

Draft Safety Guide DS479 “Operating Experience Feedback for Nuclear Installations” (Version dated 4 September 2015)

Status: STEP 7 – First review of the draft safety standard by the SSCs

WASSC
26.10.2015

COMMENTS BY REVIEWER					RESOLUTION			
Reviewer: Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) (with comments of GRS) Country/Organization: Germany Note: Blue parts are those to be added in the text. Red parts are those to be deleted in the text.					Page 1 of 9 Date: 2015-09-28			
Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	1 1	General	The DPP for DS479 states in Section 6: “The new NS-G-2.11 will contain improved guidance on the ranking of the significance of events. To assist in this, the document will include the “significance triangle” diagram.”	This content is missing in the current version of DS479.			X	For the level of a Safety Guide that content suggested in the DPP seems not to be adequate. Significance is already covered in Safety Report Series 73 on LLE and NMs in table II-1, in II-3 Excelon NPP example and also in TECDOC 1581 example B, example D and Appendix V.
1	2 2	Footnote No. 1 to 1.1	It is proposed to establish a new paragraph 1.1 just before the current one and to transfer the full text of the footnote into the new paragraph. Renumbering of the subsequent paragraphs in Section 1 would then be required.	Footnote No. 1 provides an excellent introduction into the topic of this Safety Guide. The text in the footnote is worthwhile to be established as a separate paragraph just at the beginning of the subsection “Background” in Section 1.			X	The explanation in footnote number 1 gives a short introduction in OE but addresses for example one detail (NCSFI) and does not cover the full range like a main purpose to prevent recurrence of events.
1	3	Footnote	“A nuclear installation is a nuclear fuel fabri-	A list of nuclear instal-	X			

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	3	No. 2 to 1.3	eration plant, research reactor (including sub-critical and critical assemblies), nuclear power plant, spent fuel storage facility, enrichment plant or reprocessing facility.”	lations under the scope of this Safety Guide should be provided in a separate paragraph just at the beginning of the subsection “Scope”, not only in a footnote in the subsection “Background”. Such a list should take into account the revised definition of the term ‘nuclear installation’ which has been endorsed at the 32 nd CSS meeting in October 2012. See our related proposal for a new paragraph before 1.7. If it were accepted, footnote No. 2 would be superfluous and, thus, could be deleted.			
1	4 4	before 1.7	Please add a new paragraph at the beginning of the subsection “Scope” with the following text: “This Safety Guide is applicable to all types of nuclear installations. This includes nuclear power plants, research reactors (including subcritical and critical assemblies) and any adjoining radioisotope production facilities, spent fuel storage facilities, facilities for the enrichment of uranium, nuclear fuel fabrication facilities, conversion facilities, facilities for the reprocessing of spent fuel, facilities for the predisposal management of radioactive	This is an indispensable information which needs to be included in the subsection “Scope” of the Safety Guide. A complete list of nuclear installations should take into account the revised definition of the term ‘nuclear installation’ which has been endorsed at the 32 nd CSS meeting in October 2012. Accord-	X		

			waste arising from nuclear fuel cycle facilities, and nuclear fuel cycle related research and development facilities.”	ing to that definition, ‘nuclear installation’ means “ <i>any nuclear facility subject to authorization that is part of the nuclear fuel cycle, except facilities for the mining or processing of uranium ores or thorium ores and radioactive waste disposal facilities</i> ” (see presentation to agenda item 6.1 “Revision of the Safety Glossary” at the 32 nd CSS meeting).			
1	5 5	1.9	<p>“Under the Amendment to the Convention on the Physical Protection of Nuclear Material [10], the The Fundamental Principle L concerning Confidentiality should be respected in the OE process. More guidance can be found in the Amendment to the Convention on the Physical Protection of Nuclear Material [10] Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities [14]. This Safety Guide does not deal with nuclear security aspects in detail.”</p> <p>Please add Ref. [14] to the list of references: “[14] INTERNATIONAL ATOMIC ENERGY AGENCY, Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5), IAEA Nuclear Security Series No. 13, IAEA, Vienna (2011).”</p>	As a matter of fact, the Amendment to the Convention on the Physical Protection of Nuclear Material does not provide guidance on how to fulfill the Fundamental Principles A to L for achieving the physical protection objectives. Instead, the Nuclear Security Series No. 13 (INFCIRC/225/Rev. 5) has to be followed. A new reference [14] to this publication should be added.	X		
3	6	2.1	2 nd sentence:	Editorial.	X		

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	6		“... these communications should also include occurrences that are not covered by formal reporting requirements in the sense of requirement 21 of GSR Part 1 [2].”					
3	7 7	2.5	“The management system has to ensure ... the application of lessons learned from experience according to principle 3, para. 3.12 of SF-1 [3].”	Editorial.	X			
3	8 8	2.8	“... that are relevant to safety in the sense of requirement 24, para. 5.31 of SSR-2/2 [1].”	Editorial.	X			
2	9 9	2.20	1 st sentence: “Management should ensure adherence to the expectations for identifying events, poor performance, degrading trends and good practices by everyone at the installation including contractors (see paragraph 1.8 1.7).”	Wrong paragraph is referred to here. The target audience of this Safety Guide is addressed in Para 1.7.	X			
3	10 10	2.31	“... so that any necessary corrective actions can be taken before serious conditions arise in the sense of requirement 24 para. 5.29 of SSR-2/2 [1].”	Editorial.	X			
3	11 11	2.32	“Potentially relevant external operating experience should be entered into the operating organisation OE programme of the operating organisation .”	Better wording.	X			
3	12 12	2.46	Last sentence: “... unsafe practices or lack of adherence to approved procedures in the sense of requirement 24 para. 5.28 of SSR-2/2 [1] .”	Editorial.	X			
3	13 13	2.58	Last sentence: “... the necessary corrective actions to make their recurrence less likely in the sense of requirement 24 para. 5.30 of SSR-2/2 [1] .”	Editorial.	X			
3	14 14	2.70	“... so that any necessary corrective actions can be taken before serious conditions arise in the sense of requirement 24 para. 5.29 of SSR-2/2 [1] .”	Editorial.	X			

2	15 15	2.31, 2.70	Note: The paragraphs 2.31 in subsection “Screening” and 2.70 in subsection “Trending and Review” are identically in text. Please provide justification that such duplication is required in DS479.	Unnecessary duplication of recommendations should be avoided.			X	The paragraphs are not exactly identical and address specific the subject.
3	16 16	2.82	“... to obtain advice, if necessary, in the event of equipment failure or in other events in the sense of requirement 24 para. 5.32 of SSR-2/2 [1].”	Editorial.	X			
3	17 17	2.83	Last sentence: “Relevant lessons from other industries should also be taken into consideration, as necessary in the sense of requirement 24 para. 5.27 of SSR-2/2 [1].”	Editorial.	X			
3	18 18	2.84	“... such as training, procedure revision, work management, design and modification in the sense of requirement 24 para. 5.28 of SSR-2/2- [1].”	Editorial.	X			
3	19 19	2.89	“... to determine its effectiveness and to identify any necessary improvements in the sense of requirement 24 para. 5.33 of SSR-2/2 [1].”	Editorial.	X			
1	20 20	2.90	<p>“The effectiveness of the OE programme should be assessed using the following methods:</p> <ul style="list-style-type: none"> • Self-assessment; • Benchmarking; • Independent peer review^[footnote].” <p>Please assign a footnote to the term ‘Independent peer review’ with the following text: ^{[[footnote]} The IAEA provides for the application of this Safety Guide through its PROSPER service (peer review of the effectiveness of the operational safety performance experience review process) upon request by the State. PROSPER missions perform a combination of</p>	<p>According to Section 5 of the DPP for DS479, this Safety Guide will interface with the PROSPER guidelines (IAEA Services Series No. 10, issued in 2003). Within the subsection “Reviewing the effectiveness of the process”, Para 2.90 is the appropriate place to introduce PROSPER. A reference to the guidelines could be</p>	X			

