

ENSREG Topical Peer Review Ageing

Assessment of the 1st topical Peer Review Report „Ageing Management“, October 2018

Joint Project – Nuclear Risk & Public Control

21 December, 2018

Terms of Reference and ENSREG Stakeholder Engagement Plan

The *Joint Project – Nuclear Risk & Public Control* participated in the first phase of the Topical Peer Review, when the “Terms of Reference” were published for consultation by sending a statement. In this **statement** we demanded eight points for an effective participation of NGOs and the interested public. These points can be found in detail in the table below, the whole statement of 30 Sept. 2016 can be downloaded from the Joint Project’s website¹.

We did not receive an answer on our statement, but it was referred to in the “minutes of the 33rd meeting of ENSREG, 10th November 2016, Brussels”². It stated that “A large discussion took place to solve in the best way the comments provided by NGO and in particular to address the question of participation of ‘independent experts’ to the TPR review. It was clearly emphasized by several ENSREG Members that this future exercise is a ‘Peer Review’ exercise.”

In the following table we compare which points of our statement were included in the final version of the “**Terms of Reference**”, and also in the “**ENSREG Stakeholder Engagement Plan**”³:

Requests from Joint Project Statement for Terms of References	Inclusion in Terms of Reference and/or Stakeholder Engagement Plan, and in the whole procedure
All inputs provided during the complete TPR 2017 need to be published continuously on the website to ignite a discussion.	No information on the Luxembourg Workshop in May 2018 was published, only in form of the final report in Oct 2018.
All inputs, starting with this one, need to be at least acknowledged as received. Secondly we ask for taking those seriously by justifying how they were incorporated into the TPR 2017 or not and if so, why not.	Some justification was provided in the minutes of the 33 rd meeting. The minutes were not sent to us, we found it accidentally.
Independent experts, not working for national nuclear regulators and not nominated by them, need to be involved throughout the process.	Not fulfilled.
We suggest that the ENSREG Group 3 issues a request to nominate independent experts close to the topic and trusted by leading NGOs in the antinuclear field, who work in the field and can refer to publications on nuclear safety/stress tests/aging.	Not fulfilled.
We would suggest that 2-3 of those experts are involved in the Board, the Peer Review, all workshops, country review sessions etc.	Not fulfilled.

¹www.joint-project.org/upload/file/ENSREG_TOR_Consultation_JPSTATEMENT.docx

²www.ensreg.eu/sites/default/files/attachments/minutes_of_the_33rd_meeting_of_ensreg.pdf

³www.ensreg.eu/sites/default/files/attachments/ensreg_tpr_stakeholders_plan_-_january_2017_0.pdf

We suggest introducing another level, a Public Hearing on the National Assessment on national level, because experts, NGOs and interested individuals who live there and have experience with the nuclear situation should have a chance to contribute, understand and influence this procedure on the national level.	Two public meetings were be arranged, one on May 3 rd ,2018, one on Nov. 22 nd , 2018
Not only final reports, but the complete “paper trails” need to be made available to the public.	Over 2300 questions were published in summer together with the answers, but not when they were submitted. The results from the Luxembourg workshop were not published, only as final report in Oct. 2018 The draft final report was not published and only countries were given the opportunity to give feedback.
Hearings, workshops etc. will be open to the interested public who want to observe the discussion and web-streamed.	Only the two public meetings were open to the public, not the Luxembourg workshop. The November meeting provided hardly any space for posing questions.

A public consultation on the “**TPR Technical Specifications**” was conducted in Nov. 2016. The Joint Project did not participate because we were not able to finance an independent expert to prepare an informed comment on the TPR TS for us.

National Assessment Reports were published and open for comments from Jan 8 until Feb 28 2018. The Joint Project did not participate because it would have required very specific technical expertise. But, as mentioned above, independent experts nominated by NGOs were not invited.

At the **first public meeting** on May 3 2018, two NGO representatives gave presentations⁴. Jan Haverkamp from Nuclear Transparency Watch stressed the necessity of conducting an Environmental Impact Assessment (EIA) under the ESPOO Convention before deciding upon lifetime extensions. He also argued for a review of the recommendations to include obsolescence in the specifications and expand the changes in definition of risk. Eloi Glorieux from Greenpeace Belgium criticized in detail the lifetime extension procedures of Tihange-1 and Doel 1&2.

