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Committee on the Peaceful Uses of Outer Space
Scientific and Technical Subcommittee
Forty-second session
Vienna, 21 February-4 March 2005

Preliminary draft of flow charts for potential implementation options for establishing an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable nuclear power source applications in outer space

Note by the Secretariat

1. The following diagrams were developed to support the discussions of the Working Group on the Use of Nuclear Power Sources in Outer Space of the Scientific and Technical Subcommittee of the Committee on the Peaceful Uses of Outer Space on the potential options for establishing an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable nuclear power source applications in outer space and were considered by the Working Group during the forty-first session of the Scientific and Technical Subcommittee, held in Vienna from 16 to 27 February 2004.

2. At the same session, the Scientific and Technical Subcommittee endorsed the recommendation of the Working Group to continue intersessional work on the topics described in the multi-year work plan and decided that, in order to facilitate those discussions, the Working Group would meet for informal consultations during the forty-seventh session of the Committee on the Peaceful Uses of Outer Space, held in Vienna from 2 to 11 June 2004.

3. At its forty-seventh session, the Committee on the Peaceful Uses of Outer Space noted with satisfaction that, as a result of informal consultations held by the Working Group during that session, the document entitled "Preliminary draft of flow charts for potential implementation options for establishing an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable nuclear power source applications in outer space"

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(A/AC.105/L.254) would be revised and resubmitted to the Scientific and Technical Subcommittee at its forty-second session, in 2005.

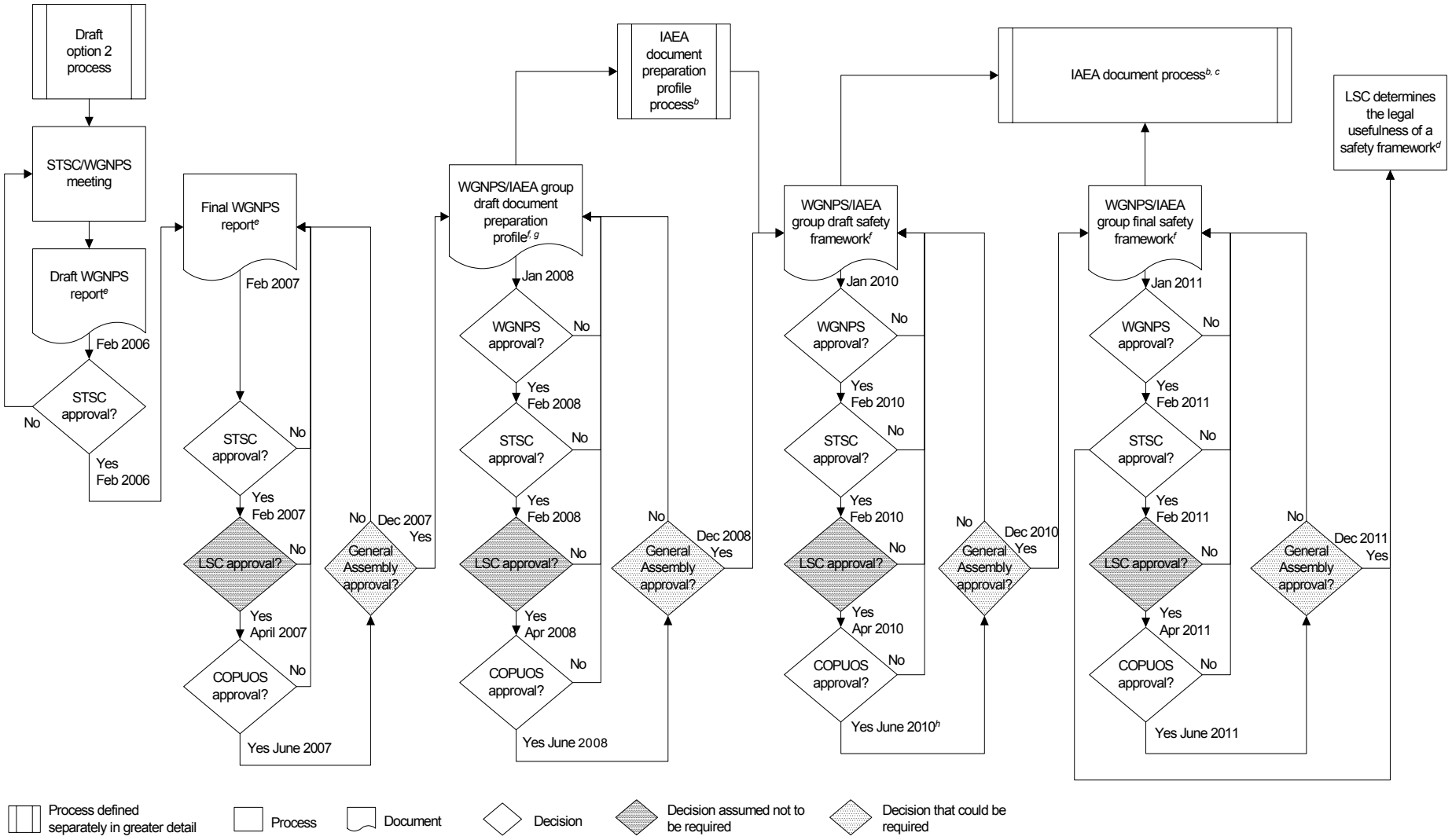
4. The annex to the present document reflects the discussions of the Working Group during the informal consultations and is a revised version of the document mentioned above.

