

Summary of decisions

INRAG Meeting

BOKU University of Natural Resources and Life Sciences, Vienna

September 26-27 2014

Participants:

Arnold, N., Becker, O., Dorfman, P., Englert, M., Hahn, L., Kastchiev, G., Kromp, W., Kromp-Kolb, H., Liebert, W., Majer, D., Müllner, N., Müskens, P., Pistner, C., Renneberg, W., Schmid, S., Seidelberger, Sholly, S., E., Swahn, J., Thomas, S., Tweer, I.

Special presentations: Misak, K., Saurugg, H.

Absentee

Hazermann, J., Kirchner, G., Lengfelder, E., Marignac, Y., Sailer, M., Schneider, M., Seibert, P., Wallner, A.

Minutes:

Gufler, K., Drapalik, F.

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INRAG Decisions

- It was agreed that the INRAG Office will be established at the ISR; no formal INRAG Chair election, but expression of confidence from meeting to meeting; during the consolidation phase the office should be connected to the host.
- Wolfgang Renneberg was elected as the INRAG Chair until the next meeting.
- INRAG decisions are taken by consensus. It is common understanding that any member who feels a serious concern on a decision to be taken that cannot be eliminated or at least substantially weakened by discussion or modification has the right to oppose (veto).
- The INRAG board was established and members were elected (Members: Wolfgang Renneberg, Paul Dorfmann, Piet Müskens, Sonja Schmid, Gueorgui Kastchiev). The board enables INRAG to prepare and take decisions between regular meetings. Before taking decisions the board will communicate them to the members and take ingoing comments into account. Vetoes will be respected. Members of the Board are designated for 1 year (2 meetings); for special topics additional members can be coopted in the board.
- It was agreed to form an Organizational Group for the NURIS conference (members: Christoph Pistner, Piet Müskens, Paul Dorfman, Johan Swahn, Wolfgang Liebert, – other INRAG members can join the group). The group shall review the conference concept and care for dissemination of the call for papers
- It was agreed to form a program committee for the NURIS conference. (members still open)
- It was agreed to create a database of documents relevant for INRAG curated by the members. It aims to enhance the exchange of experience and work. All the documents are only meant to be used for scientific purpose and the discussion among INRAG members. The following types of documents should be considered as relevant:
 - a. Scientific Publications that are deemed to have some importance
 - b. All final reports on projects of the members of INRAG
 - c. National or international papers of other organizations or institutions that should be known to us all e.g.
 - i. Papers and comments on papers on national or international development of safety rules/regulation
 - ii. Papers on the development of nuclear technology
 - iii. Papers and Comments to papers of international leading organizations (e.g. UNSCEAR, ICRP)
- It was agreed that in a second step a database for the public will be established. This database will not contain any proprietary documents, or documents which could lead to copyright violations.
- Members shall think about organizations and groups that might be interested in funding INRAG
- It was agreed to form working groups on general issues and groups on special projects. (topical groups)
 - a. Working Group structure: a working group consists of a working group coordinator and working group members; the work to be done in the working group is up to its members. Working groups shall report on their activity on the next meeting; ISR will organize an IT platform with a password protected area.
 - b. Special projects (topical groups) are timely limited working groups with the goal of a report or a statement.

- The following Working groups were established:
 - **Risk communication and transparency** – Members: S. Schmidt, G. Kastchiev, J. Swahn, P. Dorfman, W. Renneberg
 - **Nuclear Regulation** – Members: C. Pistner, S. Thomas, M. Englert, S. Sholly, W. Renneberg, J. Swahn
 - **Nuclear Safety** – Members: G. Kastchiev, D. Majer, O. Becker, E. Seidelberger, C. Pistner, L. Hahn, P. Müskens, W. Renneberg, N. Müllner, M. Englert, W. Kromp, I. Tweer
 - **Fukushima** – Members: S. Schmid, G. Kastchiev, N. Müllner, C. Pistner, W. Kromp, M. Englert
 - **Radiation Protection** – Members: P. Seibert, H. Kromp-Kolb, W. Kromp, C. Pistner, P. Dorfman
 - **Emergency Preparedness, BDBA** – Members: S. Schmid, N. Müllner, O. Becker, E. Seidelberger, C. Pistner
 - **Terror attacks against nuclear facilities** – Members: O. Becker, P. Müskens, S. Sholly
 - **Actual developments in risk and safety analysis** – Members: L. Hahn, P. Müskens, N. Müllner, S. Sholly

- The following topical groups were established
 - **Blackout** – Members: S. Sholly, L. Hahn, P. Müskens, W. Kromp
 - **Material Group Doel/Tihange** – Members: I. Tweer, W. Kromp discussion with P. Dorfman, C. Pistner, P. Müskens
 - **EU Directive** – Members: W. Renneberg, S. Schmid, G. Kastchiev, J. Swahn, C. Pistner, P. Müskens
 - **Hinkley Point C** – Members: P. Dorfman, P. Müskens, S. Thomas

NURIS 2015

- Organizational Group established (Members: Christoph Pistner, Piet Müskens, Paul Dorfman, Johan Swahn, Wolfgang Liebert) → more INRAG members can and should be part of it. Goal: Review of the NURIS Concept, dissemination of the call for papers, general support
- Program Committee (not yet assigned)
- Discussion of the concept: Scientific papers and policy oriented papers should be accepted; one goal of the conference should be to mediate scientific results for the civil society;
- INRAG members will propose people for the conference
 - People you think should attend the conference
 - People you think should make a presentation at the conference.
 - People you think should be invited as keynote speakers.)
- Next invitation mail will include Keynote speakers, and known people which are in the program committee in order to secure the scientific based choice for the papers.

