European Aviation Safety Agency

COMMENT RESPONSE DOCUMENT (CRD) TO NOTICE OF PROPOSED AMENDMENT (NPA) 2009-02B

for an Agency Opinion on a Commission Regulation establishing the Implementing Rules for air operations of Community operators

and

draft Decision of the Executive Director of the European Aviation Safety Agency on Acceptable Means of Compliance and Guidance Material related to the Implementing Rules for air operations of Community operators

"Part-OPS"

CRD a.1 – Explanatory Note

Table of Contents

Introduction

I. General

1. The purpose of NPA 2009-02 was to consult on the Opinion on the Implementing Rules for Air Operations (OPS) of EU Operators and the Decision on the related Acceptable Means of Compliance (AMC) and Guidance Material (GM). The scope of this rulemaking activity is outlined in the Terms of Reference (ToR) OPS.001.

2. NPA 2009-02 contained the following eight documents:

   - NPA 2009-02a: Explanatory Note and Appendices;
   - NPA 2009-02b: Draft Opinion and Decision Part-OPS;
   - NPA 2009-02c: Draft Opinion and Decision Part-OR (Subpart OPS);
   - NPA 2009-02d: Draft Opinion and Decision Part-AR (Subparts GEN, OPS and CC);
   - NPA 2009-02e: Draft Opinion and Decision Part-CC and Supplement to Draft Opinion Part-MED;
   - NPA 2009-02f: Cross-Reference Tables;
   - NPA 2009-02g: Regulatory Impact Assessment (RIA);
   - NPA 2009-02g1: CORRIGENDUM to RIA for Air Operations - concerning sailplanes and balloons.

3. This Comment Response Document (CRD) addresses the comments received to NPA 2009-02a, 02b, 02f, 02g, and 02g1.

4. The comments received to NPA 2009-02c, 02d as well as comments related to Authority Requirements (AR) and Organisation Requirements (OR) to NPA 2009-02a, 02f, and 02g were already covered in the CRDs to Part-AR and Part-OR, published on 4 October 2010.

5. The comments received to NPA 2009-02e as well as comments related to cabin crew (CC) requirements to NPA 2009-02a, 02f, and 02g were already covered in the CRD on Part-CC, published on 7 October 2010.

II. Consultation

6. NPA 2009-02 was published on the EASA web site (http://www.easa.europa.eu) on 30 January 2009.

7. The consultation period of the NPA was extended in accordance with Article 6(6) of the Rulemaking Procedure[1], at the request of stakeholders, to ensure sufficient time for analysing and commenting on the NPA.

8. The consultation period ended on 31 July 2009. The European Aviation Safety Agency (the Agency) had received in total 13 775 comments on NPA 2009-02, of which around 8 200 comments were on the scope of this CRD.

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[1] EASA Management Board Decision 08-2007, amending and replacing the Rulemaking Procedure, adopted at the Management Board meeting 03-2007 of 13 June 2007.
(http://www.easa.eu.int/ws_prod/g/management-board-decisions-and-minutes.php)

9. The comment review was carried out in accordance with the joint approach for the extension of the EU competence set by the Agency and the Commission, and as endorsed by the Management Board and EASA Committee[2]. This entails a phased approach for processing the first extension rules so that available resources and the comitology process can concentrate on the proposals in sequence. It also envisages an advanced working method for the comment review: on the one hand timely publication of the CRD so as not to jeopardise the publication of the Regulations by 8 April 2012, the date set in Regulation (EC) No 216/2008 (Basic Regulation), Article 70. On the other hand the Agency should provide CRDs that allow stakeholders to easily identify the changes made to the NPAs, ICAO compliance and any differences to EU-OPS / JAR-OPS 3, as appropriate. This working method satisfies Article 7 of the EASA Rulemaking Procedure.

10. All comments received on NPA 2009-02 were reviewed, analysed for their relevance with regard to proposed changes, and summarised per rule paragraph. Comment summaries, related responses to summarised comments and the proposed revised rule text were discussed in detail with the following four Rulemaking review groups:

- RG01 – CAT, focusing on commercial air transport operations;
- RG02 – SPO, focusing on specialised operations;
- RG03 – NCC, focusing on non-commercial operations with complex motor-powered aircraft; and
- RG04 – NCO, focusing on non-commercial operations with other-than-complex motor-powered aircraft.

11. With the exception of RG04 NCO, the composition of the review groups was based on that of the initial drafting groups established for rulemaking task OPS.001. Membership of these initial drafting groups was extended to include additional stakeholder representatives in line with the rules of procedures for the membership of rulemaking groups. As regards general aviation rules for other-than-complex motor-powered aircraft, the Agency relied on the rulemaking group MDM.032 to provide contributions during the NPA drafting phase. Since this group ceased its activities, a new group was created to assist in the comment review.

12. Part-CAT (commercial air transport operations) was reviewed by RG01. Part-SPA (operations requiring specific approvals) was reviewed by all four review groups.

13. The Agency also convened several meetings with helicopter specialists from authorities, operators and manufacturers, who advised on helicopter-specific issues.

III. Comment response summary tables (CRST)

14. This CRD does not follow the traditional format: due to the considerable number of comments received, it was not technically possible to generate a CRD using the Agency's comment response tool (CRT). Therefore, the Agency, in agreement with the Management Board, adopted an alternative method for processing all comments posted via the CRT. This alternative method is the comment response summary table (CRST).

15. The CRSTs of Part-CAT and Subpart E (Low visibility operations - LVO) of Part-SPA contain the following:

[2] http://easa.europa.eu/ws_prod/g/doc/COMMS/Commission%20EASA%20joint%20position%20MB%2015%2009%2009.pdf.

- column A displays the original NPA text;
- column B provides a summary of those comments that, after reviewing and analysing all comments, have been considered as relevant for the redrafting of the NPA text; and
- column C provides the Agency response to the summarised comments, accepted recommendations from review groups that are not directly linked to comments received, and additional explanatory information.

16. For Part-CAT and Subpart SPA.LVO, the revised rule text has been shown with track changes to the relevant EU-OPS / JAR-OPS 3 Subparts (ref. CRD c.9). These documents also contain justifications for amendments to the content of EU-OPS / JAR-OPS 3. The Agency applied this method to demonstrate that the revised rule text has been aligned with the content of EU-OPS / JAR-OPS 3 and to provide justification for the amendments made (see also 92.ff).

17. The CRSTs for Annex – I, Definitions, Part-SPA (except Subpart E), Part-NCO, Part-NCC, and Part-SPO contain the following:

- column A displays the revised NPA text;
- column B provides a summary of those comments that, after reviewing and analysing all comments, have been considered as relevant for the redrafting of the NPA text; and
- column C provides the Agency response to the summarised comments, accepted recommendations from review groups that are not directly linked to comments received, and additional explanatory information.

18. The revised text in the relevant CRSTs and 'revised rule text' documents shows the revisions made to the NPA text and the relevant EU-OPS / JAR-OPS 3 Subparts respectively. These changes are shown as follows:

- deleted text is shown with ~~strike-through~~;
- new text is shown in **bold**.

19. It must also be noted here that, due to the restructuring of Part-OPS into five separate Parts (discussed in Annex I below), judging the appropriateness of each comment to a particular Part in the new OPS structure was challenging. This was particularly the case for OPS.GEN, where comments from the full range of stakeholders were made. Every effort was made to identify those commentators coming from commercial operations, CAT, general aviation and specialised operations, though this was not possible in all cases. When in doubt, the Agency chose to take into account all those 'difficult to attribute' comments when making revisions to the various Parts to which they could pertain. For example, an individual comment made to OPS.GEN could therefore be taken into account when revising not only Part-CAT but also Part-NCO, Part-NCC and Part-SPO.

IV. Publication of the CRD

20. CRD OPS is published in two phases. The first phase covers Part-CAT for aeroplanes (A) and helicopters (H) and Part-SPA. It contains the following documents:

- the Explanatory Note;

- the Cover Regulation Air Operations for Part-CAT (A, H) and Part-SPA, the applicability, and proposed transition measures for the implementation of the new requirements;
- the resulting rule text of Annex I, Part-CAT (A, H) and Part-SPA;
- the CRSTs;
- revised rule text with track changes to Subparts B and D to L of EU-OPS / JAR-OPS 3;
- cross-reference tables showing a comparison of rule references and rule titles between the CRD rules, NPA rules and EU-OPS / JAR-OPS 3, where relevant;
- a list of used acronyms, to facilitate the reading of the CRD documents; and
- a guide to providing reactions.

21. The second phase of CRD OPS is planned to be published by the end of January 2011. It contains the following documents relating to Part-CAT for sailplanes (S) and balloons (B), Part-SPO, Part-NCC and Part-NCO:

- an addendum to the Explanatory Note;
- an addendum to the Cover Regulation Air Operations;
- an addendum to Annex I;
- the resulting rule texts, Part-CAT (S, B), Part-SPO, Part-NCC, and Part-NCO;
- the related CRSTs;
- cross-reference tables showing a comparison of rule references and rule titles between the NPA and CRD rules;
- an addendum to the list of acronyms.

22. The following table summarises the documents published in Phase 1:

Table 1: Documents to be published for OPS CRD phase 1

CRD to NPA 2009-2b "Part-OPS"	
CRD a.1	Explanatory Note
CRD b.1	Cover Regulation OPS
CRD b.2	Resulting text of Annex I - Definitions
CRD b.3	Resulting text of Part-CAT (A, H)
CRD b.4	Resulting text of Part-SPA
CRD c.1	Comments received on NPA 2009-2b
CRD c.2	List of commentators for NPA 2009-2b
CRD c.3	CRST Annex I Definitions

CRD c.4	CRST CAT.GEN.AH
CRD c.5	CRST CAT.OP.AH[3]
CRD c.6	CRST CAT.POL.A, .H, .MAB
CRD c.7	CRST CAT.IDE.A, .H
CRD c.8	CRST Part-SPA
CRD c.9	Revised rule text with track changes to EU-OPS/JAR-OPS3
CRD c.10	Cross-reference tables
CRD c.11	Acronyms
CRD d.1	Guidelines for submitting reactions
CRD to NPA 2009-2a "Explanatory notes"	
CRD c.1	Comments received on NPA 2009-2a
CRD c.2	List of commentators for NPA 2009-2a
CRD to NPA 2009-2f "Cross Reference Tables"	
CRD c.1	Comments received on NPA 2009-2f
CRD c.2	List of commentators for NPA 2009-2f
CRD to NPA 2009-2g "RIA"	
CRD c.1	Comments received on NPA 2009-2g
CRD c.2	List of commentators for NPA 2009-2g
CRD c.3	Comments received on NPA 2009-2g1
CRD c.4	List of commentators for NPA 2009-2g1

23. The following table summarises the documents published in Phase 2:

Table 2: Documents to be published for OPS CRD phase 2

CRD to NPA 2009-2b "Part-OPS"	
CRD a.2	Addendum to Explanatory Note

[3] GEN: general; OP: operating procedures; POL: aircraft performance and operating limitations; IDE: instruments, data and equipment; A: aeroplane; B: balloon; H: helicopter; S: sailplane.

CRD b.5	Addendum to the Cover Regulation OPS
CRD b.6	Addendum to Annex I - Definitions
CRD b.7	Resulting text of Part-CAT (S, B)
CRD b.8	Resulting text of Part-SPO
CRD b.9	Resulting text of Part-NCC
CRD b.10	Resulting text of Part-NCO
CRD c.12	CRST Part-SPO
CRD c.13	CRST Part-NCC
CRD c.14	CRST Part-NCO
CRD c.15	Cross reference tables
CRD c.16	Addendum to Acronyms

24. As this is a complex CRD, to assist stakeholders in working with the various documents they are also presented in the following table, which also includes references to the documents to be published in phase 2.

Table 3: CRD documents per rule document

NPA 2009-02b	CRD publication phase 1				CRD publication phase 2					
	Cover Regulation OPS	**Annex I - Definitions**	**Part-CAT (A, H)**	**Part-SPA**	**Cover Regulation OPS**	**Annex I - Definitions**	**Part-CAT (S, B)**	**Part-SPO**	**Part-NCC**	**Part-NCO**
Explanatory note	CRD a.1				CRD a.2					
Resulting text	CRD b.1	CRD b.2	CRD b.3	CRD b.4	CRD b.5	CRD b.6	CRD b.7	CRD b.8	CRD b.9	CRD b.10
CRST		CRD c.3	CRD c.4 CRD c.5 CRD c.6 CRD c.7	CRD c.8				CRD c.12	CRD c.13	CRD c.14
Revised rule text with track changes to EU-OPS/JAR-OPS 3		CRD c.9								
Cross-reference tables		CRD c.10					CRD c.15			
Acronyms	CRD c.11				CRD c.16					
Guidance for reactions	CRD d.1									

25. Finally, the comments received to the different NPAs and lists of commentators can be found in the following documents:

Table 4: CRD documents containing comments and list of commentators

	Comments	List of commentators
NPA 2009-02a	CRD c.1	CRD c.2
NPA 2009-02b	CRD c.1	CRD c.2
NPA 2009-02f	CRD c.1	CRD c.2
NPA 2009-02g	CRD c.1	CRD c.2
NPA 2009-02g1	CRD c.1	CRD c.2

26. The Agency Opinion will be issued at least 5 months after the publication of this CRD to allow for any possible reactions of stakeholders regarding possible misunderstandings of the comments received and responses provided.

27. Such reactions should be received by the Agency not later than 15 February 2011 and should be submitted using the comment response tool (CRT) at http://hub.easa.europa.eu/crt. When submitting their reactions, stakeholders are kindly invited to follow the recommendations in the "stakeholder guidance for reactions".

V. Appendices

28. Further explanatory information on rule-related documents can be found in the following annexes to this Explanatory Note:

- Annex 1: Rule structure – OPS
- Annex 2: Explanatory Memorandum for the Cover Regulation OPS
- Annex 3: Explanatory Memorandum for Annex I – Definitions for terms used in Annexes II to VI
- Annex 4: Explanatory Memorandum for Part-CAT (A, H)
- Annex 5: Explanatory Memorandum for Part-SPA
- Annex 6: Explanatory Memorandum for Part-CAT (S, B)
- Annex 7: Explanatory Memorandum for Part-SPO
- Annex 8: Explanatory Memorandum for Part-NCC
- Annex 9: Explanatory Memorandum for Part-NCO.

29. Annexes 6 to 9 will be published as an addendum to the Explanatory Note (CRD a.2) in the second phase of the CRD OPS publication.

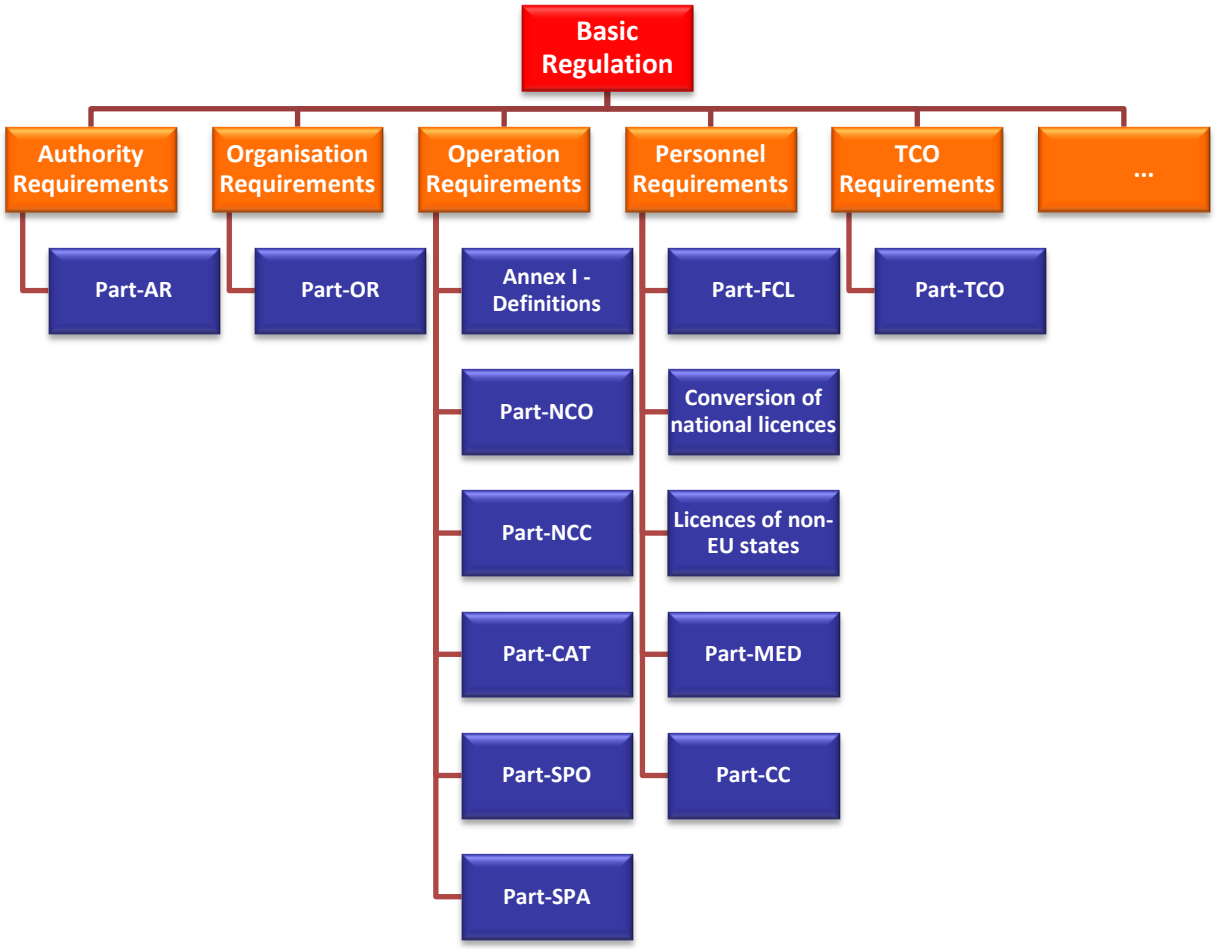
Annex 1: Rule structure

I. Annexes and Parts

30. Based on comments received and based on the decisions of the Management Board, the horizontal rule structure has been maintained.

31. The following table provides an overview of Annexes and Parts for the 1st extension.

Table 5: Rule structure 1st extension



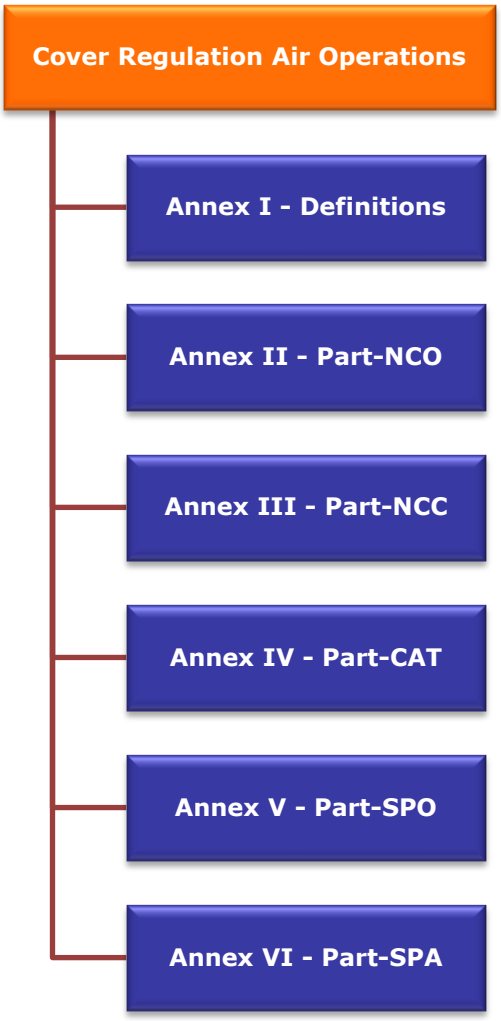
32. Based on the comments received, the Agency decided to split NPA Part-OPS into the following five Parts:

- Part-NCO, non-commercial operations with other-than-complex motor-powered aircraft;
- Part-NCC, non-commercial operations with complex motor-powered aircraft;
- Part-CAT, commercial air transport operations;
- Part-SPO, specialised operations;
- Part-SPA, operations requiring specific approvals.

33. These Parts are Annexes to the Cover Regulation Air Operations. Furthermore, definitions for terms used in these five Parts have been combined into a single document, Annex I – Definitions for terms used in Annexes II to VI.

34. The following table provides an overview of the Annexes under the Cover Regulation Air Operations.

Table 6: Annexes for the Cover Regulation Air Operations



II. Rule numbering convention

35. In line with the Agency's Rulemaking drafting guidelines, the following rule numbering convention was applied to the Implementing Rules (IR) in the OPS Parts:

<Part>.<Subpart>.<Section>.<N>.<T>

Explanation:

<Part>: mandatory - up to four letters or digits

example: CAT, SPA, SPO, NCC, NCO

<Subpart>: mandatory - up to four letters or digits

example: GEN, OP, POL, IDE

<Section>: optional - up to five letters or digits

example: AH

<N>: mandatory - rule number – three digits, in general numbered in increments of 5

<T>: optional - for rules that are applicable to a certain aircraft class only:

.A aeroplanes

.H helicopters

.S sailplanes

.B balloons

Rule paragraphs in each Subpart or chapter start with .100.

36. The following rule numbering convention was applied to AMCs:

AMC<n>-<RULE><§>

Explanation:

AMC: Identifier - mandatory – fixed text;

<n>-: mandatory - number, starting with 1, incremented by 1, to be used in all cases, also when only one AMC exists for a given IR paragraph or subparagraph;

<RULE >: mandatory - full rule number as defined above;

<§>: optional - reference of the IR subparagraph(s), where relevant; for AMCs addressing only one or more subparagraph(s) within a rule, the AMC reference includes an identification of the IR subparagraph; if more than one subparagraph is covered, all of them are listed; in the absence of such indication, the AMC covers the IR as a whole.

In this context it is important to note that the existence of an AMC1 and an AMC2 to a specific rule item does not imply that AMC2 constitutes an alternative to AMC1. Unless the scope of an AMC is limited to a certain type of organisation, operation or product, as indicated by the <attribute>, all AMCs that will be issued by the Agency need to be complied with.

37. The following rule numbering convention was applied to GM:

GM<n>-<RULE><§>

The same explanation as provided for AMC applies.

Annex 2: Explanatory memorandum for the Cover Regulation OPS

I. General

38. The Cover Regulation defines the scope and applicability and contains a proposal for transition measures for the implementation of the new requirements.

39. Elements of the Cover Regulation were already part of the NPA:

- scope and applicability were mentioned in the different Subparts of Part-OPS under the paragraphs relating to scope;
- general principles for transition and grandfathering were explained in the NPA Explanatory note.

