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MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of com- ment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
AR	General		ge	Disagree with the concepts grouping .	Proposed headings:	Accepted
				Headings are not correct.	3.1 General terms related to radiological protection	
					3.2 Terms related to biological effects	
					3.3 Terms related to biological exposure	
					3.4 Terms related to radiological monitoring	
					3.5 Terms related to measurement	
					3.6 Terms related to technical aspects	
					3.7 Terms related to regulation	
CA	General		ge	Terms shown on this draft are identical to the terms in the Preliminary Draft and do not take into account the earlier requests by Canada and France to include the terms in recent ISO TC/85 SC2 standards from the original list established in Buenos Aires.	Add deleted terms from Buenos Aires list.	Data in the Preliminary Draft could not be changed because comments shall be discussed and agreed by WG1 at a meeting before any change can be made.
CA	General		ge	Concept Diagrams do not show the relationship between terms. For example, 3.1.1 deterministic effect. 3.1.2 hereditary effect, 3.1.3 somatic effect and 3.1.4 stochastic effect are subsets of radiation effects and not directly subsets of radiological protection.	Add other intermediary terms for different subsets.	No new terms will be added.
CA	General		ge	Many terms are not exclusive to Radiation Protection and will be used in subsequent Parts of the Vocabulary. These terms should be moved to Part 1 General. For example 3.2.1 absorbed dose, 3.2.11 kerma, and 3.3.1 measurand.	Move general terms to Part 1 General	Noted.
JP	General		ge	Please see attached paper ( <b>K.Kitao – JP – Comments</b> <b>2</b> ) for a proposed list of terms, including terms missed, and proposed grouping.		All comments shall be stated in the Commenting Template.

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KE	General		ge	The grouping into sections 3.1, 3.2, 3.3, 3.4, 3.5, and 3.6 is helpful when searching. However, the listing within the sections do not seem to follow alphabetical order.		The listing within the sections is arranged in conceptual order.
кк	General		ge	Agree with the concepts grouping.		
SE	General		ge	The document ISO/TC 85 N 1154 refers to a number of organizations dictionaries. Not least, IAEA Safety Glossary 2007. There is a risk that these dictionaries diverges, and creates confusion for the reader. How will the NWIP N 1154 be consistent with the expression of existing ISO standards and its context? Will that be verified?		Before including data in the document existing ISO standards are analysed to verify consistency.
AR	Introduction				Change "radiation protection" to "radiological protection"	Accepted.
JP	Introduction	Para 3. Lin 2 And 4	ge	This part 2 is limit ed to "radiological protection"	Change "radiation protection" to "radiological protection"	See above.
JP	2 Structure of the vocabulary	Lin 2	ed	Use the same expression	Change "systematic index" to "concept diagram"	Not accepted because at the end of the standard an alphabetical index is followed by a systematic one.
JP	ditto	Lin 4	ge	This part 2 is limited to "radiological protection"	radiological protection	Accepted
GB	2	2	ge	Second sentence unnecessary		Not accepted because the standard data are arranged in a conceptual order.
IAEA	3.1		ed	The bracket states that the definition is taken from the IAEA Glossary, but the definition in the IAEA Glossary does not contain "and the environment".		Accepted. Source data has to be changed.
JP	3.1		ge	Need additional terms for this category	environmental radioactivity activity concentration accidental exposure	No new terms will be added.

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					external radiation internal radiation external exposure internal exposure <i>in vivo</i> measurement late effect radiotoxity fallout radioactive effluent radioactive waste	
JP	3.1	term	te	This part 2 is limit ed to "radiological protection"	Change order: radiological protection radiation protection	Accepted.
JP	ditto		te	"Radiation protection" have broader usage.	Added: NOTE In a broad sense, radiation protection may use for that of radiation-induced chemical and physical damage in material.	Not accepted
KE	3.1		ed	The same sub clause No. 3.1 is used for "General terms related to radiological protection" and "radiological protection/radiation protection"	Use 3.1 for "General terms related to radiological protection" and 3.1.1 for "radiological protection/radiation protection"	Noted accepted
JP6	3.1.1	Lin 1	ge	Use the same expression	Change "threshold limit of dose" to " threshold dose"	Accepted
JP7	ditto	NOTE	te	Wrong	Rewrite NOTE Deterministic effects are normally somatic effects. Example erythems acute radiation syndrome	Delete notes.
ко	3.1.1		ed	To inform	NOTE 3 The International Commission on Radiological Protection(ICRP) uses 'tissue reaction' as a synonym of deterministic effect.	Not accepted
JP8	3.1.2	NOTE	te	Have different contents	Separate NOTE to NOTE 1 and NOTE 2	Accepted

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IN	3.1.3,	NOTE	te	(Does it mean that all somatic effects are deterministic effects (in which case there exists a threshold level of dose) and all deterministic effects need not be somatic effects?)	NOTE Delete : stochastic effects may be somatic effects or hereditary effects.	Delete the second part of the note.
AR	3.1.3	NOTE	Те	It does not add anything and is confused.	NOTE Delete : stochastic effects may be somatic effects or hereditary effects.	See above
JP9	3.1.3	NOTE	te	Wrong	Delete "Deterministic"	See above
IN	3.1.4		te	Better clarity	<ul> <li>Change to: <ol> <li>stochastic effect</li> </ol> </li> <li>radiation induced health effect, probability of occurrence of which is greater for a higher radiation dose and the severity of which (if it occurs) is independent of dose. Stochastic effects may be somatic effects or hereditary effects.</li> <li>NOTE</li> <li>Stochastic effects may be somatic effects or hereditary effects, and generally occur without a threshold level of dose. (Examples include solid cancers and leukaemia.)</li> <li>If a stochastic effect is a somatic effect then there should be a threshold level of dose as somatic effect for which there exists a threshold level of dose.</li> </ul>	Not accepted
JP	3.1.4	Definition	te	Use the same expression to that 3.1.1	radiation induced health effect, which generally occur without a threshold dose and probability of occurrence is greater for a higher radiation dose, NOTE Stochastic effects may be somatic effects	Not accepted