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			<p>two types of peer review: (a) a programmatic review of the overall effectiveness of the OE feedback process for the installation or utility; and (b) a review focused on unresolved significant safety issues or specific events. PROS-PER is available to all countries with nuclear power plants under commissioning or in operation.</p>	added in the footnote.				
2	21	3.4	<p>2nd sentence: “... authorized parties, the regulatory body and other relevant authorities in accordance with GSR Part 1, requirement 15 [4] [2].”</p>	Editorial.	X			
3	22	3.5	<p>2nd sentence: “It is a good practice to discuss modifications to regulations, procedures and arrangements with stakeholders before implementation according to requirement 22 of GSR Part 1 [2].”</p>	Editorial.	X			
1	23	App. I, I.4	<p>Last sentence: “The standard format and contents of reports to the IAEA/NEA International Reporting System on for eOperating eExperiences [13], to the IAEA Incident Reporting System for Research Reactors [15], and to the IAEA/NEA Fuel Incident Notification and Analysis System [16] may be considered for adoption in national systems for the feedback of operating experience, to link national and international systems more effectively.”</p> <p>Please add Ref. [15] and [16] to the list of references: “[15] INTERNATIONAL ATOMIC ENERGY AGENCY, Guide on Incident Reporting System for Research Reactors, IAEA, Vienna (2000).”</p>	<p>1.) Citation of the correct name of the IRS database (compare with the title of the related section in Annex I).</p> <p>2.) There is an inconsistency in paragraph I.4. The 1st sentence refers to nuclear installations in general. In the last sentence, however, it is recommended to consider the format and contents of reports to the IRS for adoption in the national systems for operating experience feedback.</p>	X			X

			<p>[16] INTERNATIONAL ATOMIC ENERGY AGENCY, OECD NUCLEAR ENERGY AGENCY, IAEA/NEA Fuel Incident Notification and Analysis System (FINAS) Guidelines, IAEA Services Series No. 14, IAEA, Vienna (2006).”</p>	<p>For countries which do not operate a nuclear power plant, but a research reactor or a nuclear fuel cycle facility, the IRS guidelines are irrelevant. In lieu thereof, either the IRSRR guidelines or the FINAS guidelines apply in such cases. Therefore, additional references to both the IRSRR and FINAS guidelines need to be included since the guidance in Appendix I is not specific for NPPs.</p>	X			
3	24 24	Ref. [2]	<p>“INTERNATIONAL ATOMIC ENERGY AGENCY, Governmental, Legal and Regulatory Framework for Safety, IAEA Safety Standards, GSR Part 1 (Rev. 1) IAEA, Vienna (2010) (2015).”</p>	<p>1.) Citation of the correct title of GSR Part 1. 2.) Within the frame of the IAEA Action Plan on Nuclear Safety, GSR Part 1 was revised by amendment (DS462). The final version of DS462 has already been endorsed by the CSS (November 2014) and the Board of Governors (March 2015). Rev. 1 will be published this year.</p>	X			
3	25	Ref. [13]	<p>“INTERNATIONAL ATOMIC ENERGY AGENCY, OECD NUCLEAR ENERGY</p>	<p>For completeness of citation, the relevant</p>	X			

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	25		AGENCY, IAEA/NEA International Reporting System (IRS) Guidelines, IAEA Services Series No. 19 , IAEA, Vienna (2010).”	IAEA publication series should be added.			
3	26 26	Annex I, p. 26–27	<p>Section on IRS, subsection “History of the IRS”</p> <p>1st sentence: “The Incident Reporting System was created in 1979/1980 by the Committee on the Safety of Nuclear Installations (CSNI) of the NEA as a reaction to deficiencies identified in operating experience feedback (OEF) highlighted by the Three Mile Island (TMI) accident.”</p> <p>End of 4th paragraph: “... But it became obvious that the IRS could have difficulty to fulfil the expectations of each interested party.”</p> <p>Last paragraph: “In 2010, the name of the system was revised to “International Reporting System for Operating Experience” to reflect the evolution of the “Incident Reporting System” to one which includes an expanded view/use of operating experience feedback, the name of the system was revised to “International Reporting System for Operating Experience”². The system kept the term “IRS”.”</p>	<p>Please introduce abbreviations before using them.</p> <p>Editorial.</p> <p>Better wording.</p>	X		
3	27 27	Annex I, p. 28	<p>Section on IRSRR, subsection “What is IRSRR”</p> <p>Penultimate sentence: “The IRSRR is a web based system on IAEA/NUCLEUS and is administrated by the Research Reactor Safety Section within the Division of Nuclear Installation Safety</p>	Please introduce abbreviations before using them.	X		

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			(RRSS/NSNI/IAEA).”					
3	28 28	Annex I, p. 31	<p>Section on FINAS, subsection “Background”</p> <p>1st sentence: “The General Conference of the IAEA ... encourages the IAEA to support and coordinate these activities, through resolutions such as GC(57) GC (59) Resolution 9 articles 39 and 92 (2013) 102 (2015).”</p> <p>Beginning of 2nd paragraph: “The fundamental objective of FINAS is to support these activities with the aim of improving the safety of nuclear fuel cycle facilities worldwide. ...”</p> <p>Last sentence: “The overall system is now managed jointly by IAEA and NEA according to the wishes of the National Coordinators who comprise its steering committee.”</p>	<p>Update. Please refer to the most recent resolution adopted at the 59th IAEA General Conference held in September 2015.</p> <p>Wording.</p> <p>Wording.</p>	X			
3	29 29	Annex I, p. 31	<p>Section on FINAS, subsection “Scope of FINAS”</p> <p>1st and 2nd sentence: “FINAS now has 28 member countries out of a total eligible 39 and FINAS Member States now cover 88% of the worlds’ declared nuclear fuel cycle facilities. Membership of FINAS is open to Member States with</p> <ul style="list-style-type: none"> – One or more nuclear fuel cycle facilities in operation, or – A nuclear fuel cycle facility which is not operated but is not decommissioned, or – A project to build a nuclear fuel cycle facility.” 	<p>Wording.</p>	X			

			4 th sentence: “The types of facilities included in FINAS are defined as any type of installation dealing with the nuclear fuel cycle other than nuclear power plants and research reactors or waste disposal repositories <u>facilities</u> .”	Wording. The term ‘disposal repository’ is a tautology as the terms ‘disposal facility’ and ‘repository’ are often used synonymously. However, the Safety Requirements SSR-5 and all associated Safety Guides (GSG-1, SSG-14, SSG-23, SSG-29 and SSG-31) solely refer to disposal facilities. This term should also be used in DS479.			
3	30 30	Annex I, p. 33	Section on FINAS, subsection “Technical Meeting of National Coordinators” “The IAEA and OECD/NEA each take it in turn to host technical meetings of National Coordinators. These meetings provide an opportunity for exchange <u>of information</u> and enhanced learning from the reports provided, and to guide <u>further</u> development of the FINAS database.”	Wording.	X		
NUSCC							
COMMENTS BY REVIEWER Reviewer: U.S. Nuclear Regulatory Commission Country/Organization: United States of America / NUSSC Date: 9 Oct 2015					RESOLUTION		

Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
	1 31	1.2/6-7	In Article 19 of the “Convention of Nuclear Safety” [4] and Article 9 of the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management [5] the importance of the feedback of operating experience is fully recognized with emphasis on by the importance of establishing programmes to collect and analyse relevant operating experience and acting on the results that the results are acted upon.	Clearer language	X			
	2 32	1.3/4-6	This revised IAEA Safety Guide provides guidance on meeting the requirements as established in International Conventions, Fundamental Safety Principles as well as General Safety Requirements. It and constitutes an update and provides an extension to cover the life cycle of nuclear installations from design to decommissioning. It also adds information and takes account of for analysing and reporting of operating experience, including good practices.	Clearer language	X			
	3 33	1.4/2	“... contact points between all -relevant organizations...”	Avoid use of all	X			
	4	1.4/3	“The guidance provides key recommendations of for establishing and maintain-	Grammar edit, clarification	X			

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34		ning an effective OE system...”					
5	1.5	1.5. This Safety Guide is applicable to all relevant organizations and all phases of nuclear installations, from design through to decommissioning.	Grammatical				
35							
6	2.3/5 th bullet	“Recommended actions resulting from the investigation and analysis...”	Better continuity from previous bullets	X			
36							
7	2.3, 3.6 Fig. 1 & 2	Please review and clarify the arrows	All paths should lead to coding the results in the database. The line from Investigation directly to Corrective actions implies that Trending and review is not (always) needed.				Paths added: from corrective actions to coding/storing from trending/review to investigation Path deletd: from investigation to corrective actions
37							
8	2.4/4	“...centralized OE system that is governs various aspects...”	Grammar edit	X			
38							
9	2.5/1	“The management system has to should ensure the promotion of...”	Consistency of language			X	A quotation contains the original wording.
39							
10	Page 10/ Para 2.8, 2.20, etc.	IAEA Glossary stated that in the context of the reporting and <i>analysis</i> of <i>events</i> , “ An event is any occurrence unintended by the <i>operator</i> , including operating error, equipment <i>failure</i> or other mishap, and deliberate action on the part of others, the consequences or potential consequences of which are not negligible from the point of view of <i>protection</i> or <i>safety</i> . <i>The Glossary defined an accident as:</i> “Any unintended event , including operating errors, equipment <i>failures</i> and other mishaps, the consequences or potential	Clarity: The guidance document needs to differentiate clearly between an “accident” and an “event” in terms of category of event or accident and reporting requirement under each category				
40							

			consequences of which are not negligible from the point of view of <i>protection or safety.</i> In this regard, the guidance is unclear regarding differentiation in reporting between “an event” and “an accident,” as there are overlaps that need to be discussed				
11 41	2.8		Replace “attitude” with “safety culture”	Consistent terminology	X		
12 42	2.9/2		“...throughout the organization, fostering a where the safety culture traits of continuous learning and questioning attitude are encouraged and learning culture. ”	Consistency of language with NRC NUREG 2165	X		See comment 126.
13 43	2.16/1		“...corrective actions resulting from the OE programme are given appropriate priority...”	Not all OE corrective actions will need high priority, but if they do, they should get it.			
14 44	2.18/1		“...operational safety at the organizational/management level.”	Editorial	X		
15 45	2.21		“Operating organisations should identify and enter into their OE programme all events... shortcomings in human performance, and error likely situations and opportunities that need to be addressed..., as well as identify opportunities for improvement and good practices that are relevant to safety and enter them into their OE programme. ”	Reworded to keep like issues (undesired outcomes prevented/desired outcomes enhanced) appropriately grouped.	X		
16 46	2.22		“The sources of information on OE should comprise may include for instance construction, fabrication, and installation documents, procurement documents, component test records, and receipt inspection documents, operational records, maintenance records, results from re-	Acknowledgement of relevant construction experience, a/k/a/ ConE, and procurement activities. Potential counterfeit			

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			views, installation walk-downs, trending, the surveillance programme, benchmarks, peer reviews, and self assessments, and information about potential counterfeit, fraudulent or suspect items. A system should be developed for issues involving non-conforming, counterfeit, fraudulent or suspect items or parts that should also be identified and reported within the OE system.	items should be among the sources of OE information, but a separate system for tracking and reporting them is beyond the scope of this guide, and should not be required by this safety standard.				
17 47	2.28/1		“Although information can be captured in different information systems, they should be there are potential advantages to having a single integrated into one OE reporting system should be easily accessible to all personnel within the operating organizations personnel.”	This is a better reflection of reality; it would not be practical to expect that operating organisations would each have an integrated OE reporting system.				
18 48	2.33/2-3		“Written guidance with established significance level criteria should be utilized...”	Criteria should include more than just significance level				
19 49	2.34/1		“Significance level Screening criteria should consider...”	More accurate description; see comment on 2.33 above				
20 50	2.38/2		“... according to safety significance, potential for recurrence and recognition of developing adverse trends.”	More precise language	X			
21 51	2.43/1		“The results of external event screening of events at the installation level...”	Clearer meaning	X			
22 52	2.53		The on-site investigation should be commenced as soon as practicable to ensure that information is not lost or diminished and evidence is not invalidated or removed. It is vital that the on-site investigation be performed in a timely manner and should not affect	Protection of any ongoing investigations and/or vital information that could provide insight into the cause(s) of the event, in addition to appropriate	X			

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			the safety of the installation.	lessons learned.				
23	2.61/1		“The person responsible for implementation of the a corrective action ...”	Likely more than one corrective action	X			
53								
24	2.63		<u>DELETE:</u> A periodic evaluation should be carried out to review the pending corrective actions. Incomplete corrective actions should be assessed periodically in aggregate to check whether the risk to the installation is still acceptable.	This point appears to be more related to the effectiveness of the corrective action program than to an operating experience program. Regarding construction experience, this could be a rather large list, requiring significant tracking resources to ensure closure before commercial operation.				
54								
25	2.68		Corrective actions should be tracked to completion and close-out.	What timeframe is required (or recommended) for record retention? Is there a reference document?				
55								
26	2.71/1		“To allow further trending and identification of recurring themes...”	Pulls in relevant information from 2.73; see below	X			
56								
27	2.73/all		Combine paragraph 2.73 into paragraphs 2.71 and 2.72.	Redundant with 2.71 & 2.72 (with marked change to 2.71 noted above)				
57								
28	2.85/1-2		“Operating experience information should be made readily accessible and user friendly, with due regard for the sensitive nature of certain information, (user friendly) to all operating organisation personnel...”	Less awkward, clearer meaning	X			
58							X	IAEA orthography

29 59	3.1/4	"...in accordance to with requirement 21..."	editorial	X			
30 60	3.1	ADD: Note: Particular care must be taken when disseminating sensitive information not to jeopardize on-going technical assessments or investigatory efforts.	Re-enforces preservation of sensitive and/or proprietary information while safeguarding on-going efforts of event analysis.				
31 61	3.4/2-7	"... OE from operating organizations and regulatory experience. It should include making arrangements for analysis to be carried out to identify lessons to be learned from operating experience and regulatory experience, including experience in other States, and for the disseminating of the lessons learned and for their -use by authorized parties..." "...other information that is not necessarily captured by the operating experience programmes of operating organizations (e.g. actions...)"	Run-on sentence broken up for clarity				
32 62	3.6/3	"... arrangements of the OE process may differ in-line-with depending on the organizations..."	clarity	X			
33 63	3.6/1 st bullet	"Collection of domestic and external international OE;"	"external OE" has a different meaning in chapter 2; "international OE" is more precise				
34 64	3.6/4 th bullet	" Supervision Oversight activities and recommended actions..."	Oversight or inspection is more in line with the intended meaning	X			
35 65	3.6/5 th bullet	"Wider review of low-level events for consideration of trends and review ;"	Clarity				