Annex

Working paper submitted by the Working Group on the Use of Nuclear Power Sources in Outer Space*

* The diagrams contained in the present annex are for purposes of discussion only.

A. Draft option 1. Initiation of a joint programme of work with the International Atomic Energy Agency: process, schedule,[a] assumptions and issues



COPUOS	=	Committee on the Peaceful Uses of Outer Space
IAEA	=	International Atomic Energy Agency
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[a] The earliest possible dates are shown.

[b] Assumes that the International Atomic Energy Agency processes occur within the time period required for relevant activities of the Committee on the Peaceful Uses of Outer Space to be completed.

[c] Issue to be addressed by the International Atomic Energy Agency: What would be the status of a safety framework agreed to by the Agency but not by the Committee on the Peaceful Uses of Outer Space or the General Assembly?

[d] Issue: What conclusion from the Scientific and Technical Subcommittee would prompt the requirement for involvement of the Legal Subcommittee? How long does it take the Legal Subcommittee to complete its activity and what does that activity involve?

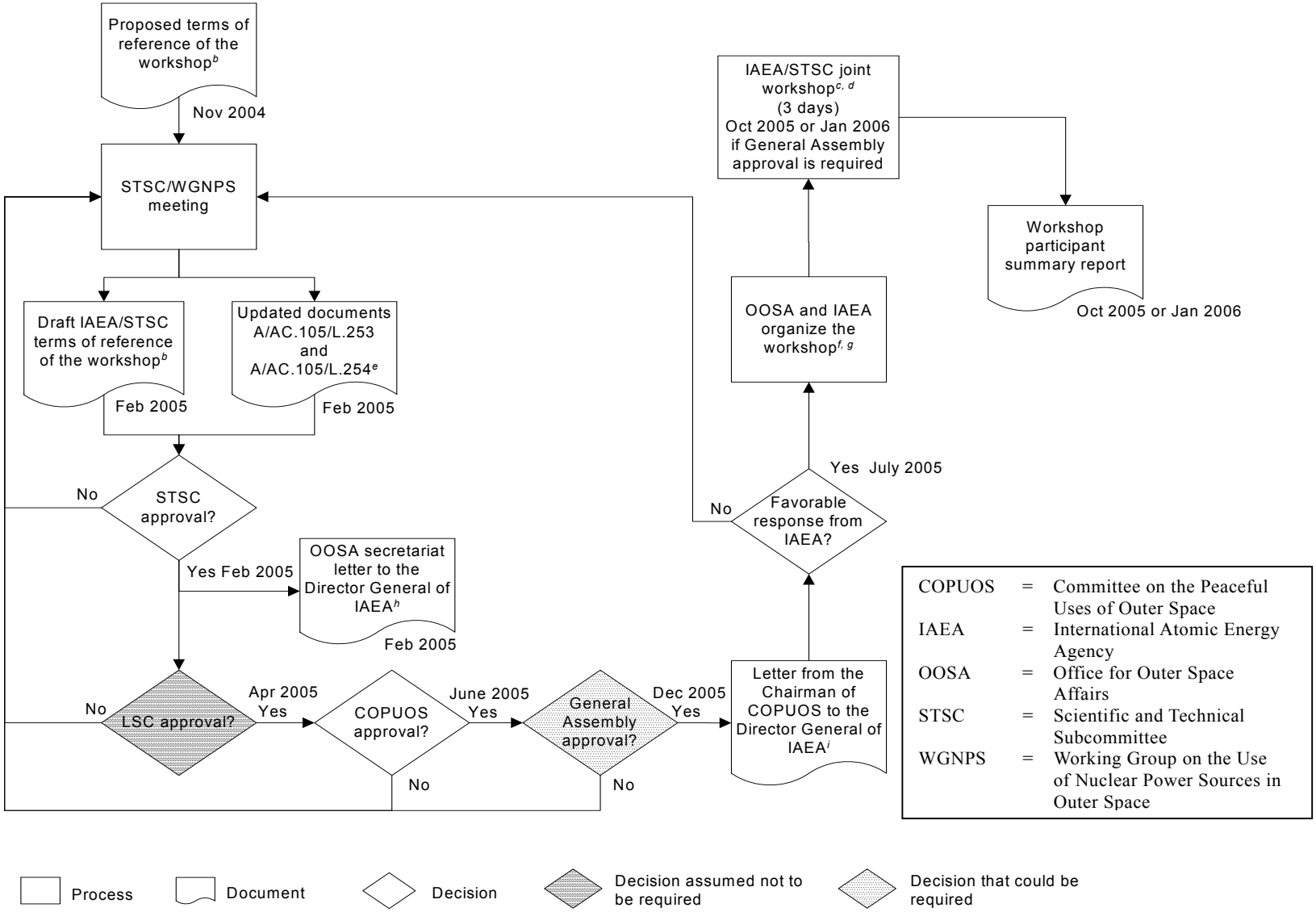
[e] Assumes that the work plan approved by the Scientific and Technical Subcommittee in 2004 (A/AC.105/804, annex III) is extended by one year to allow the incorporation of inputs from a joint International Atomic Energy Agency/Scientific and Technical Subcommittee workshop into the final report of the Working Group on the Use of Nuclear Power Sources in Outer Space.