Next activities

- NURIS Conference will take place on April 16-17, 2015
- INRAG Members propose people for the conference (NURIS 2015)
- Establishing of a knowledgebase platform and a forum
- Next INRAG meeting: proposed date April 18, 2015
- Working groups will start their work, the working group leader sends out the initial mail and the first information

Short Presentations

1. Ilse Tweer: Doel-3/Tihange-2 - Comments on the flawed reactor pressure vessels
2. Paul Dorfman/ Steven Thomas: The Hinkley Point deal
3. Wolfgang Renneberg: COUNCIL DIRECTIVE 2014/87/EURATOM of 8 July 2014
4. Johan Swahn: Review of the status of the Swedish review of the nuclear industry's application to build a spent fuel repository at the Forsmark NPP using the KBS method
5. Kurt Misak: Blackout in Europe – Challenges for Transmission System Operators
6. Herbert Saurugg: Why there is an increasing risk
7. Steven Sholly: The Black-Out Problem

Discussions and Remarks following the presentations

1. Ilse Tweer: Doel-3/Tihange-2 - Comments on the flawed reactor pressure vessels

The INRAG statement was drafted, discussed and approved by the INRAG group. The final version of the statement can be found in Annex 1.

2. Paul Dorfman/ Steven Thomas: The Hinkley Point deal

The public needs to be informed. A statement should inform the media, about the implications and the effects of the EC decision on Hinkley. Short statement on transparency and openness and background paper as supplement would be needed.

3. Wolfgang Renneberg: COUNCIL DIRECTIVE 2014/87/EURATOM of 8 July 2014

The proposed statement was discussed. Special concern regarding the quotation of Öttinger was expressed. Discussion on the role of the EC regarding nuclear safety. Wolfgang Renneberg will prepare an amended version.

4. Johan Swahn: Review of the status of the Swedish review of the nuclear industry's application to build a spent fuel repository at the Forsmark NPP using the KBS method

Discussion on the corrosion of copper and its implications for the Swedish and Finnish concept for final repositories. Discussion regarding implications if the Swedish concept will be dropped, and further implications towards P&T. INRAG will monitor the further development.

7. Steven Sholly: The Black-Out Problem

Discussion on the likelihood of a long lasting blackout in Europe.

Topical Groups (Special Projects)

TC 1: Doel-3/Tihange-2 - Comments on the flawed reactor pressure vessels

Further steps

- Doel-3/Tihange-2 was defined as special project
- INRAG statement regarding Doel-3/Tihange-2 was finished
- The SP members will create a list of potential stakeholder to which the statement will be distributed.
- The statement's target audiences are operators (especially in Belgium but not only) and regulators (especially in Belgium but not only)
- An additional report with the background will be prepared.

TC members: I. Tweer, W. Kromp discussion with P. Dorfman, C. Pistner, P. Müskens

TC 2: The Hinkley Point deal

Further steps

- INRAG statement will be prepared by Paul Dorfman and Piet Müskens and focus on transparency and openness
- An additional Background paper is needed
- INRAG will point out that such a process should be transparent, open and democratic, but in fact the process was in-transparent / closed/ undemocratic

TC members: P. Dorfman, S. Thomas, P. Müskens

TC 3: COUNCIL DIRECTIVE 2014/87/EURATOM of 8 July 2014

Further steps

- INRAG will prepare a short report (2-3 pages) with an executive summary on the topic
- The report will consist of an eye catching headline, quotations and references for stakeholders and the main facts

TC members: W. Renneberg, S. Schmid (if BDBA included), G. Kastchiev, J. Swahn, C. Pistner, P. Müskens

TC 4: The Black-Out Problem

Further steps

- A special project will be established
- The aim is to produce a short report on the blackout topic

TC members: S. Sholly, L. Hahn, P. Müskens, W. Kromp

ANNEX 1

INRAG statement concerning Doel-3 and Tihange-2

In 2012 thousands of defects were discovered in the reactor pressure vessel shells of the NPPs Doel-3 and Tihange-2. INRAG questions the opinion of the operator which was accepted by the Regulatory Authority - that these defects were manufacture induced and that these defects did not grow during operation. These defects were not observed during acceptance testing after manufacture.

INRAG is not convinced that the structural integrity assessment using an additional shift for the ductile-brittle transition temperature proposed by the operator is conservative. Experimental testing using non-representative sample material cannot eliminate the sets of uncertainties concerning the actual material characteristics of the reactor pressure vessels.

INRAG recommends that these substantive issues are addressed during any regulatory process relating to the potential restart of these reactors. Because these issues are potentially generalizable, INRAG strongly recommends similar inspection of all reactor pressure vessels worldwide for unexpected defects outside the weld regions prescribed in the standards for in service inspection.