36 66	3.10/1	“The management system has to should ensure the promotion...”	Consistency			X	A quotation contains the original wording.
37 67	3.11/1	“The regulatory body should specify the reporting arrangements requirements for events, incidents or accidents considered significant to safety and security. The ar- rangements criteria should apply a graded approach...”	Clarity – talking about criteria for events requiring reports in this paragraph, not the logistics of making the report	X			
38 68	3.12/1	“As a minimum, the arrangements report- ing requirements should include:”	Clarity	X			
39 69	3.12/1 st bullet	“Information relating to events that challenged-(or have the potential to affect challenge)...”	Clarity	X			
40 70	3.12/2 nd bullet	Follow Up Reporting: Detailed reporting of early notification events after sufficient time has passed to allow for completion of investigations, or to notify the regulatory body of changes to early notifications. As a minimum, these reports should include: description of the event sequence including all failures; direct causes and root causes; contributing factors; potential for common cause / mode failures; extent of conditions/cause analysis of actual and potential safety significance; and short, medium and long-term corrective actions. The lessons learned from previous related occurrences either at the same site or at other installations should be captured. The report should consider technical, human and organizational aspects and external factors;	Grammatical/ Clarity	X			
41	3.12/3 rd	“OE information provided routinely, or	Clarity	X			

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71	bullet	that as specified by the regulatory body, provided in-line with regular, agreed-upon time-scales...”					
42 72	3.13/1	“...types and severity of events that have to shall be reported.”	Consistency				
43 73	3.16	3.16. In addition to the information discussed in chapter 2, other relevant information should be included in the screening process. This These may include: reports	Grammatical	X			
44 74	3.18/1-2	“The first step in the screening of reports from domestic operating organisations involve the regulatory body should include confirmation of the accuracy, completeness, and timeliness of that the report and that it satisfies the prescribed reporting criteria its accuracy and completeness in due time. ”	Clarity	X		X	IAEA orthography
45 75	3.19/2	“... performing performance of a detailed analysis of the issue; further trending, and identification of necessary regulatory action, or that no further action is required. ”	Clarity and alignment with other IAEA OE guidance documents (PROSPER)	X			
46 76	3.20/3	“...include safety significance, novel causes, repeat occurrences, and generic lessons to be learned.”	Editorial	X			
47 77	3.22/all	“The regulatory body should analyse the information provided from reported events, investigations and other OE sources to identify trends and patterns. These analyses may also recognise include information about low level events and near misses when available. ”	Clarity	X			
48 78	3.23/all	Reviews of OE should be performed to investigate include evaluation of potential generic issues and to draw generic les-	Clarity; pick up intent of deleted paragraph 2.81 in the more ap-	X			

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			sons from investigations of significant events, when applicable.”	propriate context			
49 79	3.24/3-4		“Additional inspections of the OE programme or parts of it should be undertaken when gaps in to licence regulatory requirements and standards are identified.”	Clarity/consistency	X		
50 80	3.25/1-2		“...to support and enhance their its own regulatory strategy, own processes, rules...”	editorial	X		
51 81	3.29		<u>ADD:</u> Note: Particular care must be taken when disseminating sensitive information not to jeopardize on-going technical assessments or investigatory efforts.	Re-enforces preservation of sensitive and/or proprietary information while safeguarding on-going efforts of event analysis.			
52 82	3.30/1-3		“The regulatory body should have arrangements procedures in place to collect international OE and share with domestic operating organisations. <u>Arrangements Procedures</u> should also be in place for sharing domestic OE with the international community <u>through international databases (e.g. IRS/IRSRR/FINAS etc.) as well as through</u> working groups, meetings, and through regular contact...”	Consistency/emphasize importance of the use of the IRS/IRSRR/FINAS databases as the primary source of int’l OpE by listing first	X		
53 83	3.31 – new		“The regulatory body should seek to take advantage of opportunities to enhance the use of international operating experience, including participation in forums and working groups, technical meetings to exchange, evaluate and document operating experience information, and training by international organisations on the effective use and exchange of operating experience.”	This is moved up from Annex I. Recommend deleting Annex I as unnecessary; this information is retained by appropriately placing it in the context of chapter 3.			

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54 84	Appendix I, I.1	<p>...</p> <ul style="list-style-type: none"> <input type="checkbox"/> Any personnel exposure, injury and radioactive release; <input type="checkbox"/> Immediate actions taken; <input type="checkbox"/> Initial First risk perception; <input type="checkbox"/> Contact details. <p>And It may also contain a provisional INES rating for those Member States that use INES [9], [12].</p>	Editorial, completeness	X			
55 85	I.5	<p>ADD:</p> <ul style="list-style-type: none"> • date of identification • method of detection • extent of condition as appropriate • manufacturer • Component model/part number 	Information needed to respond appropriately, add value to lessons learned, and to identify trends.	X			
56 86	Annex I	Delete Annex 1	This is extraneous information. It is not clear that this is only provided as background on the history of these databases, and could become easily outdated as new processes develop. The information is too specific, not entirely accurate, and does not maintain the scope or level of detail found in the rest of the safety standard. It is				

				not necessary to successful application of the guidance in the safety standard and detracts from the overall effectiveness of the standard.				
Reviewer: NUSSC Page.... of.... Country/Organization: Republic of South Africa Date: 09 October 2015					RESOLUTION			
Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
	1 87	1.4	1.5. This Safety Guide is applicable to all relevant organizations and all phases of the nuclear lifecycle, from siting through to decommissioning.	Change to refer to the nuclear lifecycle.				
	2 88	Footnote 1	1 Operating experience (OE) is information that is pertinent to the safe siting, design, construction...	Include siting in definition				
	3 89	1.9	1.9. The Fundamental Principle concerning Confidentiality	Correct editorial “L”				
	4 90	2.3and communicate OE in a systematic manner.	Replace “way” with “manner”	X			
	5 91	2.3on relevant OE at other nuclear installations and applicable industries to draw lessons	Add “applicable industries”	X			
	6	Fig 1, External	Aims at learning from other installations and external organizations experience.	Reword to include other organisations				

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

	92	OE identification		experience.			
	7 93	2.4	...system that governs various aspects of the OE process.	Delete “is”	X		
	8 94	2.4 last bullet	Independent investigation of significant events as required.	Delete “Providing”	X		
	9 95	2.6	...throughout the lifecycle of the installation.	Delete “including de-commissioning.”			
	10 96	2.20	...contractors (see paragraph 1.7).	Change reference to 1.7	X		
	11 97	2.27	2.27. The method for reporting of issues should be user friendly, and computerized wherever possible.	Change whenever to wherever.	X		
	12 98	2.48, first bullet	In the case of a significant event with serious consequence a formal root cause analysis (RCA) with extensive use of root cause analysis techniques applicable to the type of event should be performed;	Reword to include significant and consequence.		In the case of a single serious an event with substantial learning potential (e.g.serious actual consequences) a formal root cause analysis (RCA) with extensive use of root cause analysis techniques applicable to the type of event should be performed.	
	13 99	Fig 2, External OE identification	Lessons learned from operating experience gained and shared by international nuclear community.	Propose to reword to reflect international link.	X		
	14 100	Fig 2, Domestic OE	Reception of reports from licensed nuclear installations and local industry where applicable.	Propose to reword to include other industry.			
	15 101	Fig 2, Scree-	Process following written procedures to identify and review significance of events	Propose to reword.	X		