[f] Assumes that the Working Group on the Use of Nuclear Power Sources in Outer Space/International Atomic Energy Agency group's efforts to prepare the document preparation profile and the draft and final versions of the safety framework will be conducted without interpretation (i.e. only in English) and on a schedule and at a location mutually agreed on between the participants directly involved in preparing the documents.

[g] Assumes that the initial version of the document preparation profile is approved during the meeting of the Scientific and Technical Subcommittee in February 2008.

[h] In anticipation of completing its review/evaluation of the multilateral group's guidelines in 2011, the Scientific and Technical Subcommittee in 2010 requests the Legal Subcommittee to add an agenda item in 2011.

B. Draft option 2. Joint International Atomic Energy Agency/Scientific and Technical Subcommittee technical workshop: process, schedule,[a] assumptions and issues



[a] The earliest possible dates are shown.

[b] The terms of reference of the workshop should include its objectives, attributes, scope, draft agenda topics, issues to be addressed and so on. It is assumed that two of the key objectives of the workshop would be to provide detailed information that would facilitate the Working Group's subsequent revision of documents A/AC.105/L.253 and A/AC.105/L.254 (see footnote e).

[c] Issues to be addressed: Can the workshop be held in Vienna and at a time other than just before or after the meeting of the Scientific and Technical Subcommittee? If the workshop is held in another country, would the host country pay for the workshop? As noted in document A/AC.105/C.1/L.268, appendix 1, para. 14, it is assumed that neither the Office for Outer Space Affairs nor the International Atomic Energy Agency would provide interpreters for the workshop. Participating countries could provide their own interpreters or some member States could volunteer to pay for interpreters. (The Office for Outer Space Affairs will provide an estimate of interpreter costs to the Working Group.)

[d] The workshop would last three days. Days 1 and 2 would involve presentations and discussions; day 3 would be used to prepare a consensus document that the Office for Outer Space Affairs would have translated into the official languages of the United Nations prior to the next meeting of the Scientific and Technical Subcommittee.

[e] Document A/AC.105/L.253: "Proposed outline of objectives, scope and attributes for an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable nuclear power source applications in outer space"; document A/AC.105/L.254: "Preliminary draft of flow charts for potential implementation options for establishing an international technically based framework of goals and recommendations for the safety of planned and currently foreseeable nuclear power source applications in outer space".

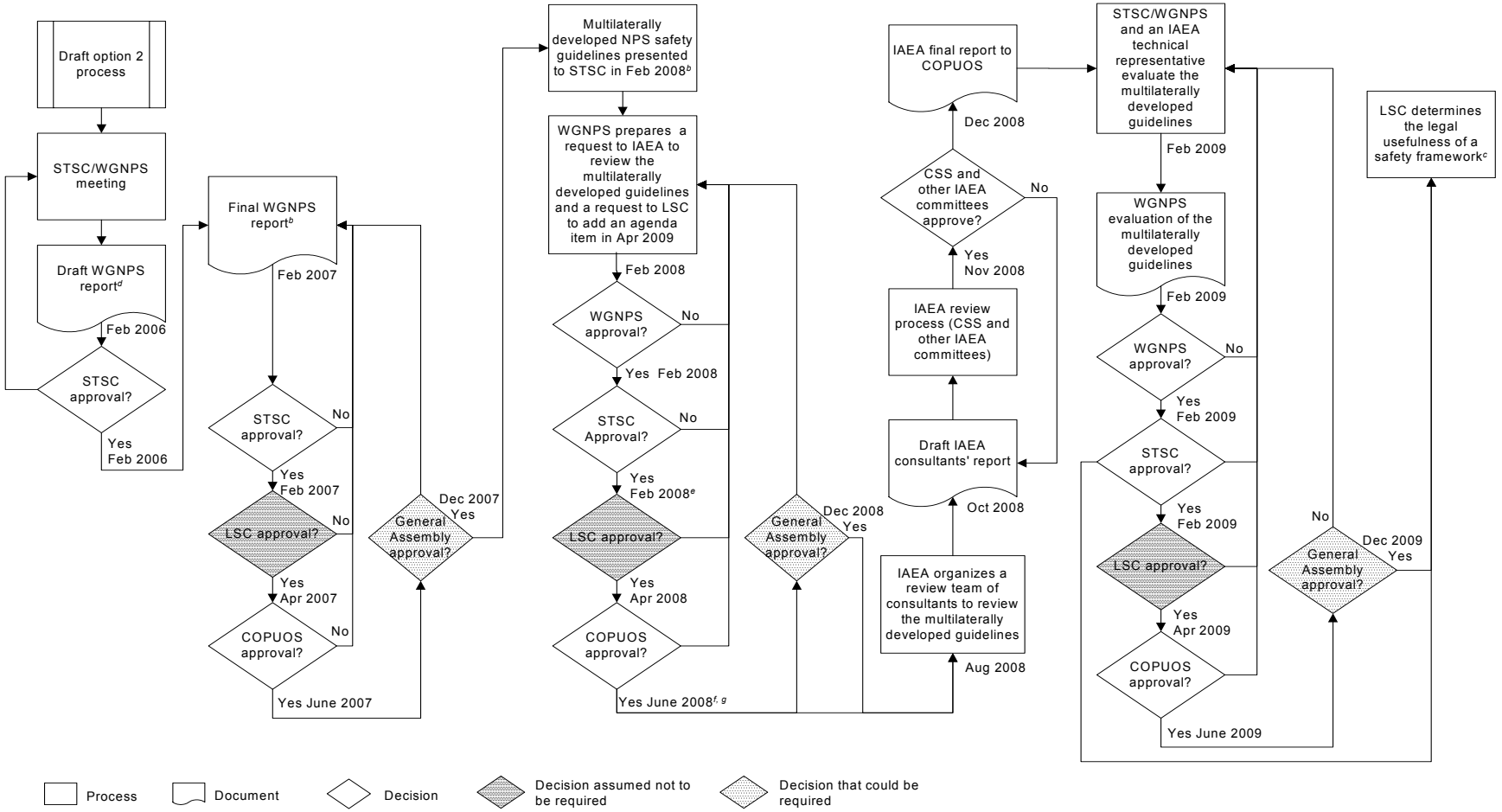
[f] Issue to be addressed: Who would the International Atomic Energy Agency invite to the workshop? How would the Agency make this decision? The Agency might consider targeting a select group of experts.

