

Proposal must be sent by e-mail
 to justin.gwynn@nrpa.no
 no later than
Friday, 15th of October 2010

1. Summary information about the proposed activity

Name of the activity Preparedness Organization at Nuclear Power Plants in the Nordic countries		Proposed acronym ¹ PONPP-2
Start date 01.06.11	End date 01.06.12	New / continued activity Continued activity
Proposed classification (E, W, M, R) E: Emergency preparedness		Is the proposed activity aimed as a cross-over activity between the NKS-R and NKS-B programmes? No
Short summary of the activity (max. 1800 characters)		
<p>The activity is proposed as a continuation of the project "Preparedness Organization at Nuclear Power Plants in the Nordic countries" which was carried out in 2010 and accomplished and reported to NKS April/May 2011 (Ref. report "IFE/HR/F-2011/1497: Preparedness Organization at Nuclear Power Plants in the Nordic countries")</p> <p>The main purpose of the project carried out in 2010 and spring 2011 was to compare how emergency preparedness is organized at the Nordic nuclear power plants. Vattenfall, Fortum and IFE participated in the project.</p> <p>The project focused on evaluation of the work processes and the decision-making processes in the existing emergency management's preparedness room (KC). The aim was to evaluate if there was a common Nordic understanding of these issues among the emergency management teams and to identify possible improvements in the processes. The collaboration and communication to external organisations (County Council ("Länsstyrelsen"), police, rescue service, authorities etc..) in the emergency management process was partly taken into account during the survey.</p> <p>The survey of the of the situation in the emergency preparedness room (KC) was carried out by means of interviews and analysis carried out in cooperation with relevant persons in the emergency management teams at Vattenfall, Fortum and IFE using a method developed by IFE. This method is used today for evaluating work processes and decision-making processes in control- and collaboration rooms with several references within the oil- and gas industries. The methodology and analysis experieces was utilized and adapted for use in the nuclear emergency preparedness domain. When carrying out the interviews and analysis one also focused on identifying improvement potentials based on access to new technology and/or organizational changes.</p> <p>The interview material from the various emergency management teams was collected and analyzed with regard to a common Nordic understanding of these issues among the Nuclear power plants. The material also revealed possible improvements. The result was presented and discussed with the emergency management teams and representatives from the Nordic authorities in a workshop at IFE, Halden in February 2011. One session of this workshop especially addressed ideas and issues for continuation of the activity. Especially one issue was consideres of high importance; collaboration and communication with the authorities during the emergency management process.</p> <p>The participating organizations have shown great interest in continuing the PONPP project also in 2011/2012 focusing on interviews and analysis of the authorities for evaluation of their work processes and the decision-making processes both in the emergency management's preparedness room (KC) and at the authorites headquarter during an emergency situation.</p> <p>It was also of interest to continue with new activities within the emergency management teams at the utilities based on suggestions for improvements and to evaluate possible measures, including HES (Health, Environmental, Safety). These activities will not be similar for the</p>		

different utilities and will therefore be started and financed by the utilities itself.

On behalf of the participating organizations and results from the Workshop, we would like to ask the NKS board to support the continuation of the PONPP project in 2011/2012 in the area of interviews and analysis of the authorities for evaluation of their work processes and decision-making processes both in the emergency management preparedness room (KC) and at the authorities headquarter during an emergency situation.

List of participating organisations (including the co-ordinating one)

Institutt for energiteknikk (IFE) and NRPA (Norge); STUK (Finland), SSM (Sverige)

Requested funding from the NKS in 2010. If continuation of activity is assumed beyond 2010, please estimate requested funding in later years.

In 2011/12: 300 (in 1000 DKK) Expected requested funding in later years (if applicable):

1: If this activity is a continuation of a previously funded NKS-B activity, please use the same acronym as before (a list of acronyms of ongoing activities can be found on the NKS-B web site)

Please note that the above information may be made public on the NKS web site if the proposal is accepted by the NKS Board

2. Relevance of proposed activity to NKS criteria

Summarise how the proposed activity will maintain and build up competence and informal Nordic networks

Emergency preparedness shall ensure that the consequences of a nuclear accident/incident are kept as low as possible by means of initiating purpose-built measures at the right time. To ensure this, the responsibilities, plans and emergency organization must be unambiguously defined both internally in the departments involved in the incident as well as among the departments. It is vital that the same message is communicated to all parties involved in the accident/incident management.

The efficiency and effectiveness of an emergency preparedness regime is dependant on the information flow between -, decision making at - and transparency of interaction between all actors in an emergency preparedness organization, i.e. authorities and operating organizations of Nuclear power plants. It is challenging and may compromise effective contingency measure if the whole emergency chain is not functioning well.

The operating organizations of a Nuclear power plant is the closest to the nuclear accident area and has the highest potential to reduce the direct consequences of the accident. The work and decision-making processes with respect to interaction with authority representatives locally (emergency preparedness room (KC)) and externally(headquarter) is of great importance and will often have direct influence on the development of an accident. It is of vital importance that the emergency management team function optimally so that the right decisions are taken at the right time based on correct information and that measures are carried out as agreed. It is also important that the actions and mitigation measures taken in course of the accident are followed closely to ensure that the desired effects are reached.