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

		ning	and information received, decide on priority and level of further analysis.					
	16 102	3.14	3.14. These criteria should cover the phases of the installation life cycle including siting, design, construction, commissioning, operation and decommissioning.	Include siting.				
	17 103	Annex I		It is proposed to review and streamline the information contained in the Annex I, as example use the same headings between IRS, FINAs, IRS RR and try to be consistent in the population of the information on the 3 systems. Example, if the countries participating is a heading include it for all 3 etc.				
COMMENTS BY REVIEWER					RESOLUTION			
Country/Organization: Canadian Nuclear Safety Commission/Industry Date: Sep. 30, 2015								
Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

1 104	Figure 1	<p>Change the language from being negatively focused to neutrally-focused.</p> <p>e.g. Aims at learning from other installations experience and preventing a similar event.</p> <p>Prior to changes in installation conditions or restart of an operation it is expected to provide immediate review of event to preclude recurrence if negative, or enhance recurrence if positive.</p>	<p>The inputs to the OE process are assumed to be negative “preventing a similar event” “to prevent recurrence”, “causes of an event “, “identify adverse trends”, “recognition of a developing or emergent problem “, “prevent repetition”. The definition of operating experience given in the first footnote clearly states that operational experience need not be negative – “non-reportable (including low level) events, operational records, near misses, good practices and all other information pertaining to the nuclear installation”, and is echoed in section 2.20, 2.21, 2.22. The flowchart is not consistent with this.</p>				
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2 105	2.6	The management should ensure that the findings of OE are used for corrective actions recommendations at all levels important for nuclear safety.	Removing the focus exclusively from negative “corrective actions” to more inclusive “recommendations”				
3 106	2.8	Management of operating organizations should instil instill an attitude among installation personnel that encourages the reporting of all events, including low level events and near misses, potential problems related to equipment failures, shortcomings in human performance, non-conformance , procedural deficiencies and inconsistencies in documentation and best practices that are relevant to safety in the sense of requirement 24, para. 5.31. SSR-2/2 [1].	Correcting a spelling mistake, and adding to the laundry list of what should be reported	X		X	IAEA orthography
4 107	2.9 footnote	A ‘just-culture’ is a culture where front line operators and others are not punished for actions, omissions or decisions taken by them, that are commensurate with their experience and training, and second victims of events are cared for , but where gross negligence, willful violations and destructive acts are not tolerated.	Just culture is a wider term than only the blame-free approach to reporting, but is encompassing second victim consequences. Sydney Dekker is a good resource for this, although many are now available.	X			
5 108	2.20	Management should ensure adherence to the expectations for identifying events, poor performance, degrading trends and good practices by everyone at the installation including contractors (see para-	Including expectations in the SAT programme is standard practice.				

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			graph 1.8). The communication of the expectations should be performed by setting the standards through written instructions, continuous example, training, supervision and coaching. This could be a learning objective of the Systematic Approach to Training of the Nuclear Installation.				
6 109	2.24	OE issues should be promptly reported, screened and followed up in a timely fashion. to ensure timely screening and follow-up.	Report promptly does not influence the rate of the following actions. All actions should be done in a timely fashion.				
7 110	2.25	Low level events and near misses should be reported as they have rich learning potential. because they may lead or contribute to more significant events.	In line with previous comments, focusses the reason for reporting on what can be learned.				
8 111	2.26	Everyone in the operating organization should be empowered to report identified issues.	Including “identified issues” presupposes an objectively complete list, which could not exist	X			
9 112	2.46	Installation event reports and non-radiation-related accident reports should identify tasks for which inadequate training may be contributing to equipment damage, excessive unavailability of equipment, the need for unscheduled maintenance work, the need for repetition of work, unsafe practices or lack of adherence to approved procedures in the sense of requirement 24 para. 5.28 SSR-	Standard SAT expeta-tions.	X			

			2/2. [1] Such event reports should be fed back to the training system.				
6 113	2.48	<input type="checkbox"/> In the case of an event with substantial learning potential single-serious event a formal root cause analysis (RCA) with extensive use of root cause analysis techniques applicable to the type of event should be performed; <input type="checkbox"/> For an event with moderate learning potential consequences the apparent causes should be identified and corrected;	To again focus the effort on both negative and positive events				
7 114	2.51	Change the language of the RCA process to be more inclusive, Eg. Establishment of the complete event sequence (what happened including how the event problem developed); Eg. Identification of corrective actions to prevent recurrence or ways to promote best practice	Again, to focus on a more inclusive understanding of where and RCA could be applied.	X			
8 115	2.70	OE information should be examined by competent persons for any precursors to, or trends in, adverse conditions for safety, so that any necessary corrective actions can be taken before serious conditions arise in the sense of requirement 24 para. 5.29 SSR-2/2. [1] Trending could also take advantage of best practices, and monitor their diffusion and uptake.	Again, to balance the approach from only negative to including a wider lens.				
9 116	3.1	All bodies associated with nuclear and radiological safety should foster mutual understanding and respect through honest					

			and open communication on operating experiences. As a good practice these communications should also include occurrences that are not covered by formal reporting requirements in accordance to requirement 21 of GSR Part 1 [2]. Specifically, these can include good practice and positive occurrences.				
10 117	Figure 2	Change the language from being negatively focused to neutrally-focused. Eg. Aims at learning from other installations experience and preventing a similar event. Eg. Process allowing recognition of developing adverse trends, and emergent problems and good practice in one or several nuclear installations, so that proactive measures can be taken.	Similar comments to Figure 1 – the information in the regulatory OE is seemingly exclusively negative – with wording such as “preventing a similar event” and “adverse trends and emergent problems”. If good practices are included, the flowchart wording would need to be expanded accordingly.				
11 118	3.13	Any event in which a single cause or condition caused a significant loss of operability of a safety system;	All accidents are multi-factorial, the original wording suggests otherwise.				
119	3.22	The regulatory body should analyse the information to identify trends and patterns. These analyses may also recognise information about low level events, near misses and best practices.	As above – expanding the idea of what information could be shared	X			
16 120	Annex 1 – Descrip-	The IRS increases worldwide awareness of potential and actual problems in nuclear plant operations. It draws attention	More precise wording.	X			

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

		tion of the IRS	to those incidents, which, if not dealt with in a timely fashion, could escalate to more serious events through subsequent equipment of human response failures.				
	17 121	General	<i>Suggest to Create/Revise a companion Tecdoc</i>	Additional guidance, in the form of a manual, may be required for an operator to implement the various elements, as this is not a "how to" document.			
	18 122	Section 3	<i>Specify an expected minimum regulator reporting level to the IAEA IRS database</i>	Lack of a minimum reporting level by the regulator to the IAEA IRS Database.			
	19 123	Section 2, Page 6 Footnote	<i>Promote the footnote into the body of the document</i>	To ensure that all can readily see and understand what constitutes operating experience this footnote should be part of the body of the document.			
	20 124	Section 2, Page 8, 2.2	<i>Provide in a glossary or define what is meant by the term graduated approach</i>	The word graduated is used repeatedly in the guide, but it is not detailed what is meant by this approach.			
COMMENTS BY REVIEWER					RESOLUTION		
Reviewer: Nikolaus Müllner Page.1... of.2. Country/Organization: Austria / BMLFUW (Consultant) Date: 9 th of October 2015							