[g] Interested members of the Working Group on the Use of Nuclear Power Sources in Outer Space would work with the Office for Outer Space Affairs to organize the workshop.

[h] Early letter of intent from the Office for Outer Space Affairs to the Director General of the International Atomic Energy Agency notifying the Agency of the interest of the Committee on the Peaceful Uses of Outer Space in holding a joint workshop pending approval by the Committee. This early notification is required to reserve a conference room for the proposed workshop.

[i] Letter to request a cooperative effort to organize and hold the joint workshop.

C. Draft option 3A. International Atomic Energy Agency technical review provided as an input to the Working Group on the Use of Nuclear Power Sources in Outer Space: process, schedule,[a] assumptions and issues



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[a] The earliest possible dates are shown.

[b] Assumptions: (a) the multilateral group forms after the Scientific and Technical Subcommittee recommends option 3A; (b) the multilateral group prepares space nuclear power sources guidelines in one year and submits them to the Scientific and Technical Subcommittee as a working paper sponsored by the group's constituent countries; (c) the Scientific and Technical Subcommittee asks the International Atomic Energy Agency to prepare a technical review/evaluation of the multilateral group's guidelines; (d) the Subcommittee requests the Working Group on the Use of Nuclear Power Sources in Outer Space (including a representative of the Agency) to provide a technical review of the multilateral group's guidelines considering the technical review/evaluation from the International Atomic Energy Agency; (e) no Agency member State or commission raises an issue regarding the consistency of standards generated by different international bodies.

[c] Issues: What conclusion from the Scientific and Technical Subcommittee would prompt the requirement for Legal Subcommittee involvement? How long does it take the Legal Subcommittee to complete its activity and what does that activity involve?

