

THE IAEA BSS REVISION PROCESS: BACKGROUND AND STATUS

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1. Introduction

The International Atomic Energy Agency (hereafter referred to as the Agency) is unique among international organizations concerned with radiation protection standards as having a statutory function (IAEA Statute, Article III.A.6) to “establish or adopt in collaboration with the competent organs of the United Nations... standards of safety for protection of health and minimization of danger to life and property ... and to provide for the application of these standards...”.

The basic requirements for radiation protection against exposure to ionizing radiation of workers, members of the public and patients are given in the *International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources* [1] (hereafter referred to as the BSS) published in 1996.

As a result of a review of its BSS in 2006, the Agency has initiated in 2007 the revision of the BSS. International organisations such as FAO, ILO, OECD/NEA, PAHO, WHO (current co sponsoring organisations) as well as potential co-sponsoring organizations (EU, UNEP) are involved in the revision process. Task specific drafting meetings, a technical meeting and “Co-sponsors’ technical drafting meetings” have lead to successive drafts.

The objective of this paper is to summarize the background of the revision process, the steps undertaken and those which still have to be performed in order to publish the final version of the BSS. The paper will also provide the status of the draft document in May 2008.

2. Background of the revision process

In 2005, in accordance with the Agency’ policy for reviewing every ten years its publications providing requirements, the Secretariat, with advice from the Safety Standards Committees¹, prepared a work plan for the review of the BSS. This plan was approved by the Commission on Safety Standards in November 2005. The work plan had the objective of completing a comprehensive review of the BSS which was finalised before the end of 2006. The Document Preparation Profile (DPP) was developed and also approved in the committees. In addition, steps

¹ RASSC, WASSC and NUSSC

were undertaken by the Agency to set up the BSS Secretariat², involving current and potential co-sponsors of the BSS.

The RASSC-WASSC meeting in April 2006 concluded - and in May 2006, the BSS Secretariat concurred with their views - that, while there was no major issue requiring urgent revision, there is a case to be made for the revision of the BSS in order to take account:

- The need to link a revised BSS to the new Safety Fundamentals [2] and to take account of new ICRP Recommendations [3].
- The need to take account of more recent international agreements such as the Code of Conduct on the Safety and Security of Radioactive Sources [4] and associated Import/Export guidance and, where appropriate, of International Conventions, particularly the Nuclear Safety Convention and the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management.
- The need to ensure consistency with and appropriate cross-referencing to closely related publications, particularly at the Safety Requirements level, such as GS-R-1 [5], GS-R-2 [6] and WS-R-3 [7], but also for key Safety Guides, such as RS-G-1.7 [8] and RS-G-1.9 [9].
- There are many more or less significant improvements that could be made to the text of the BSS³, including improvements in clarity, providing greater detail where it is presently absent, introducing new material where shortcomings are identified, and removing some detailed material as possibly more suitable for Safety Guides.

It was also noted that care should be exercised in undertaking the revision to restrict substantive changes to those that are regarded as justified, as revision could lead to significant costs for Member States and for the Agency. This will necessitate careful attention being paid in the revision to a process for considering the merit of proposed changes.

3. The revision process

Potential co-sponsoring organizations have agreed to coordinate their efforts through the BSS Co-sponsors Secretariat. In order to ensure that a coherent programme of work is developed and implemented, the following understandings were agreed for guiding the overall process for joint development of a revised BSS. It was recognized that the IAEA has the chair of the secretariat for the revision of the BSS and for overall coordination of the revision process and that the revision should be conducted according to the process required for development of publications in the *Safety Standards Series*.

² The BSS Secretariat has been established and is led by the IAEA to facilitate the participation of co-sponsoring and other international organizations in the process of revision of the BSS. It includes representatives from FAO, IAEA, ILO, OECD/NEA, PAHO, UNEP, WHO, and the European Commission, together with observers from ICRP and IRPA. ICAO and IMO have also been invited to participate.

³ Some have been identified in Working Materials prepared for the April 2006 meetings of RASSC and WASSC and in the feedback reports from Working Groups that analysed those materials.

Moreover, the adopted methodology for ensuring the most efficient conditions for these meetings was defined and eight initial drafting meetings were scheduled in 2007. Depending upon the topic to be addressed, these meetings were hosted by the IAEA or by the co-sponsoring organisations as indicated hereunder.