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
	1 125	2.5	The management system has to should ensure the promotion of a safety culture,	As a “safety guide” the document should contain “should” statements			X	A quotation contains the original wording.
	2 126	§2.9	Management should foster a ‘just-culture ’ safety culture	§2.9 introduces the term “just-culture”, and this term is repeated in §2.29. A safety guide should not be used to introduce new terms. In this specific case, a just-culture is part and parcel of a proper safety culture. I would replace just-culture with safety culture.		Management should foster a „just culture“ in which reporting is encouraged and reinforced throughout the organization, where the safety culture traits of continuous learning and questioning attitude are encouraged.		
	3 127	§2.12	Management should assure that sufficient”	“Management should assure sufficient”. This should read, “Management should assure that sufficient” (note that this is the wording in §2.13 through §2.17). The wording should be consistent				

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

	4 128	§2.22	The sources of information on OE should comprise for instance operational records, maintenance records, results from reviews, installation walk-down, trending, surveillance programme, benchmarks, peer reviews, and self assessments, safety- and risk analyses	§2.22 describes the type of information that should be included as sources of information on OE. I would argue that safety analyses and risk analyses should also be included. Although safety and risk analyses are not directly operating experience, revisions to safety and risk analyses often reflect operating experience in a way that individual events do not.				See comment 46
	5 129	§3.10	The management system has to should ensure...	See comment 1			X	A quotation contains the original wording.
COMMENTS BY REVIEWER				Page.... of.... Date:		RESOLUTION		
Reviewer: Country/Organization: STUK								
Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
	1 130	Generic		The safety guide SSG-38 presents guidance on the non-conformance control				

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

				and operating experience of the construction of a NPP. How is considered the interface in-between SSG-38 and DS479 considered?			
	2 131	Generic		OPEX process at the operating organization and RB does not recognize international major events requiring immediate actions. Immediate event review of specific interest.			
	3 132	Generic		The requirements from SF-1 and the Safety Requirements documents should be presented in the introduction and rewritten requirements should be deleted from the chapters 2 and 3. Examples: 2.5, 3.10, 3.8			
	4	Generic		Phrases			

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133			“...as stated in [ref] “... in the sense of [ref]” “..according to [ref]” are not helpful and should be removed.				
5 134	2.5	2.5 should be deleted	See above				
6 135	3.8	3.8. The regulator’s management system should integrate the outcomes of the OE in the regulatory processes. The international exchange of OE should be encouraged. The regulatory body shall establish, implement, assess and improve a management system that is aligned with its safety goals and contributes to their achievement as stated in requirement 19 of GSR Part 1 [2].	See above				
7 136	3.10	3.10 should be deleted					
8 137	Fig. 1 Fig. 2	Flow chart should be based on Fig II-1 on NS-G 2.11. It could be developed further. These new figures are not so clear that they would give overall picture of process.					
9 138	2.22.	NCSFI	acronym should be added	X			
10 139	2.25	..should be identified and processed at installation level.		X	.		
11 140	2.40	Screening of OE should include a review of external (national and international) OE ... The possible prior and re-occurrence of a similar event;			The possible prior and reoccurrence once or more times of a similar event;		
12 141	2.41	Screening of OE should also include relevant information from all relevant stakeholders (e.g. vendors, suppliers, designers and research institu-		X			

			tions).				
13 142	2.50 & 2.53			same meaning / purpose of requirement? should be placed together			
14 143	2.51	Appraisal	Evaluation of extent of condition7;				
15 144	2.52		to determine which previous corrective actions taken were not effective at preventing recurrence	How you can find corrective actions which are not effective? Maybe better to find previous effective actions ??		... to determine which previous corrective actions taken were not effective at preventing recurrence.	
16 145	2.58			paragraph is too long – should be divided to 2 different after 1st sentence!			
17 146	2.78		... The level of the analysis should be based on the significance and potential consequences of the events and significant changes in trends of the events.	we should look events or significant changes in trends of the events	X		
18 147	2.86		Personnel should use OE information to improve safety performance and prevent events. target should be on safety ..not just performance ??			
19 148	3.3		This system should be consistent with the criteria discussed in paragraph 2.3.	system should be consistent with every criteria in chapter 2	X		
20 149	3.4			paragraph is too long – should be divided to 3 different!!			
21 150	3.12			where is the main report ? as stated in the Appendix I / I.2.A			

				Should be before the follow up report ?			
22 151	3.13			Who designed this list ?? ...abandonment of service or suspension of activity >> is this clear ? Nxt text is twice: Any natural phenomenon or other external condition that posed an actual threat to the safety of the nuclear installation or that significantly hampered site personnel in the performance of duties necessary for safe operation; same as : Any event that posed an actual threat to the safety of the nuclear installation or that significantly hampered site personnel in the performance of duties necessary for safe operation, including fires, releases of toxic gases and radioactive releases;			
23 152	3.14 & 3.15		These criteria Reporting should cover ...	text change		These reporting criteria should cover ...	
24 153	Appendix I I.1		I.1.The preliminary report (sometimes termed the early notification or prompt report)		X		

25 154	Appendix I I.3		chapter I.3 (follow up) should be moved to after I.5; because follow up report is delivered after main report ??	X			
COMMENTS BY REVIEWER Country/Organization: FRANCE Pages 3				Date: 2015-10-07	RESOLUTION		
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1 155	All	The introduction indicates that the guide deals with all sources of OE and the following of the guide appears to be oriented only on events reported (for instance, nothing related to good practices that are not addressed in the guide)	OE should not be oriented only on events reported. Moreover, this comment is consistent with the DPP				
2 156	2.33	Only the first sentence should be kept	The nature of analysis should not depend on the INES level for instance				
3 157	2.34	Please add the environment issues	Environment should not be forgotten	X			
4 158	2.43	Please add the periodic safety reassessment (PSR)	OE is a major input for performing the PSR				

5 159	2.48	This paragraph should be clarified	Which consequences are concerned in this paragraph? Actual or potential ones? An event with moderate actual consequence might have significant potential consequences and therefore need an in depth analysis.				
6 160	2.48	Last bullet to be deleted	Human factor is involved in most of events. Consequently, human factor has to be addressed in every report and not subject to a specific report				
7 161	2.52	Investigation should search in internal and external...etc	Of course, investigators will not search in databases that would not be appropriate	X			
8 162	2.58	Delete “and should be reviewed for their effectiveness”	Analysis of the effectiveness of corrective action is a broad topic. It takes sometimes years to establish that an action is not effective. To my knowledge no country has engaged such an action at the present time. Is there confusion between reviewing effectiveness of corrective action and qualification test after completion of a modification? A qualification test can be positive while the modification proves to be of a poor effectiveness some years later.				