II. Specific issues

Article 1 Objective and scope

40. In accordance with Articles 4.1(b) and (c) of the Basic Regulation, the technical requirements for air operations apply to all EU operators using EU or third country registered aircraft and the personnel involved in the operation of such aircraft.

41. As already explained in the NPA, due to time constraints, it was not possible to provide implementing measures for all categories of aircraft or types of operations. Those not covered by this draft Regulation will be addressed in future rulemaking tasks, and are listed in the Agency's rulemaking programme[4]. Subparagraph 2 of Article 1 therefore excludes from the scope of the initial Implementing Rules:

- certain Annex II aircraft when used in CAT operations. They should be operated in accordance with the conditions contained in a Commission Decision adopted under EU-OPS;
- airships, tilt-rotor aircraft, tethered balloons and unmanned aerial systems; and
- flights conducted by design or production organisations and related to this activity.

Article 2 Air operations

42. Article 2 establishes the applicability of the six Annexes to the Cover Regulation.

43. Since the CRD phase 1 relates to CAT operations with aeroplanes and helicopters and SPA only, applicability paragraphs on CAT operations with balloons and sailplanes and those regarding Part-NCO, Part-NCC and Part-SPO and the related Annexes are not yet included. The CRD phase 2 containing Parts-NCO, Part-NCC, and Part-SPO will be published by the end of January 2011 and include the appropriate amendments to the Cover Regulation as regards applicability and transition measures.

44. Subparagraphs 3 and 4 address the grandfathering of CAT aeroplane operators having been issued with an AOC under EU-OPS and CAT helicopter operators having been issued with an AOC under JAR-OPS 3 when the Member State was recommended for mutual

[4] Available via the Agency's website: http://www.easa.europa.eu.

recognition within the JAA system. A period of 2 years is proposed to allow for the adaptation of internal procedures and manuals, as necessary. The principle stems from Regulation (EC) No 2042/2003, where it was successfully applied for Part-145 organisations.

Article 3 Entry into force

45. On the NPA only a few comments were received on paragraphs 82 to 87 of the Explanatory Note relating to transition and grandfathering. The main themes arising from these comments were:

- transition periods beyond 8 April 2012 are required to allow industry and authorities to adapt;
- longer transition periods are needed for areas where no common European legislation is established yet; and
- grandfathering of EU-OPS/JAR-OPS 3 certificates.

46. The definition of a maximum applicability date for the Implementing Rules in Art 70 of the Basic Regulation limits the periods available for transition by establishing that the IRs shall be applicable no later than 8 April 2012.

47. On request of the European Commission, the method of opt-outs was chosen to cater for the transitional period of applicability beyond 8 April 2012. An opt-out is a type of transition measure that leaves to the Member States the choice to postpone the implementation date of a certain provision, up to a certain time limit defined by law.

48. The opt-out provisions are harmonised with the ones proposed for Part-OR.

49. The technical requirements of Part-CAT are based on EU-OPS and JAR-OPS 3 with only minimal changes. It is therefore not considered necessary to propose any transition measures in this regard. As in EU-OPS and JAR-OPS 3, any equipment transition may be found in the applicable equipment paragraph itself, e.g. for data link recording.

50. Not all Member States were recommended for JAR-OPS 3 mutual recognition. A period of 2 years is therefore proposed for helicopter CAT operators not being JAR-OPS 3 compliant.

51. Part-SPA contains specific approvals accessible to all operators, except for helicopter emergency medical service (HEMS), helicopter hoist operations (HHO), night vision imaging system (NVIS) operations and extended range operations with two-engined aeroplanes (ETOPS), which are accessible to AOC holders only. As regards CAT operations by aeroplane or helicopter, the principles regarding grandfathering and transitioning apply as described above. Concerning CAT with balloons and sailplanes, although applications for the specific approval for transporting dangerous goods might be rare, a transition period of 3 years is proposed. The same period is proposed for specialised operations (SPO), i.e. aerial work. For non-commercial operations not carrying out specialised operations (NCO and NCC) a transition period of 2 years is proposed. Those periods are aligned with the transition periods of Part-OR, as applicable, and those that will be proposed for Part-NCO, Part-NCC and Part-SPO with the CRD phase 2 to be published by January 2011.

Annex 3: Explanatory memorandum for Annex I – Definitions for terms used in Annexes II to VI

I. Summary of comments

52. The definitions in OPS.GEN.010 and its AMC/GM received 507 comments (457 to NPA 2009-02B, and 50 relevant comments to NPA 2009-02A *Explanatory Note*). Of these comments, 296 were duplicates. A further 20 comments covered editorial issues. The remaining 191 comments covered unique issues. The comment summaries, responses, and changes made to the NPA text can be found in the CRST for Annex I - Definitions (ref. CRD c.3).

53. The principal issues raised in the comments received on NPA 2009-2a and NPA 2009-2b are as follows:

- the definitions should, in general, be aligned with EU-OPS and JAR-OPS 3, ICAO, Part-FCL and CS-Definitions, and at the level of IR; the majority of these comments were accepted (see below);
- the Agency should provide a single, consolidated set of definitions, either for the NPA as a whole, or even for all definitions used by the Agency; this resulted in Annex I and its AMC;
- in some cases the definition conflicts with the rule, or terms were not used consistently; the rules were reviewed to correct such problems;
- additional terms that were defined in EU-OPS, JAR-OPS 3, ICAO Annex 6 and Part-FCL were requested to be added; terms that were used in the Parts were included (see 46.ff);
- clearer indications as to which category of aircraft a definition applies were requested, for those definitions that are aircraft-specific; and
- many comments on specific definitions.

II. Summary of main changes

Changes to NPA

54. In response to the requests to provide a consolidated set of definitions, the majority of terms requiring definitions were collected in Annex I. Following the redrafting of the NPA, many changes were made to the set of definitions. This included adding many definitions that had not included in the NPA, based on those in EU-OPS, JAR-OPS 3, ICAO, Part-FCL and CS-Definitions.

55. The criteria used to determine whether a term should be added to Annex I were: whether it is used in Implementing Rules, and whether the rule itself provides an adequate description of the term. For those terms only used in AMC/GM, and where the rule does not adequately describe the term, definitions have been placed in AMC to Annex I. As a result, Annex I and its AMC contain many, but not all, of the terms defined in EU-OPS and JAR-OPS 3.

56. Definitions for the following terms that had not been published in the NPA were added to Annex I: aided night vision imaging system (NVIS) flight, balloon, child, clearway, crew member, helicopter, helicopter emergency medical service (HEMS) crew member, helicopter hoist operation (HHO) crew member, local helicopter operation, medical passenger, night vision imaging system (NVIS) crew member, pilot-in-command, separate runways, unaided NVIS flight.

57. Definitions for the following terms that had not been published in the NPA were added to the AMC to Annex I: committal point, exposure time, maximum zero fuel mass, rotation point (RP), touch down and lift-off area (TLOF).

58. The following terms were moved from AMC/GM to Annex I as they are used in Implementing Rules: Category II operation, Category IIIA operation, Category IIIB operation, circling, commercial air transport (CAT) operation (transferred from the Explanatory Note NPA 2009-02A), contingency fuel, continuous descent final approach (CDFA), converted meteorological visibility (CMV), dangerous goods accident, dangerous goods incident, defined point before landing (DPBL), head-up display (HUD), head-up guidance landing system (HUDLS), landing decision point (LDP), lower than Standard Category I operation, non-precision approach (NPA) operation, other than Standard Category I operation, performance class A/B/C aeroplanes, rejected take-off distance available (RTODAH), rejected take-off distance required (RTODRH), stabilised approach (SAp), take-off decision point (TDP), take-off distance available (TODAH), Technical Instructions (TI), visual approach.

59. The definition for aerodrome has been deleted and that provided in the Basic Regulation should be followed.

60. The following terms were moved from OPS.GEN.010 and from AMC/GM to the AMC to Annex I, as they are not used in Implementing Rules: approach procedure with vertical guidance (APV) operation, fail-operational flight control system, fail-operational hybrid landing system, fail-passive flight control system, flight control system, HEMS dispatch centre, hybrid head-up display landing system (hybrid HUDLS), landing distance available (LDAH), landing distance required (LDRH).

61. The following terms were deleted as they are not used in Annexes II-VI, or are suitably covered within the relevant rule text: controlled flight, D, dangerous goods transport document, disruptive passenger, hoist cycle, series of flights, screen height, V_Y.

62. Another drafting issue taken into account when reviewing the comments was that the definitions contained in Annex I should not contain requirements or non-exhaustive lists of attributes – these are better placed in Implementing Rules or AMC/GM. Those aspects of a definition that were requirements have therefore been transposed into the Implementing Rules using these terms. Those aspects of a definition that were a non-exhaustive list of attributes have been placed as Guidance Material to Annex I. For this reason, changes were made to some definitions published with the NPA and others transposed from EU-OPS and JAR-OPS 3: adequate aerodrome, contingency fuel, dry operating mass, HUDLS, V_1.

63. In some cases the decision was taken (based on comments received and following review group discussions) to realign with EU-OPS: low visibility procedures (LVP), listing 'adult', 'child/children' and 'infant' under passenger classification.

64. The other change was to reintroduce some of the AMC/GM to definitions into the Annexes containing the relevant rules, and as a result the following are no longer retained in the

AMC/GM to the definitions contained in Annex I: AMC/GM on Category A and B for helicopters, AMC/GM on the application of TODRH.

Changes to EU-OPS / JAR-OPS 3

65. Although the general principle was to transpose definitions in principle unchanged from EU-OPS and JAR-OPS 3 (with minor editorial changes for consistency with the drafting guidelines), changes were made to some terms. These were based on comments received, and were passed through the review groups. The terms affected are:

- '3% en-route alternate aerodrome' changed to 'fuel en-route alternate aerodrome';
- 'GNSS landing system (GLS)' has been renamed 'GBAS landing system (GLS)' and edited to align with ICAO PANS ATM and PANS ABC;
- 'hold-over time (HoT)': the definition has been aligned with ICAO Annex 14;
- 'Standard Category I' was renamed 'Category I (CAT I) approach operation', and following comments received, GBAS approaches have been added.

Differences to ICAO Annex 6

66. For the definitions in this Regulation, the Agency aligned with EU-OPS and JAR-OPS 3 in the first instance. While the majority of the terms are aligned with ICAO, this decision has resulted in some differences to ICAO definitions for a small group of terms.

- Category A/B/C with respect to helicopters: these definitions remain aligned with JAR-OPS 3. There were conflicting requests: to extend alleviations for certain operations (HEMS operations in particular) so as to permit helicopters that do not fully comply with the required certification specifications to nevertheless be eligible for performance class 1 and 2 operations. In contrast, other stakeholders requested that the alleviations as presented in the NPA be withdrawn. The Agency does not see a safety case for changing the definitions, and decided to maintain the text of AMC OPS.GEN.010(a)(9)&(10), in line with JAR-OPS 3.
- CAT II, IIIA, IIIB operations: the definitions remain aligned with EU-OPS.
- En-route alternate (ERA) aerodrome: the definition remains aligned with EU-OPS, and differs to ICAO in that it is linked to 'adequate aerodrome' and may be required at the planning stage.
- Performance class 1/2/3 for helicopters: there were requests for the definitions to be aligned with ICAO. The Agency considers the JAR-OPS 3 definitions to be most appropriate. Although the terms were renamed as 'operations in performance class 1/2/3 for helicopters', they remain aligned with JAR-OPS 3. As a result, there are some differences with the ICAO Annex 6, Part III definitions (for performance class 1, the chosen definition does not clearly define at which point the performance should be considered, following failure of a critical engine, compared with ICAO; for performance class 3, the JAR-OPS 3 definition distinguishes between multi-engined and single-engine helicopters, in contrast to the ICAO definition).
- Contaminated / damp / dry / wet runway: these definitions raised many comments, requesting various amendments and also to align with Amendment 33 to ICAO Annex 6, Part I (as 'runway surface condition'). The Agency considered it not

appropriate to make any changes prior to carrying out an impact assessment, and decided to leave any amendments to the runway definitions for a future rulemaking task.

III. Specific issues

Commercial air transport (CAT) operation

67. As explained in the NPA Explanatory Note (2009-02A), this definition was added, based on that given in ICAO Annex 6, Part I. The definition is has been aligned with that given in the Basic Regulation by referring to 'other valuable consideration' rather than the ICAO usage of 'hire'.

Critical phases of flight

68. The helicopter aspect of this definition has been redrafted, but still provided for the operator and the pilot-in-command/commander to define what these phases are. The aeroplane aspect remains aligned with EU-OPS, with minor editorial changed made.

Heliport

69. Requests were made to include certain terms used in JAR-OPS 3, in particular 'heliport', in place of 'final approach and take-off area'. The Agency has decided not to make this change, as the term 'aerodrome' as defined in Regulation (EC) No 216/2008 covers both heliports and helidecks. Secondly, with the introduction of the term 'operating site', 'heliport' in effect has become redundant. In order to retain legal certainty, 'heliport' is not used in the Implementing Rules. However, 'helideck' has been retained as it would otherwise be difficult to define operations to and from these sites.

Hostile / Non-hostile environment

70. These definitions attracted many comments from stakeholders from the alpine region. Some requested that mountain areas be considered as hostile, while others requested clarification that this is not the case. In addition clarification was requested as to who should define a hostile area. The Agency decided to leave the text largely as it was presented in the NPA. In particular it is important that the decision to define an area as hostile or not is taken within the operational circumstances of an individual flight.

Local operations

71. The term is no longer used in the NPA, but a new term 'local helicopter operation' has been introduced, and is relevant to the HEMS and HHO rules contained in Part-SPA.

Maximum passenger seating configuration

72. This term is used in Regulation (EC) No 216/2008 but not defined there. It is more flexible than 'maximum approved passenger seating configuration' (as used in EU-OPS), and covers commercial and non-commercial operations (the latter do not need an approval). Although several stakeholders requested that the EU-OPS term be reintroduced, the Agency decided to retain the term from Article 3 of Regulation (EC) No 216/2008.

Night

73. The NPA definition raised many requests from stakeholders based in northern latitudes to align with either ICAO or Part-FCL, and to permit the appropriate (national) authority to define when night starts and ends. The definition was therefore changed to align with that given in Part-FCL, which states that night begins after the end of evening civil twilight and ends with the beginning of morning civil twilight or as prescribed by the appropriate authority.

Pilot-in-command and commander

74. This definition was added, largely aligned with that in ICAO Annex 1, Part I. In the light of the many comments received to the NPA and from review group members, it was added that, for CAT operations, 'the pilot-in-command shall be termed the commander'.

Technical crew member

75. This definition was transferred from OR.OPS.005.TC (from NPA 2009-02c) into the central set of definitions. An editorial error resulted in this definition not being included in the Cover Regulation to Part-OR. In order to provide an opportunity for reactions, it has been placed in the Annex I definitions, but will be transferred to Part-OR when the Opinion is published.

Comparison table NPA rules / Resulting text

76. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 7: Rule title comparison for Annex I - Definitions

NPA rule	NPA title	CRD rule	CRD title
OPS.GEN.010	Definitions	Annex I	Definitions for terms used in Annexes II - VI
GM OPS.GEN.010	Definitions	Annex I AMC Definitions	Definitions for terms used in Annexes II - VI
AMC OPS.GEN.010(a)(9) & (10)	Definitions - Category A and Category B	AMC1-CAT.POL.H.200&300&400	General - Category A and Category B
GM OPS.GEN.010(a)(9)&(10)	Definitions - Category A and Category B	GM1-CAT.POL.H.200&300&400	General - Category A and Category B
GM OPS.GEN.010(a)(30)	Definitions - HEMS Flight	GM1-Annex I	Definitions for terms used in Annexes II – VI – HEMS flight

NPA rule	NPA title	CRD rule	CRD title
GM OPS.GEN.010(a)(41)	Definitions – Hostile environment	GM1-Annex I	Definitions for terms used in Annexes II – VI – Hostile environment
AMC OPS.GEN.010(a)(73)	Definitions – the application of TODRH	GM1-CAT.POL.H.205(b)(4)	Take-off
GM OPS.GEN.010(a)(73)	Definitions – the application of TODRH	GM1-CAT.POL.H.205(b)(4)	Take-off
AMC4 OPS.GEN.150	Instrument flight rules (IFR) operating minima	Annex I AMC1-CAT.OP.AH.110	Definitions Aerodrome operating minima
AMC1-OPS.CAT.010	Definitions	Annex I AMC Definitions	Definitions for terms used in Annexes II – VI
AMC OPS.CAT.316.A(a)(1)	Performance general – aeroplanes	Annex I	Definitions for terms used in Annexes II – VI

Annex 4: Explanatory memorandum for Part-CAT (aeroplanes and helicopters)

I. Scope

77. Part-CAT contains the technical requirements for commercial air transport (CAT) operations with aeroplanes, helicopters, sailplanes and balloons. It consists of four Subparts which are further broken down to Sections containing aircraft specific rules. Some Sections are further broken down into Chapters.

78. The structure of the Subparts is comparable to the structure of the Essential Requirements in Annex IV of the Basic Regulation, EU-OPS/JAR-OPS 3, and ICAO Annex 6 Part I.

79. The rule structure, and in particular the Sections and Chapters, have been designed in such a way that requirements for additional aircraft categories, or even specific operations, could be added in the future without the need to make changes to the existing rule text. It should be noted that future rulemaking tasks will develop the requirements for airships, tilt-rotor aircraft, and unmanned aerial systems.

80. Figure 1 and Figure 2 provide an overview of the structure of Part-CAT.

81. This Explanatory Memorandum concerns only the Sections for CAT operations with aeroplanes and helicopters:

- CAT.GEN.AH;
- CAT.OP.AH;
- CAT.POL.A, CAT.POL.H, CAT.POL.MAB; and
- CAT.IDE.A, CAT.IDE.H.

82. The Explanatory Memorandum for the requirements for CAT operations with sailplanes and balloons will be published together with the related CRST and resulting text in the 2nd CRD phase.

Figure 1: Structure of Part-CAT – rule title headings

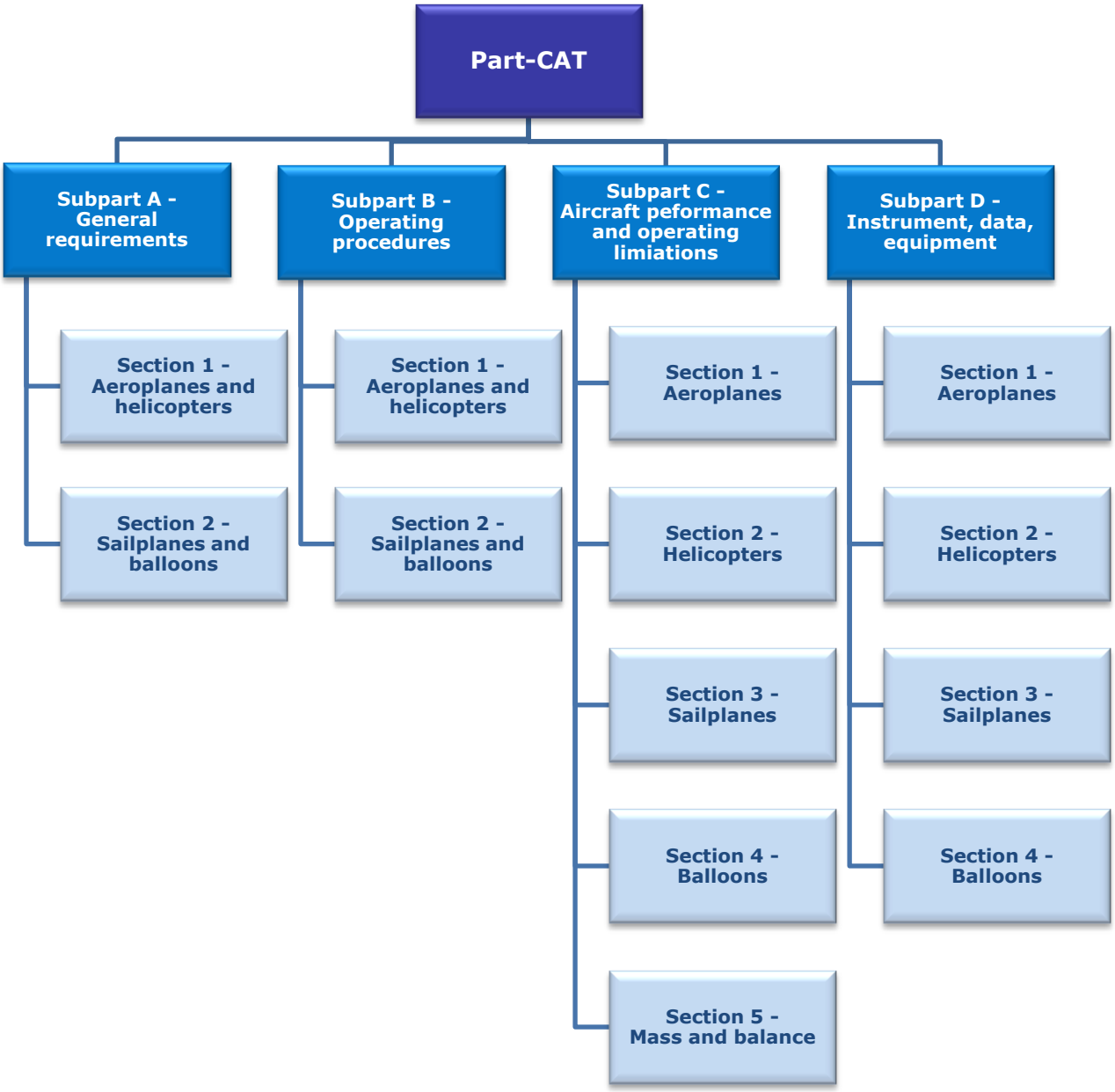
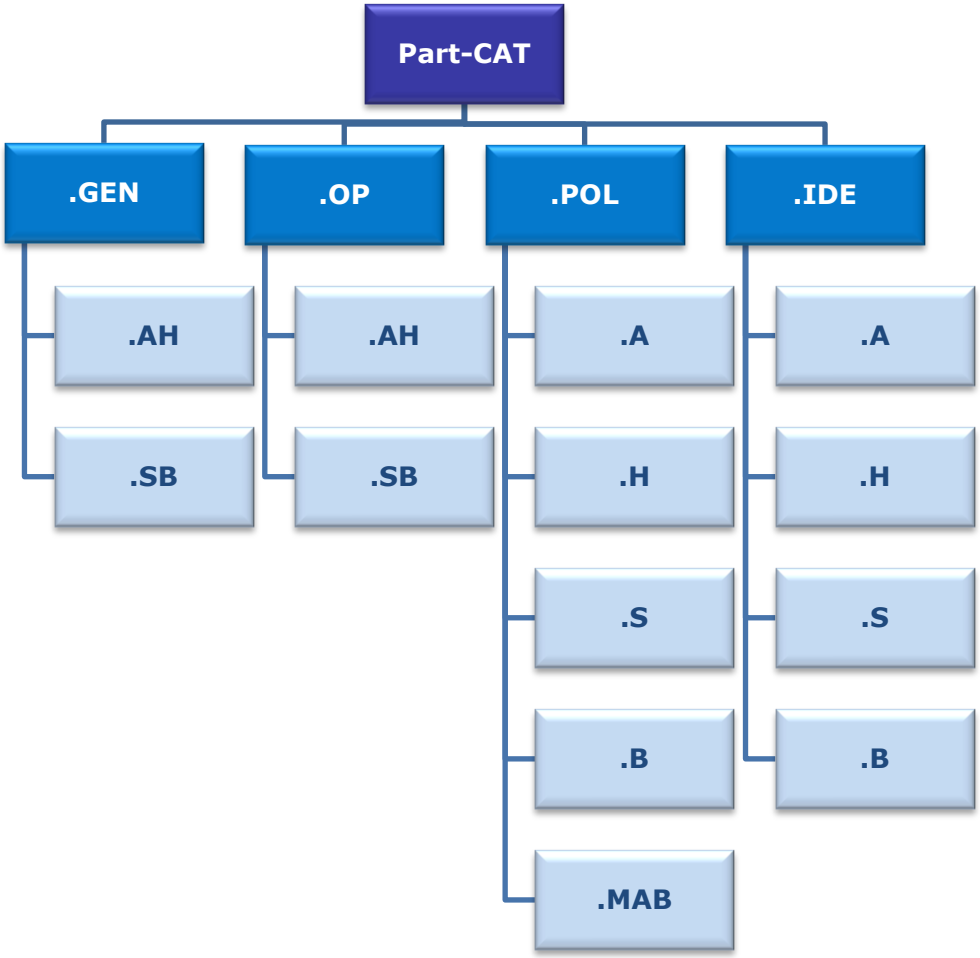


Figure 2: Structure of Part-CAT – Rule identifiers



II. Overview of general comments to CAT

83. General comments received on NPA 2009-2a and NPA 2009-2b related to CAT operations can be summarised as follows:

- most commentators found NPA OPS too difficult to read and requested to split the rules into distinctive Parts, e.g. a single Part for CAT operations; this request has been accepted (ref. Annex 1: Rule structure);
- the majority of stakeholders requested that the CAT rules should be aligned with EU-OPS/JAR-OPS 3; this request has been accepted, further details are described in the subheadings for the different Sections below;
- many commentators recommended to separate the rules into aircraft-specific rules; this request has also been accepted (ref. I Scope);
- many commentators argued that the balance between IR text and AMC/GM was not balanced and requested that AMC material be upgraded to the IR level; this request has been accepted in most cases, further details are provided for the different Sections below;

- generally, commentators did not challenge that the rule text of EU-OPS/JAR-OPS 3 had been split into technical requirements, authority requirements and organisation requirements; this has been noted and the horizontal rule structure has been retained;

III. Changes applicable to all Subparts

Compared to the NPA

84. In NPA Part-OPS, the requirements for CAT operations were located in two Subparts, OPS.GEN, General requirements, and OPS.CAT, specific CAT requirements. The revised rule text combined the general and specific rules into a single set of CAT rules..

