



Nordisk kernesikkerhedsforskning
Norrcænar kjarnöryggisrannsóknir
Pohjoismainen ydinturvallisuustutkimus
Nordisk kjernesikkerhetsforskning
Nordisk kärnsäkerhetsforskning
Nordic nuclear safety research

NKS-B Status Report

Kasper G. Andersson
NKS-B Programme Manager
June 2016
Technical University of Denmark

Status summary

Overall the work in NKS-B is progressing well. Since the last NKS-B status report was made to the NKS-Board in January 2016, 6 new final reports from completed NKS-B activities have been published on the NKS website. All NKS-B activities that commenced prior to 2015 are completed. Of the 10 activities starting in 2015, 8 have been completed, and 2 are expected to be nearing completion. Of the 9 NKS-B activities that started in 2016, contracts have been agreed and signed with all. Activities that started in 2016 are all currently on schedule.

NKS-B reports

The following NKS-B reports have been published on the NKS website since the last NKS-Board meeting.

EFMARE

M. Iosjpe et al.

Effects of dynamic behaviour of Nordic marine environment to radioecological assessments

FAUNA

J. Havskov Sørensen et al.

Fukushima accident: Uncertainty of atmospheric dispersion modelling (FAUNA)

IDEA

B.B. Árnason et al.

Internal Dosimetry Exercise for enhanced Ability

NORCOP-COAST

A. Nalbandyan et al.

Nuclear icebreaker traffic and transport of radioactive materials along the Nordic coastline: response systems and cooperation to handle accidents (NORCOP-COAST): Final report

NUFORNOR

O.C. Lind et al.

Nuclear forensics within a Nordic context

STANDMETHOD

X. Hou et al.

Standardization of Radioanalytical Methods for Determination of ⁶³Ni and ⁵⁵Fe in Waste and Environmental Samples

NKS-B activities from 2015 (January)

CONCORE

Characterisation of NORM contaminated objects: reliable & efficient
Activity leader: Charlotte Nielsen (NIRP/SIS)

NKS-B funding: **363 kDKK**

Milestones defined in contract:

1. Third project meeting
2. All samples retrieved.
3. Analytical start-up.
4. Fourth project meeting: presentation and discussion of results
5. Dissemination at international meeting.
6. Guideline for characterisation of NORM and NORM contaminated equipment for operators and competent authorities
7. Final report

Status

Contract signed. More time was granted on request in December, since the group wanted to include extra experimental work. The above milestones have been covered, except final reporting, which is imminent (expected before 22nd of June 2016). Dissemination took place at the NSFS conference in Roskilde in 2015, and an additional paper is planned.

RAPID-TECH

Application of rapid and automated techniques in radiochemical analysis

Activity leader: Jixin Qiao (DTU)

NKS-B funding: **317 kDKK**

Milestones defined in contract:

1. Meetings and planning
2. Sample preparation and distribution for inter-comparison
3. Performance of inter-comparison and inter-exchange exercises
4. Results evaluation and summary
5. Final report

Status

Contract signed. Report was contractually due by 1st of April 2016. Milestones 1-4 achieved, and report writing is ongoing. The activity has on request been granted a little more time since the laboratory work took a little longer than anticipated at some of the partner organisations. Final reporting is imminent and expected before 22nd of June 2016.

NKS-B activities from 2015 (January)

MOMORC

Mobile search of material outside of regulatory control (MORC) – Detection limits assessed by field experiments

Activity leader: Christopher L. Rääf (Lund University)

NKS-B funding: **525 kDKK**

Milestones defined in contract:

1. Joint meeting of participants (31 March)
2. Description of field experiment for testing of detection limit of various vehicle borne systems and a template for data reporting (31 May)
3. Field experiment conducted by the participants using the agreed definitions of detection limit (15 September)

4. Data report compiled in a pre-determined format (31 October)
5. Follow-up meeting discussing the reported data (15 November)
6. Full report to NKS Board (31 December)

Status

Contract signed. Progress on schedule. Comprehensive meeting minutes, experiment description and template received on 4th of May.

NISI

Nordic in situ gamma intercomparison

Activity leader: Alexander Muring / Torbjörn Gäfvert (NRPA)

NKS-B funding: **225 kDKK**

Milestones defined in contract:

1. Intercomparison site and dates selected (01-04-16)
2. All necessary information sent to participants (15-05-16)
3. Final list of participants, preparatory work complete (30-06-16)
4. Intercomparison and seminar completed (30-09-16)
5. Final report (15-12-16)

Status

Contract signed. Progress on schedule. Only few participants can be accommodated, so the intercomparison and seminar will not be announced publicly. NRPA, IRSA, SSM, STUK and DEMA will nominate participants. Event to be held in Norway (Ås). Alexander Muring will leave NRPA, and has been replaced (information given 12-05-16) as NISI coordinator by Torbjörn Gäfvert (NRPA).