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					or hereditary effects. The severity of the effects (if it occurs) is independent of dose Examples solid cancers leukaemia.	
AR	3.1.4				radiation induced health effect, which generally occur without a threshold dose and probability of occurrence is greater for a higher radiation dose, NOTE Stochastic effects may be somatic effects or hereditary effects. The severity of the effects (if it occurs) is independent of dose Examples Solid cancers and leukaemia.	Not accepted
КО	3.1.4		ed	To emphasize no-threshold	radiation dose and ->radiation dose, without threshold, and	Not accepted
SE	3.1.4		ed	"which probability" is not good English, according to a specialist.	Change "which probability" to "whose probability"	Accepted
AR	3.1.4		ed		Change "which probability" to "whose probability"	See above
AR	3.1.5		te	Change position of the portion in bracket	linear-no threshold hypothesis (LNT)	Accepted
IN	3.1.5		te	Superfluous	linear–no threshold (LNT) hypothesis Delete the portion in bracket	Not accepted
ко	3.1.5		ed	Use right term	Hypothesis -> model	Not accepted
KE	3.1.7		te	The definition applies more to "dispersion" than to "atmospheric dispersion factor", which connotes a number		We need new definition of "dispersion factor". Term changed from "dispersion factor" to "dispersion".

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КО	3.1.7		ed	Avoid confusion	Delete the second line 'dispersion'	"dispersion"/ "dispersion factor"
JP	3.1.8.1	Definition	ed	General term	Move to Part 1	Accepted
AR	3.1.8.1	Definition	ed	General term	Move to Part 1	Accepted
KE	3.1.8.1		te	This definition of radioactivity, which suggests it is a process rather than a property of matter, is contentious.	The contention is avoided by rephrasing the sentence as follows: "Spontaneous random disintegration of nuclei, usually accompanied by the emission of subatomic particles, or photons"	To be discussed later.
SE	3.1.8.1		ed	In some vocabularies (e.g. ISO 921) photons are regarded as particles	Write "including" instead of "of" before "photons"	See above
BE	3.1.8.1.1.1			exposure Correct, but change "positron" to "positrons"		Accepted
AR	3.1.8.1.1.1				"Positrons" instead of "positron".	Accepted
CA	3.1.8.1.1.1		te	For this Vocabulary, "exposure" should be defined in terms of "being irradiated" as stated in the Jeju terms list.	Redefine and move to 3.4 where other compound terms that include "exposure" are used.	Accepted
IN	3.1.8.1.1.1			Should be plural	exposure Change positron into positrons	See above
JP	3.1.8.1.1.1	Definition	ed	Use uniformed expression for unit.	NOTE The unit of exposure is Ckg <sup>-1</sup>	Accepted
AR	3.1.8.1.1.1	Definition	ed		Agree with previous comment.	Accepted
JP	3.1.8.1.1.1	definition	te	Wrong, it is not that of "radiation exposure"	change the definition	Accepted
JP	3.1.8.1.1.1. 1	Term	te	Acute radiation sickness is a kind of acute syndrome.	Delete "or sickness" Change No 3.1.8.1.1.1.to 3.1.3.1.	Not accepted
AR	3.1.8.1.1.1. 1				Delete "or sickness" Change No 3.1.8.1.1.1.1.to 3.1.3.1.	Not accepted
AR	3.1.9		te	naturally occurring radioactive material (NORM) by ICRP 103	Radioactive material containing no significant amounts of radionuclides other than naturally occurring radionuclides. Material in which the	Accepted. Trevor Boal sent following text to be added as a Note: The exact definition

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					activity concentrations of the naturally occurring radionuclides have been changed by some process are included in NORM.	of "significant amount" would be a regulatory decision.
BE	3.1.9		te	naturally occurring radioactive material (NORM) Correct	but change "material which" for "material in which"	See above
IAEA	3.1.9		te	The ISO definition of NORM is narrower than the IAEA definition. The following definition is in the IAEA Glossary:	Radioactive material containing no significant amounts of radionuclides other than naturally occurring radionuclides	See above
IN	3.1.9			The definition as given refers to "Treated or processed naturally occurring radioactive material".	naturally occurring radioactive material (NORM) Definition should be: Radioactive material occurring in nature. Examples: Uranium and thorium ores	See above
JP	3.1.9		ed		Change No 3.1.9.to 3.1.8.1	See above
JP	ditto	Definition	te	Definition is a note.	Change definition: Radioactive material containing no significant amounts of radionuclides other than naturally occurring radionuclides NOTE The exact definition of 'significant mounts' would be given by a regulatory decision.	See above
КО	3.1.9		te	Better definition(replace)	Radioactive material containing no significant amounts of radionuclides other than naturally occurring radionuclides. NOTE 1 Material in which the activity concentration of the naturally occurring radionuclides have been changed by some process are included in NORM.	See above

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SE	3.1.9		ed	Missing word	Insert "in" between "material" and "which"	See above
AR	3.1.9				Insert "in" between "material" and "which"	See above
GB	3.1.9		te	Is solid waste not ever high level.		See above
AR	3.1.10				Change "source" to" radiation source"	accepted
JP	3.1.10	Term	ed	"source" is a special case of "radiation source"	Change "source" to" radiation source"	See above
JP	3.1.10	term	te		change to "radioactive source"	See above
JP	3.1.11	Definition	te	In relation of "3.4.22 ALI", given descript in detail.	taken into the human body by inhalation or ingestion or throng the skin in a given time interval or NOTE The unit of absorbed dose is s <sup>-1</sup> , with the special name bequel (Bq)	Not accepted
IN	3.1.12			Complete definition would be there.	The terminology "single slice" and nominal slice" may be elaborated	Not accepted
JP	3.1.12	Term	ge	Too specific	Delete	Change the location.
JP	3.1.12	term	te	Too specific	delete	Not accepted
AR	3.1.13				Change to "threshold dose"	Accepted
CD	3.1.13		te	It has a more general use than the definition given		Accepted
JP	3.1.13	Term	te	1) dose threshold or threshold dose ?	1)Change "dose threshold" to "threshold dose"	1)Accepted
		Definition		2) Definition not enough	2)Definition: Minimum absorbed dose that will produced a specified deterministic effect I[SO 921 MOD]	2) Not accepted