85. The scope of the CAT related rules in NPA Part-OPS has been kept; there were only minor movements from/to other Parts, in particular from/to OR.OPS and AR.OPS.

86. The rule sequence has been changed to follow the rule sequence of EU-OPS/JAR-OPS 3. As a consequence, some rules have been moved within the Subparts of Part-CAT. For example, in NPA Part-OPS, certain operating procedures were linked to the equipment requirements in Section IV Instrument, data, equipment. In Part-CAT such rules are now in Subpart CAT.OP, under operating procedures, as in EU-OPS/JAR-OPS 3.

Compared to EU-OPS / JAR-OPS 3

87. The revised rule text for Part-CAT is aligned with the content of EU-OPS/JAR-OPS 3 of the relevant Subparts. The following table provides a general overview on how the Subparts of EU-OPS/JAR-OPS 3 relate to the new Subparts.

Table 8: General comparison of Part-CAT with EU-OPS/JAR-OPS3

Part-CAT	EU-OPS	JAR-OPS3
CAT.GEN.AH	Subpart B (partly)	
CAT.OP.AH	Subpart D Subpart E (partly)	
CAT.POL.A	Subpart F-I	
CAT.POL.H		Subpart F-I
CAT.POL.MAB	Subpart J	
CAT.IDE.A	Subpart K-L	
CAT.IDE.H		Subpart K-L

88. It should be noted that the remaining Subparts of EU-OPS/JAR-OPS 3 have been transposed in other Parts, e.g., Part-SPA, Part-OR, Part-AR and Part-CC. Definitions and terms have been transposed to Annex I – Definitions. In certain cases, rules have not been transposed because they are or will be covered in other Regulations, such as

Regulation (EU) No 996/2010 on the investigation and prevention of accidents and incidents in civil aviation, or the future IR on the Single European Rules of the Air (Part-SERA). The documents with the revised rule text with track changes to EU-OPS and JAR-OPS 3 Subparts provide detailed information at rule level on how the content of the existing rule text has been transposed into the new rules (ref. CRD c.9).

89. Apart from the acceptance of comments, differences between the text of existing rules, in particular EU-OPS and JAR-OPS 3 Section 1, and the amended text after comment review have been limited to cases where such differences can be justified on the grounds of:

- changes stemming from the Basic Regulation;
- recent ICAO amendments not yet reflected in the existing provisions;
- JAA NPAs and WP, JAA SICs (safety information communications), EASA SIBs (safety information bulletins);
- required alignment with other EU legislation;
- items resulting from discussions in the Air Safety Committee;
- anticipated developments in the fields of air traffic management/service and aerodromes, e.g. European Rules of the Air (SERA), EGNOS;
- identified safety risks;
- proportionality principles; and
- legal considerations and drafting principles[5].

90. Following these considerations, for each rule paragraph a text comparison with EU-OPS and JAR-OPS 3 Section 1 has been carried out carefully in order to evaluate if the text should be amended to align its wording with existing texts, even for those paragraphs where no comments had been received. EU-OPS and JAR-OPS 3 have been given precedence over existing ICAO SARPS. The latest amendments of Annex 6[6] have been incorporated whenever the impact of change was considered limited or crucial for international operations. Whenever the impact could not be easily assessed, the item was deferred to a future rulemaking task. It should be noted, that there are also intentional differences to ICAO SAPS, e.g. single-engine IMC CAT operations. Further information on differences to ICAO SARPS and the planned rulemaking tasks to address such differences are discussed in the Subparts below.

91. EU-OPS and JAR-OPS 3 rules containing a safety objective have been retained as IR. EU-OPS and JAR-OPS 3 rules unambiguously containing a means to comply with a safety objective have been moved to the AMC level. In many instances, Appendices of EU-OPS and JAR-OPS 3 were regarded as a means of compliance and have been transposed as AMC. In such cases where it was not possible to make a clear distinction between a

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5 As laid down in the Inter-institutional Style Guide: http://publications.europa.eu/code/en/en-000500.htm.

6 This concerns the following Amendments:
- Amendments 32, 33, 34 of Annex 6 Part I
- Amendments 27, 28, 29 of Annex 6 Part II
- Amendments 13, 14, 15 of Annex 6 Part III.

safety objective and a means to comply with a safety objective, the rule text has been retained as IR.

92. In cases where commentators requested a more proportionate approach, the Agency proposed a rule text with a safety objective and an AMC and discussed these proposals with RG01. However, RG01 recommended in most cases to retain EU-OPS and JAR-OPS 3 text at this stage, which was in line with the majority of comments received on the NPA. Following these requests, the Agency made no major changes to the rule substance, except for varying the level of text between IR and AMC. This also takes into account that EU-OPS and JAR-OPS 3 were used by Member States for small operations.

93. It should also be noted that the content of Appendix 1 to OPS 1.005(a), Operations of performance class B aeroplanes, Appendix 1 to OPS 3.005(f), Operations for small helicopters (VFR (visual flight rules) day only), and Appendix 1 to OPS 3.005(g), Local area operations (VFR day only) have been transposed in the relevant Sections, where appropriate.

94. Nevertheless, the Agency is of the opinion that the rules require further review as regards proportionality and the alleviation criteria that were applied in EU-OPS/JAR-OPS 3. It will therefore schedule in its RM programme a task to review the CAT rules in relation to other-than-complex motor-powered aircraft and their use in defined areas.

95. EU-OPS and JAR-OPS 3 rule text indicating an alternative to an IR has been deleted for legal reasons; such alternatives need to be dealt with using the procedures provided in Article 14 of the Basic Regulation. EU-OPS and JAR-OPS 3 rule text moved to the AMC level and indicating an alternative to an AMC without demonstrating that the requirements of the safety objective were fully met has been deleted; such alternative AMC, however, can be followed up by operators using the alternative means of compliance procedure, provided it is demonstrated that the safety objective can be met.-

96. Text transposed in AMC material that demanded an approval by the competent authority for an alternative means of compliance has been deleted since it would be covered through the alternative means of compliance procedure.

97. EU-OPS / JAR-OPS 3 rule text which is also covered in Annex IV of the Basic Regulation has been retained and a reference to the Basic Regulations was added.

98. EU-OPS / JAR-OPS 3 rule text with explanatory character has been transposed as GM; notes have either been redrafted into AMC provisions, where treated as footnotes, transposed as GM, or deleted if they did not provide sufficient added value.

99. Rules which contained provisions as "acceptable to the authority" have been consistently redrafted through all Subparts as "the operator shall specify in the operations manual …". The Agency adopted this approach in order to specify a defined procedure for how such items should be brought to the attention of the competent authority.

100. In NPA Part-OPS, EU-OPS / JAR-OPS 3 rules were transposed to the IR of OPS.GEN, IR of OPS.CAT, AMC of OPS.GEN, and AMC of OPS.CAT. Following the request to align with EU-OPS and JAR-OPS 3, the NPA text (which had resulted from the merging of what had been multiple rules into a single set of rules) did not provide the optimal means for revising the OPS rules. Therefore, it was decided to carry out revisions taking the EU-OPS/JAR-OPS 3 rule text as the basis, rather than the NPA text. Changes to the original EU-OPS/JAR-OPS 3 text have been tracked and justified, when not merely editorial or self-explanatory, in comment balloons (ref. CRD c.4-c.7).

101. Changes to the original text of Section 2 of JAR-OPS 1 and JAR-OPS 3 are not tracked in the AMCs/GMs of the new proposed text, since AMCs/GMs of the NPA were used as a basis in this case.

102. Use of Appendices, as existing in EU-OPS/JAR-OPS 3, has been avoided, transferring such material either to IR or AMC level.

IV. CAT.GEN: Subpart A – General requirements

103. This Subpart contains general requirements for CAT operations. It contains two Sections:

- Section 1 – aeroplanes and helicopters; and
- Section 2 – sailplanes and balloons.

104. This Explanatory Memorandum discusses Section 1.

CAT.GEN.AH: Section 1 – Aeroplanes and helicopters

General

105. This Section transposes parts of Subpart B of EU-OPS and JAR-OPS 3 and related Section 2 material of JAR-OPS 1 and JAR-OPS 3. It relates to NPA OPS.GEN Sections I, V, and VI and OPS.CAT Section I.

106. CRD c.10 provides a rule title comparison between the NPA rules, EU-OPS / JAR-OPS 3 rules and the CRD rules.

Summary of comments

107. The main comments received on NPA OPS.GEN Sections I, V, VI, and OPS.CAT Section I. and the related text on NPA 2009-2a can be summarised as follows:

- rule text for the flight crew, cabin crew and the commander should be re-aligned with EU-OPS / JAR-OPS 3; these comments have been accepted and are further discussed under CAT.GEN.AH.100 and CAT.GEN.AH.105 below;
- the division of text into a general part and a CAT-specific part has been challenged; these comments have been accepted, the revised rule structure is discussed in Annex I above;
- text which has been deleted because it would be a repetition of Annex IV of the Basic Regulation should be re-instated; these comments have been accepted; the revised rule text contains the text with a reference to Annex IV;
- for the transport of dangerous goods, the rule text should contain a reference to the Technical Instructions; these comments have been accepted; the revised rule text provide a dynamic reference to the Technical Instructions and removed text which would be a duplication of the Technical Instructions;
- many commentators requested the possibility for carriage of documents in electronic format; these comments were accepted and the possibility provided;

- preference was expressed for the possibility to carry copies of all documents, manuals and additional information, instead of originals; these comments were accepted and the possibility provided;
- authorities and an industry association asked for "a copy of the dangerous goods documents…" to be carried;
- with regard to the alleviation allowing certain documents to be retained at the aerodrome/operating site under certain conditions, some commentators asked for the list to be re-aligned with the lists in Appendix 1 to OPS 1.005(a) and Appendix 1 to JAR-OPS 3.005(f); these comments were accepted and the text was aligned accordingly; and
- clarification was requested on the meaning of "any other documentation which may be pertinent to the flight or is required by the States concerned with the flight" and how to comply with the IR on carriage of "certified true copy of the AOC"; these comments were followed up and the revised rule text provided further guidance.

Summary of main changes

Compared with the NPA

108. This Section has been completely redrafted. The revised rule text is aligned with the relevant provisions of Subpart B of EU-OPS / JAR-OPS 3 and related Section 2 material of JAR-OPS 1 and JAR-OPS 3. The rule sequence follows the rule sequence of EU-OPS / JAR-OPS 3.

109. OPS.GEN Section VI was not transposed since these rules are covered under OR.OPS.SEC and Commission Regulations.

Compared with EU-OPS / JAR-OPS 3

110. The following rules of Subpart B are transposed by other Parts and are not included in this Section:
    - OPS 1./3.005 General, is covered by the Cover Regulation Air Operations, Part-M, ER, OR.OPS.FC;
    - OPS 1./3.030 Minimum Equipment Lists – Operator's Responsibilities is covered in OR.OPS.MLR;
    - OPS 1./3.035 Accident prevention and flight safety programme, is covered in OR.GEN.200;
    - OPS 1./3.037 is covered in OR.GEN.200;
    - OPS 1./3.155 is covered in OR.OPS.SEC;
    - OPS 1./3.165 Leasing is covered in OR.OPS.AOC; Appendix 1 to OPS 1.005(a), Operations of performance class B aeroplanes, Appendix 1 to OPS 3.005(f), Operations for small helicopters (VFR day only), and Appendix 1 to OPS 3.005(g), Local area operations (VFR day only) have been transposed in the relevant Sections, where appropriate.

Specific issues

CAT.GEN.AH.100 Crew responsibilities

111. This rule transposes OPS 1./3.085 (a), (b), (d). Paragraph (b)(5) was added in line with the discussion in the Air Safety Committee to particularly address crew members who work for more than one operator. Such items which are already covered in Annex IV of the Basic Regulation have been retained and a reference to the Annex IV was added.

CAT.GEN.AH.105 Responsibilities of the commander

112. This rule transposes OPS 1./3.085 (f). With the objective to combine all responsibilities of the commander within a single rule, the following EU-OPS / JAR-OPS 3 rules have been merged with this rule: OPS 1/3.330, and OPS 1.420 (d)(2), (d)(3).

CAT.GEN.AH.180 Documents, manuals and information to be carried

113. This rule transposes and combines the following EU-OPS / JAR-OPS 3 rules: OPS 1./3.050, OPS 1./3.125, OPS 1./3.130, OPS 1./3.135. The following revisions to the NPA text and EU-OPS / JAR-OPS 3 have been made:

- the possibility for documents and information to be in electronic format is now broader than it was in EU-OPS/JAR-OPS 3, to account for increasing use of electronic means; the integrity of the information is controlled by the conditions included in the AMC;
- the text now clearly indicates that only the certificate of registration, certificate of airworthiness and the aircraft radio licence must be "the original", reflecting the intent of EU-OPS/JAR-OPS 3;
- the reference to dangerous goods documentation has been deleted as it is covered in SPA.DG;
- the alleviation allowing certain documents to be retained at the aerodrome/operating site under certain conditions has been changed to accommodate HEMS operations. In addition, the list has been re-aligned with the lists in Appendix 1 to OPS 1.005(a) and Appendix 1 to JAR-OPS 3.005(f), except that mass and balance documentation has been added, as OR.OPS.MLR requires a copy to be retained on the ground anyway;
- the AMC paragraph on loss or theft of documents has been re-aligned with EU-OPS/JAR-OPS 3, i.e., the applicability is limited to certificates (except for the certified true copy of the AOC, which is required on board by ICAO Annex 6);
- the EU-OPS/JAR-OPS 3 wording on carriage of the operations manual has been re-instated; and
- clarification was provided regarding the carriage of the certified true copy of the AOC.

CAT.GEN.AH.200 Transport of dangerous goods

114. The approach taken by the Agency is to work with a reference to the ICAO Technical Instructions, as was presented in the NPA. The reference is now upgraded to IR. This drafting decision also meant that extracts from the Technical Instructions were not to be

included in these rules. Therefore SPA.DG is in effect much shorter than Subparts R of EU-OPS and JAR-OPS 3. Only requirements specifying particular operator responsibilities have been repeated from the Technical Instructions. The requirements in CAT.GEN address the circumstances under which dangerous good might be carried without holding an approval in accordance with SPA.DG. This concerns for example items carried in passengers' baggage that are normally considered being dangerous goods. This paragraph also addresses the awareness of crew members to detect dangerous goods carried inadvertently.

V. CAT.OP: Subpart B – Operating procedures

115. This Subpart contains requirements for operating procedures for CAT operations. It contains two Sections:

- Section 1 – aeroplanes and helicopters; and
- Section 2 – sailplanes and balloons.

116. This Explanatory Memorandum discusses Section 1.

CAT.OP.AH: Section 1 – Aeroplanes and helicopters

General

117. This Section transposes Subpart D and parts of Subpart E of EU-OPS and JAR-OPS 3 and related Section 2 material of JAR-OPS 1 and JAR-OPS 3. It relates to NPA OPS.GEN Section 2 and OPS.CAT Section 2.

118. CRD c.10 provides a rule title comparison between the NPA rules, EU-OPS / JAR-OPS 3 rules and the CRD rules.

Summary of comments

119. The main comments received on NPA OPS.GEN Section 2 and OPS.CAT Section 2 and the related text on NPA 2009-2a can be summarised as follows:

- on most of the rules it was recommended that the rule text be re-aligned with EU-OPS / JAR-OPS 3; this was in particular requested for the requirements addressing aerodrome operating minima and fuel policy;
- for the requirements mentioned above, commentators also did not consider the balance between IR and AMC/GM appropriate and suggested to upgrade AMC material to the IR level;
- particularly business jet operators requested greater flexibility in the methods for providing passenger safety briefings;
- several stakeholders provided proposals on how to improve the EU-OPS rule text and achieve harmonisation with FAA rules; and
- commentators recommended to change the definition of approach procedure with vertical guidance (APV) provided in EU-OPS and to align the lowest minima with the minima for LPV operations.

Summary of main changes

Compared with the NPA

120. This Section has been completely redrafted. The revised rule text is aligned with the relevant provisions of Subpart D and partly Subpart E of EU-OPS / JAR-OPS 3 and related Section 2 material of JAR-OPS 1 and JAR-OPS 3. The rule sequence follows the rule sequence of EU-OPS / JAR-OPS 3.

Compared with EU-OPS / JAR-OPS 3

121. Rules of Subpart E of EU-OPS / JAR-OPS 3 that are not related to low visibility operations (LVO) have been integrated into CAT.OP.AH.110. This concerns parts of OPS 1/3.430 and the parts of the Appendix 1 (New) to OPS 1./3.430 and Appendix 2 to OPS 1.320(c).

122. The EU-OPS / JAR-OPS 3 rules on RVSM, ETOPS, MNPS and PBN have been moved to the relevant Subparts of Part-SPA.

123. The prescriptive text of the following Appendices that contain means to comply with a safety objective have been transposed as AMC; this approach applied to the following Appendices:

- Appendix 1 to OPS 1.255 Fuel policy;
- Appendix 1 to OPS 1.270 Stowage of baggage and cargo;
- Appendix 1 to OPS 1.305 Refuelling / defuelling with passengers embarking, on board or disembarking; and
- Appendix 1 (New) to OPS 1./3.430.

124. The following rules of Subpart D are transposed by other Parts or rule documents and are not included in this Section:

- OPS 1.311 is transposed in OR.OPS.CC.207;
- OPS 1.390 Cosmic radiation, is covered by Directive 93/29; and
- OPS 1.420 is covered in Regulation (EC) No 996/2010, OR.OPS.100, Part-M, Part-SERA, CAT.GEN.105(c), (d), SPA.DG, OR.OPS.SEC; and CAT.GEN.105.

Specific issues

CAT.OP.AH.105 Use of aerodromes and operating sites

125. This rule transposes OPS 1/3.220. As already contained in the NPA, the scope of the rule has been extended for those operations that do not depart from, or land on an aerodrome. Due to safety considerations, the revised rule text does not allow the use operating sites for CAT operations with complex aeroplanes.

CAT.OP.AH.106 Use of isolated aerodromes – aeroplanes

126. The Agency followed the advice of RG01 to require a prior approval for the use of an isolated aerodrome as destination aerodrome with aeroplanes. The Agency concurs with the view of the review group that the use of an isolated aerodrome exposes the aircraft and passengers to a greater risk than to operations where a destination alternate

aerodrome is available. Whether an aerodrome is classified as an isolated aerodrome or not often depends on which aircraft are used for operating the aerodrome. The competent authority should therefore assess whether all possible means are applied to mitigate the greater risk.

CAT.OP.AH.110 Aerodrome operating minima
CAT.OP.AH.115 Approach flight technique –aeroplanes

127. These rules transpose OPS 1./3.225 and parts of 1./3.430. To improve the readability of the rules, 1./3.430 was split into two requirements. The text has been redrafted and simplified as far as feasible.

AMC1-CAT.OP.AH.110 Aerodrome operating minima

128. This AMC transposes the following provisions of Appendix 1 (New) to OPS 1.430:

- take-off operations;
- non-precision approach (NPA) operations, approach operations with vertical guidance (APV) CAT I operations;
- circling operations;
- visual approach operations;
- the rules for failed or downgraded ground equipment; and
- the rules for the conversion of reported meteorological visibility to RVR.

129. It should be noted that also the provisions of Appendix 1 (New) to OPS 1.430, which are related to low visibility operations, have been moved to AMC. This approach was discussed with all review groups and received support from the majority of review group members.

130. It should be further noted that the provisions for take-off of Appendix 1 (New) to OPS 1.430 (a) have been separated into take-off operations without an approval for an specific LVO approval and low visibility take-off (LVTO) operations requiring an LVO approval.