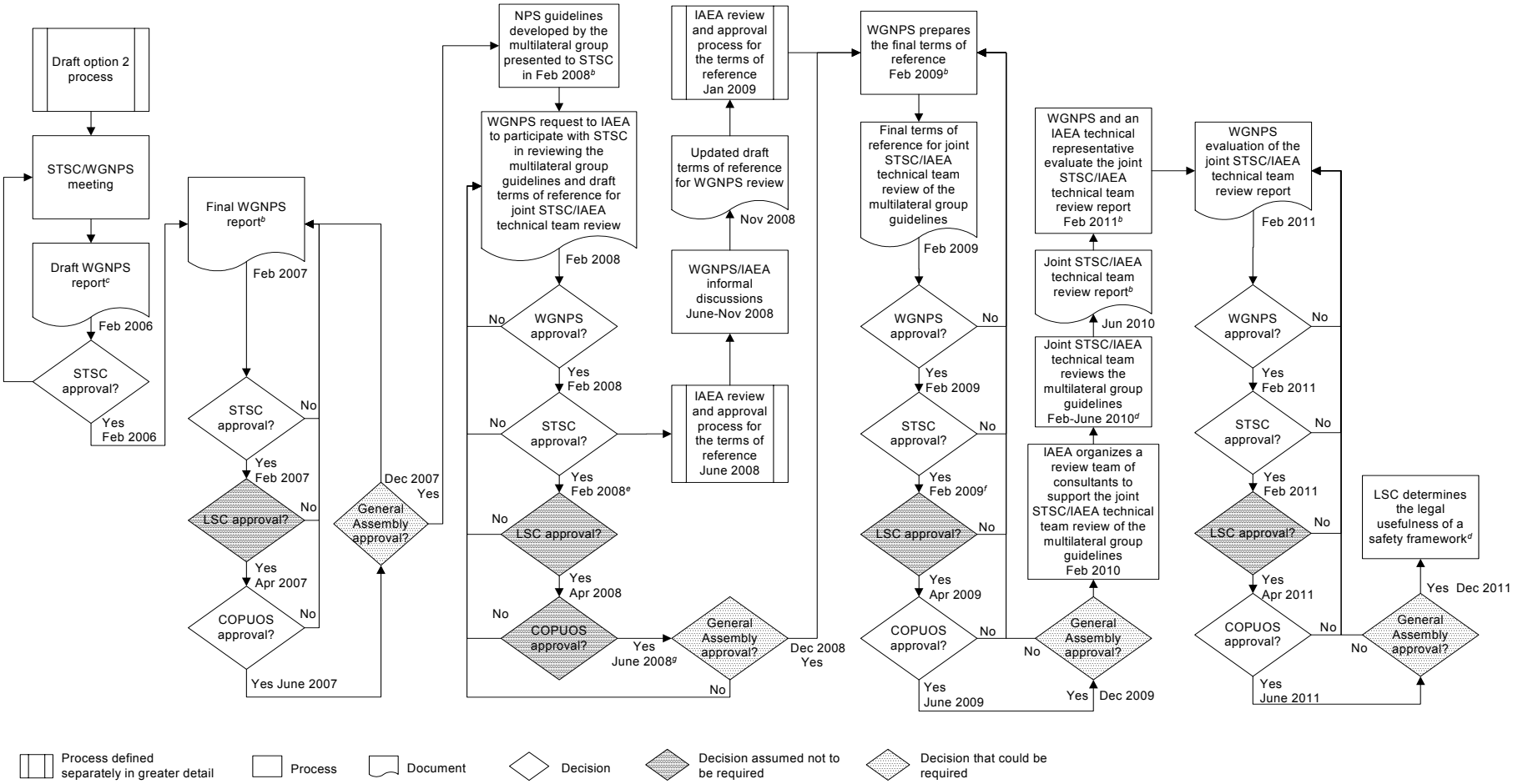
[d] Assumes that the work plan approved by the Scientific and Technical Subcommittee in 2004 (A/AC.105/804, annex III) is extended by one year to allow the incorporation of inputs from a joint International Atomic Energy Agency/Scientific and Technical Subcommittee workshop into the final report of the Working Group on the Use of Nuclear Power Sources in Outer Space.

[e] Upon Scientific and Technical Subcommittee approval, the Office for Outer Space Affairs sends a letter of intent to the Director General of the International Atomic Energy Agency notifying him of an anticipated request from the Chairman of the Committee on the Peaceful Uses of Outer Space.

[f] In anticipation of completing its review/evaluation of the multilateral group's guidelines in 2009, the Scientific and Technical Subcommittee in 2008 requests the Legal Subcommittee to add an agenda item in 2009.

[g] Upon Committee on the Peaceful Uses of Outer Space approval, the Chairman of the Committee sends a letter to the Director General of the International Atomic Energy Agency requesting a technical review of multilaterally developed guidelines by the Agency.

D. Draft option 3B. Joint Scientific and Technical Subcommittee/International Atomic Energy Agency technical review of the multilateral group guidelines: process, schedule,[a] assumptions and issues



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[a] The earliest possible dates are shown.

[b] Assumptions: (a) the multilateral group forms after the Scientific and Technical Subcommittee recommends Option 3B; (b) the multilateral group prepares space nuclear power sources guidelines in one year and submits them to the Scientific and Technical Subcommittee as a working paper sponsored by the group's constituent countries; (c) no International Atomic Energy Agency member State or commission raises an issue regarding the consistency of standards generated by different international bodies; (d) any changes in the final version by the Working Group on the Use of Nuclear Power Sources in Outer Space of the terms of reference for the joint Scientific and Technical Subcommittee/International Atomic Energy Agency technical team review are within the purview of the Agency's representative to the Working Group to approve; (e) the joint Scientific and Technical Subcommittee/International Atomic Energy Agency technical team review report is translated into the official languages of the United Nations by the Office for Outer Space Affairs and distributed in advance of the February 2011 Scientific and Technical Subcommittee meeting; (f) the same Agency representative(s) who participate in the joint Scientific and Technical Subcommittee/International Atomic Energy Agency technical team review participate in the 2011 Scientific and Technical Subcommittee/Working Group on the Use of Nuclear Power Sources in Outer Space meeting.

[c] Issues: How would the International Atomic Energy Agency take into account Commission on Safety Standards and other Agency Committees' interests? Would members of the Working Group on the Use of Nuclear Power Sources in Outer Space be able to support the joint Scientific and Technical Subcommittee/International Atomic Energy Agency technical team review at times other than February and June? What conclusion from the Scientific and Technical Subcommittee would prompt the requirement for Legal Subcommittee involvement? How long does it take the Legal Subcommittee to complete its activity and what does that activity involve?