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JP	3.1.13	term	te		change to "threshold dose"	Accepted
GB	3.1.13		te	This term is used in a more general fashion.		Not accepted
AR	3.1.14	Term	ed		Delete "nominal"	Accepted
JP	3.1.14	term	ed	nominal ?	Delete "nominal"	See above
JP	3.1.14	term	te	nominal risk coefficient; risk coefficient replace with two terms.	fatality probability coefficient; risk coefficient nominal fatality probability coefficient; nominal risk coefficient	No new terms will be added.
КО	3.1.14		ed	consistency	Delete the first 'the'	Accepted
AR	3.1.16				Replace "ingestion by children and adults" with "human ingestion".	Accepted
BE	3.1.16				human alimentary tract model (HATM) Correct, but it could be simplified by replacing "ingestion by children and adults" with "human ingestion"	See above
AR	3.1.17			The definition has been changed so as to be coherent with the one of HATM	model that describes the processes that are involved when a radioactive material is incorporated by inhalation by children and adults.	Accepted
BE	3.1.17				human respiratory tract model (HRTM) Correct, but change "process that are involved" with "processes involved"	See above
AR	3.1.17				The definition has been changed so as to be coherent with the one of HRTM	See above
AR	3.1.17		ed		Change "process" to "processes".	See above
SE	3.1.17		ed	Printing error	Change "process" to "processes"	See above

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AR	3.1.18			By Classification of radioactive waste, IAEA General safety guise GSG -1	High concentrations of radionuclides of long period and heat generation. Final disposition in depth. To be deleted as definition is given in 3.1.5.	Accepted
BE	3.1.18				linear-no threshold (LNT) hypothesis Correct, but is it necessary to say "and dose rate"?	See above
IN	3.1.18			Avoid repetition.	Needs to be deleted as definition is given in 3.1.5.	See above
ко	3.1.18		te	Consistency with the reference	(amend after 'spent fuel') and some of the associated <i>waste</i> streams; this material following solidification; <i>spent fuel</i> (if it is declared a <i>waste</i> ); or any other <i>waste</i> with similar radiological characteristics.	See above
CD	3.1.19		te	What about solid waste		Noted
BE	3.1.19				high level waste (HLW) high level radioactive waste (HLRW) Correct, but too restrictive: it doesn't have to be liquid as it can also be irradiated fuel and solids resulting from stabilisation of reprocessing wastes.	Trevor Boal sent sent IAEA definition that reads as follows:. "radioactive liquid containing most of the fission products and actinides present in spent fuel – which forms the residue from the first solvent extraction cycle in reprocessing - and some of the associated waste streams; this material following solidification; spent fuel (if it is declared waste); or any other waste with similar radiological characteristics"

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IN	3.1.19			<ul> <li>High-level wastes take one of two forms:</li> <li>Spent (<i>used</i>) reactor fuel when it is accepted for disposal (This definition is given above)</li> <li>Waste materials remaining after spent fuel is reprocessed (This does not get reflected in the draft definition but is more precise).</li> </ul>	high level waste (HLW). high level radioactive waste (HLRW) radioactive liquid containing most of the fission products and actinides present in spent fuel and waste materials remaining after spent fuel is reprocessed.	See above
JP	3.1.19	Definition	te	Need words "from reprocessing"	The radioactive liquid containing most of the <i>fission products</i> and actinides from reprocessing of spent nuclear fuel. NOTE Its thermal powers is above about 2 kW/m3	See above
JP	3.1.20	Term	ed	"waste class" ?	Delete "waste class"	Noted
JP	ditto	Definition	te	Wrong	Delete "(LILW-LL)(LILW=SL)".	See above
SE	3.1.20		ed	The term denotes a waste class, but "waste classes" has a wrong position here	Delete "waste classes"	See above
IAEA	3.2		te	The proposed definition is adapted from a soon to be obsolete IAEA publication. The definition from the revised BSS is provided.	A measure of the energy deposited by <i>radiation</i> in a target	Accepted
JP	3.2		ge	Need additional terms for this category	air kerma kerma factor air absorbed dose air dose; absorbed dose in air threshold dose whole-body dose annual effective dose average effective dose external dose internal dose collective dose committed dose	No new terms will be added.

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					cumulative dose personal dose equivalent <i>H</i> p( <i>d</i> ) retention time air equivalent material tissue equivalent material	
JP	3.2	Definition	te	Measure and target is wrong.	Quantity of radiation absorbed or energy by matter.	See above
KE	3.2		ed	The same subclause no. 3.2 is used for "Terms related to dose" and "dose"	Use 3.2 for "Terms related to dose" and 3.2.1 for "dose"	
IN	3.2.1			Better clarity	Add Gray before (Gy)	Not accepted
JP	3.2.1	Definition	ed	Need definition of "men energy imparted " Use uniformed expression for unit.	NOTE The unit of absorbed dose is Jkg <sup>-1</sup> , with the special name gray (Gy)	<ol> <li>Not accepted</li> <li>accepted</li> </ol>
AR	3.2.1	Definition	ed		Agree with previous comment.	See above
SE	3.2.1		ed	Missing term	Insert "Gray" before (Gy)	See above
GB	3.2.1.1		te	How can one determine the dose at the centre.		Not accepted
JP	3.2.2		ed	Need definition of "lifetime dose"		No new terms will be added.
AR	3.2.3		ge	Consistency in the definitions quoted in various ISO documents need to be reviewed and may also be desirable. Delete: "The effective dose can also be expressed as the sum of the doubly weighted absorbed dose in all the tissues and organs of the body", because it does not add anything.	<b>Effective dose</b> <i>E</i> result of the summation of the equivalent doses in tissues or organs, each multiplied by the appropriate tissue weighting factor. It is given by the expression $E = \Sigma w_T H_T$ where $H_T$ is the equivalent dose in tissue or organ, <i>T</i> , each multiplied by the appropriate tissue weighting factor for tissue <i>T</i> .	Accepted