9 163	2.69	See previous comment N°8					
10 164			In the paragraph “Utilization, reporting and exchange of information, subcontractors should be mentioned				
11 165	2.87	Please add the constructor into the brackets		X			
12 166	2.93	The operating... of lessons learned and effectiveness of corrective action.	This periodic report could make a point on the effectiveness of corrective action	X			
13 167	Fig 2	Please add “reactive Inspections” in the frame “Investigation”	Investigations have to be carried out on site and not only on paper, in an office	X			
14 168	3.13	To be completed	Criteria are mainly oriented to safety significant events. What about radiation protection and environment?				
15 169	3.28	Please mention into brackets the generic letters issued by regulators.	It is important that regulators disseminate generic issues	X			
16 170	Appendix 1-II	Please define a deadline for reporting an event	Early information should be reported immediately (within 2 days?)				

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

17 171	I 2	This report should be submitted to both regulatory body and, according to national practices, to the TSO... practicable, within a period of time to be defined by the regulator	TSO when separated from RB have to be informed as soon as possible of any event. The delay to issue a report has to be defined by the regulator				
18 172	Annex I- Scope of FINAS	FINAS, at the date of the report , has...	The number of Member States is likely to change over the years.	X			
173			Japan				
1 174	2.3 /15	Relevant lessons from other industries experiences, <u>which could practically apply to the nuclear installations</u> , should also be taken into consideration, as necessary. or, Relevant lessons from other industries experiences (<u>e.g. chemical plants, transportation (air, sea and land)</u>), should also be taken into consideration, as necessary.	Clarification for other industries experiences. This is just the same as stated in SSR-2/2 requirement 24, however, more detail guidance should be stated in here as a safety guide.	X			
2 175	After 2.4	<u>From the culture point of view, due account should be taken that how Member States can utilize the operating experiences for different countries.</u>	National culture aspect is very important factor to utilize the operating experiences effectively.				
3 176	2.5 and 3.8	Add reference in para.2.5 and 3.8.	Should be referred GS-R-3 or DS456 (GSR Part 2) for management system.				

	4 177	2.82	The operating organization should maintain liaison, as appropriate, with support organizations (<u>e.g.</u> manufacturers, research organizations and designers) in order to feedback information on operating experience and to obtain advice, if necessary, in the event of equipment failure or in other events in the sense of requirement 24 para. 5.32 SSR-2/2 (<u>Rev. 1</u>) [1].	SSR-2/1 (Rev. 1).				
	5 178	2.83 para.1	The operating organization should obtain and evaluate <u>available</u> information on relevant operating experience at other nuclear installations to draw <u>and incorporate</u> lessons for its own operations. It should also encourage the exchange of experience with the national and international systems for the feedback of operating experience. Relevant lessons from other industries should also be taken into consideration, as necessary in the sense of requirement 24 para. 5.27 SSR-2/2 (<u>Rev. 1</u>) [1].	The same comment on #3.				
ENISS								
COMMENTS BY REVIEWER					RESOLUTION			
Reviewer: ENISS Country/Organization: ENISS 10-08					Page 1 of 12 Date: 2015-			
Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
	1	2.3	The OE system should include the follo-	Evaluation of effects				

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

179		wing: (add a bullet, second from last) <ul style="list-style-type: none"> <u>Evaluation of the effects of actions taken</u> 	of the actions taken is important for “continuous learning”				
2 180	2.3/ Fig 1	Add to box “Screening”. “Also to identify adverse <u>and positive</u> trends.”	It is important also to identify positive trends.				
3 181	2.3/ Fig 1 and 2.70	Fig. 1 Box “Trending and review”. Add at the end <u>“Positive trends should also be recognized.”</u> Update para. 2.70 to reflect changes in Fig. 1. <u>“Positive trends should also be recognized to support application of good practices.”</u>	It is important also to recognize positive trends				
4 182	2.3/ Fig 1	Box “Corrective action” “....monitored and the <u>effects</u> assessed.”	Evaluation of effects from action is an important source for continuous improvement. Ref para. 2.69				
5 183	2.3/ Fig 1	Add text (or arrow) that explains that coding database should be reviewed following the investigation.	Best coding is done on events that are investigated in depth, thus the coding ought to be reviewed for any changes following the investigation. See Para 2.71.				
6 184	2.3/ Fig 1	Clarify that the box “Results coded and stored in database for further use.” is updated following “Investigation”. Also “corrective actions” and “trend”	The box “Results coded and stored in database for further use” is not an action that is performed only				

			should be included in the database.	once (after screening), this is an action that is performed also after “Investigation”. (also “Corrective Actions” and “Trend and review” should be included in the OE database.				
7 185	2.4	2.4. The organizational framework for an OE programme will be dependent on the operating organization’s structure. Operating organizations with a single nuclear installation should perform all functions of an OE programme. <u>The exchange of experience with the national and international systems for the feedback of operating experience may be supported by external organizations.</u>	Some members have utilized the gathering and distribution by external contractor to ensure comprehensive information. There are also international organisations (WANO, owner group) that analysed significant feedback and provide recommendation to their members.					
8 186	Management System Page 10	After 2.5 <u>Contribution of the Management</u> <u>2.8</u> <u>2.9</u> <u>2.18</u> <u>2.19</u> <u>2.20</u>	Most of the paragraphs under management system deals with the contribution of the management and not with the Management System or the OE programme itself. We would recommend to insert a section CONTRIBUTION OF THE					

				MANAGEMENT and to order paras 2.5 till 2.20 with the content below.			
9 187	2.9	2.9. Management should foster a ‘just-culture5’ in which reporting is encouraged and reinforced throughout the organization, fostering a questioning attitude and learning culture.		The definition in footnote 5 is different to the phrasing of in para 2.9. . We propose to use either footnote 5 or delete “just”			
10 188	2.8	Management of operating organizations should instil an attitude among installation personnel that encourages the reporting of all events, including low level events and near misses, potential problems related to equipment failures, shortcomings in human performance, procedural deficiencies and inconsistencies in documentation that are relevant to safety in the sense of requirement 24, para. 5.31. SSR-2/2 [1] <u>and good ideas / performance.</u>		The OE process should be used not only for adverse events but also to capture good ideas.			
11 189	2.12	2.12. Management should ensure <u>provide</u> sufficient, dedicated, suitably qualified, and experienced staff are <u>is</u> appointed to deliver <u>ensure</u> the defined scope of the OE programme.		For clarification			
12 190	2.16	Management should ensure that corrective actions resulting from the OE programme are given <u>commensurate</u> priority within the short and long term budget and staffing plans.		Most of events do not require a high priority level for corrective actions (otherwise, Nuclear Power Plants would be very dangerous)			

13 191	2.22	The sources of information on OE should comprise for instance operational records, maintenance records, results from reviews, <u>results from training sessions</u> , installation walk-down, trending, surveillance programme, benchmarks, peer reviews and self assessments. A system should be developed for issues involving non-conforming, counterfeit, fraudulent or suspect items or parts that should also be identified and reported within the OE system.	Training sessions are also good sources of information, e.g. simulator sessions				
14 192	2.27	The method <u>and system</u> for reporting of issues should be user friendly, <u>be easily accessible to all the operating organizations personnel</u> and computerized whenever possible. <u>Anonymous reporting should be possible</u>	Combination to one para with last sentence of 2.28. It is important to be able to report issues anonymously.				
15 193	2.28	Although information can be captured in different information systems, they should be integrated <u>gathered</u> into <u>a single one OE reporting system, in order to ensure their exhaustiveness and uniqueness</u> . The installation's OE reporting system should be easily accessible to all the operating organizations personnel. <u>Also contractor personnel should have access to OE when relevant for them.</u>	For clarification. Last sentence changed to 2.27 OE system should also be available to contractor personnel.				
16 194	2.29	Feedback should be given to the person who initiated the report and all other relevant personnel where appropriate.	Events used for trending needs to be communicated to the				