131. Table 3 containing the system minima for NPA, APV and CAT I operations has been amended with the values for instrument landing systems (ILS), GNSS/SBAS (satellite-based augmentation system), global navigation satellite system (GNSS) lateral navigation (LNAV)) and GNSS/Baro-VNAV (LNAV/VNAV) based on comments received.

132. Table 7 on the effect on landing minima of failed or downgraded equipment has been modified with contributions from commentators with the objective to harmonise with FAA rules. This table has been split into the table containing CAT I, APV and NPA and table containing LVO.

CAT.OP.AH.140 Maximum distance from an adequate aerodrome for two-engined aeroplanes without an ETOPS approval

133. This rule transposes OPS 1.245 and retains the content of EU-OPS. This includes the rule to increase the threshold distance up to 180 minutes for turbo-jet aeroplanes if approved by the competent authority. For legal reasons, subparagraph (d) was added with the requirements for the operator on how to obtain such an approval from the competent authority.

134. Furthermore, the 'necessary ancillary services' as contained in the EU-OPS definition for adequate aerodrome were inserted into this requirement. This is because the EU-OPS definition could not be transposed in full into Annex I as it should be applicable not only to CAT but also to non-commercial operations.

CAT.OP.AH.145 Establishment of minimum flight altitudes

135. This rule transposed OPS 1.250. The rule has been retained but the prescriptive part of the rule in subparagraph (d) of OPS 1.250 has been moved to AMC1-CAT.OP.AH.145(a) to provide sufficient flexibility particularly for smaller operators. This AMC also includes the alleviation of Appendix 1 to OPS 1.005 (a) 11.

CAT.OP.AH.150 Fuel policy

136. This rule transposes OPS 1./3.255. Even though editorial revisions have been made, the content of the OPS rule is retained. The prescriptive text of Appendix 1 to OPS 1.225 has been moved to the AMC material. This Appendix, however, contains an approval item for the statistical method to be used for the calculation of the contingency fuel. An approval cannot be required in an AMC. Based on the recommendation of RG01, and also as the fuel policy is a safety critical requirement, the Agency decided to require a prior approval of the fuel policy and any change to it.

CAT.OP.AH.155 Carriage of special categories of passengers (SCPs)

137. This rule transposes OPS 1.260 and 1.265 and has been redrafted. The proposed text has been developed giving also regard to persons with reduced mobility, thus ensuring that Regulation (EC) No 216/2008 and the related IR for air operations as well as Regulation (EC) No 1107/2006 can be complied with.

CAT.OP.AH.170 Passenger briefing

138. This rule transposes OPS 1.285. In order to provide sufficient flexibility in the methods for providing passenger safety briefings, the prescriptive text of subparagraphs (b) to (e) have been moved to AMC. Moreover, as already contained in the NPA and requested by commentators, the AMC also provides the possibility for a passenger safety briefing training programme.

CAT.OP.AH.295 Use of airborne collision avoidance system (ACAS II)

139. This rule transposes OPS 1.390. It has been aligned with the text proposed in the Opinion to AUR.ACAS which was drafted with the objective to introduce ACAS II with collision avoidance logic version 7.1 as a mandatory standard to the European airspace.

GM1-CAT.OP.AH.295 Use of airborne collision avoidance system (ACAS II)

140. The training material, transposing ACJ OPS 1.398 has been provisionally attached to this rule. For the Decision, this GM will be transferred to OR.OPS.FC.

AMC1-CAT.OP.AH.305 Commencement and continuation of approach

141. Based on recommendations of RG01, the Agency merged, for all instrument approach operations, the corresponding rules for visual references into a single AMC. The rule

sources for this AMC are the visual references contained in Appendix 1 (New) to OPS 1.430. This AMC has been attributed to CAT.OP.305 Commencement and continuation of approach, the only requirement that refers to visual reference at IR level.

VI. CAT.POL: Subpart C – Aircraft performance and operating limitations

142. This Subpart contains requirements for aircraft performance and operating limitations for aircraft used in CAT operations. It consist of five Sections:

- Section 1 – aeroplanes;
- Section 2 - helicopters;
- Section 3 – sailplanes;
- Section 4 – balloons; and
- Section 5 – mass and balance.

143. This Explanatory Memorandum discusses Sections 1, 2 and 5.

CAT.POL.A: Section 1 – Aeroplanes

General

144. This Section transposes EU-OPS Subparts F-I and the related Section 2 material of JAR-OPS 1. It relates to the general and aeroplane specific rules of NPA OPS.GEN Section 3 and OPS.CAT Section 3.

145. This Section consists of four Chapters:

- Chapter 1 – general requirements;
- Chapter 2 – performance class A;
- Chapter 3 – performance class B; and
- Chapter 4 – performance class C.

146. CRD c.10 provides a rule title comparison between the NPA rules, EU-OPS / JAR-OPS 3 rules and the CRD rules.

Summary of comments

147. The main comments received on aeroplane specific rules of NPA OPS.GEN Section 3 and OPS.CAT Section 3 and the related text on NPA 2009-2a can be summarised as follows:

- the majority of commentators considered this part of the NPA as poorly drafted and recommended to align with EU-OPS Subpart F-I;
- the majority of commentators did not consider the balance between IR and AMC/GM appropriate and suggested to requested that the definition of the performance classes should be moved to IR;
- the majority of commentators asked to re-instate the specific approvals for steep approach, short landing and take-off with increased bank angles; and

- many commentators requested that the safety-critical rules for the runway factors be re-instated and moved to the IR level as in EU-OPS; however, a minority of commentators also asked that runway factors should not apply to specific operations, e.g., business jet operations.

Summary of main changes

Compared with the NPA

148. This Section has been completely redrafted. The revised rule text is aligned with the relevant provisions of Subpart F-I of EU-OPS and related Section 2 material of JAR-OPS1. The rule sequence follows the rule sequence of EU-OPS.

Compared with EU-OPS / JAR-OPS 3

149. The rule content of Subpart F-I has been retained. There are editorial revisions to align with the terms used in other Subparts. In those cases where the EU-OPS text allowed alternative methods, the text was either moved to AMC or deleted since it would require an Article 14 (6) procedure.

150. In this Section, the Appendices of EU-OPS in Subpart F-I, containing conditions for the specific approvals, have been retained as IR for legal reasons. These Appendices, however, have been redrafted as operator requirements. Only Appendix 1 to OPS 1.545(b)(1) and (c)(1) has been moved to AMC level.

Specific issues

Chapter 2 – Performance class A

151. Based on recommendations of the majority of RG01 members, the rule text has been retained without any significant changes.

152. The Agency therefore did not agree with commentators requesting that for certain operations, the landing factors should be abolished, e.g., for business jet operations. The Agency considers the provisions for landing factors as safety critical requirements. Moreover, the Agency would also point out that alleviations for landing factors would cause a non-compliance with ICAO Annex 6 Part I, which could cause a major disadvantage for operators conducting global business.

153. Based on comments received, for steep approaches, the screen height values were raised from 50 to 60 ft to align with NPA 25B-267 and the proposal of the JAA Performance Sub-Committee.

Chapter 3 – Performance class B

154. Based on recommendations of the majority of RG01 members, the rule text has been retained without any significant changes including alleviations.

Chapter 4 – Performance class C

155. Based on recommendations of the majority of RG01 members, the rule text has been retained without any significant changes.

CAT.POL.H: Section 2 - Helicopters

General

156. This Section transposes JAR-OPS Subparts F-I and the related Section 2 material of JAR-OPS 3. It relates to the general and helicopter-specific rules of NPA OPS.GEN Section 3 and OPS.CAT Section 3.

157. This Section consists of four Chapters:

- Chapter 1 – general requirements;
- Chapter 2 – performance class 1;
- Chapter 3 – performance class 2; and
- Chapter 4 – performance class 3.

158. CRD c.10 provides a rule title comparison between the NPA rules, EU-OPS / JAR-OPS 3 rules and the CRD rules.

Summary of comments

159. A significant number of the comments highlighted disagreement with the proposals. There are two main reasons that the Agency could not take into account all of the comments in this category:

- Firstly problems appear to only exist in a limited number of Member States; it can therefore be argued that these either stem from a national variant presumably addressing a very specific localised problem or incorrect application of JAR-OPS 3. This is further emphasised by the fact that not all Member States have highlighted the same problems. Based on Standardisation results - only 14 out of 41 JAA Member States were recommended for mutual JAR-OPS 3 recognition by the JAA - some comments might also indicate that commentator's unfamiliarity with JAR-OPS 3 philosophies and principles and therefore the Agency's proposals. Furthermore the underlying reasons for these problems with the proposals were generally not clearly indicated in the comments, therefore requiring further examination of the issue. This further examination should be conducted as part of a separate proposal to amend the existing requirements and transposed to a future rulemaking task, as the Agency has to bear in mind that rulemaking may not necessarily be the only way to address the issue. Changing the current requirements based only on those comments would not do justice to those who have not commented because of agreement with the current set of requirements.
- The second reason is that a considerable number of comments did not offer a solution to deal with the identified problem. They only indicated disagreement with the rule, without justifying the reason for disagreement, nor providing an alternative to be considered by the Agency. An acceptable solution could not be agreed upon within the comment response period and a proposed solution in some cases could not be properly evaluated for possible unintended effects. Also here not all Member States have indicated disagreement with the current state of play of JAR-OPS 3; therefore the Agency has to assume that they agree with the approach taken by the Agency.

160. Those comments that have been taken into account become apparent in the following paragraphs, as they have formed the basis of the decision to revert back to a structure and division between IR and AMC more resembling JAR-OPS 3 than the proposals contained in NPA 2009-02b.

161. With regard to performance and the comments received with respect to HEMS operations, there is still confusion between HEMS and mountain rescue operations; whereas HEMS is considered to be CAT, mountain rescue is considered to be a similar service in the sense of Article 1 of the Basic Regulation. The joint decision of the Agency and the JAAC to postpone transposition of TGL 43 to a future rulemaking task resulted in the exclusion of guidance in this respect. After discussing this issue with the helicopter experts, the possibility of including TGL 43 in the draft proposals was evaluated. However, it was decided not to include the material at this stage as the publication deadlines prevented the required detailed and technical discussion. The rulemaking task OPS.057 will be used to address this issue and will therefore provide suitable opportunities for stakeholder consultation. However, this does not prevent a Member State from using the guidance material of TGL 43 in the application of the Basic Regulation.

162. The Agency will further review the link between operational and airworthiness requirements. A number of airworthiness provisions were included in JAR-OPS 3, which under the new regulatory system might be better placed in Part-M. A good example is to be found in CAT.POL.H.305 and the AMCs that address power plant reliability statistics and maintenance activities. These requirements are addressing airworthiness issues that should be considered by an operator in respect of the Part-M approval. However, in order not to lose this important information during the transition from JAR-OPS 3 to Implementing Rules and the finalisation of that rulemaking task, the information is retained here.

Summary of main changes

Compared to the NPA

163. Several comments were received on the balance between rule and AMC/GM that it did not accurately reflect the original requirements and was not consistent with some requirements contained in other parts of the NPA.

164. Commentators were critical of the distribution of the performance requirements between OPS.GEN, OPS.CAT and OPS.SPA.SFL because rules had been split and, consequently, were difficult to understand. Commentators also indicated that SPA.SFL should apply only to CAT and not to 'aerial work' activities. The Agency has therefore decided to delete SPA.SFL and include all performance requirements as a new CAT.POL.H Chapter. This now addresses all CAT performance issues, except for some specific requirements for HEMS and HHO, which have been retained in their respective Part-SPA Subparts.

165. Particularly the performance alleviation for operation to a public interest site (Appendix 1 to JAR-OPS 3.005(i)) and for those helicopters operating over a hostile environment located outside a congested area (Appendix 1 to JAR-OPS 3.005(e)) were not appropriately addressed.

166. The Agency has also decided not to transpose OPS.SPA.035.SFL Helicopter flight manual limitations into CAT.POL.H. The reason being that the proposal contradicts the Essential

Requirements and can therefore not be contained in the IR, as already explained in NPA 2009-02a. The 2011-2014 Rulemaking Programme contains a task (27&29.027, which will start in the second quarter of 2011) addressing this particular issue. This rulemaking task will address any newly certificated helicopter. The retrospective application to existing designs should therefore be solved by the manufacturers applying for an aircraft flight manual (AFM) change under Part-21, taking into consideration that this change is compliant with the outcome of the rulemaking task.

Compared to JAR-OPS 3

167. Although the text seems to have changed considerably compared to the original text contained in JAR-OPS 3, most of the changes are considered to be editorial or related to adaptation to the drafting principles of the Agency. There are also a considerable amount of changes made because the proposals needed to be harmonised with the Basic Regulation, the definitions contained therein and Essential Requirements.

168. Some examples are:

- definitions originally contained in JAR-OPS 3.480 that are used in the IR have been transposed to Annex I – Definitions;
- definitions that are only used in AMC/GM are now contained in the AMC to Annex I – Definitions;
- as explained in Annex 3 to this Explanatory Note above, the term 'heliport(s)' is no longer used, since the definition of 'aerodrome' in the Basic Regulation encompasses heliports, furthermore due to the inclusion of the term 'operating site' the term 'heliport' has become obsolete;
- the definition of 'R' meaning rotor radius is not transposed. As the acronym is only used in one requirement it is now introduced by spelling it out the first time it is used in that requirement;
- in the definitions the term 'Distance DR' is defined and for this reason the whole term is used;
- subheadings have been included in all AMC and GM material; and
- Appendix 1 to JAR-OPS 3.005(e), Appendix 1 to JAR-OPS 3.005(i) and Appendix 1 to JAR-OPS 3.517(a) have been included as a rule in the Performance Section, since the IR cannot contain any Appendices.

Specific issues

AMC1-CAT.POL.H.200&CAT.POL.H.300&CAT.POL.H.400 General

169. In specifying the intent of 'any properly certificated' in sub-paragraph 4 of ACJ OPS 3.480(a)(1) and (a)(2), the Agency defined in NPA 2009-02b under AMC OPS.GEN.010(a)(9)&(10) a list of Certification Specifications. However, this could be interpreted such that helicopters certificated to another standard but in compliance with ICAO Annex 8 would not be considered as eligible for performance class 3 operations. The original ACJ text of paragraph 4 has therefore been reinstated, with an additional reference to CAT.IDE.H for clarity.

170. The original ACJ paragraph 3 has however been retained as GM.

AMC1-CAT.POL.H.205 Take-off

171. Based on one comment received from a Member State, Figure 2 has been enhanced such that it highlights the fact that the safety zone should also include the divergence.

GM1-CAT.POL.H.205(b)(4) Take-off

172. The original ACJ OPS 3.480(a)(32) explains the application of TODRH, therefore it is better as GM to the rule that sets the requirement, rather than as GM to a definition (as had been presented in the NPA).

GM1-CAT.POL.H.205&CAT.POL.H.220 Take-off and landing

173. The reference to human external cargo (HEC) Class D has been deleted, since this requirement is considered to be overly restrictive.

CAT.POL.H.225 Helicopter operations at a public interest site

174. The intent of Appendix 1 to JAR-OPS 3.005(i) has been transferred into the performance class 1 chapter as it is effectively alleviation from the performance class 1 requirements. The definitions/terminology of the original Appendix have been included in Annex I - Definitions.

GM1-CAT.POL.H.225 Helicopter operations at a public interest site

175. JAR-OPS 3 Amendment 5 introduced the 'ground level exposure' concept. This would eliminate the need to designate a heliport located outside a congested hostile environment as a public interest site. 'Ground level exposure' is encompassed in the CAT.POL.H.305 approval to operate without an assured safe forced landing capability, therefore operation to such a site now does not need the alleviation contained in CAT.POL.H.225 and such references have been deleted from the original text.

GM to Section 2, Chapter 3 Performance class 2

176. As already explained above, definitions/terminology have been included in a separate AMC to Annex I and the text has been updated to reflect the current text contained in ICAO Annex 6, as during drafting of the original JAR-OPS 3 text the affected ICAO change was not yet effective.

CAT.POL.H.305 Operations without an assured safe forced landing capability

177. Appendix 1 to JAR-OPS 3.517(a) has been included in the IR.

178. For legal certainty the "set of conditions" needs to be spelt out. Therefore some elements of ACJ-2 to Appendix 1 to JAR-OPS 3.517(a) have had to be upgraded to rule material, rather than leave them open to alternative interpretation. The method to comply with such a condition has been retained in the AMC material.

GM1-CAT.POL.H.305(b) Operations without an assured safe forced landing capability

179. Following discussions in several of the review group meetings, it was decided to draft new guidance to clarify under which circumstances full authority digital engine controls (FADEC) could be accepted as a means to record the required parameters. The request

that the accepted types and models would be included in an AMC was rejected by the Agency, as the Agency is not the authority issuing the AOC and therefore not the authority issuing the approval to operate without an assured safe forced landing capability. This remains the responsibility of the competent authority.

CAT.POL.H.420 Helicopter operations over a hostile environment located outside a congested area

180. This is the transposition of Appendix 1 to JAR-OPS 3.005(e). Although the original intent of the rule as explained in the IEM to Appendix 1 to JAR-OPS 3.005(e) of 1 February 1999 was to allow existing operations to continue, the rule has been used more widely than was intended back in 1999.

181. The rule was intended to address the issue of:

- mountain operations; and
- operations in a remote area, where it is impractical and not proportionate to cease single-engine operations and replace the fleet with multi-engined helicopters.

182. Even in 2010 multi-engined helicopter might not be able to meet the performance class 1 or 2 requirements for the mission at the operational altitude. This issue has been discussed at length and it has been decided that there is still a need to allow such operations under the proposed IR.

183. A new GM (GM1-CAT.POL.H.420) has been introduced to replace IEM to Appendix 1 to JAR-OPS 3.005(e). This new GM clarifies the circumstances under which approvals may be obtained.

184. A new Authority Requirement also had to be proposed to require these mountain and remote areas to be designated by the Member State and to require the competent authority to review the risk assessment and consider the technical and economic justification for the conduct of such operations before approving them.

185. The following issues were also commented upon:

- the applicability to turbine-powered helicopters only; and
- the maximum passenger seating configuration. The limit of six was already set under JAR-OPS 3 to limit the increased exposure to an engine failure, whilst over a hostile environment, to a limited number of persons.

186. At the moment reliability statics are only available for turbine engines. However the Agency, based on a proposal by the Swedish CAA, has reserved a rulemaking task to look into this particular issue. Although it could be argued that the rule discriminates, in practice it does not, because engine reliability statistics are not yet provided or made available for reciprocating engines.

CAT.POL.MAB: Section 5 – Mass and balance

General

187. This Section transposes Subpart J of EU-OPS and JAR-OPS 3 and the related Section 2 material of JAR-OPS 1 and JAR-OPS 3. It relates to rules of NPA OPS.GEN Section 3 and OPS.CAT Section 3.

188. This Section consists of two Chapters:

- Chapter 1 – motor-powered aircraft; and
- Chapter 2 – other-than-motor-powered aircraft.

189. This Explanatory Memorandum discusses Chapter 1.

Chapter 1 – Motor-powered aircraft

190. CRD c.10 provides a rule title comparison between the NPA rules, EU-OPS / JAR-OPS 3 rules and the CRD rules.

Summary of comments

General

- Comments relating to mass and balance topics were identified from the full set of comments received, on OPS.GEN Section 3 and OPS.CAT Section 3 of the NPA 2009-2b. A few comments were also identified among those received on the NPA 2009-2a (Explanatory Note to the NPA).

191. The main issues raised in the comments received are the following:

- request to re-align with EU-OPS and JAR-OPS 3;
- balance between IR and AMC/GM;
- specific alleviations or exemptions for balloons and sailplanes operations;
- subjects/organisations entitled to accomplish aircraft weighing;
- proportionality of the requirements for different kinds/sizes of operations, operators and aircraft categories;
- handling of the exceedence of tolerances for fleet masses and fleet centre of gravity (CG);
- several comments were submitted on standard masses, revision of standard masses for crew, passengers, and baggage, weight surveys;
- request to restore at IR level provisions for mass and balance documentation; and
- request to address on-board mass and balance systems.

Summary of main changes

Compared to the NPA

192. Unlike the rest of Subpart C (CAT.POL), where the performance requirements are broken down into aircraft-specific sections to best address aircraft specific differences, Section 1 mass and balance requirements were kept together, since only a few differences were identified between aeroplanes and helicopters. Therefore this Section has been divided in two Chapters: Chapter 1 applicable to motor-powered aircraft, and Chapter 2 applicable to non-motor-powered aircraft. This second Chapter was developed since the requirements for balloons and sailplanes differ in some cases substantially from those for aeroplanes and helicopters. Furthermore, this Section contains certain alleviations taking

into account comments received. The numbering of the rules between the two Chapters has been kept consecutively. As explained in the general part of this Explanatory Note, the requirements for sailplanes and balloons will be published with the 2nd phase of the CRD on NCC/NCO/SPO.

193. The resulting text after comment review has been re-aligned as much as possible with the original requirements of EU-OPS and JAR-OPS 3.

194. A better balance between IR and AMC/GM material was achieved, trying to take into account proportionality of the rules by putting safety objectives at IR level and means to comply with them at AMC level. This would allow for sufficient flexibility to account for different operational circumstances.

195. The requirements for weighing of aircraft and related AMC have been kept, for the time being, in CAT.POL.MAB.100(b) and AMC1-CAT.POL.MAB.100(b). They will be incorporated into Part-M within the Rulemaking Task MDM.047 after the NPA's consultation period, during the preparation of the CRD of this task. The following material, originally not included in the NPA, was added to provide rules for issues not currently covered by Part-M. Nevertheless they will be also transposed into Part-M with the CRD of rulemaking task MDM.047: IEM to Appendix 1 to EU-OPS 1.605/JAR-OPS 3.605 (a)(4)/(2)(iii) - Accuracy of weighing equipment, now in AMC1-CAT.POL.MAB.100(b).

196. A GM was added for In-flight changes in loading – helicopters, based on Appendix 1 to 3.605(c)(4). This text was originally at IR level.

197. Some provisions were restored to IR level:

- the contents of mass and balance documentation; and
- means to provide mass and balance documentation (either on flight planning documents or on mass and balance systems).

Changes to EU-OPS / JAR-OPS 3

198. The following changes have been made:

- (from Appendix 1 to EU-OPS 1.605 and related IEM) the text on CG limits and operational CG envelope and in-flight CG has been merged and clarified at AMC level;
- (from EU-OPS 1.607/JAR-OPS 3.607) Terminology has been moved to Annex 1 – Definitions and its AMC, where it has been used in the rules;
- (from EU-OPS 1.620/JAR-OPS 3.620 & related Appendixes) the approval for alternative standard masses is no longer required as this matter has been downgraded to AMC level. The approval process has been replaced by the alternative means of compliance procedure. A similar change has been made for pooled weighing surveys performed by different operators. This change was discussed with and agreed by the review group.
- Additional criteria for approval of standard masses for load items other than passengers and baggage have been included.
- (from EU-OPS 1.625/JAR-OPS 3.625) Mass and balance documentation provisions have been expanded to cover the use of different types on-board mass and balance systems. The intent is to make a distinction between on-board systems intended as

aircraft systems and laptop computerised systems requiring input from the user, and also to specify criteria for the approval of such systems.