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GB	3.2.3		te	any tissues and organs of the body or the body ?		See above
GB	3.2.3		te	cm <sup>-3</sup> for cm-3		See above
IN	3.2.3		ge	<b>ISO/DIS 29661.2 specifies</b> <b>effective dose</b> <i>E I</i> result of the summation of the equivalent doses in tissues or organs, each multiplied by the appropriate tissue weighting factor. It is given by the expression = $\Sigma E$ wT HT where HT is the equivalent dose in tissue or organ, <i>T</i> , and r organs, each multiplied by the appropriate tissue weighting is the tissue weighting factor for tissue, <i>T</i> . The effective dose can also be expressed as the sum of the doubly weighted absorbed dose in all the tissues and organs of the body. (ICRU Report 57) And As per the ISO document ISO/TC/85 N1154 <b>3.2.3</b> <b>effective dose</b> sum of the weighted equivalent doses in all tissues and organs of the body NOTE The effective dose is expressed in units of joules per kilogram (special name: sievert, Sv). [ISO 20553:2006]	Consistency in the definitions quoted in various ISO documents need to be reviewed and may also be desirable.	See above
JP	3.2.3	Definition	ed	Use uniformed expression for unit.	NOTE The unit of effective dose is Jkg <sup>-1</sup> , with the special name sievert (Sv)	See above
КО	3.2.3		te	To provide the meaning of effective dose: replace	A conceptual dose quantity for use of protection purposes, resulting from detriment	See above

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					weighted averaging of equivalent doses in all organs or tissues of the reference person considered to be sensitive to the induction of stochastic effects, where detriment weighting is performed by the tissue weighting factors wT. The effective dose E is calculated as $E = Sum_T w_T H_T$ where $H_T$ is the equivalent dose in an organ or tissue T, and $w_T$ is the tissue weighting factor.	
AR	3.2.5	Definition	te	Change note 1 ,2 ,3 to NOTE	NOTE The unit of effective dose is J kg-1, with the special name sievert (Sv).	Accepted
CD	3.2.5	Note 1		Delete all but first sentence		See above
IAEA	3.2.5, Note 1.		ed	Delete all text after "1 J/kg". This text is not relevant to the ISO standard.		See above
JP	3.2.5	Definition	te	<ol> <li>Use uniformed and simple expression</li> <li>Need definition of "radiation field"</li> </ol>	the product of D <sub>T,R</sub> by W <sub>R</sub>  NOTE The unit of effective dose is Jkg <sup>-1</sup> , with the special name sievert (Sv) Delete NOTE 1, 2 and 3	See above
GB	3.2.5	Note 1	te	Delete the last sentence.		See above
SE	3.2.5 and 6		Ed	Joule per kg is written differently	Write in the same way	See above
CD	3.2.6	Note 1		Delete at the end " in this International Standard"		Accepted
GB	3.2.6	Note 2	te	Delete is equal to 1 in this internal standard" Not applicable		See above

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JP	3.2.6	Definition	ed	1) Write name of dose as the example	Delete "e.g", and delete NOTE 1.	1) Accepted
			2) Ose uniformed expression for unit.	NOTE The unit of equivalent dose is Jkg <sup>-1</sup> , with the special name sievert (Sv)	2) Accepted	
ко	3.2.6	Note	ed	Not effective anymore	Delete the NOTE	Noted
JP	3.2.7.1		ed	Need definition of "ambient dose equivalent"		No new terms will be added
SE	3.2.7.1		ed	Missing word	Insert "Unit" before "J per kg". Write as in next term	Accepted
KO	3.2.7.2		te	consistency	ICRU sphere -> ICRU tissue	Accepted
JP	3.2.8	NOTE	ed		Delete both NOTE 1 and 2	Accepted
КО	3.2.8	NOTE1	te	Q and wR are related but different quantity	Delete NOTE 1	See above
КО	3.2.8	NOTE2	ed	This note may be provided for the term 'radiation weighting factor', not here.	Delete NOTE 2	See above
JP	3.2.9	Term	ed	Too specific	Delete	Not accepted
ко	3.2.9		ed	Very specific term for use in calibration of dosimeter: not needed as a general term	Delete the item	See above
AR	3.2.10	Definition	te	The phantom is not necessarily the human	Add "or animal body or part of them "	Not accepted
CD	3.2.10	Note	te	Delete : inapplicable		Accepted
GB	3.2.10.	Note	te	Delete . Too specific		See above
JP	3.2.10	Definition	te	The phantom is not necessarily the human	Add "or animal body or part of them "	See above
КО	3.2.10		te	Clarify specific term	Phantom -> calibration phantom	Not accepted
КО	3.2.10	NOTE	ed	To specify the usage	purpose of this standard -> purpose of personal dosimeter calibration	Delete note
AR	3.2.10.1		ed	Difference in terms	Write in the definition "phantom" instead of "phantoms"	Accepted

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JP	3.2.10.1	Definition	ed	Single or plural?	Change "phantoms" to "phantom" and delete "defined"	See above
SE	3.2.10.1		ed	Difference in terms	Write in the definition "phantom" instead of "phantoms"	See above
ко	3.2.10.1.1	NOTE	ed	Use right term	Reference phantom -> standard phantom	Not accept
AR	3.2.12			Change word	change "weight percentages" to "mass percentages"	Accepted
BE	3.2.12				soft tissue Correct, but change "weight percentages" to "mass percentages"	See above
IN	3.2.12 and 3.2.12			Same definition	3.2.13 may be deleted.	See above
JP	3.2.12	Definition	te	Wrong		Not accepted
AR	3.2.12.1	Definition	te	Scattering is included in attenuation	Change by Property of a material that approximates the absorption and scattering properties of biological tissue for a given radiation.	Accepted
JP	3.2.12.1	Definition	te	Wrong. Scattering is included in attenuation	Property of a material that approximates the absorption and scattering properties of biological tissue for a given radiation.	See above
КО	3.2.12		te	'soft tissue' is not necessarily the 'ICRU tissue'	Delete the item	Not accepted. "soft tissue" definition has to be revised.
КО	3.2.12.1		te	Add absorption aspect	and scattering properties -> , scattering and absorption properties	See above
ко	3.2.12.2		te	Provide meaning of the term(replace)	factor by which the equivalent dose in an organ or tissue T is weighted to represent the relative contribution of that organ or tissue to overall radiation detriment from stochastic	Not accepted