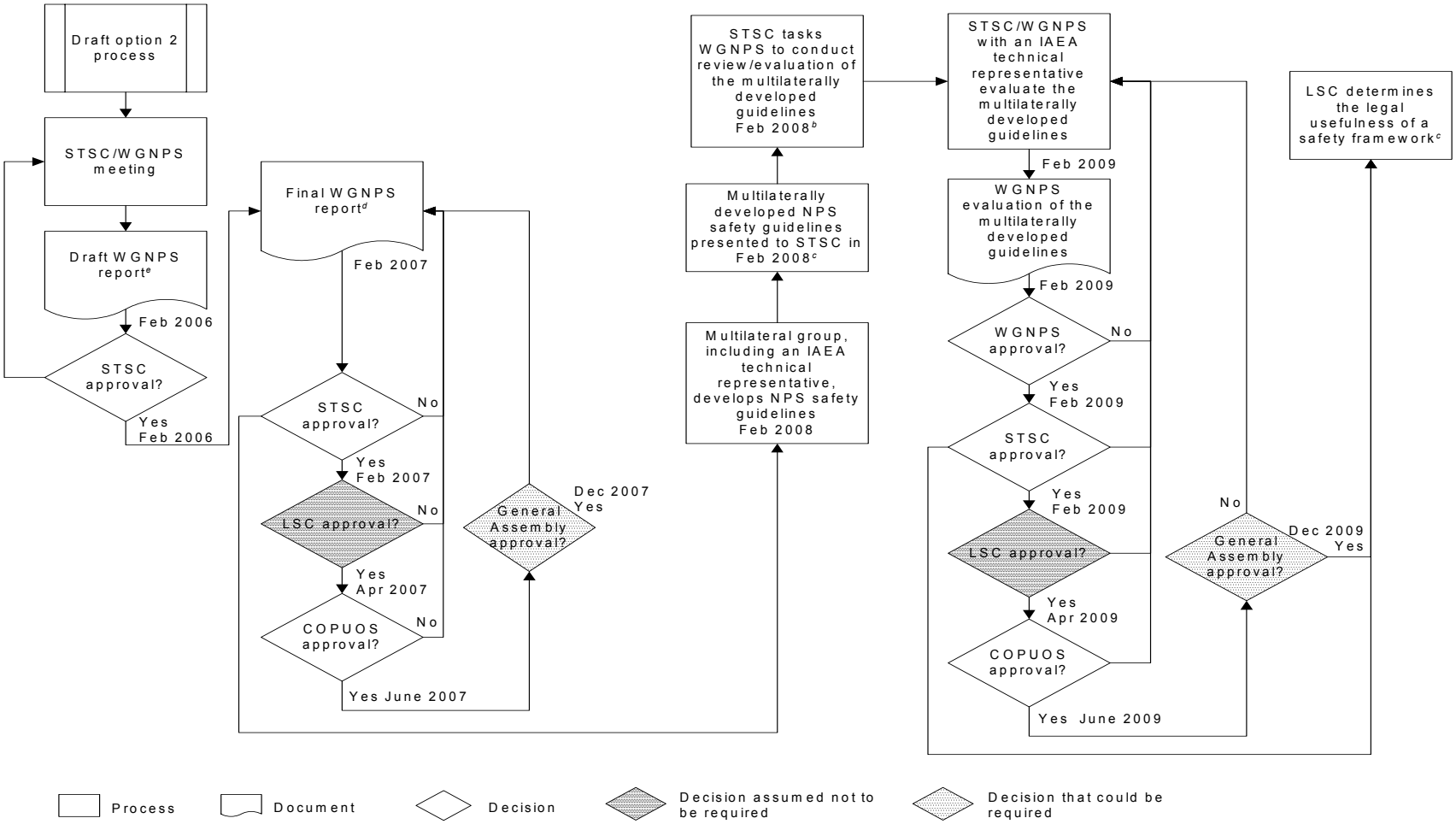
[d] Assumes that the work plan approved by the Scientific and Technical Subcommittee in 2004 (A/AC.105/804, annex III) is extended by one year to allow the incorporation of inputs from a joint International Atomic Energy Agency/Scientific and Technical Subcommittee workshop into the final report of the Working Group on the Use of Nuclear Power Sources in Outer Space.

[e] Upon Scientific and Technical Subcommittee approval, the Office for Outer Space Affairs sends a letter of intent to the Director General of the International Atomic Energy Agency notifying him of an anticipated request from the Chairman of the Committee on the Peaceful Uses of Outer Space.

[f] In anticipation of the Working Group on the Use of Nuclear Power Sources in Outer Space completing its evaluation of the joint Scientific and Technical Subcommittee/International Atomic Energy Agency technical team's review of the multilateral group's guidelines in 2011, the Scientific and Technical Subcommittee in 2009 requests the Legal Subcommittee to add an agenda item in 2011.

[g] Upon Committee on the Peaceful Uses of Outer Space approval, the Chairman sends a letter to the Director General of the International Atomic Energy Agency requesting a technical review of the multilateral group guidelines by the Agency.

E. Draft option 3C. International Atomic Energy Agency technical expert participation in the multilateral group: process, schedule,[a] assumptions and issues



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[a] The earliest possible dates are shown.

