Document Preparation Profile (DPP)

1. IDENTIFICATION

Document Category: Safety Requirements

Working ID: DS379

Proposed Title: Revision of the international BSS

Proposed Action: Revision of the International Basic Safety Standards

Published Title/Date 1996

Safety Series No.: 115

SS Committee(s): RASSC, WASSC, TRANSSC, NUSSC

Technical Officer(s): E. Amaral

2. OBJECTIVE

To update the International Basic Safety Standards to take into account developments in radiation safety since 1996, and to formally establish the revised standards as a Safety Requirements publication within the overall structure of the *Safety Standards* as outlined in the action plan approved by the Board of Governors in March 2004..

3. BACKGROUND

The International Basic Safety Standards for Protection against Ionizing Radiation and for the Safety of Radiation Sources (BSS) was published in the former IAEA Safety Series in 1996 as SS115, although it has served *de facto* as a Requirements level publication in the current *Series*. Over the years, it has become the international benchmark for radiation safety requirements. Following a thorough review, the IAEA Safety Standards Committees RASSC and WASSC have come to the conclusion that, while no single issue creates a compelling need to revise the BSS, there is a case to be made for revision to deal with many improvements that have been suggested, provided that proposed changes are subjected to an appropriate test of merit consistent with the overall structure, vision and strategy for the IAEA Safety Standards.

4. INTERFACES

As the BSS has a role with respect to the other Requirements and with formalization of fundamental principles, great care will be needed to ensure coherence across the *Safety Standards Series*. Particular attention will need to be paid to consistency and complementarity with the new Safety Fundamentals and other Safety Requirements such as GS-R-1, GS-R-2, TS-R-1, and WS-R-3. In addition, anticipated new ICRP Recommendations should be taken into account, as should implications arising from relevant International Conventions and other international instruments, such as the Code of Conduct on the Safety and Security of Radioactive Sources and associated import/export guidance.

The current BSS is cosponsored by five other international organizations: FAO, ILO, NEA/OECD, PAHO and WHO. The involvement of existing and possible future cosponsors in the revision process is essential to the harmonised application of the BSS by all cosponsoring organisations, and will be ensured by the participation of cosponsoring organisations in the secretariat for the BSS revision, as resolved by the IAEA Board of Governors in GC(50)/RES(10).

5. OVERVIEW

The Safety Standards Committees have advised that the comprehensive character of the BSS should be retained in this revision, which should be based on the most up-to-date data on the health and environmental consequences of radiation exposure, as provided by UNSCEAR and, to the extent possible, on the recommendations of ICRP. It should underpin radiation safety practice in all areas, including medicine, general industry, nuclear industry, radioactive waste management, and transport; it should cover occupational exposure, medical exposure, exposure of members of the public and protection of the environment; it should cover both normal circumstances of exposure and emergency situations; and it should make reference to infrastructures for safety and for security related to safety.

The new Safety Requirement should be in such a form that the requirements set out can be readily transformed into national regulatory frameworks. Terminology and concepts should be settled in the light of new ICRP recommendations and the new Safety Fundamentals. The existing BSS text should be reviewed from the perspective of moving more detailed material to safety guides when prescriptive requirements are considered to be unnecessary.

The revision should be carried out bearing in mind the clear wishes of many Member States that unwarranted change should be avoided, in order to promote stability of national standards that make use of the IAEA Safety Requirements. An outline table of contents is given at Annex I.

6. PRODUCTION: Provisional schedule for preparation of the document, outlining expected dates for:

Approval of DPP by the Safety Standards Committees:	Sept. /Oct. 2006
Endorsement of DPP by the CSS:	November 2006
Development of the draft Safety Requirements will proceed through ad hoc drafting Working Meetings, with a Technical Meeting anticipated in July 2007 to complete first draft.	
First draft to be reviewed by RASSC and other Committees Development will continue with drafting meetings and a Technical Meeting If necessary, in 2008	October 2007
Approval by the Safety Standards Committees for submission to Member States for comments:	Sept. /Oct. 2008
Revision of draft taking into account the Comments by the Member States:	March/April 2009
Submission to the Committees	March/April 2009
Approval by the Safety Standards Committees for submission to the CSS:	May 2009
Endorsement by the CSS	June 2009
Submission to Publications Committee for approval:	June 2009
Finalization of formal approval processes by cosponsoring organizations[1]:	September 2009
Approval by the Board of Governors:	September 2009
Target publication date:	4th Quarter 2009.