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					effects	
AR	3.2.13	NOTE	ed		Delete NOTE	Accepted
CD	3.2.13		ed	cm <sup>-3</sup> not cm-3		Accepted
La JP	3.2.13	NOTE	ed		Delete NOTE	Accepted
ко	3.2.13		ed	Use a period instead of a comma		See above
AR	3.2.14	Definition	te	Change by definition ICRP 103	Definition: An idealised male or female with characteristics defined by the Commission for the purpose of radiological protection, and with the anatomical and physiological characteristics defined in the report of the ICRP Task Group on Reference Man (Publication 89, ICRP 2002).	Accepted
JP	3.2.14	Definition	te	Wrong	Delete "by the ICRP" and "defined2002) Add: NOTE See ICRP pub 89 (2003) for these anatomical and physiological characteristics.	See above
KE	3.2.14		ed	Font is different from the rest.	Use the correct font	See above
AR	3.2.15	Definition	te	Change by definition ICRP 103	Definition: Used as a synonym for dose per unit intake of a radioactive substance, but sometimes also used to describe other coefficients linking quantities or concentrations of activity to doses or dose rates, such as the external dose rate at a specified distance above a surface with a deposit of a specified activity per unit area of a specified radionuclide.	Accepted
JP	3.2.15	Definition	te	Wrong		Not accepted
CD	3.2.16			It may be IAEA but it does not make sense to me		Another definition has to be found in a reliable source.
GB	3.2.16		te	Is something missing because the definition is not understood		See above

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AR	3.2.17		Ed	Classification defined as class	Start the definition: "class of classification used"	"issue" definition will be further analyzed
GB	3.2.17		te	Is this not used more generally than just for the lung.		See above
ко	3.2.17		te	Use better term	Clearance class -> clearance type	See above
SE	3.2.17		ed	Classification defined as class	Start the definition: "class of classification used"	See above
JP	3.3		ge	Need additional terms for this category	personal dosemeter; individual dosimeter air equivalent ionization chamber free air wall ionization chamber etched track dosimeter; track etched detector film dosemeter glass dosemeter TLD low energy X-ray reference radiation primary standard reference radiation reference radiation field reference atmosphere reference conditions <clinical dosimetry="" tl=""> traceability</clinical>	No new terms will be added.
AR	3.3.1	Definition			Delete both NOTE 1 and 2	Not accepted because the latest VIM 2008 defines it as "intended to be".
JP	3.3.1	Definition	te	Write [VIM 2.3(2.6)] as source	Change "intended to be" to "subject to" Delete both NOTE 1 and 2	Accepted
JP	3.3.1.1.	Definition	te	Same to that of 3.3.1.2	Add "minimum detection level" to the term	3.3.1.1 and 3.3.1.2 definitions could be merged
JP	3.3.1.1	term	te	combine with 3.3.1.1, see below	minimum detectable amount; MDA ; minimum detection level; MDL	See above
AR	3.3.1.2.	Definition	te	Same to that of 3.3.1.1	Delete 3.3.1.2	See above

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JP	3.3.1.2		ed	See above	Delete	See above
JP	3.3.1.2	term	te	same definition that of 3.3.3.1	delete	See above
AR	3.3.3			Change definition.	"Material, usually plastic in nature, etched and inspected microscopically to count nuclear tracks produced by incoming ionising radiation"	Accepted
CD	3.3.3			Definition inadequate could describe plastic scintillator		See above
BE	3.3.3				etched track detector Incorrect. A plastic scintillator is not an etched track detector and yet it would be, according to this definintion! We suggest "Material, usually plastic in nature, etched and inspected microscopically to count nuclear tracks produced by incoming ionising radiation"	See above
GB	3.3.3		te	Redifine. This definition would be applicable to plastic		See above
CD	3.3.4			Like many VIM definitions does not make sense		
JP	3.3.4.	Definition	te	Delete "second step"	Operation that, under specified conditions, establishes a relation between conventionally true value of quantity provided by standards and indication by measuring system. NOTE It is important not to confuse calibration with adjustment of a measuring system, often mistakenly called "self-calibration", or with	Accepted
					verification of calibration.	
SE		3.3.4	ed	The expression "of an additive or multiplicative correction" occurs twice in Note 1	Delete (and correct) one of the expressions	See above
GB	3.3.4		te	This convoluted VIM definition is not understood by some English speekers. There are many understandable		See above

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				definitions available		
AR	3.3.4.1	Definition	te	Rewrite according to VIM	change the definition: Conditions of use prescribed for evaluating the performance of measuring instrument or measuring system or for comparison of measurement results [VIM 4.11 MOD]	Not accepted
JP	3.3.4.1	Definition	te	Rewrite according to VIM	Add "reference operating condition" to the term, and change the definition: Conditions of use prescribed for evaluating the performance of measuring instrument or measuring system or for comparison of measurement results [VIM 4.11 MOD]	See above
JP	3.3.7		ed	General term	Move to part 1	Not accepted
КО	3.3.7		ed	Need not to define	Delete the item	Accepted
SE	3.3.9		Te	The alternative term "dosimeter" is missing, although it is widely used, also in combinations, e.g. in 3.3.9.2	Insert "dosimeter" as an alternative term	Accepted
CD	3.3.9.2			Could be materials other than aluminium oxide		
BE	3.3.9.2				optically stimulated luminescence (OSL) dosimeter Correct, but add "used to measure the electron- hole pairs produced by incoming ionising radiation" Note: missing source [?????]	A more general definition is required.
JP	3.3.9.2	Definition	te	Wrong		See above
GB	3.3.9.2		te	Are there not other OSL materials.		See above
JP	3.3.9.3	term	te	too specific	delete	Not accepted

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JP	3.3.10	biological dosimetry Definition	te	Wrong	Measurement of the degree of a biological response to radiation, that is then used indirectly as measure of the absorbed dose received by tissue. [ICRU 30]	Accepted.
SE	3.3.10		te	The term "dosimetry" occurs here, but it should have its own definition	Insert "dosimetry" as a separate term	No new terms will be added.
AR	3.3.11	definition		Change definition	Definition: sampling of air in the immediate vicinity of an individual's nose and mouth, usually by a portable sampling pump and collection tube (e.g., a lapel sampler) worn on the body.	Accepted.
BE	3.3.11				personal air sampling (PAS) Correct, but remove "typically within one foot" as imperial units should not be used in scientific definitions.	See above.
AR	3.3.12	Definition	ed	Change definition	Equipment where the determination of the lung burden activity can be performed	Proposed definition: equipment for the determination of lung burden activity
JP	3.3.12	Definition	ed	Facility ? A term "lung monitor" is used in Japan	measuring assembly used for the determination activity	Not accepted because a lung monitor is used to assess function of lung not activity.
JP	3.3.12	term	te		change to "lung monitor"	See above.
JP	3.3.13	Definition	ed	Facility ?	ditto	Proposed definition: equipment for the determination of thyroid burden activity
JP	3.3.13	term	te		change to "thyroid monitor"	Accepted "thyroid monitor".