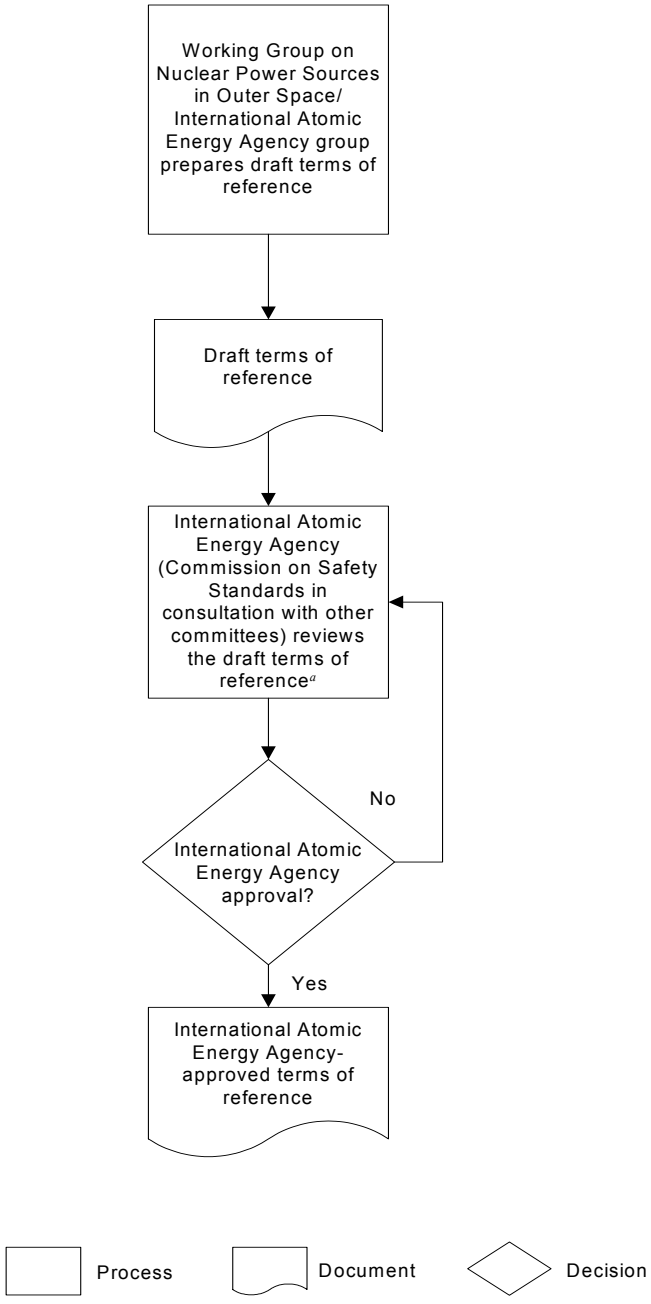
[b] In anticipation of completing its review/evaluation of the multilateral group's guidelines in 2009, the Scientific and Technical Subcommittee in 2008 requests the Legal Subcommittee to add an agenda item in 2009.

[c] Issues: What conclusion from the Scientific and Technical Subcommittee would prompt the requirement for Legal Subcommittee involvement? How long does it take the Legal Subcommittee to complete its activity and what does that activity involve?

[d] Assumptions: (a) the multilateral group forms after the Scientific and Technical Subcommittee recommends option 3A; (b) the multilateral group prepares space nuclear power sources guidelines in one year and submits them to the Scientific and Technical Subcommittee as a working paper sponsored by the group's constituent countries; (c) the multilateral group includes an International Atomic Energy Agency technical representative(s); (d) the Scientific and Technical Subcommittee requests the Working Group on the Use of Nuclear Power Sources in Outer Space (including the same representative(s) from the Agency who supported the multilateral group) to conduct a review/evaluation of the multilateral group's guidelines.

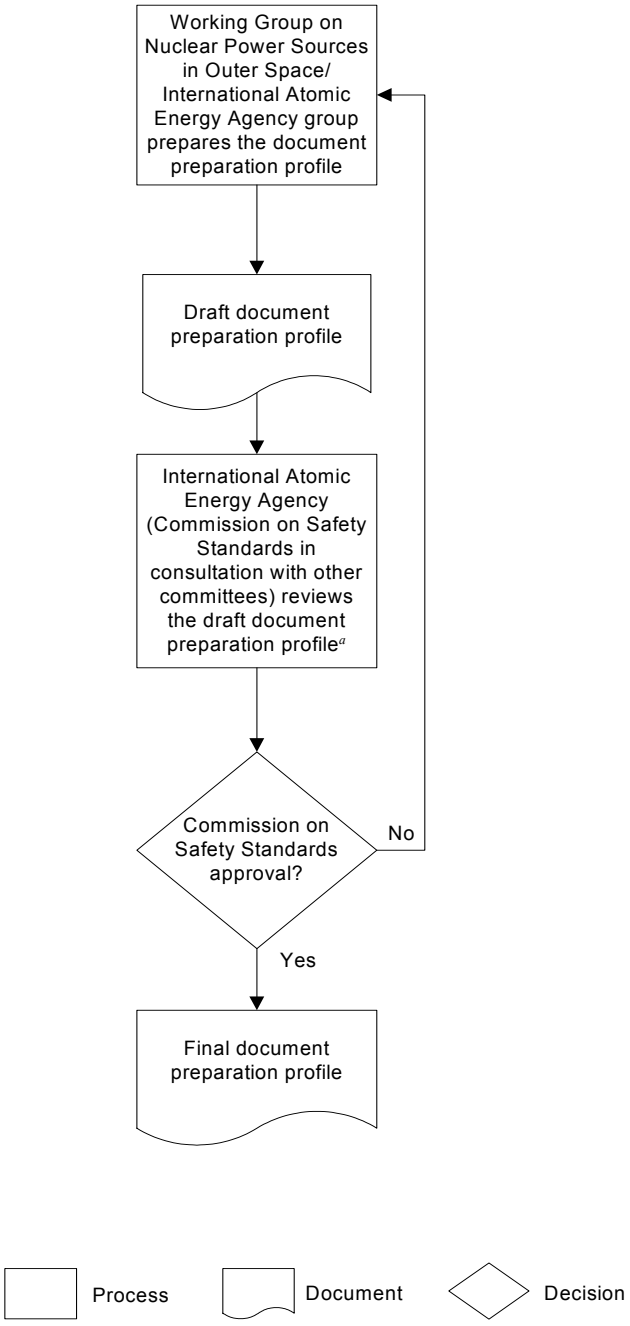
[e] Assumes that the work plan approved by the Scientific and Technical Subcommittee in 2004 (A/AC.105/804, annex III) is extended by one year to allow the incorporation of inputs from a joint International Atomic Energy Agency/Scientific and Technical Subcommittee workshop into the final report of the Working Group on the Use of Nuclear Power Sources in Outer Space.