- (from EU-OPS 1.625/JAR-OPS 3.625 & related Appendices) Flexibility for managing tolerances of fleet masses and CGs has been allowed for, provided a proper risk assessment is completed by the operator.
- New GM has been added following changes to EU-OPS 1.625/JAR-OPS 3.625 on "on-board mass and balance systems". The intent is to provide guidance on "on-board integrated mass and balance computer system" and "stand alone computerised mass and balance system".

Specific issues

CAT.POL.MAB.105(c)&(d) / GM1-CAT.POL.MAB.105

199. Mass and balance computer systems

- These paragraphs and related GM1-CAT.POL.MAB.105 were added, following comments received and further feedback from the review group. They cover computerised stand-alone systems and make a clear distinction between on-board systems intended as aircraft systems and laptop computerised systems requiring input from the user. As there may be hybrid systems somewhere between an integrated system and a standalone system (i.e. that for the A380) this may cause ambiguities especially with regards to the approval of such systems. Stakeholders are invited to further comment and possibly make further proposals on this topic during the CRD reaction period.

VII: CAT.IDE: Subpart D – Instrument, data, equipment

200. This Subpart contains general requirements for CAT operations. It consists of four Sections:

- Section 1 – aeroplanes;
- Section 2 - helicopters;
- Section 3 – sailplanes; and
- Section 4 - balloons.

201. This Explanatory Memorandum discusses Sections 1 and 2.

General – Section 1 and Section 2

202. Section 1 and 2 transposes Subpart K and L of EU-OPS and JAR-OPS 3 and related Section 2 material of JAR-OPS 1 and JAR-OPS 3. It relates to NPA OPS.GEN Sections IV and OPS.CAT Section IV.

203. CRD c.10 provides a rule title comparison between the NPA rules, EU-OPS / JAR-OPS 3 rules and the CRD rules.

Summary of comments

204. General

- Comments relating to "instrument, data, equipment" topics were identified from the full set of comments received, on OPS.GEN Section IV (OPS.GEN.400 to 550) and OPS.CAT Section IV (OPS.CAT.405 to 526) and associated AMC and GM applicable to CAT operations of aeroplanes and helicopters.

205. The main issues raised in the comments received are the following:

- requests to align the new text with EU-OPS/JAR-OPS 3 rules text when the proposed NPA text was modifying its intent/interpretation;
- requests to restore in the new text the content of existing EU-OPS/JAR-OPS 3 rule that was moved at AMC level;
- requests for fewer specifications at rule level but keeping a performance-based objective where practical (e.g. windshield wipers);
- request to separate equipment requirements from purely operational procedures requirements;
- request for clarification of the definition of "harness" and to allow the use of three point harnesses on the observer seat in the flight crew compartment on aeroplanes where the fitting of a four point harness is not reasonably practical;
- flight data recorders (FDR):
- request to apply the same dates and weights as in EU-OPS/JAR-OPS 3;
- the requirements for the specific parameters to be recorded which were in EU OPS and JAR-OPS 3 Section 1 are requested to stay in the main part and not be moved to the AMC part, otherwise standardisation efforts in this area will be lost;
- the nature of the information to be recorded by the cockpit voice recorder (CVR) is requested not be moved to an AMC;
- request to postpone the date for mandating data link communication recording;
- the possibility of using combined recorders is requested not to be only mentioned in an AMC since it was addressed in EU OPS 1.727;
- request to add a paragraph on the use and preservation of data link recordings;
- all references to EUROCAE Documents ED 55 and ED 56A are requested to be removed since these documents are obsolete and superseded by ED 112.
- the performance specifications related to data link communication recording in part IV of ED-112 are immature and contain inconsistencies; these tables are requested not to be referenced by the OPS Regulation;
- indications on how to check the continuous serviceability of flight recorders are requested;
- the requirement on the operators to keep the documentation required to convert stored data into engineering units should stay in IR; and
- a paragraph on the use and preservation of data link recording should be added.

Summary of main changes

Changes compared to NPA

206. This Subpart is broken down into aircraft-specific sections to best address aircraft specific differences and facilitate readability.

The numbering of the rules has been kept consecutive in each section, giving the same number and title to rules on the same subject for aeroplanes and helicopters. Whenever a rule was peculiar to aeroplanes that number was skipped for helicopters and vice versa.

The resulting text after comment review has been re-aligned as much as possible with original requirements of EU-OPS and JAR-OPS 3.

Some of the rules proposed in the initial NPA to be included in Section IV (OPS.GEN.400 to 550) and OPS.CAT Section IV (OPS.CAT.405 to 526) do not requiring fitting of equipment but rather specific procedures. These rules have been transferred to CAT.OP.

Changes compared to EU-OPS / JAR-OPS 3

207. This Subpart corresponds to EU-OPS and JAR-OPS 3 Subparts K and L and additional rule sources i.e. the JAA NPAs (NPA-OPS 39B2, NPA-OPS 39B3, NPA-OPS 39C, NPA-OPS 48A, NPA-OPS 51, NPA-OPS 67).

Specific issues

CAT.IDE.A(H).100 Instruments and equipment – General

208. The approval requirements on the instruments and equipment required by Part-CAT.IDE have been clarified, in line with the Part-21 requirements. Additional provisions have been added to ensure instruments and equipment not required by Part-CAT that do not need to be approved in accordance with Part-21 are not used for safety functions and do not affect airworthiness. This does not preclude the use of electronic flight bags (EFB). Rulemaking task 20.002 will provide further material in this regard.

CAT.IDE.A(H).105 Minimum equipment for flight

209. A new paragraph has been introduced to address operations with failed items in line with EU-OPS 1.030).

CAT.IDE.A(H).110 Spare electrical fuses

210. Requirements on spare electrical fuses have been introduced for helicopters, in line with ICAO and EU-OPS & JAA NPA-OPS 43.

CAT.IDE.A(H).125 Day VFR operations – Flight and navigational instruments and associated equipment and CAT.IDE.A(H).130 IFR or night operations – Flight and navigational instruments and associated equipment

211. Calibration specifications and performance requirements have been moved to AMC level.

CAT.IDE.A(H).165 Additional Equipment for operations in icing conditions at night

212. The first part of the original requirement has been deleted as it is already contained in Essential Requirement 2.a.5.

Flight recorders

213. NPA-OPS 39B (Type 1A FDR) and NPA-OPS 48A (JAR-OPS 1) Data Link Communications Recording for New Built Aeroplanes were taken into consideration. NPA-OPS 67 (JAR-OPS 3) Type IVA Flight data recorders) was also taken into consideration for helicopters.

CAT.IDE.A(H).185 Cockpit voice recorder/CAT.IDE.A(H).190 Flight data recorder/CAT.IDE.A.195 Data link recording /CAT.IDE.A.200 Combination recorder.

214. The content of EU OPS has been retained as far as possible. Some changes have been introduced such as:

- the exhaustive list of FDR parameters to record has been moved to AMC, but the nature of the information to be captured by the FDR stays in CAT.IDE.A(H).270; and
- new requirements were introduced for FDR and CVR installed on aircraft with an individual certificate of airworthiness delivered after 1 January 2016, on the FDR parameters to record and on the recording duration.

CAT.IDE.A(H).195 – Data link recording

215. The date for mandating data link communication recording ideally should be as soon as data link is used for essential VHF communications, but many comments requested sufficient notice to avoid costly retrofit. It is proposed to mandate two years after the OPS Regulation enters into force, i.e. on the 8th April 2014.

Preservation and use of recordings:

216. The provisions related to flight recorders in EU OPS 1.085 and 1.160 have been recombined and moved to CAT.OP (general requirements and procedures).

AMCs

217. All references to ED 55 and ED 56A have been taken out. References to parameter performance specification tables in ED 55 have been replaced by a copy of the tables themselves, since these tables are still needed for the legacy aircraft. For FDR installed on new generation aircraft (initial certificate of airworthiness delivered after 2016), reference to EUROCAE Document 112, version of 2003, has been included.

The data link recording tables in the AMC paragraphs of CAT.IDE.A.205 and CAT.IDE.H.205 have been updated and aligned with the provisions in the latest amendment of ICAO Annex 6.

CAT.IDE.A(H).240 Supplemental oxygen – non-pressurised aeroplanes

218. The content of Appendix 1 to OPS 1.775 has been imported into the IR.

CAT.IDE.A(H).250 Hand fire extinguishers

219. The provision of EU-OPS/ the JAR mandating the use of extinguishing agent Halon 1211 (bromochlorodifluoro-methane, CBrCIF2) were removed to comply with Regulation (EC) No 1005/2009 that will forbid its use. The rule contains a general safety objective on the efficiency of the fire extinguishing agent. This may allow the use of Halon in the transition period.

CAT.IDE.A(H).325 Headset

220. A dedicated rule for the headset has been introduced, consistent with EU-OPS content.

CAT.IDE.A(H).345 Communication and Navigation equipment for operations under IFR, or under VFR over routes not navigated by reference to visual landmarks

221. This rule does not require specific navigation equipment (e.g. automatic direction finder ADF, instrument landing system ILS) but rather objective requirement. The detailed equipment list previously given in EU-OPS 1.865 is however kept at AMC level. This will allow modern technology design to be addressed in alternative means of compliance. The requirement on SSR transponder capability is transferred to CAT.IDE.A(H).350 Transponder and its AMC.

CAT.IDE.A(H).205 Seats, seat safety belts, harnesses and child restraint devices)

Safety Harnesses - Upper Torso Restraint Systems for smaller aeroplanes

222. With the OPS NPA, the Agency transposed JAA NPA 26-20 on 'Upper Torso Restraint Installation on transport category (passenger) aeroplanes with a MTOM of less than 5700 kg'. Following an accident investigation board recommendation addressed to CAA UK and a subsequent study carried out by CAA UK, it was concluded that all JAR-23 aeroplanes should be equipped with an upper torso restraint system for passenger seats. The NPA was prepared by the JAA as an amendment to JAR-26 and then transferred to the Agency for further rulemaking. The Agency included the proposal of fitting a safety harness into NPA 2009-02b.

223. Taking into account the comments received and considering the latest developments in aircraft interior designs, the text has been amended to read 'upper torso restraint' for passenger seats instead of 'safety harness'. Actual aircraft design in the affected category demonstrate that with the exception of the pilot seats, different design solutions for the upper torso restraint systems can provide the same enhanced safety level.

224. In the second half of the 1980 the JAA and FAA introduced new certification requirements that were meant to improve passenger passive safety. These new "XX.562 Emergency landing dynamic conditions" that were introduced into JAR/FAR/CS-23 (normal, utility, aerobatic and commuter aeroplanes), 25 (large aeroplanes), 27 (small rotorcraft), and 29 (large rotorcraft) require passenger and crew seats that protect the occupants under defined dynamic test conditions. Aircraft certified after the introduction of XX.562 provide an even higher safety standard as the mandatory introduction of safety harnesses could have presented. This is because, in addition to the restraint systems, the seat attachments and the seat structures had to be improved. During the development of new design solutions meeting the improved certification requirements, it was demonstrated

that not only the harness type restraint system would provide the anticipated safety level. Consequently, some of the new small jet aircraft with a maximum certificated take-off mass (MCTOM) of less than 5 700 kg and less than 10 passengers are equipped with occupant restraint systems that are similar to safety belts with diagonal shoulder straps.

225. Aircraft that have been certified prior to the introduction of the dynamic seat test requirements (XX.562) have mainly lap belts as restraint systems on the seats installed. NPA 26-20 was prepared to improve the passive safety on such aircraft with an MTOM of less than 5 700 kg. Furthermore, the Agency issued on 28th July 2008 SIB 2008-24 to improve occupant safety by detailing that:

- Upper torso restraint (UTR) systems are widely recognised as a safety enhancing feature which can reduce the number of fatalities following an otherwise survivable accident and reduce the number of seriously injured and the severity of those injuries. This recognition is reflected in the airworthiness standards of FAR/JAR/CS 23.785, which now include UTR as a mandatory requirement within the basic design codes. While these enhancements have benefited passenger protection on new aeroplanes, the existing fleets are not immediately affected and accidents continue to occur where passengers might have benefited if UTR systems had been fitted. Consequently, various national aviation authorities have recognised the need to enhance existing standards and have proposed national requirements to address this issue. Also, some type certificate (TC) holders have issued technical publications to support retrofit of the UTR systems on existing fleets.
- Based on the UK experience, together with similar US experience that led to publication of FAR Part 23 Amendment 23-32, the Agency has concluded that there is sufficient justification to investigate the possibility of mandating UTR systems to aeroplanes certificated in the normal, utility or aerobatic category in compliance with previous amendments of the Regulation, when engaged in CAT operations, and to raise awareness of the issue.
- According to Article 20(1) of the Basic Regulation, the Agency has taken over Member States' obligations related to design approval. The Agency has determined that the aforementioned information may raise passenger safety concerns on aircraft under national registers.
- The SIB is applicable to all normal, utility and aerobatic category aeroplanes with a maximum take-off weight of less than 5 670 kg[7] and nine passenger seats or less, when engaged in CAT operations and not already equipped with occupant UTR systems.

226. To allow for sufficient transition periods and taking into account that the above mentioned SIB was published 2 years ago, the Agency proposes another 3 years until 8 April 2015 to allow sufficient time for retrofitting aeroplanes.

Safety harness on observer seat

227. The review of comments also made clear that EU-OPS was not consistent in the use of the term 'safety harness'. While there seems to be a common understanding that a

[7] The difference in MTOM of 5 670 kg and 5 700 kg is due to conversion. The current CS 23 includes a requirement on 'maximum certificated take-off weight of 5 670 kg (12 500 lb) or less'. For consistency within the OPS rules, the mass of 5 700 kg is maintained. There are no practical implications.

safety harness includes a safety belt and two shoulder straps, there are a number of aeroplanes that may not be in compliance with the applicable requirements. Exemptions received by the Commission under EU-OPS are confirming this view. Several comments were received in order to allow the use of safety belts with diagonal shoulder strap on the observer seat in the flight crew compartment on aeroplanes where the fitting of a four point harness is not practicable. The Agency is aware of the concerns expressed by the operators of such aeroplanes and carefully assessed the following options:

- 1. allow for three point harness generally;
- 2. allow for a three point harness linked to the date of issuance of the initial CoA, i.e. all aircraft having received their initial CoA before a certain date may be equipped with three point harnesses, since mainly older aeroplanes are affected; or
- 3. transpose EU-OPS and use Article 14 derogations since it affects a few types only.

228. The conclusion was to maintain the requirement for a four point harness in line with EU-OPS for the time being. A definition of safety harness is introduced in paragraph (b) of the rule. The possibility to use a safety belt with diagonal shoulder strap may be granted through an Article 14 derogation. One NAA is already prepared to lead the Article 14 derogation linked to Dash-8, which could then be used by everyone. This derogation will provide the necessary elements to further amend the IR, if considered necessary.

229. This decision has been taken in light of the guidance given to the Agency to minimize the changes to the rules compared to EU-OPS/JAR-OPS 3. Nevertheless, it is highlighted that the explanation on UTR systems provided above may also apply to larger aircraft. Also here the term UTR system could be used to introduce a performance-based objective. This would enhance the possibilities for different design solutions and apply to observer seats and all passenger seats. The design prescription of a harness type restraint system may unnecessarily limit possible design solutions, for example seat belt with diagonal shoulder strap, that, taking into account that the current certification standards, may provide the intended level of protection to the seat occupant. Taking this into account, below is an extract of how the rule would change.

CAT.IDE.A.205 Seats, seat safety belts, harnesses and child restraint devices

(a) Aeroplanes shall be equipped with:

(1) a seat or berth for each person on board older than 24 months;

(2) seats for cabin crew members

(3) either:

(i) a seat belt on each passenger seat and restraining belts for each berth; or

(ii) a seat belt with upper torso restraint system on each passenger seat in the case of aeroplanes with an MCTOM of less than 5 700 kg and with an MPSC of less than nine after 8 April 2015;

(4) a child restraint device for each person on board younger than 24 months;

*(5) a **seat belt with upper torso restraint system**~~safety harness~~ incorporating a device that will automatically restrain the occupant's torso in the event of rapid deceleration*

(i) on each flight crew seat and for any seat alongside a pilot's seat;

(ii) on each observer's seat located in the cockpit.

*(6) a **seat belt with upper torso restraint system**~~safety harness~~ on the seats for the minimum required cabin crew;*

*(b) A **seat belt with upper torso restraint system**~~safety harness~~ shall:*

(1) have a single point release ~~include two shoulder straps and a seat belt which may be used independently~~; and

(2) ~~have a single point release~~ on flight crew seats, on any seat alongside a pilot's seat and on the seats for the minimum required cabin crew; include two shoulder straps and a seat belt which may be used independently.

230. The removal of 'harness' in the proposal above might also require further changes in operational procedures as the term 'harness' is used consistently throughout EU-OPS. This is one of the reasons why this proposal is not yet incorporated. The Agency is firstly interested in having stakeholder views on the proposed changes shown above. Pending the feedback received, the Agency may decide to include the above in its Opinion or to address the issue in a future rulemaking task. Stakeholders are requested to provide their preference on this point.

Exemptions for smaller aeroplanes

231. EU-OPS 1.730 (c) included exemptions for the fitment of safety harnesses on flight crew, cabin crew and observer's seats for aeroplanes below 5 700 kg MCTOM. The criteria of 'not reasonably practicable' does not sufficiently determine under which conditions such exemption may be granted by the competent authority. This may lead to an uneven playing field. Since exemptions and derogations to these IR are required to follow the process of Article 14 of the Basic Regulation, the exemption is removed from the IR. An Article 14 derogation requires demonstration of an equivalent level of protection and justification of what is 'not reasonably practicable'. It is believed that Member States have carried out this assessment when granting relief under EU-OPS. These assessments may easily be used for the derogation that will generate the elements to better determine the condition in the Implementing Rule. Once approved, such derogation may be used by all Member States. It also provides the necessary elements to review and possibly amend the IR.

Section 1 - Aeroplanes

Summary of main changes

Changes to NPA

232. Airborne collision avoidance system (ACAS) (CAT.IDE.A.155)

Apart from AUR.ACAS, the requirement is also kept in OPS to ensure coverage for all airspaces (within and outside Europe).The Agency may combine the ACAS provision in one rule in the future.

Changes to EU-OPS

CAT.IDE.A.125 Day VFR operations – Flight and navigational instruments and associated equipment / CAT.IDE.A(H).130 IFR or night operations – Flight and navigational instruments and associated equipment

233. A new paragraph has been added to incorporate the content of Appendix 1 to OPS 1.0005 (a) 28 for single-engine aeroplanes.

CAT.IDE.A.150 Terrain awareness warning system (TAWS)

234. Requirements on TAWS Class A & Class B have been introduced in line with NPA-OPS 39B conclusions. The detailed list of required functions is contained in the applicable ETSOs issued by the Agency, and is therefore is not repeated here. An AMC is added to provide clarifications on the applicability of the warning for excessive downwards glide slope deviation.

Cosmic radiation detection equipment (OPS 1.680)

235. As already explained in the NPA, this has been deleted as the Basic Regulation, which only addresses the mitigation of safety risks, does not provide the legal basis for their transposition, i.e. health issues, and to avoid overlaps with other Community Legislation, in particular that related to health and safety at work or the protection against radiations (Council Directive 96/29/Euratom of 13 May 1996). It has therefore been necessary to delete the requirement related to the cosmic radiation indicator.

CAT.IDE.A.225 Emergency medical kit

236. The provisions on access to the contents of the kit were clarified. A specific AMC on this has also been added.

CAT.IDE.A.235 Supplemental oxygen – pressurised aeroplanes

237. The content of Appendix 1 to OPS 1.770 has been imported in the IR.

CAT.IDE.A.365Flight over water

238. The requirements regarding flight over water have been regrouped under a single rule for aeroplanes, e.g. the life-jacket requirements is now included under this rule.

CAT.IDE.A.355 Electronic navigation data management

239. Paragraph (a) of this rule is general in the intent and the corresponding AMC specify that if electronic data are used to support an application as a primary means for navigation, then a letter of acceptance (LoA) is required. For any other application needed to support SPA operations an approval is required. This is specified in paragraph (b) of the IR.

Differences with ICAO Annex 6

240. 6.2.2 Aeroplanes on all flights

- The rule on the first-aid kit is consistent with ICAO recommendations, but the content defined in AMC1-CAT.IDE.A.220 versus ICAO attachment differs for some items.
- CAT.IDE.A.225 on emergency medical kit, which corresponds to the paragraph 3) of ICAO recommendation for the content of medical supplies exceeds ICAO provisions as the criteria is greater than 30 passengers and 1 hour flying time to an adequate aerodrome, while ICAO is contains greater than 100 passengers and a flight duration of more than 2 hours.
- The ICAO recommendation for a universal precaution kit is not reflected in the CAT.IDE rules.

241. 6.5.3 All aeroplanes on long-range over-water flights / 5.2.10 En route two power-units inoperative

- En-route two power-units inoperative ICAO requirements for rafts and are not reflected in CAT.IDE.A.285.

242. 6.19.1 Requirements for pressure-altitude reporting transponders

- The requirement to be equipped with a data source that provides pressure-altitude information with a resolution of 7.62 m (25 ft), or better, are not included in CAT.IDE.A.350.

243. 5.1.6 Communication equipment

- The requirement on RCP (radio communication performance) are not included in CAT.IDE.A.340.

244. These ICAO differences stem largely from EU-OPS or relate to later ICAO amendments. The Agency will review these differences and address any subsequent ICAO amendments that are not yet included in future rulemaking tasks.

Section 2 - Helicopters

Summary of main changes

Changes to JAR-OPS 3

CAT.IDE.H.135 Additional equipment for single pilot operation under IFR.

245. The provisions for an alleviation that is elapsed have been deleted.

CAT.IDE.H.275 Emergency lighting and marking

246. Requirements on emergency exit markings visibility are clarified and regrouped in the same rule for large helicopters and helicopters operated overwater under certain conditions.

CAT.IDE.H.345 Communication and Navigation equipment for operations under IFR, or under VFR over routes not navigated by reference to visual landmarks

247. The provisions for alternative equipment have been deleted as they are not specific enough for an IR. Alternative equipment authorised by the authority is to be handled through Article 14.

Provisions for unserviceable equipment have been deleted as this is to be handled at MMEL/MEL level.

Differences to ICAO Annex 6

248. 4.8.2 & 4.8.3 All helicopters on high altitude

Pressurised helicopters oxygen requirements have not been included in CAT.IDE.H, as they were not part of JAR-OPS 3.