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JP	3.3.14	Definition	ed	Ditto	ditto	See above.
JP	3.4		ge	Need additional terms for this category	clearance level exception level guidance level intervention level annual dose limit concentration limit practice intervention evacuated area medical surveillance radiological survey lifetime dose protective action surface contamination limit working level month working level cloud shine absorbed fraction, AF biological concentration coefficient exposure pathway ingestion ingestion dose coefficient occupancy factor potential alpha energy concentration ; PAEC potential alpha energy ; PAE radon progeny	No new terms will be added.
JP	3.4.1	Definition	ed	No given the definition for "protective action"	Area to facilitate for actions to avoid and reduce the public exposure during	Accepted.
КО	3.4.1		ed	To make general	Power plant -> installation	Accepted.

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CD	3.4.2			This should relate to the size of the reactor . 50 miles is too much. We should remember the concern of the WHO and other organisations expressed in their reports of the large number of suicide and drug and alcohol related deaths due to anxiety over the gross exaggeration of effects of ionising radiation accident that occurred after the Chernobyl.		Proposed definition: zone of a radius from a nuclear installation, dependant of the nature of the installation and past experience at which the ingestion of any radioactive fallout from any accident will not have a significant
				Such a distance could, supposing a future event, again create unnecessary anxiety and even more unnecessary deaths		consequence
JP	3.4.2	Definition	te	Wrong	EPZ to protect the public from the ingestion of contaminated foods and water NOTE IN US, the dimension of IEPZ is about 50mile (80.5km)	See above.
КО	3.4.2		ed	Specific term used in USA	Delete the term	See above.
SE	3.4.2		ed	A zone cannot be defined as a radius	Start the definition: "zone within a radius of about"	See above.
GB	3.4.2		te	This is generally far too large an area. Application can cause health problems. See UNSCEAR's report on the disastrous effects of the exaggerated fears about the effects of radiation in the case of Chernobyl		See above.
BE	3.4.3				existing exposure situation Correct Note: missing source [????]	It is in the next page.
CD	3.4.3			Not necessary		Decision for ISO. Are these terms used in ISO standards?
GB	3.4.3 to 3.4.5		te	Unnecessary Delete		See above.

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BE	3.4.4				planned exposure situation Correct, but replace "Arise" with "Situation of exposure which arises"	See above.
CD	3.4.4			Do not understand "operation of a source"		It is clear, e.g. exposure of radiography source in unshielded area.
ко	3.4.4		te	To clarify the meaning	from a source -> at normal level	Not accepted
SE	3.4.4		ed	Not according to rules	Start the definition: "situation arising from the"	Accepted.
CD	3.4.5			Not necessary		Not accepted.
JP	3.4.5	Term Definition	te	Separate NOTE	Delete "emergency exposure situation" in terms	Not accepted.
КО	3.4.5		te	To clarify the meaning( replace)	Situation of exposure where exposure at an elevated level is inevitable due to unexpected events or needs of important action.	Accepted.
JP	3.4.6	Definition	te	Wrong. May use for the beam production facility, also. Delete symbol "(T)"	Change "level" to "in shielding design, degree or type" Change "X-ray facility" to "X-ray facility or accelerator facility " in NOTE	Not accepted. Change to "radiation facility" since it can also be a cobalt 60 teletherapy source.
JP	3.4.7	Definition	te	ditto		Accepted. Change to « in shielding design » .
КО	3.4.7		ed	To make it general	An x-ray beam -> a radiation beam	Accepted.
JP	3.4.8	Definition	te	Correct the definition	1)Delete "protection factor for clothing" in terms	1) Not accepted.
					,under test conditions, in the ambient	2) Accepted
					3)Delete NOTE	3) Accepted
						The definition seems specific

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						to its use in a particular ISO standard. It has to be checked with the ISO WG responsible.
GB	3.4.9		te	In the case of carers there should be a different classification recognising that in many cases exposure is short term and their presence is beneficial to the patient.		See below.
IAEA	3.4.9		te	The definition in the IAEA Glossary has been changed in the revised BSS	<i>Exposure</i> incurred by patients for the purposes of medical or dental diagnosis or treatment; by <i>carers and comforters</i> ; and by volunteers subject to <i>exposure</i> as part of a programme of biomedical research	Accepted.
AR	3.4.10		ed	Change Clause 3.10 to 3.4.10 Definition by ICRP 103	Definition: all exposure incurred by workers in the course of their work, with the exception of 1) excluded exposures and exposures from exempt activities involving radiation or exempt sources; 2) any medical exposure; and 3) the normal local natural background radiation.	Accepted.
CD	3.4.10			Why the exceptions		See above.
GB	3.4.10		te	The exclusions are not understood		See above.
IAEA	3.10		ed	Incorrect numbering	3.4.10	Accepted.
IAEA	3.4.10		te	The definition in the IAEA Glossary has been changed in the revised BSS.	<i>Exposure</i> of <i>workers</i> incurred in the course of their work	Accepted.
KE	3.4.10		ed	3.10 Occupational exposure	3.4.10 Occupational exposure	Accepted
AR	3.4.11		te	Definition by ICRP 103	Change definition: exposure that is not expected to be delivered with certainty but that may result from an accident at a source or an event or sequence of events of a probabilistic nature, including equipment failures and operating errors	Accepted.