At the **second public meeting** on 2 Nov. 2018 ENSREG informed about the results, also via livestream (<https://livestream.com/streaming/euratom/videos/183898672>). Patricia Lorenz participated via livestream. Only five persons participated in this event, and the last part of the event, a short timespan to raise questions, was completely cancelled. This seemingly disinterest of the public is an effect of the results that were published – the reports lack information on single NPPs and their ageing management.

Conclusions and requests

Public participation

The requests of the Joint Project statement to the consultation procedure on the Terms of Reference were only partly fulfilled. Most documents were published on the ENSREG website, but not the

⁴<http://www.ensreg.eu/public-engagement>

whole “paper trail”, meaning draft documents and questions to the National Assessment Reports which were not published at all. Such documents help to understand the ongoing discussions, especially for NGOs and the interested public who have no other access to the debate. The workshop in Luxembourg in May 2018 was not open for the public, not even via webstream. We request that future workshops are at least partly available for NGOs and interested public.

The inclusion of two public events (May 2018, Nov. 2018) was good practice as such, but when looking at the output of this form of participation there is a large potential for improvement. It was announced that contributions of NGOs from the public workshops would be reflected in the final report of the Topical Peer Review Procedure. But when assessing the Final Report no discussion of the NGO inputs was found, neither on the points that were criticized at ageing management of Belgium’s old reactors nor on the request for Environmental Impact Assessment for lifetime extension.

Future participation should include not only the possibility for NGOs and the interested public to make a presentation but also ensure that the presented topics and questions are dealt with in an adequate way, meaning a documented discussion on the topic and justifying why a topic was included or not in the scope of work.

A barrier to effective public participation was the fact that the requested presence and participation of **independent experts** close to the topic and trusted by leading NGOs in the antinuclear field was not enabled in the Topical Peer Review. The technical questions that were topic of the Topical Peer Review procedure need to be assessed by experts with specific knowledge to be able to make informed contributions to the debates in every step. It was not enough to delegate this task to the national regulators who only sent their own experts but did not invite NGOs to nominate additional independent experts. **Independent experts need to be invited explicitly by ENSREG to the next Topical Peer Review.**

For the next step (setting up the **National Action Plans**) public participation is not included in the stakeholder engagement plan (this plan ends in Dec 2018), a **new participation scheme** has to be established.

Research reactors and other nuclear installations

Not all **research reactors** have been included in the TPR, and it became obvious that “more systematic and comprehensive Overall Ageing Management Programmes should be implemented for the Research Reactors” (press release Oct 29 2018).

Open questions: Will the countries be obliged to include all of their research reactors in the ageing management? Will this be part of the National Action Plans? How will countries be treated that did not participate in the TPR but operate research reactors?

In the recommendations of the Final Report it is stated that there are other nuclear installations that were not covered by the peer review. It is not clear which installations were meant by this, but it is clear that all nuclear installations in operation should be subjected to ageing management. This includes also interim storages of spent fuel, because in absence of operationable final repositories

long-term interim storage is the only solution in the next decades or even for longer. Buildings and containers for nuclear waste are also at risk of defects caused by ageing.

Open question: When will ageing management programmes be evaluated for those nuclear facilities outside the scope now?

There are more problems related to ageing than were discussed in the TPR!

The public would be interested to find out with **such a peer review how it can substantially contribute to avoiding incidents and accidents which become likelier or are directly caused by ageing of materials and technologies**. What is the definition of ageing management? According to WENRA definition "Ageing is considered as a process by which the physical characteristics of a SSC (Systems, Structures, Components) change with time (ageing) or use (wear-out)". In addition, ageing management is defined as the design, engineering, operations and maintenance actions undertaken to prevent or to control ageing degradation of SSCs within acceptable limits. (Final Report 2018, p. 17) Therefore, if a country has an ageing management programme, the public could be misled to expect that no incidents will occur that are caused or substantially aggravated by ageing.

But when taking a look at incidents that happened in old reactors in the last months it became visible that the ageing management programmes don't keep aging under control and make these incidents possible. And, when looking at the topics of the Topical Peer Review, it seems that some of these incidents do not fall into the scope at all, but others do.