[1] Cosponsoring organizations will participate in the development of the revised BSS, and will use their own approval mechanisms and procedures, in parallel with the above schedule as far as possible. Final approval for cosponsorship will depend on completion of the formal processes required by each cosponsoring organization.

Annex I. DS379 - Proposed outline of contents

[Linkage to the new Fundamental Safety Principles in square brackets]

1. Introduction
   - Standard format, but to include lead-in material on key concepts, such as: types of exposure – actual, potential, planned, emergency, existing, occupational, public, medical – and regulatory approaches. Infrastructure considerations (see eg: GS-R-1, Ch.6 and Paras. 2.2 (6), (7), (9), (11)) to be covered.

(Depth of detail to be discussed, along with the possibility of a separate explanatory document)

SECTION I – Regulatory Framework

2. Regulatory measures for the control of exposure [SF: P1, P2, P3, P4]
   - Governmental infrastructure responsibilities
   - Legislation, regulations, codes of practice
   - Circumstances of exposure: practices, emergencies, existing situations
   - Scope of regulatory requirements
   - Responsibilities
   - Justification and authorization processes
   - Assessment, Inspection and Verification processes
   - Regulatory roles in optimization and use of dose constraints
   - Safety and security of sources
   - Management systems [SF: P3]

(Text to be kept to a minimum, consistent with the need for completeness of BSS, with refs. to, and avoiding duplication with, GS-R-1)

SECTION II –Requirements for practices

3. Control of exposure in practices
   - Administrative requirements, authorization, reporting
   - Optimization, Limitation, Dose constraints [SF: P5, P6]
   - Management requirements and systems [SF: P3]
   - Safety and security of sources *(includes material from Appendix IV)* [SF: P8]
   - Transport of radioactive sources *(reference to TS-R-1)*
   - Whole-of-life considerations (eg: control of sources and management of radioactive waste) *(reference to DS353)* [SF: P7]

(The next chapters will bring material currently in Appendices into the body of the text. Particular attention will be given in Ch.4 and Ch. 6 to the possible transfer of highly detailed material to Safety Guides; conversely, in Ch. 5 and Ch. 8 to possible elaboration of existing text.)

4. Requirements for occupational exposure [SF: P5, P6, P8]
   (Updating of Appendix I. Includes dose limits, and use of constraints)

5. Requirements for public exposure from practices [SF: P5, P6, P7, P8]
   - Management of radioactive waste *(reference to DS353)*

   (Updating of Appendix III. Includes dose limits, and use of constraints)

6. Requirements for medical exposure [SF:P4, P5]
(*Updating of Appendix II.*)

SECTION III –Requirements for emergency actions

7. Requirements for control of exposure in emergencies [SF: P9]
(*Updating of Appendix V. Text to be kept to a minimum, consistent with the need for completeness of the BSS, with referencing to GS-R-2*)

SECTION IV –Requirements applicable to existing exposure situations

8. Control of existing exposure [SF: P10]
(*Updating of Appendix VI*)

SECTION V – Requirements for protection of the environment

9. Protection of the environment [SF: P7]

SCHEDULES

Schedule I. Regulatory thresholds (eg: exemption levels) (*Combination of existing Schedule I and RS-G-1.7*)

Schedule II. Action levels for emergencies (*Updating of Schedules IV and V, with consideration to be given to moving to GS-R-2 or Safety Guides*)

Schedule III. Action levels for existing exposure situations (*Updating of Schedule VI, with consideration to be given to moving to Safety Guides*)

Glossary