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MB <sup>1</sup>	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of com- ment <sup>2</sup>	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
GB	3.4.11		te	Delete "at a source" it add nothing and could be confusing		Not accepted.
КО	3.4.11		te	To provide better meaning(potential exposure is not an exposure)	Exposure that -> prior risk of exposure	Not accepted.
IAEA	3.4.12		te	The definition in the IAEA Glossary has been changed in the revised BSS.	Exposure incurred by members of the public due to sources in planned exposure situations, emergency exposure situations and existing exposure situations, excluding any occupational exposure or medical exposure	Accepted.
ко	3.4.12		te	To clarify the meaning(replace)	Exposure of an individual with no informed consent	Not accepted.
JP	3.4.13.1	NOTE	te	Wrong	Usually operation of individual monitoring is contrasted with that of workplace monitoring.	Accepted.
SE	3.4.13.1		ed	It is obvious that the terms have the same meaning	Delete the Note	Accepted.
AR	3.4.13.2	Definition	ed		Change "form" to "a form"	Not accepted because definitions shall not begin with an article.
JP	3.4.13.2	Definition	ed		Change "form" to "a form"	See above.
AR	3.4.13.3		ed	Same definition that of "3.4.13"	Delete and Change term of 3.4.13 to "radiological monitoring"	Combine all 3 concepts.
JP	3.4.13.3		ed	Same definition that of "3.4.13"	Delete and Change term of 3.4.13 to "radiological monitoring"	See above.
IAEA	3.4.13.6		te	The definition is not clear.		See below.
КО	3.4.13.6		te	To clarify	out in actual ->out to quantify significant exposures following actual	Accepted
CD	3.4.13.4 to 3.413.7			Not necessary		Not accepted.
GB	3.4.13.4 to		te	Delete. Unnecessary		See above.

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	3.4.13.7					
AR	3.4.14		ed	Missing		Add missing term.
JP	3.4.14		ed	Missing		See above.
AR	3.4.14.1	Definition NOTE	te	Definition by IAEA Glossary Delete NOTE 1 Delete NOTE 2	Change definition: The value of a quantity such as effective dose, intake or contamination per unit area or volume at or above which requires investigations into the effectiveness of radiation protection measures [IAEA Glossary 2007MOD] NOTE Investigation levels are established by national authorities	Accepted but remove "the".
CD	3.4.14.1	Note		Not necessary		See above.
GB	3.4.14.1	Note 2	te	This note is confusing definition better without it. Delete.		See above.
IAEA	3.4.14.1		te	The definition differs from the IAEA. The definition from revised BSS is provided	The value of a quantity such as <i>effective dose</i> , <i>intake</i> or <i>contamination</i> per unit area or volume at or above which an investigation would be conducted	Accepted.
JP	3.4.14.1	Definition NOTE	te	Definition in IAEA Glossary is better.	Delete both NOTE 1 and 2, and change definition: The value of a quantity such as effective dose, intake or contamination per unit area or volume at or above which requires investigations into the effectiveness of radiation protection measures [IAEA Glossary 2007MOD] NOTE Investigation levels are established by national authorities	See above.
КО	3.4.14.1		ed	To generalize	the personal dose equivalent which, ->a monitored quantity which	See above.
ко	3.4.14.1	NOTE2	ed	Too specific	Delete NOTE2	See above.
AR	3.4.14.2	Line 2	te	Move second sentence to NOTE	Definition: level of dose rate or activity concentration above which remedial actions or protective	Accepted.

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					actions should be carried out in chronic exposure or emergency exposure situations NOTE. An action level can also be expressed in terms of any other measurable quantity as a level above which intervention should be undertaken.	
IAEA	3.4.14.2		te	The concept of action level in relation to interventions was not used by ICRP in its new recommendations. They used the concept of "reference level". This approach has been taken up in the revised BSS. The term "action level" is no longer used in the revised BSS.		Definition should be retained.
IP	3.4.14.2	line 2	te	Move second sentence to NOTE	NOTE An action undertaken	See above
JP	ditto		te	Need terms "remedial action" and "chronic exposure"		No new terms will be added.
IAEA	3.4.14.3	reference level	te	The meaning of the term "reference level" has been changed in the revised BSS. The concept of "reference level" as used in the 2007 recommendations of the ICRP was taken up in the revised BSS, in relation to existing exposure and emergency exposure situations."		Need new definition from revised BSS.
AR	3.4.14.5			Change NOTE 1	NOTE 1 In radiophamaceuticals, DRL is level of activity for typical examinations for groups of standardized patients or standard phantom for broadly defined types of equipment.	Accepted.
BE	3.4.14.5				diagnostic reference level (DRL) Correct, but in Note 1 change "broadly defines" to "broadly defined"	See above.
CD	3.4.14.5			Replace by "The dose expected from a specific		See above.

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				radiodiagnostic practice"		
IAEA	3.4.14.5		te	The proposed definition needs improvement. It does not allow for situations where dose or the amount of radiopharmaceutical are unusually low to allow diagnostic information to be obtained from the procedure. The definition in the revised BSS is provided.	A level used in medical imaging to indicate whether, in routine conditions, the <i>dose</i> to the patient or the amount of <i>radiopharmaceuticals</i> administered in a specified <i>radiological procedure</i> is unusually high or unusually low for that procedure	Accepted but remove "a".
JP	3.4.14.5		ed	Meaning of this level is different that in 3.4.14	Move to other category	Not accepted.
JP	3.4.14.5	term	te	too specific	delete	It depends on the usage in ISO standards.
КО	3.4.14.5		te	To generalize(redefine)	Level set to indicate whether the patient dose of administered activity from a specified diagnostic radiology procedure is unusually high or low for that procedure.	See above.
SE	3.4.14.5		ed	Note 1 very unclear	Correct Note 1	See above.
JP	3.4.15	<b>limitation of dose</b> Definition	te		Change "radiation dose" to "equivalent dose"	Accepted
GB	3.4.15	limitation of dose Note2	te	Delete from "for standard procedures" it confuses rather than helps.		Comment is assumed to refer to 3.4.14.5.
IAEA	3.4.17	dose constraint	te	The square bracket indicates that the definition was taken from ICRP 60. The definition was changed by ICRP in publication 103. The definition from the revised BSS is provided:	A prospective and <i>source</i> related value of individual dose ( <i>dose constraint</i> ) or risk ( <i>risk</i> <i>constraint</i> ) that is used in planned exposure situations as a parameter for the optimization of protection and safety for the source, and that serves as a boundary in defining the range of options in optimization	Accepted. New definition from ICRP 103 is stated.
NU	3.4.17		ιe	TO Clarify	exceeded in theprocess -> exceeded for the	See above.

