations of other-than-complex motor-powered aircraft

...

GM1 NCO.GEN.115 Taxiing of aeroplanes

PROCEDURES FOR TAXIING

The pilot-in-command should observe the following during taxiing:

- (a) perform only essential operational activities;

- (b) not being disturbed except for matters critical to the safe operation of the aircraft and/or the safety of the occupants;
- (c) use of standard radiotelephony (RTF) phraseology;
- (d) use of lights as follows:
 - (1) strobe lights, where fitted, when entering or crossing a runway (active or inactive); and
 - (2) landing lights for take-off;
- (e) measures to enhance the situational awareness of the pilot-in-command, such as:
 - (1) the pilot-in-command should have the necessary aerodrome layout charts available;
 - (2) if applicable, all taxi clearances should be heard, and should be understood by the pilot-in-command;
 - (3) if applicable, all taxi clearances should be cross-checked against the aerodrome chart and aerodrome surface markings, signs and lights;
 - (4) an aeroplane taxiing on the manoeuvring area shall stop and hold at all lighted stop bars, and may proceed further when an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower, and when the stop bar lights are switched off;
 - (5) if the pilot-in-command is unsure of his/her position, he/she should stop the aircraft and contact air traffic control; and
 - (6) any action, which may disturb the pilot-in-command from the taxi activity, should be avoided or done with the parking brake set.

...

GM2 NCO.GEN.115 Taxiing of aeroplanes

SAFETY-CRITICAL ACTIVITY

- (a) Taxiing should be treated as a safety-critical activity due to the risks related to the movement of the aeroplane and the potential for a catastrophic event on the ground.
- (b) Taxiing is a high-workload phase of flight that requires the full attention of the pilot-in-command.

...

VI.2.5 AMC/GM to Annex VIII: Part-SPO — specialised operations

...

AMC1 SPO.GEN.120 Taxiing of aircraft

PROCEDURES FOR TAXIING

Procedures for taxiing should include at least the following:

- (a) application of sterile flight deck crew compartment procedures or similar procedures:
 - (1) by performing only essential operational activities;
 - (2) by not being disturbed except for matters critical to the safe operation of the aircraft and/or the safety of the occupants;

- (b) use of standard radiotelephony (RTF) phraseology;
- (c) use of lights as follows:
 - (1) strobe lights, where fitted, when entering or crossing a runway (active or inactive); and
 - (2) landing lights for take-off;
- (d) measures to enhance the situational awareness of the pilot-in-command, such as:
 - (1) the pilot-in-command should have the necessary aerodrome layout charts available;
 - (2) if applicable, the pilot taxiing the aircraft should announce in advance his intentions to the pilot monitoring;
 - (3) if applicable, all taxi clearances should be heard, and should be understood by the pilot-in-command;
 - (4) if applicable, all taxi clearances should be cross-checked against the aerodrome chart and aerodrome surface markings, signs and lights;
 - (5) an aircraft taxiing on the manoeuvring area shall stop and hold at all lighted stop bars, and may proceed further when an explicit clearance to enter or cross the runway has been issued by the aerodrome control tower, and when the stop bar lights are switched off;
 - (6) if the pilot-in-command is unsure of his/her position, he/she should stop the aircraft and contact air traffic control;
 - (7) any action, which may disturb the pilot-in-command from the taxi activity, should be avoided or done with the parking brake set.

GM1 SPO.GEN.121 Taxiing of aeroplanes

SAFETY-CRITICAL ACTIVITY

- (a) Taxiing should be treated as a safety-critical activity due to the risks related to the movement of the aeroplane and the potential for a catastrophic event on the ground.
- (b) Taxiing is a high-workload phase of flight that requires the full attention of the flight crew.