F. Option 3B: process for review and approval of the terms of reference by the International Atomic Energy Agency



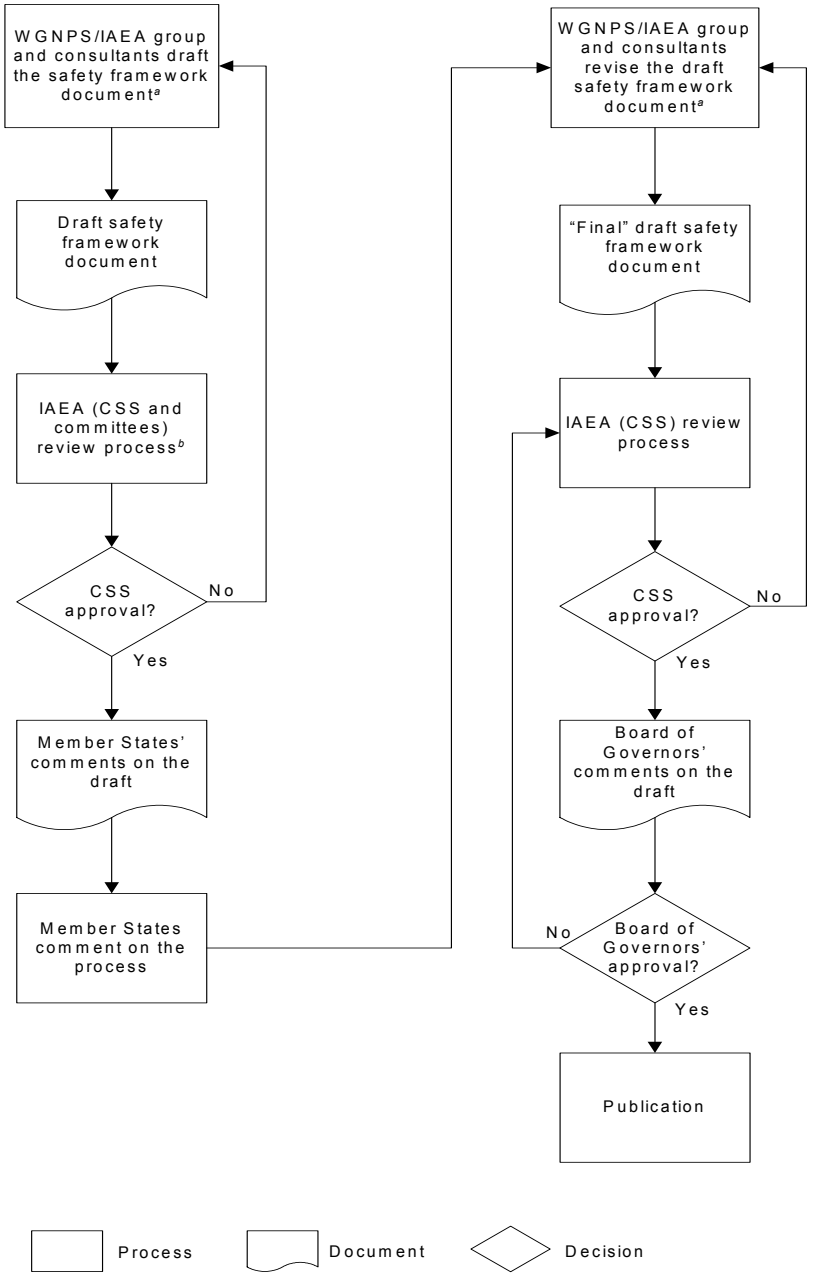
[a] Commission on Safety Standards, including consultations with other committees of the International Atomic Energy Agency.

G. Process for production of the document preparation profile by the International Atomic Energy Agency



[a] Commission on Safety Standards, including consultations with other committees of the International Atomic Energy Agency.

H. Document process of the International Atomic Energy Agency



[a] The group consists of members of the Working Group on the Use of Nuclear Power Sources in Outer Space and staff and consultants of the International Atomic Energy Agency.

[b] The Commission on Safety Standards and other committees of the International Atomic Energy Agency.