The cooperating partners in the proposed project is interesting to compare how preparedness is organized at Nordic authorities, exchange information, share competence and identify possibilities for improvements. The already existing information exchange and competence sharing between the cooperating partners will be utilized and enhanced. Focus will be on enhancing work practices and decision-making processes with respect to collaboration and communication with the authority representative locally(in KC) and externally(headquarter) during the emergency management process.

Summarise the proposed activity's technical and scientific merits

The project is developed by applying a methodology developed by IFE. This method is used today for evaluating and analyzing work and decision-making processes in control- and collaboration rooms and has several references within the oil- and gas industries. Results from use of this methodology are now forming the basis for changing to a new operation standard on large parts of the Norwegian section of the Continental Shelf. This methodology and analysis experieces was utilized and adapted for use in the nuclear emergency preparedness domain during the PONPP project in 2010/2011.

<p>Summarise what the proposed activity will deliver in the form of distinct and measurable goals</p> <p>Expected result of the project is a final report focusing on common understanding of the work among the authorities during emergency situations at nuclear power plants and identification of areas for possible improvement. Focus will be on enhancing work practices and decision-making processes with respect to collaboration and communication with the authority representative locally(in KC) and externally(headquarter) during the emergency management process.</p> <p>For the authorities the results will focus on possibilities for optimal use of their core competence and role of their work tasks which have a positive impact on their work situation.</p> <p>The HSE(Health Environment Safety) is an important aspect in each step within the methodology which should result in an enhanced HSE for the working situation at the authorities during an emergency preparedness situation.</p> <p>The analysis will also indicate if some work/actions should be supported by means of enhanced technical solutions, e.g. decision support systems, collaboration rooms etc.</p>
<p>Summarize who are the potential end users and how it has been ensured that the proposed activity is relevant for them</p> <p>The authorities in the Nordic countries have shown interest in evaluating the work processes and the decision-making processes during emergency management situations at the nuclear power plants. The aim is to obtain what can be defined as a common Nordic understanding among the authorities and also to look for possible improvements.</p>
<p>Summarise the participation of 'young scientists' in the proposed work (Degree, masters, PhD, post doctoral level)</p> <p>The HSE(Health Environment Safety) part of the methodology will be further developed during the analysis. A master thesis will be carried out as part of the project focused on the HSE aspects for the work and decision-making processes and further role of their work tasks in the organization.</p>
<p>Interfaces to other relevant projects (past or present NKS activities, national research programs, EU programs, etc.)</p> <p>OECD Halden Reactor Project, by organizing the work in groups in critical situations in an optimal way.</p> <p>Norwegian Assistance Programme (financed by Ministry of Foreign Affairs in Norway) focused on emergency preparedness at the Kola NPP.</p> <p>This project is of relevance to both NKS-R and -B, and may also be of interest to other countries, especially within Human Factors in NKS-R.</p>

3. Co-ordination of activity

Institution or company	
Institutt for energiteknikk (IFE)	
Activity co-ordinator	
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4. Other organisations involved

Institution or company	Contact person	E-mail
STUK (Finland)		
Institution or company	Contact person	E-mail
SSM (Sverige)		
Institution or company	Contact person	E-mail
NRPA (Norge)		
Institution or company	Contact person	E-mail

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5. Assumed distribution of NKS funding amongst participants (in 1000 DKK)¹

Activity will run from June 2011 – June 2012	2011/2012	
IFE	210	
STUK (Finland)	30	
SSM (Sverige)	30	
NRPA (Norge)	30	
Total	300 k DKK	0 k DKK

6. Assumed distribution of own contributions amongst participants (in 1000 DKK)¹

Activity will run from June 2011 – June 2012	2011/2012	
IFE	210	
STUK (Finland)	30	
SSM (Sverige)	30	
NRPA (Norge)	30	
Total	300 k DKK	0 k DKK

7. Milestones, deliverables

	Date
Interviews/Data collection/Analysis	01.08.11 - 01.12.11
Status report after completion of interviews and analysis	31.12.11
Workshop	February 2012
Distribution of "Workshop" material and results	15.04.12
Final report	01.06.12

8. Submission of proposal

¹ Use decimal point (.) as a separator for decimals in all tables

This form must be sent by e-mail no later than the 15th of October 2010 from the official e-mail address of the activity co-ordinator (as given on this form) to justin.gwynn@nrpa.no .

Please use the *acronym* as a file name and add the number "1"

Is supplementary description (maximum 4 pages) included?

NO (please click on drop-down form field at left to select "Yes" if needed)

Name of file: (please use the acronym and add the number "2")

The date of sending will be regarded as the date of submission.

Please note that a confirmation of the reception of the proposal will be sent by the Programme Manager