Meeting	Topic	Host(s)	Venue
DM1	Ch.5, Public exposure from practices	IAEA	Vienna
DM2	Ch.6, Medical exposure	PAHO/IAEA	E-meeting
DM3	Ch.7, Exposure in emergencies	NEA/IAEA	Paris
DM4	Ch.4, Occupational exposure	ILO/IAEA	Geneva
DM5	Ch.2, Regulatory framework	IAEA	Vienna
DM6	Ch.3, Control of exp. in practices	IAEA	Vienna
DM7	Ch.8, Existing exp. situations	IAEA/WHO	Geneva
DM8	Ch.9, Protection of the environment	IAEA	Vienna

In July 2007, a technical meeting was held in Vienna and was attended by more than 120 participants. They examined in plenary and working group sessions the draft text produced during the “topical” drafting meetings. The main conclusions drawn at the end of this technical meeting were:

- the BSS should remain the international benchmark for protection and safety at the international level;
- there is a need for maintaining the completeness of the BSS across all circumstances of exposures;
- **there was a clear agreement on the need to follow as much as possible the ICRP Recommendations;**
- an introductory section should be developed for explaining the principles and concepts of protection and safety;
- a common structure should be adopted for each section of the revised BSS as well as subsections; briefly described, for each exposure situation, generic requirements, public exposure, occupational exposure and medical exposure should be addressed. Moreover, for each of these three last areas, the scope, the responsibilities, the application of the protection and safety system as well as specific situations should be developed if needed;
- further work should be done in order to examine the level of detailed information to be put in the BSS or to be moved to the relevant Safety Guide;
- it was also advised to maintain definitions in the revised BSS and
- it was strongly emphasized again that all changes made to the existing BSS should be justified and tracked.

4. Status by May 2008 and way forward

After the technical meeting of July 2007, additional works were performed by the Secretariat and one drafting meeting (March 2008) and an extended review meeting (May 2008) were held at the IAEA-Headquarters in Vienna involving co-sponsoring and potential co-sponsoring organisations.

Although the fruitful discussions held during the drafting- and technical meetings have solved many issues, there are still a few which will still be finalized. For example, concerning the radon, the ICRP values have been provisionally considered but s ICRP will proceed to a review of these values, changes may still occur in the revised BSS. Another issue still requesting final decision is the clear distinction, in emergency exposure situations, between the emergency phase as such and the start of the existing exposure situation phase.

Nevertheless, as scheduled, the objective to produce in June 2008 the Draft 1.0 which should be a “clean” draft, together with tracking and justification of changes from the existing BSS should be achieved.

The next step - all Committees to conduct a first full review of Draft 1.0- is scheduled in October/November 2008. As information, Annex 1 gives the provisional table of contents of the revised BSS.

5. References

- [1] International Basic Safety Standards for Protection Against Ionizing Radiation and for the Safety of Radiation Sources, *Safety Series, No.115, 1996.***
- [2] Fundamental Safety Principles - *Safety Standards Series, No. SF-1, 2006***
- [3] ICRP Recommendations, *Publ.103, Dec.2007***
- [4] Code of Conduct on the Safety and Security of Radioactive Sources, *IAEA 2004***
- [5] Legal and Governmental Infrastructure for Nuclear, Radiation, Radioactive Waste and Transport Safety Requirements *Safety Standards Series, No. GS-R-1, 2000***
- [6] Preparedness and Response for a Nuclear or Radiological Emergency Safety Requirements *Safety Standards Series, No. GS-R-2, 2002***
- [7] Remediation of Areas Contaminated by Past Activities and Accidents Safety Requirements *Safety Standards Series, No. WS-R-3, 2003***
- [8] Application of the Concepts of Exclusion, Exemption and Clearance Safety Guide *Safety Standards Series, No. RS-G-1.7, 2004***
- [9] Categorization of Radioactive Sources Safety Guide, *Safety Standards Series, No. RS-G-1.9, 2005***

ANNEX 1 : Provisional Table of Contents of the revised BSS (May 2008)

1. INTRODUCTION

Background
Objective
Scope
Structure

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Interpretations
Resolution of conflicts
Entry into force
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Responsibilities of the regulatory body
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Implementation of radiation protection principles

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CONTRIBUTORS TO DRAFTING AND REVIEW