GAMMASPEC

Seminars for users of gamma spectrometry

Activity leader: Sven P. Nielsen (DTU)

NKS-B funding: **395 kDKK**

Milestones defined in contract:

1. Planning meeting, Spring 2016
2. Announcement of intercomparisons and seminar, Spring 2016
3. Seminar, autumn 2016
4. Final report, December 2016

Status

Contract signed. Planning meeting held, seminar announced in NewsFlash and on NKS website as well as on GammaWiki website. Event to be held near Oslo on 13-14 September 2016. Progress on schedule.

MESO

Meteorological uncertainty of short-range dispersion

Activity leader: Jens Havskov Sørensen (DMI)

NKS-B funding: **375 kDKK**

Milestones defined in contract:

1. Kick-off meeting
2. RIMPUFF short-range atmospheric dispersion model implemented at the DMI supercomputer
3. Case studies selected, corresponding NWP model ensembles generated, and data derived for RIMPUFF
4. Short-range atmospheric dispersion model applied to the case studies and atmospheric dispersion model ensembles generated
5. Uncertainties related with the use of weather radar data described
6. Meeting
7. Methods developed and described for computation of meteorological uncertainty of the atmospheric short-range dispersion of radioactivity from accidental releases.
8. Methods applied to the atmospheric short-range dispersion model ensembles corresponding to the case studies
9. Presentation of the uncertainties to decision makers described and applied to the case studies selected.
10. Final report

Status

Contract signed. Kick-off meeting held. Progress on schedule.

NORCO

Nordic cosm pilot study

Activity leader: Tanya Helena Hevrøy (NRPA)

NKS-B funding: **435 kDKK**

Milestones defined in contract:

1. Construction of cosms and dosimetric calculations (30-06-16)
2. Midterm report (01-08-16)
3. Exposure to radiation (30-10-16)
4. Data analyses (30-11-16)
5. Draft of scientific papers (16-12-16)
6. Final report (16-12-16)

Status

Contract signed. Progress on schedule.

NORDIC ICP

Nordic development and exploration of inductively coupled plasma spectrometry

Activity leader: Jixin Qiao (DTU)

NKS-B funding: **420 kDKK**

Milestones defined in contract:

1. Kick-off meeting and planning
2. Experimental material purchase and sample preparation
3. Execution of inter-comparison exercise
4. Summarise results and output
5. Final report of 1st year

Status

Contract signed. Progress on schedule.

EFMARE

Effects of dynamic behaviour of Nordic marine environment to radioecological assessments
Activity leader: Per Roos (DTU)

NKS-B funding: **395 kDKK**

Milestones defined in contract:

1. Kick-off meeting
2. Report on available biokinetic models for fish
3. Final report

Status

Contract signed. The work group meet to discuss progress at Hotel Hilton, Copenhagen airport, on 14-06-16. Progress on schedule.

COASTEX

Scenarios and table top exercise concept on events related to traffic of nuclear-powered vessels and transportation of spent nuclear fuel along the Nordic coastline
Activity leader: Inger Margrethe Eikermann / Anna Nalbandyan (NRPA)

NKS-B funding: **330 kDKK**

Milestones defined in contract:

1. Planning meeting/s: MAR-MAY 2016. Each partner will contribute and participate at the planning meeting (incl. electronic communication). NRPA will be coordinating the whole activity, communication with partners and organisation of meetings.
2. Development of scenarios: MAR-SEPT 2016. Each partner will contribute to the development of scenarios related to the maritime transport of radioactive materials and traffic of nuclear-powered vessels. NRPA will combine all inputs and summarize.
3. Development of the table top exercise concept: MAR-OCT 2016. Each partner will contribute to the development of the table-top concept. NRPA will combine all inputs and summarize.
4. 2-days Workshop in Reykjavik, Iceland: AUG-OCT 2016. NRPA and GR will organize the workshop where all partners will attend and work together.
5. Preparation of the scenario and table-top exercise report: by DEC 31 2016. All partners will contribute to the draft report. NRPA will compile inputs and write the report.
6. Preparation of the final project report: by DEC 31 2016. All partners will contribute to the final project report. NRPA will compile inputs and write the report.

Status

Contract signed. Progress on schedule. Note that instead of the planned 1 project workshop there will be 2 workshops for better implementation of the project and interaction between

countries. The 1st workshop is to be held on 30-31 May in Tromsø and the 2nd is to be on 11-14 October in Reykjavik. Participation will be only by invitation.

NORDUM

Intercomparison of Nordic unmanned aerial monitoring platforms

Activity leader: Kasra Tazmini (NRPA)

NKS-B funding: **400 kDKK**

Milestones defined in contract:

1. Selection of site for exercise (01-03-16)
2. Obtaining of all necessary permits/permissions (01-05-16).
3. Notification of all teams, production of necessary materials, information (01-06-16)
4. NORDUM activity (09-16)
5. Final report (19-12-16)

Status

Contract signed. Progress on schedule. Required permissions obtained. There will be a 1 day workshop for participants plus a few observers. Will be held near Oslo probably 5-9 September, the day after the activity field work. First announcement has been made in NKS NewsFlash and on NKS website.