249. 4.2.2 Helicopters on all flights

The rule on the first-aid kit is consistent with ICAO recommendations for the medical supplies content, but the content defined in AMC1-CAT.IDE.H.220 versus ICAO attachment differs for some items.

The ICAO recommendation for a universal precaution kit is not reflected in the CAT.IDE rules.

250. 5.1.6 Communication equipment

The requirement on RCP (radio communication performance) is not included in CAT.IDE.H.340.

251. The Agency will review these differences and address any subsequent ICAO amendments that are not yet included in future rulemaking tasks.

Annex 5: Explanatory memorandum for Part-SPA

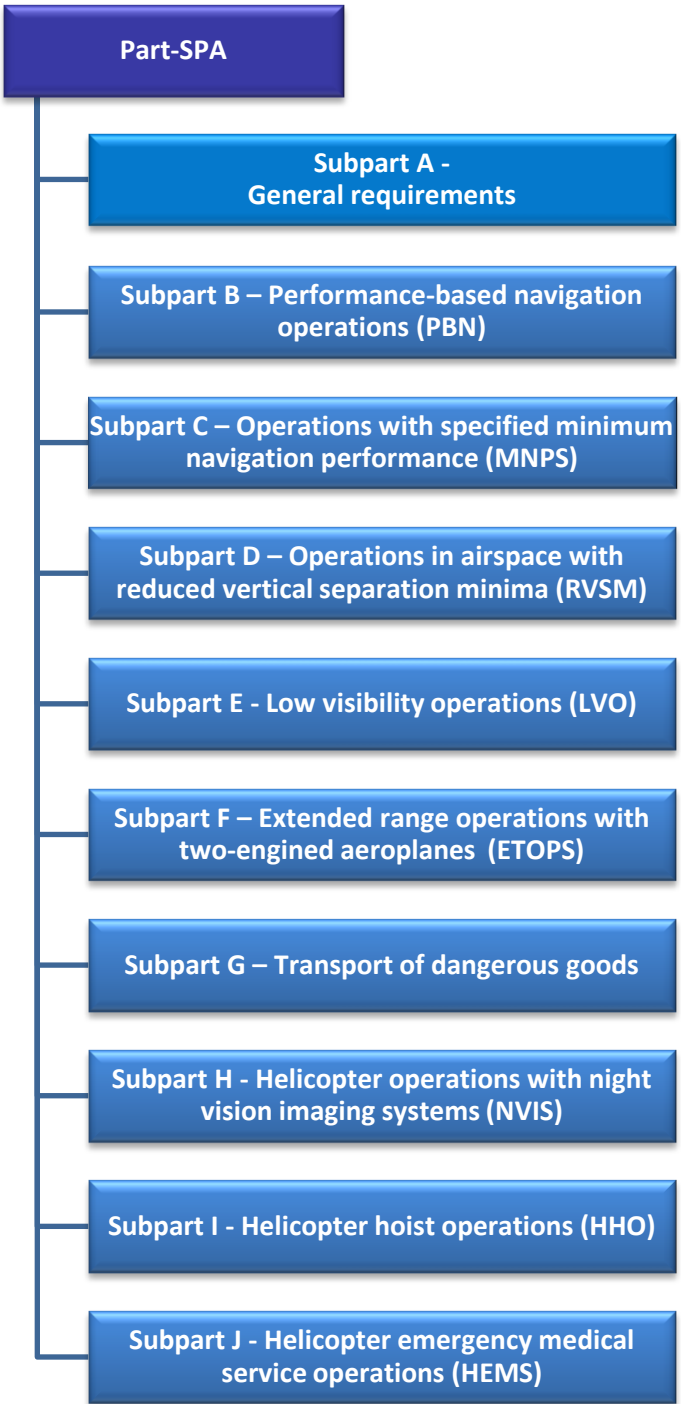
I. Scope

252. Part-SPA contains operator requirements for operations requiring specific approvals, and is based on Subpart D (OPS.SPA) of Part-OPS published in NPA 2009-02b.

253. Part-SPA consists of 10 Subparts:

- the first Subpart contains general requirements, which are applicable to all nine specific approvals addressed in Part-SPA;
- the requirements for the nine specific approvals are each specified in a separate Subpart;
- Table 1 provides an overview of the structure of Part-SPA.

Table 9: Structure of Part-SPA – Operations requiring specific approvals



254. Part-SPA requirements are applicable to commercial as well as non-commercial operators with the following exceptions:

- SPA.ETOPS only applies to commercial air transport (CAT) operations with aeroplanes;
- SPA.NVIS, SPA.HHO and SPA.HEMS only apply to CAT operations with helicopters.

II. Summary of general comments and changes

255. NPA OPS Subpart D received 1 462 comments, the Explanatory Note (NPA 2009-02a) 39 SPA-related comments.

256. Based on the comments received, the Agency decided to combine these requirements within a single Part for the following reasons:

- to simplify the rule structure;
- to avoid unnecessary repetitions of requirements; and
- to enhance consistency between the specific approval requirements.

257. The main changes to the rule structure of the NPA are as follows:

- Subpart D "Operations requiring specific approvals" of the NPA has been transformed into the new Part-SPA "Operations requiring specific approvals"; former Sections are now Subparts;
- NPA Section "OPS.SPA.SPN" has been split into the two new Subparts: SPA.PBN and SPA.MNPS;
- the rules for the specific approval for ETOPS with aeroplanes in CAT operations have been moved from the NPA Subpart OPS.CAT to the new Subpart F SPA.ETOPS; and
- NPA Section "OPS.SPA.SFL" for CAT operations with helicopters without a safe forced landing capability has been moved to the new Section CAT.POL.H.

258. The rules for the following Subparts have been extensively revised and aligned with EU-OPS/JAR-OPS3: SPA.LVO, SPA.NVIS, SPA.HHO, and SPA.HEMS.

259. Several comments were received on the balance between Implementing Rule (IR) and AMC/GM, that it did not accurately reflect the original requirements as set out in EU-OPS, JAR-OPS 3 and related TGL (as explained in the Explanatory Note to NPA 2009-02) and was not consistent with some requirements contained in other parts of the NPA. These comments were addressed and the balance between IR and AMC/GM was adjusted where appropriate.

260. The majority of requirements that were originally contained in Appendix 1 to JAR-OPS 3.005(d) and Appendix 1 to JAR-OPS 3.005(h) (and NPA 2009-02b) had been included in the AMC/GM material. These have now been included in the IR in SPA.HEMS and SPA.HHO. The balance between IR and AMC/GM has been reconsidered and is harmonised for the helicopter-specific requirements.

261. Commentators were critical of the distribution of the performance requirements for helicopter operations between OPS.GEN, OPS.CAT and OPS.SPA because rules had been split and, consequently, were difficult to understand. Commentators also indicated that SPA.SFL should apply only to CAT and not to 'aerial work' activities. The Agency has therefore decided to delete SPA.SFL and include all performance requirements as a new CAT.POL.H Chapter. This now addresses all CAT performance issues, except for some specific requirements for HEMS and HHO, which have been retained in their respective Part-SPA Subparts.

262. Comments indicate a general misunderstanding and misinterpretation of training and checking requirements. There is no reason why elements of training and checking cannot

be aggregated – it was never intended that there would be individual checks for each type of operation. Training and checking should, where possible, reflect the operations conducted by the crew concerned. If an operator holds an approval in accordance with Part-SPA, then it is likely that these training and checking elements would become an integrated part of the overall Part-OR, OR.OPS.FC training and checking.

263. The Agency will further review the link between operational and airworthiness requirements. A number of airworthiness provisions were included in JAR-OPS 3, which under the new regulatory system might be better placed in Part-M. A good example is to be found in SPA.HHO.110 and the associated AMC addressing the service history of hoist installations. These requirements address airworthiness issues that should be considered by an operator in respect of the Part-M approval. However, in order not to lose this important information during the transition from JAR-OPS 3 to the new rules and the finalisation of that rulemaking task, the information is retained here.

264. Finally, the Agency received comments from some Member States to include a specific approval for helicopter offshore operations, which should be applicable to any region and not only to commercial operators but also to non-commercial operators. After carefully analysing the comments and assessing the JAR-OPS 3 rules for the conditions to obtain such a specific approval, the Agency decided that such an approval should be dealt with as a future rulemaking task. This approach would provide for appropriate consultation with stakeholders.

III. SPA.GEN: Subpart A – General requirements

General

265. This Subpart contains general requirements for operators for obtaining and holding a specific approval. This Subpart should be read together with the requirements of the Subpart containing the requirements for that specific approval.

266. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 10: Rule title comparison for SPA.GEN

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.GEN.100	Competent authority	OPS.SPA.001.GEN	Competent authority
xxx	xxx	OPS.SPA.005.GEN	Scope
SPA.GEN.105	Application for a specific approval	OPS.SPA.020.GEN	Application for a specific approval
SPA.GEN.110	Privileges of an operator holding a specific approval	OPS.SPA.025.GEN	Privileges of an operator holding a specific approval
SPA.GEN.115	Changes to operations subject to a specific approval	OPS.SPA.030.GEN	Changes to operations subject to a specific approval

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.GEN.120	Continued validity of a specific approval	OPS.SPA.035.GEN	Continued validity of a specific approval

Summary of comments

267. The main comments received on the NPA Section OPS.SPA.GEN can be summarised as follows:

- the State of Registry cannot be a Member State of the European Union for non-European registered aircraft; these comments were accepted and the rule text in SPA.GEN.100 revised accordingly;
- the requirements are written for commercial operations and do not fit for non-commercial operations; these comments were accepted and the rule text in this and the following relevant Subparts was revised accordingly; and
- the continued validity of the approval is questioned; these comments were not accepted, and the validity of specific approvals was retained as for other operator related approvals and certificates.

Summary of main changes

268. The structure of this Subpart was not altered. Changes to the text address accepted comments but are for the most part editorial.

Specific issues

SPA.GEN.100 Competent authority

269. The revised text better describes which authority is the competent authority and distinguishes between commercial and non-commercial operators.

270. To maintain compliance with ICAO Annex 6 Part II, this rule also stipulates that for non-commercial operators using aircraft registered in a third country, the specific approvals for PBN, MNPS and RVSM should be issued by the third country State of Registry.

SPA.GEN.105 Application for a specific approval

271. The Agency included a reference to "operational suitability data (OSD) established in accordance with Part-21". Operational suitability data (formerly operational suitability certificate) are a set of data required to be produced by the aircraft manufacturer during the type certification process to support safe operation of the aircraft type. Some of these data will become mandatory for operators in so far as they have to develop their minimum equipment list (MEL) and training programmes on the basis of these data. The OSD therefore represent minimum requirements for an aircraft type to ensure a harmonised level of safety. A more detailed explanation will be provided with the CRD to NPA 2009-01, which is expected to be published by January 2011.

272. The revised text better distinguishes between commercial operations, non-commercial operations with complex motor-powered aircraft (CMPA) and non-commercial operations with other-than-complex motor-powered aircraft (otCMPA), for example regarding the method of documenting operating procedures or retaining records.

SPA.GEN.110 Privileges of an operator holding a specific approval

273. The revised text specifies that specific approvals are documented for non-commercial operations in the "list of specific approvals" and for commercial operations in the "operations specifications" (OPSPECS). The corresponding authority requirements are specified in Part-AR, AR.OPS.200. The forms for the "list of specific approvals" and the "OPSPECS" are provided as Appendix V and Appendix VI to Part-AR.

SPA.GEN.115 Changes to operations subject to a specific approval

274. This rule specifies that any change affecting the conditions of a specific approval needs a prior approval by the competent authority. This includes the development of alternative means of compliance. It should therefore be noted that this rule was written with the intent that alternative means of compliance related to Part-SPA requirements for both commercial and non-commercial operations need a prior approval.

SPA.GEN.120 Continued validity of a specific approval

275. The revised text maintains the concept of the continued validity of specific approvals, which is in line with the approach taken for all other operator related approvals and certificates. The Agency added a reference to the OSD as additional criteria for maintaining the validity of a specific approval.

IV. SPA.PBN: Subpart B – Performance-based navigation operations (PBN)

General

276. This Subpart addresses the specific approval for operations in designated airspace where performance-based navigation (PBN) specifications are established. It includes the following specifications:

- RNAV10;
- RNP4;
- RNAV1;
- Basic-RNP1;
- RNP APCH;
- RNP AR APCH[8].

277. This Subpart transposes EU-OPS 1.243, and is based on NPA Subpart D, Section II (OPS.SPA.SPN, Operations with specified navigation performance).

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[8] RNAV: area navigation; RNP: required navigation performance; AR: authorisation required; APCH: approach

278. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 11: Rule title comparison for SPA.PBN

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.PBN.100	PBN operations	OPS.SPA.001.SPN	Operations in areas with specified performance based navigation (SPN)
SPA.PBN.105	PBN operational approval	OPS.SPA.010.SPN	Equipment requirements for operations in MNPS areas
xxx	xxx	OPS.SPA.030.SPN	Flight crew requirements for operations in PBN or MNPS areas
GM1-SPA.PBN.100	PBN operations	GM1 OPS.SPA.001.SPN	Operations in areas with specified performance based navigation

Summary of comments

279. The main comments received on the NPA Subpart D, Section II (OPS.SPA.SPN) can be summarised as follows:

- many commentators recommended separating the requirements for PBN and MNPS; these comments were accepted and the rules have been separated; and
- non-commercial operators, in particular with other-than-complex motor-powered aircraft, requested that the requirements for a specific approval should not apply to them; these comments were not accepted in the interest of safety.

Summary of main changes

280. The Agency followed the first request and separated the requirements into two Subparts: SPA.PBN and SPA.MNPS.

Specific issues

SPA.PBN.100 PBN operations

281. The Agency agrees with commentators that operations in RNAV5 (B-RNAV) airspace do not constitute such a safety-critical operation that a specific approval would be justified and therefore removed RNAV5 from the scope of this Subpart.

282. The Agency, however, did not concur with the opinion of some non-commercial operators to make a distinction between commercial and non-commercial operations and to require an approval for the first group but exempt the later from any approval. There is no safety justification available for such an approach. The requirements are therefore identical for

commercial and non-commercial operations. However, it should be noted that the competent authorities are bound to apply a proportionate approach in their certifying and oversight activities to avoid undue administrative burden to non-complex organisations.

GM1-SPA.PBN.100 PBN operations

283. Further information on criteria for the approval and the operation are specified in AMC 20 material and/or in ICAO Doc 9613 (PBN Manual). The redrafted GM1-SPA.PBN.100 provides a comprehensive overview of PBN specifications and their corresponding regulatory and guidance material.

284. It should be noted that the Agency intends to re-evaluate the need for specific approvals of certain PBN specifications in a separate rulemaking task, together with a re-evaluation of the AMC 20 documents.

V. SPA.MNPS: Subpart C – Operations with specified minimum navigation performance (MNPS)

General

285. This Subpart contains the requirements for the specific approval to be allowed to operate in designated minimum navigation performance specifications (MNPS) airspace in accordance with Regional Supplementary Procedures.

286. The Subpart MNPS transposes EU-OPS 1.243 and 1.870, and is based on NPA Subpart D, Section II (OPS.SPA.SPN, Operations with specified navigation performance).

287. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 12: Rule title comparison for SPA.MNPS

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.MNPS.100	MNPS operations	OPS.SPA.001.SPN	Operations in areas with specified performance based navigation (SPN)
SPA.MNPS.105	MNPS operational approval	OPS.SPA.010.SPN	Equipment requirements for operations in MNPS areas
xxx	xxx	OPS.SPA.030.SPN	Flight crew requirements for operations in PBN or MNPS areas
xxx	xxx	AMC OPS.SPA.010.MNPS	Equipment requirements for operations in MNPS areas

Summary of main comments

288. As discussed above, many commentators recommended separating the requirements for PBN and MNPS.

Summary of main changes

289. The Agency separated the requirements into two Subparts: SPA.PBN and SPA.MNPS. Further changes to the text address accepted comments but are for the most part editorial.

Specific issues

290. As for PBN, the Agency agreed to delete the requirement for a minimum flight crew of two pilots for CAT operations since the crew composition requirements are addressed in OR.OPS.FC.

VI. SPA.RVSM: Subpart D – Operations in airspace with reduced vertical separation minima (RVSM)

General

291. This Subpart contains the requirements for the specific approval to operate in designated airspace where a reduced vertical separation minimum of 300 m (1 000 ft) applies.

292. This Subpart transposes EU-OPS 1.241 and contains parts of the rule text of TGL 6 (Guidance material on the approval of aircraft and operators for flight in airspace above FL 290 where a 300 m (1 000 ft) vertical separation minimum is applied). It is based on NPA Subpart D, Section III (OPS.SPA.RVSM Operations in airspace with reduced vertical separation minima).

293. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 13: Rule title comparison for SPA.RVSM

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.RVSM.100	RVSM operations	OPS.SPA.001.RVSM	Operations in airspace with reduced vertical separation minima (RVSM)
SPA.RVSM.105	RVSM operational approval	xxx	xxx

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
SPA.RVSM.110	Equipment requirements for operations in RVSM airspace	OPS.SPA.010.RVSM	Equipment requirements for operations in RVSM airspace
SPA.RVSM.115	RVSM Height keeping errors	xxx	xxx
xxx	xxx	OPS.SPA.030.RVSM	Flight crew requirements for operations in RVSM airspace
AMC1-SPA.RVSM.105	RVSM operational approval	AMC2 to AR.OPS.200	
		AMC OPS.SPA.001.RVSM(b)(2)(ix)	Operations in RVSM airspace
AMC2-SPA.RVSM.105	RVSM operational approval	GM OPS.SPA.001.RVSM(b)(2)	Operations in RVSM airspace
GM1-SPA.RVSM.105	RVSM operational approval	GM OPS.SPA.001.RVSM(b)(2)	Operations in RVSM airspace
AMC1-SPA.RVSM.110	RVSM equipment requirements	xxx	xxx

Summary of main comments

294. The main comments received on the NPA Subpart D Section OPS.SPA.RVSM can be summarised as follows:

- height-keeping error provisions should be moved from AMC to IR level; these comments were accepted; and
- non-commercial operators, in particular aeroclubs and private pilot owners, requested that the requirements for a specific approval should not apply to them; these comments were not accepted in the interest of safety.

Summary of main changes

295. The structure of this Subpart was retained. Changes to the text address accepted comments but are for the most part editorial. However, some AMC material has been moved from Part-AR to this Subpart.

Specific issues

SPA.RVSM.100 RVSM operations

296. The Agency did not concur with some requests to exempt aeroclubs and private pilot owners from this Subpart. There is no safety justification available for such an approach. The requirements are therefore identical for commercial and non-commercial operations. However, it should be noted that the competent authorities are bound to apply a proportionate approach in their certifying and oversight activities to avoid undue administrative burden to non-complex organisations.

AMC1-SPA.RVSM.105 RVSM operational approval

297. The text of this AMC has been moved, with minor editorial revisions, from Part-AR (AMC2 to AR.OPS.200) to Part-SPA since it contains rules addressed to the operator and not to the authority.

298. AMC2-AR.OPS.200 in Part-AR still addresses the procedures for the approval of RVSM operations.

SPA.RVSM.115 RVSM height-keeping errors

299. The Agency agreed with commentators to move the height-keeping error provisions from AMC to IR level.

VII. SPA.LVO: Subpart E - Low visibility operations (LVO)

General

300. This Subpart contains the specific approval for low visibility operations, which consist of the following operations:

- low visibility take-off (LVTO) operation;
- lower than Standard Category I (LTS CAT I) operation;
- Standard Category II (CAT II) operation;
- other than Standard Category II (OTS CAT II) operation;
- Standard Category III (CAT III) operation; and
- approach operation utilising enhanced vision systems (EVS) for which an operational credit on the runway visual range (RVR) minima is applied.

301. The Subpart transposes the LVO related rules of Subpart E of EU-OPS and JAR-OPS 3, and related Section 2 material of JAR-OPS 1 and JAR-OPS 3. It is based on NPA Subpart D, Section IV (OPS.SPA.LVO Low visibility operations) and the LVO related rules of OPS.GEN.150.

302. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 14: Rule title comparison for SPA.LVO – NPA – CRD

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
SPA.LVO.100	Low visibility operations	OPS.SPA.001.LVO	Low visibility operations (LVO)
SPA.LVO.105	LVO approval	N/A	N/A
SPA.LVO.110	General operating requirements	N/A	N/A
SPA.LVO.115	Aerodrome considerations	N/A	N/A
SPA.LVO.120	Flight crew training and qualifications	OPS.SPA.030.LVO	Flight crew requirements for LVO
SPA.LVO.125	Operating procedures	N/A	N/A
SPA.LVO.130	Minimum equipment	N/A	N/A
AMC1-SPA.LVO.105	LVO approval	AMC1 OPS.SPA.001.LVO(b)(3)	Low visibility operations (LVO) -OPERATIONAL DEMONSTRATION AND DATA COLLECTION / ANALYSIS
AMC2-SPA.LVO.105	LVO approval	AMC2 OPS.SPA.001.LVO(b)(3)	Low visibility operations (LVO) -OPERATIONAL DEMONSTRATION AND DATA COLLECTION / ANALYSIS
GM1-SPA.LVO.105	LVO approval - CRITERIA FOR A SUCCESFUL CAT II/III APPROACH AND AUTOMATIC LANDING	GM OPS.SPA.001.LVO(b)(3)	Low visibility operations (LVO) -CRITERIA FOR A SUCCESFUL CAT II/III APPROACH AND AUTOMATIC LANDING
AMC1-SPA.LVO.100	General operating requirements - LOWER THAN STANDARD CATEGORY I OPERATIONS	Appendix 1 to AMC1 OPS.SPA.020.LVO	LVO operating minima - LOWER THAN STANDARD CAT I OPERATIONS

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
AMC1-SPA.LVO.100	General operating requirements - CAT II AND OTHER THAN STANDARD CAT II OPERATIONS	Appendix 2 to AMC1 OPS.SPA.020.LVO	LVO operating minima - CAT II AND OTHER THAN STANDARD CAT II OPERATIONS
AMC1-SPA.LVO.100	General operating requirements - CATEGORY III OPERATIONS	Appendix 3 to AMC1 OPS.SPA.020.LVO	LVO operating minima - PRECISION APPROACH - CAT III OPERATIONS
AMC1-SPA.LVO.100	General operating requirements - OPERATIONS UTILSIING EVS	AMC OPS.SPA.001.LVO(b)(2)	Low visibility operations (LVO) -USE OF ENHANCED VISION SYSTEMS (EVS)
AMC1-SPA.LVO.100	General operating requirements - LVTO OPERATIONS	AMC3 OPS.GEN.150	Instrument flight rules (IFR) operating minima - TAKE-OFF OPERATIONS
AMC1-SPA.LVO.100	Low visibility operations - FAILED OR DOWNGRADED EQUIPMENT	AMC12 OPS.GEN.150	Instrument flight rules (IFR) operating minima - EFFECT ON LANDING MINIMA OF TEMPORARILY FAILED OR DOWNGRADED GROUND EQUIPMENT
GM1-SPA.LVO.100	Low visibility operations - DOCUMENTS CONTAINING INFORMATION RELATED TO LOW VISIBILITY OPERATIONS	GM2 OPS.SPA.001.LVO	Low visibility operations - DOCUMENTS CONTAINING INFORMATION RELATED TO LOW VISIBILITY OPERATIONS
GM2-SPA.LVO.100	Low visibility operations - USE OF ENHANCED VISION SYSTEMS (EVS)	GM OPS.SPA.001.LVO(b)(2)	Low visibility operations (LVO) -USE OF ENHANCED VISION SYSTEMS (EVS)

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
GM3-SPA.LVO.100	Low visibility operations - CREW ACTIONS IN CASE OF AUTOPILOT FAILURE AT OR BELOW DECISION HEIGHT IN FAIL-PASSIVE CATEGORY III OPERATIONS	GM1 Appendix 3 to AMC1 OPS.SPA.020.LVO	LVO operating minima - CREW ACTIONS IN CASE OF AUTOPILOT FAILURE AT OR BELOW DECISION HEIGHT IN FAIL-PASSIVE CATEGORY III OPERATIONS
GM4-SPA.LVO.100	Low visibility operations - ESTABLISHMENT OF MINIMUM RVR FOR CATEGORY II AND III OPERATIONS	GM2 Appendix 3 to AMC1 OPS.SPA.020.LVO	LVO operating minima - ESTABLISHMENT OF MINIMUM RVR FOR CATEGORY II AND III OPERATIONS
GM5-SPA.LVO.100	Low visibility operations - ILS CLASSIFICATION	N/A	N/A
AMC1-SPA.LVO.120	Flight crew training and qualifications GENERAL STANDARDS GROUND TRAINING FLIGHT SIMULATOR TRAINING AND/OR FLIGHT TRAINING CONVERSION TRAINING TYPE AND COMMAND EXPERIENCE LOW VISIBILITY TAKE-OFF RECURRENT TRAINING AND CHECKING LOWER THAN STANDARD CATEGORY I OPERATIONS, OTHER THAN STANDARD CATEGORY II OPERATIONS, APPROACH OPERATIONS UTILISING EVS	AMC OPS.SPA.001.LVO(b)(1)	Low visibility operations (LVO) -FLIGHT CREW TRAINING
GM1-SPA.LVO.120	Flight crew training and qualifications - FLIGHT CREW TRAINING	GM OPS.SPA.001.LVO(b)(1)	Low visibility operations (LVO) - FLIGHT CREW TRAINING

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
AMC1-SPA.LVO.125	Operating procedures - GENERAL	GM1 OPS.SPA.001.LVO	Low visibility operations (LVO) - GENERAL - TERMINOLOGY
AMC1-SPA.LVO.125	Operating procedures - PROCEDURES AND INSTRUCTIONS	GM1 OPS.SPA.001.LVO	Low visibility operations (LVO) - GENERAL - TERMINOLOGY
AMC1-SPA.LVO.125	Operating procedures - PROCEDURES AND INSTRUCTIONS	AMC OPS.SPA.001.LVO(b)(2)(iii)	Low visibility operations (LVO) - NORMAL PROCEDURES

Summary of main comments

303. The main comments received on the NPA Section OPS.SPA.LVO can be summarised as follows:

- most commentators requested that the rule text should be aligned with EU-OPS; these comments were accepted and the revised rules follow Subpart E;
- many commentators argued that too many safety-critical rules were downgraded to AMC; these comments have been followed up; the balance for all rules have been re-assessed and revisions have been made, where appropriate;
- several stakeholders provided proposals on how to improve the EU-OPS rule text and achieve harmonisation with FAA rules; most of these comment have been accepted and the tables have been revised;
- several stakeholders pointed out that the EU-OPS text contains contradictions within itself as well as with the Section 2 material of JAR-OPS 1; these comments have been followed up and inconsistencies have been rectified;
- some stakeholders did not agree that a specific approval should be required for low visibility take-off (LVTO) operations with an RVR between 150 m and 400 m; these comments have not been noted, but the rule text has been retained in the interest of safety; and
- one stakeholder had the opinion that operations using enhanced visual systems (EVS) do not constitute an LVO and therefore should not be listed in this Subpart; this comment was noted, however, there was not sufficient safety justification provided for this approach and the content of EU-OPS was transposed.

Summary of main changes

Compared with the NPA

304. This Subpart has been completely redrafted. The revised rule text is aligned with the relevant rules of Subpart E of EU-OPS / JAR-OPS 3 and related Section 2 material of JAR-OPS1 and JAR-OPS 3. It follows the rule sequence of EU-OPS.

Compared with EU-OPS/JAR-OPS 3

305. The revised rule text maintains EU-OPS and JAR-OPS 3 rules as IR. For the Appendices, however, a different approach was taken. The Appendices in Subpart E are drafted in a prescriptive style, describing how a safety objective can be applied and in some instances also provide explanatory information. The Agency therefore proposed to transpose most of the rule text of the Appendices in Subpart E as AMC and/or GM material. This would allow the development of alternative means of establishing compliance with the IRs.

306. As already described above, it should be reminded that for specific approvals, amendments to AMCs in the form of alternative means of compliance require a prior approval of the competent authority. Therefore, although some IR have been moved to AMC/GM level, this text and any of its amendments remain within a controlled environment. At the same time, it offers operators the requested operational flexibility and proportionality.

307. Furthermore, it should be noted that the lowest operating minima for all LVOs are specified in definitions and as such at the IR rule level in Annex I. This approach also allows sufficient harmonisation and a fair level playing field.

308. This approach gained support from the review groups.

309. A number of editorial revisions have been made to existing rule for the following reasons:

- to provide consistency with styling provisions of the European Union;
- text with explanatory character has been transposed as GM; and
- notes have either been redrafted into AMC provisions, where treated as footnotes, transposed as GM, or deleted if they did not provide sufficient added value.

Compliance with ICAO Annex 6

310. The operating minima for Standard Category II (CAT II) operation and Standard category III (CAT III) operation are in some instances higher than minima specified in the recent amendments of ICAO Annex 6: Amendment 33 of Part I, Amendment 28 of Part II and Amendment 14 of Part III.

311. The Agency decided to transpose these ICAO Amendments in a dedicated rulemaking task to allow for appropriate consultation with stakeholders.

Specific issues

SPA.LVO.100 Low visibility operations (LVO)

312. The revised text provides an improved description of which operations constitute an LVO.

313. LVOs together with the lowest operating minima are defined in "Annex I – Definitions for terms used in Annexes II to VI" (Annex I - Definitions).

314. In compliance with EU-OPS and as specified in the NPA, LVTO operations are defined as a take-off with an RVR lower than 400 m. EU-OPS requires a training programme for LVTO and additional further specific approvals for take-offs with an RVR lower than 150 m and for take-offs with an RVR lower than 125 m. The revised rule text aligns with these provisions but slightly changes the concept. There is only a single approval for LVTO, which would specify the approved operating minimum.

315. The Agency did not concur with commentators suggesting that EU-OPS does not consider EVS operations as an LVO and therefore would not require operational approval. The Agency, supported by its review groups, considers that EU-OPS unambiguously classifies EVS operations as an LVO, e.g. in Appendix 1 to OS 1.450 or Appendix 1 to OPS 1.455.

316. The revised rule text, however, clarifies that only such EVS operations should be dealt with as LVOs for which operational credits on the RVR minima are applied. In other words, if an operator conducts a CAT I operation at or above CAT I operating minima, the use of EVS would not constitute an LVO nor require an operational approval. However, if an operator conducts a CAT I operation below CAT I operating minima, which by definition would be an LVO, relying on the EVS and applying operational credit on the RVR minimum, such an operation would be an LVO which therefore requires an operational approval.

AMC1-SPA.LVO.100 Low visibility operations (LVO)

317. This AMC contains the SPA.LVO relevant rules of Appendix 1 (New) to OPS 1.430 for LVTO, LTS CAT I, CAT II, OTS CAT II, EVS operations and for failed or downgraded ground equipment.

318. The revised rule text contains many editorial revisions on the existing rule text, carried out mainly for consistency reasons.

319. Furthermore, it contains amendments, based on comments received, with the aim to harmonise the rules with FAA provisions in the following areas:

- table 1.A, displaying RVR minima depending on aerodrome lighting facilities for LVTO operations; and
- table 6, providing rules for failed or downgraded ground equipment on operating minima.

320. The following obvious errors in EU-OPS have been rectified on the basis of comments received:

- the ILS of an OTS CAT II operation should be certified to Class II/D/2; and
- in table 3, for LTS CAT I operations, the DH values for categories A to C aeroplanes for the category full approach light facilities have been amended.

321. The following amendments to EU-OPS have been made based on safety justifications:

- EU-OPS as well as the revised rule text for SPA.LVO requires that for LVOs call-out heights below 200 ft above the aerodrome threshold shall be determined by means of a radio altimeter; in order to address the potential safety risk when applying the radio altimeter on unsurveyed aerodromes, the AMC requests for OTS CAT II and

for EVS operations that the terrain ahead of the runway threshold should be surveyed.

322. Existing rule text that would have allowed an alternative to an IR or AMC was treated in the following way:

- rule text constituting an alternative to a safety objective was deleted because it would require an Article 14(6) derogation procedure;
- rule text providing an alternative to an AMC and fully meeting the requirements of the safety objective were kept as AMC;
- rule text indicating an alternative to an AMC without demonstrating that the requirements of the safety objective were fully met has been deleted; such alternative, however, can be followed by operators in an alternative means of compliance procedure, providing evidence that the safety objective can be met.

323. Text in AMC material that demanded an approval by the competent authority for an alternative means of compliance has been deleted since it would be covered through the alternative means of compliance procedure.

324. Based on recommendations of Review Group 01, the Agency merged, for all instrument approach operations, the corresponding rules for visual references into a single AMC. This AMC has been attributed to CAT.OP.305 Commencement and continuation of approach, the only requirement that refers to visual reference at IR level.

SPA.LVO.110 General operating requirements

325. The Agency did not concur with commentators requesting for EVS operations that call-out heights below 200 ft should be determined by means of a barometric altimeter. In compliance with EU-OPS (Appendix 1 to OPS 1.455 (b)(2)(ix)), based on serious safety concerns expressed by certification experts and with the recommendation of review groups, the revised rule text requires for LVOs utilising EVS that call-out heights below 200 ft above the aerodrome threshold shall be determined by means of a radio altimeter.

326. The Agency, furthermore, addressed in AMC1-SPA.LVO.100 the potential safety risk when applying the radio altimeter on unsurveyed aerodromes, requesting that the terrain ahead of the runway threshold should be surveyed. The Agency takes the view that the operator's safety management system (SMS) would usually also demand such a measure. It is understood that for such approaches where the use of a radio altimeter could constitute a safety risk, the operator would opt to use the barometric altimeter and choose an approach operation with operating minima where call-out heights below 200 ft are not required.

SPA.LVO.115 Aerodrome considerations

327. The revised rule text clarifies that, in accordance with EU-OPS, an LVO can only be conducted if the selected aerodrome has established low visibility procedures (LVP). This requirement shall apply to all LVOs.

328. Based on comments received, a new subparagraph was added to clarify that, at aerodromes outside of the European Union, where the term LVP may not be used, the operator shall ensure that for these aerodromes there are equivalent procedures in place adhering to the requirements of LVP.

AMC1-SPA.LVO.105 LVO approval

329. This AMC transposed Appendix 1 to OPS 1.440. The eligible aerodrome and runway verification provisions provoked a number of comments ranging from requests to delete this rule or even to strengthen and extend its scope. After detailed discussion with Review Group 01, the Agency decided to keep this rule unchanged but at the AMC level. This should provide operators and competent authorities sufficient flexibility to address this provision within an operator's SMS.

AMC3-AR.OPS.200 Specific approval procedure

330. Appendix 1 to OPS 1.440 has been transposed in AMC1-SPA.LVO.105 and for those aspects addressing competent authority as an AMC to Part-AR, in AMC3-AR.OPS.200 Specific Approval Procedure. It should be noted that this AMC has not been published with the CRD of Part-AR and is therefore published with this CRD.

GM2-SPA.LVO.100 Low visibility operations

331. This GM transposes ACJ OPS to Appendix 1 (New) to JAR-OPS 1.430 (h). It contains provisions that are in conflict with EU-OPS requirements as regards the use of the radio altimeter for EVS operations. This contradiction has been rectified.

Future rulemaking tasks

332. Within the mandate given to the Agency, it revised the existing rule text of EU-OPS only where obvious errors needed to be rectified, essential amendments were required in the interest of safety, or the intent of the rule was ambiguous.

333. The Agency takes the view that a thorough overhaul of requirements stemming from Subpart E is necessary. This would in particular concern the rules on APV operations, LTS CAT I operations, OTS CAT II operations and operations with EVS. For this, a dedicated rulemaking task is required, which also takes into account recent amendments of ICAO SARPs and new technological advancements, such as synthetic visions systems (SVS).

VIII. SPA.ETOPS: Subpart F – Extended range operations with two-engined aeroplanes (ETOPS)

General

334. This Subpart contains the requirements for the specific approval for extended range operations with two-engined aeroplanes under CAT operations.

335. This Subpart transposes EU-OPS 1.246, and is based on the ETOPS requirements contained in NPA Subpart B (OPS.CAT Commercial air transport).

336. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 15: Rule title comparison for SPA.ETOPS

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.ETOPS.100	ETOPS	OPS.CAT.225.A	Maximum distance from an adequate aerodrome for two-engined aeroplanes
SPA.ETOPS.105	ETOPS operational approval	xxx	xxx
SPA.ETOPS.110	ETOPS en-route alternate aerodromes	OPS.CAT.156.A	Selection of take-off alternate aerodromes - Aeroplanes
SPA.ETOPS.115	ETOPS en-route alternate aerodrome planning minima	xxx	xxx

Summary of main comments

337. Many commentators recommended that this specific approval should be placed with the rules for other specific approvals; these comments have been accepted and the rules have been moved to Part-SPA

Summary of main changes

Compared with the NPA

338. In the NPA, the requirements were located in Subpart B for CAT operations. Based on comments received, the Agency decided to move these requirements to Part-SPA and align with the rule sequence adopted for other Subparts.

Compared with EU-OPS

339. The text is aligned with the content of EU-OPS.

Specific issues

SPA.ETOPS.115 ETOPS en-route alternate aerodrome planning minima

340. These requirements contain a table with planning minima for the ETOPS en-route alternate aerodrome.

Ongoing and future rulemaking tasks

341. It should be noted that these requirements will undergo further amendments in the near future for the following reasons:

- the corresponding AMC 20-6 material was proposed in NPA 2008-01 and the CRD was published on 19 October 2010;
- early next year, ICAO is expected to publish a state letter containing proposed amendments to extended range operations covering not only two-engined aeroplanes but also aeroplanes with more than two engines; and
- as mentioned above, the planning minima for the ETOPS alternate aerodrome need to be updated to include APV operations.

IX: SPA.DG: Subpart G – Transport of dangerous goods

General

342. This Subpart contains the specific approval for the transport of dangerous goods as defined in the Technical Instructions of ICAO. It transposes EU-OPS / JAR-OPS 3 Subpart R and JAA NPA-OPS 70, and is based on NPA Subpart D, Section V (OPS.SPA.DG Transport of dangerous goods).

343. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 16: Rule title comparison for SPA.DG

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
SPA.DG.100	Approval to transport dangerous goods	OPS.SPA.001.DG	Approval to transport dangerous goods
SPA.DG.105	Dangerous goods information and documentation	OPS.SPA.040.DG	Dangerous goods information and documentation
AMC1-OPS.SPA.DG.100(b)(1)	Approval to transport dangerous goods	AMC OPS.SPA.001.DG(b)(1)	Approval to transport dangerous goods
AMC1-OPS.SPA.DG.100(b)(2)(ii)	Approval to transport dangerous goods	AMC OPS.SPA.001.DG(b)(2)(ii)	Approval to transport dangerous goods
AMC1-OPS.SPA.DG.100(b)(2)(iv)	Approval to transport dangerous goods	AMC OPS.SPA.001.DG(b)(2)(iv)	Approval to transport dangerous goods
xxx	xxx	AMC OPS.SPA.001.DG(b)(2)(v)	Approval to transport dangerous goods

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
xxx	xxx	AMC OPS.SPA.001.DG(b)(2)(vii)	Approval to transport dangerous goods
GM1-OPS.SPA.DG.100(b)(1)	Approval to transport dangerous goods	GM OPS.SPA.001.DG(b)(1)	Approval to transport dangerous goods
xxx	xxx	AMC OPS.SPA.040.DG(b)	Dangerous goods information and documentation
AMC1-OPS.SPA.DG.105(a)	Dangerous goods information and documentation	AMC OPS.SPA.040.DG(c)	Dangerous goods information and documentation

Summary of main comments

344. The main comments received on the NPA Subpart D Section OPS.SPA.DG can be summarised as follows:

- some commentators suggested to align the NPA as closely as possible to EU-OPS provisions;
- other commentators recommended to take the Technical Instructions as a reference basis and to ensure consistency with other OPS-related Parts and/or Subparts;
- the Agency carefully assessed all comments and after consultation with the review groups decided to revise the rule text with a dynamic reference to the Technical Instructions.

Summary of main changes

Compared with the NPA

345. Changes to the NPA were largely editorial, with the objective to be coherent with other Parts and/or Subparts and to align with the wording of EU-OPS and the Technical Instructions. The NPA text has been adapted to take into account electronic means of displaying and providing documentation. Furthermore, the reference to the ICAO Technical Instructions is now included as dynamic reference within the IR.

Compared with EU-OPS/JAR-OPS 3

346. The approach taken by the Agency is to work with a reference to the ICAO Technical Instructions, as was presented in the NPA. This drafting decision also meant that extracts from the Technical Instructions were not to be included in these rules. Therefore SPA.DG is in effect much shorter than Subparts R of EU-OPS and JAR-OPS 3. Only requirements

specifying particular operator responsibilities have been repeated from the Technical Instructions.

Specific issues

AMC1-OPS.SPA.DG.100(b)(1)

347. With regard to the training intervals, some comments suggested extending this to 5 years, as crew already undergo a considerable level training and checks in all operations. The Agency is not in favour of extending the interval to 5 years because the identification and handling of dangerous goods needs a specific training that should be properly assessed on a regular basis. The Agency proposes that training should be conducted at intervals of no greater than 2 years. This is also in line with EU-OPS 1.1220(e) and the Technical Instructions.

X. SPA.NVIS: Subpart H - Helicopter operations with night vision imaging systems

General

348. This Subpart contains the specific approval for night VFR operations with the aid of night vision imaging systems (NVIS) with a helicopter in CAT operations. It transposes JAR-OPS 3.005(j) and TGL 34, and is based on NPA Subpart D, Section VII (OPS.SPA.NVIS Helicopter operations with night vision imaging systems).

349. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 17: Rule title comparison for SPA.NVIS

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.NVIS.100	Night Vision Imaging System (NVIS) operations	OPS.SPA.001.NVIS	Night Vision Imaging System (NVIS) operations
SPA.NVIS.110	Equipment requirements for NVIS operations	OPS.SPA.NVIS.010	Equipment requirements for NVIS operations
SPA.NVIS.120	NVIS operating minima	OPS.SPA.020.NVIS	NVIS operating minima
SPA.NVIS.130	Crew requirements for NVIS operations	OPS.SPA.030.NVIS	Crew requirements for NVIS operations
SPA.NVIS.140	Information and documentation	xxx	xxx
GM1-SPA.NVIS.110(f)	Equipment requirements for NVIS operations	xxx	xxx

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
GM1-SPA.NVIS.130	Crew requirements for NVIS operations	xxx	xxx
GM1-SPA.NVIS.130(e)	Crew requirements for NVIS operations	xxx	xxx
AMC1-SPA.NVIS.130(f)(1)	Crew requirements for NVIS operations	xxx	xxx
Moved to SPA.NVIS.130	Moved to SPA.NVIS.130	AMC OPS.SPA.001.NVIS(b)(1)	Night Vision Imaging System (NVIS) operations
AMC1-SPA.NVIS.130(f)	Crew requirements	xxx	xxx
GM1- SPA NVIS.130(f)	Crew requirements for NVIS operations	GM OPS.SPA.001.NVIS(b)(1)	Night Vision Imaging System (NVIS) operations
GM2-SPA.NVIS.130(f)	Crew requirements	GM OPS.SPA.001.NVIS(b)(1)	Night Vision Imaging System (NVIS) operations
GM3-SPA.NVIS.130(f)	Crew requirements	GM OPS.SPA.001.NVIS(b)(1)	Night Vision Imaging System (NVIS) operations
GM4-SPA.NVIS.130(f)	Crew requirements	GM OPS.SPA.001.NVIS(b)(1)	Night Vision Imaging System (NVIS) operations
Moved to SPA.NVIS.110	Moved to SPA.NVIS.110	AMC OPS.SPA.010.NVIS(a)	Equipment requirements for NVIS operations
AMC1-SPA.NVIS.140	Information and documentation	xxx	xxx
GM1-SPA.NVIS.140	Information and documentation	xxx	xxx

Summary of main comments

350. Only a few technical comments were received. Three main issues could be identified:

- The proposal to take credit for NVIS by lowering the operating minima including the introduction of the term 'NVIS visual range'; the requirement to have an NVIS technical crew member; the applicability to only helicopters.
- NVIS is to be regarded as an aid during night VFR such that the pilot has sufficient visual cues for spatial and situational awareness. By lowering the operating limitation the visual cues are again degraded and the benefit of the use of NVIS is

lost. The minima given are absolute; the operator should define higher values for those pilots with lesser experience.

- The requirement for the NVIS technical crew member was also discussed during the review of the comments. The comments were accepted and the text amended to differentiate between certification requirements, specific types of operation and operations manual – any one of which could define the level of crewing.

Summary of main changes

Compared with the NPA

351. Although the text might appear to have changed compared to the original text contained in TGL 34, most of the changes are considered to be editorial or arising from the drafting principles of the Agency. Changes were also made to provide harmonisation with the Basic Regulation, the definitions contained therein and the Essential Requirements.

352. In line with the policy previously discussed, material that was provided as AMC/GM in NPA 2009-02b has been reconsidered and some AMC text was upgraded to IR level.

Compared with TGL 34

353. The main change to the TGL 34 text is that it has been transposed into IR and AMC/GM.

354. Definitions and terms originally contained in TGL 34 that are used in the IR have been transposed to Annex I – Definitions. Those definitions and terms used only in AMC/GM have been transposed in an AMC to Annex I - Definitions.