Example 1: In Doel-1, Belgium's oldest nuclear reactor, a leak occurred in a pipeline in the emergency cooling water circuit in April 2018: the reactor was shut down. It is still not known what caused the leak. The defect pipe was replaced, but now the regulator FANC also has to inspect a second pipe in Doel-1 and two pipes at the equivalent Doel-2 emergency cooling water circuit.⁵

The Final Report stated that in Belgium the ageing management programmes for concealed pipework have been recently extended for all units in the framework of the TPR self-assessment. (Final Report 2018, p. 41) Nevertheless, a leak occurred in April 2018 in a pipeline that may not have been concealed but it was in a difficult location for repairs.

Example 2: In its Oct 20 2017⁶ press release the operator of Doel and Tihange, EngieElectrabel, reported about concrete work failures at Doel-3, and later on July 5 2018⁷ about ongoing revisions not only at Doel-3 but also at Tihange-3. On July 5, 2018 Electrabel wrote: "Since the observations at Doel-3, Electrabel has launched a preventive program for inspections and repair works at the other units." It seems that ageing management in Belgium is not a preventive programme per se but rather an ad-hoc measure only once if a defect has already occurred and was detected.

The Final Report on p. 61 stated: "Countries provided several examples in their NARs regarding degradation in concrete structures. These examples show both where the AMP failed to deal with the degradation and events that were successfully managed. As an example of the first case, there is an event reported by Belgium regarding degradation of concrete structures not part of the

⁵<https://www.neimagazine.com/news/newsrepair-continue-at-belgian-reactors-6847405>,
<https://www.nucnet.org/all-the-news/2018/11/06/belgium-s-regulator-approves-work-to-repair-doel-1-pipe-leak>,
<https://www.montelnews.com/fr/story/belgian-nuclear-watchdog-widens-probe-at-doel-reactors/951014>

⁶ <http://corporate.engie-electrabel.be/de/test-morgane-aktuelles/meldung-kernkraftwerk-doel-3/>

⁷ <http://corporate.engie-electrabel.be/news/press-releases/ongoing-revision-of-the-doel-3-and-tihange-3-units-electrabels-reaction/>

containment, which required several repairs and underlined the inadequacy of the preventive and remedial actions.”

Example 3: A recent study for the European Greens conducted by the nuclear engineering expert Manfred Mertins on Tihange-1⁸ showed that the plant is not fit to withstand external events such as flooding, earthquakes and plane crashes. It has an obsolete safety design, does not meet the requirements for accident protection and has a negative operating experience. Mertins argued that the sharp increase in unforeseen events at Tihange-1 were further evidence of the ageing of the plant, whose management he described as “completely erratic”.⁹ This showed that the ageing management of the plant was not able until now to eliminate these severe problems.

These examples show that ageing management programmes by far don't cover all necessary systems, structures and components!

However, the now published “Country Findings” don't make any reference to those problems Belgium is experiencing with concrete structures next to the containment. It is unclear if dealing with the non-containment structure concrete problems will be part of the National Action Plan at all.

Open question: Will findings about systems, structures and components that are relevant for ageing management but not part of ageing management programmes be dealt with in the National Action Plans?

CONCLUSIONS: The report doesn't provide usable information on the status of ageing plants or on the adequacy of the aging programs. Countries and plants are not mentioned thus citizens cannot find out about a plant's status. The following quote from the press release on the report's conclusions illustrates the lack of usable information: “The main conclusion of the peer review is that Ageing Management Programmes exist in all countries for Nuclear Power Plants and no major deficiencies were identified in European approaches to regulate and implement Ageing Management Programmes at Nuclear Power Plants. However, the review identified areas where further work in participating countries would enhance their ageing management at the Nuclear Power Plants.” It is rather confusing to read that everything is good enough, however, it needs improvement, but it is unclear what at which plants. **Reality is confirming that the plants are not safe and there is room for improvement, e.g. by “surprising” defects such as in Belgium reactors, concrete problems followed the problems of reactor pressure vessel cracks.**

⁸ <https://rebecca-harms.de/post/bericht-sicherheitsstand-von-tihange-1-17043>

⁹ <http://www.brusselstimes.com/belgium/13070/>, accessed Nov 12 2018