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

		Examples of a strong reporting culture should be widely communicated within the installation to encourage reporting, questioning attitude and promote a 'just-culture'. <u>Trends should be communicated.</u>	reporting personnel to avoid a reputation of OE as "an empty hole" where events are input but no useful information come out.				
17 195	2.35	A suitably experienced, knowledgeable, and multi-disciplinary team should be assigned to the screening task. The team should <u>preferably</u> include personnel with knowledge of relevant technical matters and matters concerning human performance and organisational factors.	It is difficult to systematically ensure that all the skills are present in the team				
18 196	2.46	Events with <ul style="list-style-type: none"> • safety implications should be investigated in accordance with their actual or potential significance • significant implications for safety should be investigated to identify their direct and root causes, including causes relating to equipment design, operation and maintenance, or to human and organizational factors. Installation event reports and non-radiation-related accident reports should identify tasks requirement 24 para. 5.28 SSR-2/2. [1]	This is important information, We propose to structure these in bullets for better readability.				
19 197	2.47	The operating organization should have procedures in place with criteria for specifying the type of investigation that is appropriate for any category of event. The type of investigation should be commensurate with the actual or potential consequences of an event and the fre-	The type of investigation or level of detail applied should also be selected based on criteria of complexity of the event (not only consequences). Some-				

			quency of recurring events <u>and take in to account the complexity of the event.</u>	times an event with big consequences does not need an analysis in depth and vice versa. Criteria for specifying the complexity of an event may include: how many groups/organizations are involved in the matter, time elapsed since occurrence, number of broken “root-cause barriers”, etc.				
20 198	2.51, 2 nd bullet	Cause analysis (technical and HOF) – root causes and contributing causes (why it happened)	To not forget HOF causes as they appear in more than 70% of the events					
21 199	2.55	Individuals performing investigations should be knowledgeable in investigation techniques. At least one individual on the team performing root cause or apparent cause analysis should have received formal training, regular retraining and <u>or</u> have recent experience in the conduct of investigations.	A people which regular practice of such investigations does not need retraining					
22 200	2.56	2.56. A multi-disciplinary group composed of suitably trained, experienced and knowledgeable personnel, including operators and management, should be assigned to review the completed investigations to ensure all causes have been identi-	Operators’ involvement is another key of event analysis. Event analysis should not be conducted without operators. Otherwise,					

			fied and that corrective actions have been developed to address the causes.	event analysis validity could strongly be called into question.			
23	2.57	201	Organizational issues should be investigated by an independent group to ensure objectivity with the results of the investigation.	The intent of this recommendation is not clear. independent of what ? The investigation group should be trusted with all aspects of the investigation. Also this para is in contradiction with 2.35.			
24	2.58	202	As a result of the investigation of events, clear recommendations should be developed for the responsible managers, who should take appropriate corrective actions in due time to avoid any recurrence of the events. <u>Coding should be reviewed and checked against additional insights</u> Corrective actions should be prioritized, scheduled and effectively implemented. <u>A selection of them</u> and should be reviewed for their effectiveness <u>after completion.</u>	Coding must be reviewed and possibly updated following “Investigation” to reflect any new insights in particular events. A systematic review is too strong.			
25	2.59	203	Adequate corrective actions should be addressed to all <u>main</u> causes.	To correspond to the idea of graded approach, addressing the main causes is generally sufficient			
26	2.67	204	Corrective actions affecting safety should be given the highest priority. <u>Prioritizing corrective actions should consider the</u>	There are different functional safety classes, so that safety cor-			

Relevance: 1 – Essentials 2 – Clarification 3 – Wording/Editorial

			<u>safety aspects at first. The nuclear safety should not be jeopardized by any corrective action.</u>	rective actions may similarly be distinguished (graded approach). Moreover, scheduling modifications is a big issue and may lead to group modifications in order to minimize drawbacks. To sum up, adequate priority and not highest priority should be given to corrective actions.			
27	2.69	An effectiveness review of corrective actions should be performed after completion		Already included in 2.58, last sentence Option: add “			
28	2.75	Information from all reported issues including low level events and near misses should be trended. The following types <u>Examples</u> of trend <u>to</u> should be identified and reviewed <u>are</u> : ... <input type="checkbox"/> Overall trends in human and Organisational factors and Human Performance; - Short term trends that develop quickly ... Performance as a word makes disappear “human actions important for safety” and so the involvement of human being as a part of safety. this may be difficult. If trends develop					

				quickly, they may be missed on short term because time to identify and characterize them may be longer than the short term trend. Moreover, it is only a specific type of trend which is encompassed in other trends.				
29 207	2.86	Personnel should use OE information to improve performance and prevent events. This should be actively encouraged and reinforced by management.		this statement is not necessary for it repeats the basic objective of OE implementation.				
30 208	2.88	Legal requirements and commercial interests may restrict the dissemination of some information. The regulatory body and the operating organization should make the necessary arrangements with the organizations concerned to ensure that any restrictions on the information to be disseminated are <u>adequate</u> minimized .		information is to be adequately protected, not minimally protected.				
31 209	2.90	The effectiveness of the OE programme should be assessed using the following methods <u>such as</u> : <input type="checkbox"/> Self-assessment; <input type="checkbox"/> Benchmarking; <input type="checkbox"/> Independent peer review.		Systematic use of all the methods seems excessive				
32 210	3.4	The regulatory body should establish an <u>internal</u> OE process. The information disseminated should		For clarification most of the given ex-				

			include other information that is not necessarily captured by operating experience programmes (e.g. actions pursuant to research and development activities , inspection findings, international forums, licensing activities, Integrated Regulatory Review Service Mission findings, regulatory experience from other industries, etc.) but which would result in improving the regulatory framework.	amples, except those that connected to re-search and develop-ment activites, are OE related and should be captured by OE pro-grammes. OE issued from R&D activities may not be relevant for industrial installa-tions (less formal pro-cedures, temporary solutions, etc.)				
33 211	3.6	Nevertheless, the OE system should reflect the following: <input type="checkbox"/> Collection of domestic and external <u>national and international</u> OE;	For harmonization					
34 212	3.6	A flowchart of a typical operating experi-ence <u>OE</u> process containing the recom-mended elements is shown in Fig. 2.						
35 213	3.11	The regulatory body should specify the <u>internal</u> reporting arrangements ...” or “The regulatory body should specify <u>in accordance with licensees</u> the reporting arrangements ..”	For clarification, de-pending on what is targeted					
36 214	3.11	The regulatory body should specify the reporting arrangements for events, in-cidents or accidents considered signifi-cant to safety and security .	This document de-scribes the OEF for safety significant is-sues. Security specific is-					

				sues should be mentioned in a Nuclear Security document.					
NSGC									
COMMENTS BY REVIEWER					RESOLUTION				
Reviewer: J. JALOUNEIX Page.... of.... Country/Organization: IRSN/France					Date: 09/10/2015				
Relevance	Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows		Rejected	Reason for modification/rejection
	1 215	P.7/§1.9	The nuclear security Fundamental Principle L	Add nuclear security for clarity					
	2 216	P.17/§2.88	Add: Moreover, information which could affect nuclear security should be identified and protected according to the regulation.	To explicitly address security issues.	X				
	3 217	P.22/§3.29	Add: Moreover, information which could affect nuclear security should be identified and protected according to the regulation.	To explicitly address security issues.					