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					specified source in planned exposure situations.	
IAEA	3.4.18	projected dose	te	The definition in the IAEA Glossary has been changed in the revised BSS	The <i>dose</i> that would be expected to be received if planned protective actions were not taken	Accepted.
CD	3.4.19	annual dose		Not only intakes?		Accepted the addition of:" and radiation due to external sources". / See below
GB	3.4.19		te	Should this include radiation from external sources.		See above / below.
IAEA	3.4.19		te	This definition is specific to those situations where the exposure is due to intakes only, i.e. there is no external exposure.		See above / below
ко	3.4.19		ed	Not necessary	Delete the item	Term is from ISO 20553, which deals with internal contamination. Change term to "annual intake dose".
AR	3.4.21		te	Change shall by should	Definition: value of the effective dose or the equivalent dose to individuals form planned situations that should not be exceeded	Not accepted because ICRP 103 reads "shall". <b>dose limit</b> value of the effective dose or the equivalent dose to individuals from planned exposure situations that shall not be exceeded [SOURCE: ICRP 103, March 2007]
CD	3.4.21			"from" not "form"		Accepted.

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GB	3.4.21		te	"should" rather than "shall" ?		See above.
IAEA	3.4.21		ed	Replace "form" with "from" and insert "exposure" after planned.		Accepted.
JP	3.4.22	Definition	te	In relation of "intake" defined in 3.1.11, Change the definition. Add NOTE 2	Intake of given radionuclide in a year by reference individual which NOTE2 Some concepts and quantities are defined in term "reference man", an idealized adult Caucasian male.	Accepted.
ко	3.4.22		te	Use right term(reference man is no more in use)	Reference man -> reference person	Accepted.
IAEA	3.4.23		te	It is noted that the definition of "supervised" area is taken from the IAEA Glossary, but that the definition of "controlled area" is not. The definition of "controlled area" from the revised BSS is provided:	A defined area in which specific <i>protection</i> measures and <i>safety</i> provisions are or could be required for controlling <i>exposures</i> or preventing the spread of <i>contamination</i> in normal working conditions, and preventing or limiting the extent of <i>potential exposures</i>	Accepted, .but delete "a" at the beginning.
CD	3.4.26			Puzzled by the concept. Deletion of "from a release of radioactive material" might help.		Not accepted because the definition is the latest from EPA.
ко	3.4.28		ed	To be specific	specific request -> access to a controlled area	Accepted.
ко	3.4.28	NOTE		Not needed	Delete NOTE	Accepted.
КО	3.4.29		te	Use right term	Reference man -> reference person	Accepted.
JP	3.4.30		ed		Move to section "3.1"	See where the concept fits in the concept diagram to decide its location.
GB	3.4.31		te	No longer makes sense		See below.
ко	3.4.31		ed	Incomplete	(amend at the end), as low as reasonably achievable, economic and societal factors	Accepted.

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					being taken into account.	
					(Give ICRP Pub. 103 as reference)	
ко	3.4.31	NOTEs		Not needed	Delete NOTE1 an\d NOTE2	Accepted.
JP	3.4.32		ed		Move to section "3.1"	See where the concept fits in the concept diagram to decide its location.
IAEA	3.4.33		te	It is noted that only the second part of the definition of justification from the IAEA Glossary was included in the draft ISO standard. The two parts of the definition from the revised BSS are provided, and both parts are important to the definition:	<ol> <li>The process of determining for a planned exposure situation whether a practice is, overall, beneficial; i.e., whether the expected benefits to individuals and to society from introducing or continuing the practice outweigh the harm (including radiation detriment) resulting from the practice.</li> <li>The process of determining for an emergency exposure situation or an existing exposure situation whether a proposed protective action or remedial action is likely, overall, to be beneficial; i.e., whether the expected benefits to individuals and to society (including the reduction in radiation detriment) from introducing or continuing the protective action or remedial action outweigh the cost of such action and any harm or damage caused by the action.</li> </ol>	Accepted without the initial article.
KO	3.4.33		ed	To clarify and simplify(replace)	Process of determining whether a proposed action(or no action) is likely to be beneficial overall to individuals or to society.	See above.
ко	3.4.37		ed	Add a second meaning	clearance 2 Removal of radioactive material or radioactive objects within authorized practices from any further regulatory control by the regulatory body.	If accepted, then modify to read: removal of regulatory control by the regulatory body from radioactive material or

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						radioactive objects within notified or authorized practices
JP	3.5		ge	Need additional terms for this category	cold area hot area protective clothes use factor workload	No new terms will be added.
JP	3.5		ge	Need additional terms for this category	containment system shielding container	No new terms will be added.
JP	3.5.1	automatic exposure assessment	te	too specific	delete	Accepted
KO	3.5.1		ed	To use common term. This tem may go to section 3.6(devices)	Automatic exposure assessment -> automatic exposure control(AEC)	See above.
KO	3.5.2		ed	To generalize	hazardous radiation beam -> hazardous radiation area	Accepted.
JP	3.5.3		te	Need definition of "radiation quantity"		Not accepted.
КО	3.5.3		ed	To make clear	Delete 'In the passage of radiation through a medium'	Not accepted because scatter in air is not considered build up.
КО	3.5.4	NOTE		Use periods instead of commas		Not accepted.
JP	3.6.1	Definition	ed	Same as ISO 921-1092 except term "capsule", "container" in ISO 921	Change [ISO 399-12004]] to [ISO 921 MOD]	Not accepted.
JP	3.6.2	Source	ed		Change to [ISO 921 MOD]	Not accepted.
GB	Concept diagrams		te	Delete Unnecessary		Not accepted because concept diagrams are the

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Data arrangement regarding "source" will be changed to meet requirements stated in ISO 10241-1:2011 "Terminological entries in standards – Part 1: General requirements and examples of presentation", Annex A, A.1.3.8 "Source of entire terminological entry or a language section of a multilingual entry" that reads: "STYLE Regular, proceeded by the text "SOURCE". Enclosed in square brackets "[...]". "If the source has been modified, the indication of the source is followed by the string "modified" together with the explanation of the modification". ISO standard stated in ISO/IEC Directives, Part 2, 2011 – Annex B – "Basic reference works".

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