

Proposal for a NKS Fukushima Seminar

Preface

The NKS PC's and NKS Chair's proposal for arrangement of a Fukushima-related NKS seminar was strongly supported by the NKS Board at its meeting in January. The NKS Board has granted the financial support of DKK 200,000 for the seminar arrangement.

The PC's were asked to jointly chair a Program Group responsible for detailing the contents and structure of the seminar. A draft seminar plan with venues and dates is to be presented at the May Board meeting. The PC's will be responsible for the practical arrangement of the seminar.

The Program Group has the following members:

Sigurdur Emil Palsson, Geislavarnir Rikisins
Eldri Holo, NRPA
Kenneth Broman, SSM
Antti Daavittila, STUK
Karoliina Ekström, NKS-R programme manager
Kasper Andersson, NKS-B programme manager

The Program Group met on the 19th of March 2012 at SIS in Herlev, Denmark, discussing the PC's draft plan that had been shown to the Board in January. A number of new ideas emerged, which are described in the meeting minutes. The draft was also discussed on the following day with the NEP Group, which also contributed constructively to the further development of the seminar plan, as reflected in the minutes from that meeting. The Program Group also had an extensive email exchange meeting on the 11th of May 2012. Some structural changes were made to the seminar plan in the light of this, which the PC's have aimed to capture in the revised plan scheduled below. A worry was expressed during the discussions that there could easily be too many topics to discuss at the seminar given the limited available time. To enhance clarity a draft time plan is proposed for the seminar, including time allocations.

Time and venue:

The NKS Board wishes the seminar to take place immediately following its half-day meeting in Stockholm in January 2013. Suggested dates are 8-9 January 2013. The duration of the seminar will be 1½ days.

Target audience:

- Nordic authorities and regulators on different levels
- Representatives of Nordic nuclear installations

- Advisors and experts on technical issues and communication
- Nordic directors and the NKS Board

Structure of the seminar:

It was found to be useful to initiate the workshop with a short ‘primer’ presentation, possibly by an invited speaker, giving an overview of international findings, reports and conclusions on the Fukushima accident, with a special view to the specific topics to be addressed in detail at the seminar. By this time there should be much material available (possibly even including an UNSCEAR report). This short presentation would be beneficial in outlining current status, and setting the stage for the much more Nordic focused sessions that will form the core of the seminar.

A presentation of the objectives of the seminar and the specific topics for discussion should then follow. A draft overall formulation of the seminar objectives could be: ‘On the basis of the Fukushima accident, to identify areas for possible improvement of Nordic knowledge, understanding and information handling (R&B), strengthening cooperation and identifying topics where future activities of NKS might be valuable. Priority issues relate to a chain of power plant operation safety, quality and timely availability of accident consequence prognoses, improvement of response capabilities, and discrepancies between countries in emergency interpretation and response’.

Each of the following topical sessions will include a moderated plenary discussion. Where it is deemed relevant, this will be initiated by a presentation given by either an invited speaker, one of the PC’s, or other. Since we will not be able to address all of the many identified relevant topics in detail, the PC’s could make a short presentation towards the end of the seminar of potentially important topics that have been identified, but which it was not possible to discuss within the narrow timeframe. The PC’s can also prepare to initiate additional discussions on a few topics, in case there is (against expectation) not interest in using the entire allocated time for discussion of one of the selected topics.

The formulation of emergency preparedness related discussion topics has been made considering the recommendations of the NEP Group.

Topics relevant to different audiences (NKS R and B) will be mixed in the workshop programme.

Time schedule:

Discussion topics:

1) **Source term estimation and related methods for *timely* estimation of residual dose following a NPP release.** This is a point with some clear ‘crossover’ aspects, where cooperation between the reactor and preparedness sides is needed, and it would be interesting to discuss the data and information requirements. It should be discussed which measurement capabilities are and should be available in the Nordic areas to enable the best possible estimation of residual dose. Timing is an issue. This would require also discussion of the current and future features of models like the

ARGOS and RODOS decision support systems. Also incorporation in prognostic modelling of long-lasting releases could be discussed here.

2) **How can the Nordic countries improve cooperation at home and abroad?** Is it possible to pool resources and share the workload? How can the authorities improve and strengthen communication during a crisis? It should be discussed how the communication on national, organisational and responder level can be optimised to strengthen the response to crises. Also sharing data, prognoses and other safety assessments to make better use of available information is an issue that could be discussed in this context. It should be noted that the emergency preparedness in some Nordic countries could benefit from sharing expertise with others (e.g., with respect to reactors).

3) **Discrepancies or differences in Nordic perception and response.** Where did we act differently in connection with the Fukushima accident - and why? Examples are the prophylactic use of stable iodine, and screening of people in airports. Can we approach Nordic consensus? Also data, prognosis results and other information may be conflicting between countries and in relation to official reports from the authorities in the country where the release occurred. Which formal and informal information sources should be trusted, and how can the Nordic countries avoid going off in different directions? The importance of uncertainties could also be discussed here.

4) Presentations from the 5 Nordic power plants. **Lessons learned from the Fukushima accident at the Nordic nuclear power plants** with respect to checking safety functions, and particularly covering external threats including natural disasters, and essentially any event resulting in long-lasting power failure. Information on implemented, ongoing or future needed improvements of plant designs to address such issues. Short description of stress test results - presented by the plants themselves and/or as a short summary presentation in the end - together with a brief overview of findings in EU countries.

Day 1.

Start: 13:00

End: 17:00

(12:00 - 13:00 Lunch)

13:00 - 13:10 Welcome, opening words

13:10 - 13:40 Fukushima accident: international overview (suggested speaker: Wolfgang Weiss (UNSCEAR))

13:40 - 14:30 Session I (50 min.). **Lessons learned - the regulators' perspective: what are the implications so far (presentations)?**

14:30 - 15:00 Coffee

15:00 - 16:00 Session II (1h) **Topic 2: How can the Nordic countries improve cooperation at home and abroad?**

16:00 - 17:00 Session III (1h) **Topic 3: Discrepancies or differences in Nordic perception and response.**

Dinner

Day 2.

Start: 9:00

End: 17:00

9:00 - 10:20 Session IV (1h 20 min). **Topic 4: Lessons learned - the industry's perspective.**

- Short instruction - what is a stress test?
- 3 power plant presentations.

10:20 - 10:40 Coffee

10:40 - 12:00 Session V (1h 20 min). **Topic 4: Lessons learned - the industry's perspective.**

- 2 power plant presentations.
- In the end a short summary on how the Nordic plants survived the stress tests and international situation (if available) if major safety issues have come up at any plant in EU.

12:00 - 13:00 Lunch

13:00 - 14:20 Session VI (1h 20 min). **Topic 1: Source term estimation.**

14:20 - 14:40 Coffee

14:40 - 15:40 Session VII (1h) **Reserved for possible extra topic.**

15:40 - 16:00 Other topics in brief, the way forward, conclusion (suggested speaker: Sigurdur M. Magnusson)

Note: Mats Isaksson from the University of Gothenburg has approached us earlier in May about the possibility of joining forces with the Swedish Radioecology Society, that are planning a meeting on radioecological effects and measurements after the accident. He suggests that it might be possible to extend the programme with an extra day on radioecology for those interested. The two arrangements might however be kept separate, but simply arranged on consecutive days, thus easing travel without combining the two.