355. TGL-34, when initially drafted, was partially based upon military experience and contained elements that were specific to military operations, e.g. a recommendation to use infrared lights. In CAT operations there is no need to conduct covert operations and such recommendations have been removed.

Specific issues

SPA.NVIS.100 Night vision imaging system (NVIS) operations

356. Text has been included to limit the application to those helicopter operators that hold an AOC for CAT operations.

SPA.NVIS.110 Equipment requirements for NVIS operations

357. Equipment, initially included in AMC/GM, has been moved to IR level in line with the approach taken for Part-CAT, Subpart CAT.IDE (instruments, data and equipment).

SPA.NVIS.120 NVIS operating minima

358. The NVIS operating minima should not be lower than the visual flight rules (VFR) weather minima for the type of night operations conducted. As already explained above, NVIS is an aid to enhance visual cuing at night; therefore night VFR minima remain as defined for the activity in which NVIS are used, e.g. HEMS minima apply when HEMS is conducted with the aid of NVIS.

SPA.NVIS.130 Crew requirements for NVIS operations

359. The text has been adapted to differentiate, for crew composition purposes, between that required for certification, the specific types of operation and the operations manual. The balance between IR and AMC/GM has been reconsidered. The rule has been adapted by splitting it into subparagraphs that set specific criteria and objectives for selection, experience, qualification, recency and crew composition. Training and checking requirements are set for flight crew and technical crew members.

AMC1-SPA.NVIS.130(f) Crew requirements for NVIS operations

360. To avoid any misunderstanding this AMC has been included to emphasise the intent to have the NVIS training and checking conducted and integrated into the training for the underlying activity.

GM1-SPA.NVIS.130(f) Crew requirements for NVIS operations

361. The Agency has provided flexibility by adding the text 'or 30 hours' flight time under NVIS as pilot-in-command' to the TGL 34 text in respect of instructor qualification. In addition, references to other-than military guidance documents have been added.

SPA.NVIS.140 Information and documentation

362. This new paragraph specifies which NVIS specific elements have to be addressed in the operations manual.

Future rulemaking tasks

363. The possibility of using NVIS for all types of aircraft was intended in NPA 2009-02b.. However, TGL 34 was developed for helicopter CAT and the NPA proposals could be too restrictive for other operations. The issue of dedicated NVIS requirements for other-than CAT and other-than helicopter operations could be subject to a future rulemaking task. Currently there is no knowledge of such operations and the experts remain undecided on what might be proportionate for those types of operations. Subpart SPA.NVIS is therefore limited to helicopter CAT operations pending the outcome of this future rulemaking task. Stakeholders are invited to submit substantiated proposals that would help the Agency in establishing a future rulemaking task.

XI. SPA.HHO: Subpart I - Helicopter hoist operations

General

364. This Subpart contains the requirements for the specific approval of helicopter hoist operations (HHO). It transposes Appendix 1 to JAR-OPS 3.005(h) and draft JAA NPA-OPS 69. It is based on NPA Subpart D, Section VIII (OPS.SPA.HHO Helicopter hoist operations).

365. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 18: Rule title comparison for SPA.HHO

CRD rule reference	CRD rule title	NPA OPS rule reference	NPA OPS rule title
SPA.HHO.100	Helicopter hoist operations (HHO)	OPS.SPA.001.HHO	Helicopter hoist operations (HHO)
SPA.HHO.110	Equipment requirements for HHO	OPS.SPA.010.HHO	Equipment requirements for HHO
SPA.HHO.115	HHO communication	OPS.SPA.015.HHO	HHO communication
SPA.HHO.125	Performance requirements for HHO operations	OPS.SPA.025.HHO	Performance requirements for HHO operations
SPA.HHO.130	Crew requirements for HHO operations	OPS.SPA.030.HHO	Crew requirements for HHO operations
SPA.HHO.140	Information and documentation	xxx	xxx
Moved to SPA.HHO.130	Moved to SPA.HHO.130	AMC OPS.SPA.030.NVIS	Crew requirements for NVIS operations
Moved to SPA.HHO.130	Moved to SPA.HHO.130	AMC1 - OPS.SPA.001100.HHO(b)(3)	Helicopter hoist operations (HHO)
AMC1-SPA.HHO.130(a)(2)	Crew requirements for HHO operations	AMC OPS.SPA.001.HHO(b)(4)	Helicopter hoist operations (HHO)
AMC1-SPA.HHO.130(a)(5)	Crew requirements for HHO operations	AMC OPS.SPA.001.HHO(b)(4)	Helicopter hoist operations (HHO)
AMC1-SPA.HHO.110(a)	Equipment requirements for HHO	AMC OPS.SPA.010.HHO(a)	Equipment requirements for HHO
AMC1-SPA.HHO.140	Information and documentation	xxx	xxx

Summary of main comments

366. The Agency noted that several comments have been made addressing hoist operations during search and rescue missions. Search and rescue as well as mountain rescue are considered to fall outside the remit of the Agency. These comments, which indicate that certain requirements should not apply to such operations, have therefore been set aside.

367. Search and rescue and similar services remain the responsibility of the individual Member States. States should ensure that such services are conducted, as far as practicable, to the objectives of the Basic Regulation.

368. A number of comments were concerned with the absence of appropriate regulations for aerial work. HHO, already specified in JAR-OPS 3, has always been considered as a CAT activity – hence the requirement for engine-failure accountability in accordance with human external cargo (HEC) Class D certification requirements. HEC Classes A, B and C (non-CAT activities) are addressed under Part-SPO by requiring the operator to establish appropriate standard operating procedures (SOPs). Consensus for this approach was achieved within the review groups.

Summary of main changes

Compared with the NPA

369. Elements of Appendix 1 to JAR-OPS 3.005(h), initially included in AMC/GM material in the NPA, have been moved to IR level to reinstate a better balance between the requirements and the AMC/GM.

Compared with EU-OPS/JAR-OPS3

370. Definitions and terminology items originally contained in Appendix 1 to JAR-OPS 3.005(h) and used in IR have been transposed to Annex I – Definitions. Those definitions and terms used only in AMC/GM have been transposed in an AMC to Annex I - Definitions.

Specific issues

SPA.HHO.100 Helicopter hoist operations (HHO)

371. This rule now contains only elements for the additional HHO approval; all other elements are covered by the issuance of the AOC, which is one of the conditions to be met. The requirement therefore addresses only variations to the AOC.

SPA.HHO.110 Equipment requirements for HHO

372. HHO addresses CAT operations (HEC Class D); the personnel carrying device system (PCDS) is therefore subject to airworthiness approval. The approval for the hoist and associated equipment will contain continuing airworthiness instructions and the operator is responsible for ensuring that these are carried out.

SPA.HHO.115 HHO communication

373. The text has been improved to clarify that the "ground personnel" should be at the HHO operating site. However, when conducting HHO at a HEMS operating site there might not be ground personnel on-site; an alleviation has therefore been included for HHO at a HEMS operating site.

SPA.HHO.125 Performance requirements for HHO

374. HHO do not rely upon the performance classes; the performance issue is therefore specifically addressed within the rule.

375. A number of comments were concerned with the applicability of engine-failure accountability. The fundamental requirement regarding HHO conducted as CAT is that the helicopter shall be capable of sustaining a critical engine failure without hazard to the suspended person/cargo, third parties or property. A fare-paying passenger is being transferred by hoist and not a crew member. Engine failure accountability precludes helicopters certificated in Category B from performing this type of CAT operation. This requirement applies only to CAT operations; it neither addresses those activities conducted as aerial work nor those conducted as search and rescue or similar services.

SPA.HHO.130 Crew requirements for HHO

376. The balance between rule and AMC/GM has been reconsidered. The rule has been adapted by splitting it in subparagraphs setting specific criteria and objectives for selection, experience, qualification, recency and crew composition. Training and checking requirements are set for flight crew and the technical crew, as well as a requirement for a specific briefing for HHO passengers.

AMC1-SPA.HHO.130(a)(5) Crew requirements for HHO

377. One comment clearly indicated that the philosophy for this AMC was not understood. There is a subtle difference between the AMC text and the requirements for VFR and IFR rules. In this case the hoisting operation will be carried out visually but recovery from an engine failure might have to be conducted with an IMC departure. For this reason it was decided to require two pilots under these circumstances. One pilot can concentrate on the hoisting and the other pilot acts as a safety pilot and takes appropriate precautions/action as necessary in the case of an engine failure.

SPA.HHO.140 Information and documentation

378. Several comments requested the reintroduction of a requirement for an operations manual supplement. The requirement for a supplement would not be an objective rule, as it would prevent an integrated operations manual. However, this paragraph now defines which HHO-specific elements shall be addressed in the operations manual required by OR.OPS.MLR. It is for the operator to decide how best to include these elements, which may be in the form of a supplement.

Future rulemaking tasks

379. Comments were received regarding HHO in non-CAT operations. A rulemaking task will be initiated to examine further the rules included in Part-SPO.

XII. SPA.HEMS: Subpart J - Helicopter emergency medical service operations

General

380. This Subpart contains the requirement for the specific approval for helicopter emergency medical services (HEMS). It transposes Appendix 1 to JAR-OPS 3.005(d) and partly the Working Paper HSST-WP-07-03.4. It is based on NPA Subpart D, Section IX (OPS.SPA.HEMS Helicopter emergency medical service operations).

381. The following table provides a rule title comparison between the NPA rules and the CRD rules.

Table 19: Rule title comparison for SPA.HEMS

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
SPA.HEMS.100	Helicopter emergency medical service operations (HEMS)	OPS.SPA.001.HEMS	Helicopter emergency medical service operations (HEMS)
SPA.HEMS.110	Equipment requirements for HEMS operations	OPS.SPA.010.HEMS	Equipment requirements for HEMS operations
SPA.HEMS.115	Communication	xxx	xxx
SPA.HEMS.120	HEMS operating minima	OPS.SPA.020.HEMS	HEMS operating minima
SPA.HEMS.125	Performance requirements for HEMS operations	OPS.SPA.025.HEMS	Performance requirements for HEMS operations
SPA.HEMS.130	Crew requirements	OPS.SPA.025.HEMS	Performance requirements for HEMS operations
SPA.HEMS.135	HEMS medical passenger and other personnel briefing	xxx	xxx
SPA.HEMS.140	Information and documentation	xxx	xxx
SPA.HEMS.145	HEMS operating base facilities	OPS.SPA.045.HEMS	HEMS operating base facilities
SPA.HEMS.150	Fuel supply	xxx	xxx
SPA.HEMS.155	Refuelling with passengers embarking, on board or disembarking	xxx	xxx
GM1-SPA.HEMS.100(a)	Helicopter emergency medical service operations (HEMS)	GM OPS.SPA.001.HEMS(a)	Helicopter emergency medical service operations (HEMS)
AMC1-SPA.HEMS.130(a)(2)	Crew requirements	AMC OPS.SPA.001.HEMS(b)(4)	Helicopter emergency medical service operations (HEMS)

CRD rule reference	**CRD rule title**	**NPA OPS rule reference**	**NPA OPS rule title**
AMC1-SPA.HEMS.130(a)(4)	Crew requirements for HEMS operations	xxx	xxx
AMC1-SPA.130.HEMS(e)(2)(ii)(B)	Crew requirements	GM1 OPS.SPA.001.HEMS(b)(4)	Helicopter emergency medical service operations (HEMS)
AMC1-SPA.130.HEMS(e)	Crew requirements	GM2 OPS.SPA.001.HEMS(b)(4)	Helicopter emergency medical service operations (HEMS)
GM1-SPA.HEMS.120	HEMS Operating Minima	GM OPS.SPA.020.HEMS(a)	HEMS Operating Minima
GM1-SPA.HEMS.125 (b)(2)	Performance requirements for HEMS operations	xxx	xxx
AMC1-SPA.HEMS.125(b)(3)	Performance requirements for HEMS operations	AMC OPS.SPA.025.HEMS(b)(3)	Performance requirements for HEMS operations
GM1-SPA.HEMS.130(e)(2)(ii)	Crew requirements	xxx	xxx
AMC1-SPA.HEMS.130(f)(2)(ii)(B)	Crew requirements	xxx	xxx
AMC2-SPA.HEMS.130(f)(4)	Crew requirements	xxx	xxx
AMC1-SPA.HEMS.135(a)	HEMS medical passenger and other personnel briefing	xxx	xxx
AMC2-SPA.HEMS.135(a)	HEMS medical passenger and other personnel briefing	xxx	xxx
AMC1-SPA.HEMS.135(b)	HEMS medical passenger and other personnel briefing	xxx	xxx
AMC1-SPA.HEMS.140	Information and documentation	xxx	xxx

Summary of main comments

382. From the comments received, it is apparent that there is still confusion between HEMS and mountain rescue operations; whereas HEMS is considered to be CAT, mountain rescue is considered to be a similar service in the sense of Article 1 of the Basic Regulation. The joint decision of the Agency and the JAAC to postpone transposition of TGL 43 to a future rulemaking task resulted in the exclusion of guidance in this respect. After discussing this issue in the helicopter working group, the drafting group looked into the possibility of including TGL 43 in the draft proposals. However, it was decided not to include the material at this stage as the publication deadlines prevented the required detailed and technical discussion. The rulemaking task OPS.057 will be used to address this issue and will therefore provide suitable opportunities for stakeholder consultation. However this does not prevent a Member State from using the guidance material of TGL 43 in the application of the Basic Regulation.

383. Following inclusion of HSST/WP-07/03.4 in the NPA text and the question related to which option to choose in the Explanatory Note to the NPA, commentators requested the following :

- several individuals repeated the opinion of the stakeholder organisation that represented them; these opinions only indicated the agreement with that opinion and were therefore set aside;
- 1 stakeholder organisation opted for option 2(a);
- 1 Member State and 1 stakeholder organisation opted for option 2(b); and
- 2 Member States and 1 manufacturer opted for option 2(c).

384. The Agency therefore decided to incorporate option 2(c), which means that HEMS operations to an operating site are only excluded from the specific risk assessment (see SPA.HEMS.125 (b)(2)). A risk assessment is already an element of HEMS operations, as explained in GM1-SPA.HEMS.100(a).

385. To facilitate implementation GM1-CAT.POL.H.305 (b) explains that a full authority digital engine control (FADEC), with recording and downloading facilities, could partly, or in whole, fulfil the usage monitoring system (UMS) requirement; the cost of compliance will consist only of the additional procedures and not equipment fitting.

386. Comments received highlighted the differences in implementation of the JAR rules in the JAA Member States. As explained in the Explanatory memorandum for Part-CAT to the Section CAT.POL.H (148.ff), some problems appear to exist only in a limited number of Member States. it can therefore be deduced that this stems either from a national variant (presumably addressing a very specific localised problem) or incorrect application.

387. In the case of HEMS operations and the designation of public interest sites, the problems could be caused by several countries not implementing, nor using, JAA Section 2 material and possibly misunderstandings on the philosophy behind the rules. This is further illustrated by the fact that not all Member States have highlighted the same problems.

388. Based on standardisation results, only 14 out of 41 JAA Member States were recommended for mutual JAR-OPS 3 recognition by the JAA; some comments are indicative of unfamiliarity with JAR-OPS 3 philosophy and principles and, consequently, the Agency's proposals.

389. Additionally, the underlying reasons for problems with the proposals were not clearly stated in the comments, indicating that a further and more detailed examination of the issue was required. This further examination should be conducted as part of a separate proposal to amend the existing requirements and conclusions transferred to a future rulemaking task, bearing in mind that rulemaking may not necessarily be the best way to address the issue. Changing the current requirements on the basis of these comments would not do justice to those who have not commented because they are in agreement with the current set of requirements.

390. For the above-mentioned reason the Agency did not change the intent of the JAR-OPS 3 requirements; the HEMS philosophy and the discussion of the conditions associated with public interest sites have both been transposed into GM and it should therefore be clear why the requirements have been transposed from JAR-OPS 3. Deviations should be addressed using the flexibility provisions of the Basic Regulation.

391. Due to the nature of HEMS operations (i.e. it is an operation in the interest of the general public), it attracts alleviation from the CAT rules, such as reduced operating minima, landing at unsurveyed sites and low level operations. These alleviations can only be used when appropriately mitigated. The mitigation for these three issues is 'an extra pair of eyes' in the co-pilot front seat of the helicopter. It is well known, and understood, that this precludes some small helicopters from HEMS operations, even though they may be certificated under Category A and eligible for PC1 operations. A stretcher cannot be used as a seat; if the fitting of a stretcher prevents the HEMS crew member from sitting up front and assisting the pilot it does not satisfy the requirements for HEMS operations; for that reason, the reference to a co-pilot seat in the rule is considered clear enough.

Summary of main changes

Compared with the NPA

392. Elements of Appendix 1 to JAR-OPS 3.005(d), initially included in AMC/GM material of the NPA have been moved to IR level to reinstate a better balance between the requirements and the AMC/GM.

Compared with EU-OPS/JAR-OPS 3

393. Definitions and terminology items originally contained in Appendix 1 to JAR-OPS 3.005(h) and used in IR have been transposed to Annex I – Definitions. Those definitions and terms used only in AMC/GM have been transposed in an AMC to Annex I - Definitions.

Specific issues

SPA.HEMS.100 Helicopter emergency medical services (HEMS)

394. This section now contains only elements for the additional HEMS approval; all other elements are covered by the issuance of the AOC, which is one of the conditions to be met. The requirement therefore addresses only variations to the AOC.

SPA.HEMS.120 HEMS operating minima

395. The Agency had omitted to include the full paragraph (c)(4)(ii) of the JAR-OPS 3 HEMS Appendix. The missing text has now been included.

396. Further comments were received on crediting the use of NVIS and therefore lowering the operating minima, which was not accepted.

397. Since the minimum crew is always one pilot and one HEMS technical crew member, the one pilot operating minima apply to this crew composition, whereas the two pilot operating minima apply only to those cases where the crew consists of two pilots. The HEMS technical crew member is not a pilot and therefore the operation cannot be credited as such. The fact that the one pilot operating minima are already lower than the standard operating minima is already taking into consideration the additional HEMS technical crew member (see also SPA.HEMS.130).

398. One commentator requested a definition of the 'short duration of time' used when reduction of operating minima is applied in accordance with the requirement. The Agency's position is that this cannot be defined and should remain at the pilot's discretion. Even the example provided in the comment could be considered to be too long in some cases. Based on good crew resource management (CRM) principles, good airmanship and the application of the guidance it is the commander's responsibility not to proceed with the mission when the aviation risk (loss of control due to inadvertent IMC) is no longer proportional to the task (see GM1-SPA.HEMS.100(a)).

SPA.HEMS.125 Performance requirements for HEMS operations

399. Text has been added as a result of the consultation on HSST/WP-07/03.4. The requirements provide for exposure (this term is used to avoid the longer correct term 'operation without an assured safe forced landing capability') during take-off and landing in the cases defined in (b). It needs to be emphasised that exposure in performance class 1 (PC1) and performance class 2 (PC2) is not equal to performance class 3 (PC3) operations. Therefore the argument put forward by some commentators, that a helicopter that is unable to meet the PC1 or PC2 requirements at high 'density altitudes', does not justify the application of PC3 criteria below those altitudes where PC2 would otherwise be possible.

AMC1-SPA.HEMS.125(b)(3) Performance requirements for HEMS operations

400. Several comments were received on the AMC setting an acceptable means of compliance for the HEMS operating site dimensions. Although the decision on the suitability of the size can only be that of the commander, there should be a safeguard in terms of risk-taking. As the operation is classified as CAT, it is necessary to limit the risk to a reasonable level, as described in the HEMS philosophy (see GM1-SPA.HEMS.100(a)). The rule itself already stipulates that the site shall be big enough to provide adequate clearance from all obstructions; the use of dimensions is therefore deemed necessary as an indication of what is an acceptable risk to take. It is equally important in the mountains to provide clearance from obstacles. Whilst it is understood that this may be in a different form from a flat landing site, the obligation is still there to ensure that it is safe to land. The only exception is for HEMS HHO, which is clearly indicated in that particular rule. A HEMS operating site by definition has nothing to do with ICAO Annex 14, therefore the dimensions are only stated to ensure obstacle clearance.

SPA.HEMS.130 Crew requirements

401. The balance between rule and AMC/GM has been reconsidered. The rule has been adapted by splitting it in subparagraphs setting specific criteria and objectives for

selection, experience, qualification, recency and crew composition. Training and checking requirements are set for flight crew and the technical crew, as well as a requirement for a specific briefing for HEMS medical passengers.

402. The 30 minutes' flying by sole reference to instruments is intended as a mitigating procedure to prevent pilots from losing control when inadvertently entering IMC. Since it is not a recognised procedure in the sense of FCL, there is no need to require this to be instructed by a flight instructor (FI), as one Member State suggested.

403. Both for legal clarity and due to comments received, the exceptional circumstances under which the crew may be reduced have been spelt out in paragraph (e)(1).

404. A new AMC has been added to the paragraph (a) to satisfy comments that there are many examples where the 'medical passenger' is a member of a permanent HEMS team. If the 'medical passenger' receives regular training, there is no need for a briefing prior to any, or series of, flight(s).

AMC1-SPA.HEMS.130(e) Crew requirements

405. The text has been re-ordered to emphasize what should be considered the primary task (referred to in the summary of comments as 'an extra pair of eyes') of the HEMS technical crew member and which secondary tasks may be delegated to this crew member by the commander.

GM1-SPA.HEMS.130(e)(2)(ii) Crew requirements

406. GM added to explain what is intended with the term 'specific geographical area'.

AMC2-SPA.HEMS.130(f)(4) Crew requirements

407. The original text has been adapted to indicate more precisely the intent of the rule and to provide guidance because comments indicated that an operator is generally unable to provide familiarisation training to all such ground emergency services personnel.

SPA.HEMS.140 Information and documentation

408. Several comments requested the reintroduction of a requirement for an operations manual supplement. The requirement for a supplement would not be an objective rule, as it would prevent an integrated operations manual. However, this paragraph now defines which HEMS specific elements shall be addressed in the operations manual required by OR.OPS.MLR. It is for the operator to decide how best to include these elements, which may be in the form of a supplement.

409. Several elements initially contained in AMC/GM have now been included in IR to remain consistent throughout the specific approvals for helicopter operations.

SPA.HEMS.145 HEMS operating base facilities

410. A comment suggested more precision in describing what a suitable accommodation should consists of. However, occupational health requirements are not within the remit of this legislation and no changes were made to the text in this respect.

SPA.HEMS.150 Fuel supply

411. This text has been included as a commentator addressed the need to make appropriate provisions for HEMS operations, suggesting that the alleviation contained originally in Appendix 1 to JAR-OPS 3.005(f) should also be applicable to HEMS.

SPA.HEMS.155 Refuelling with passengers embarking, on board or disembarking

412. The rule has been reintroduced from JAR-OPS 3 to be consistent with Part-CAT.