

QUESTIONNAIRE TO THE REGULATORY BODY MEETING TURKU 2008

INVITATION

In conjunction with the 2008 ISOE Symposium, 25-27 June 2008, we are preparing a 3rd Senior Regulatory Body representatives meeting, to be held 24 June 2008 in Turku (Finland). We hope to encourage your participation in this meeting which follows on from the very successful Regulatory Body representatives meetings in 2004 (Lyon) and 2006 (Essen). The purpose of the meeting is to provide a forum for open exchange and discussion within specialised regulatory audience concerned with occupational radiation protection. For this occasion, the contamination management in NPPs from the occupational point of view has been chosen as the main topic.

OBJECTIVES OF THE MEETING

The main objectives of the meeting are:

- To meet with regulators from other organisations
 - To exchange information regarding regulatory control on **contamination management in NPPs from the occupational radiation protection perspective** focusing on
 - controlled and supervised areas inside NPP
 - occupational exposure control and assessment due to both external and internal contamination.
- This meeting will not deal with aspects of contamination management other than those related to occupational radiation protection.
- To help to improve national regulatory effectiveness on occupational radiation protection by comparing national reality versus international context

AGENDA

- Introduction of the different representatives
- Brief presentation on national requirements on contamination management
- Discussion
- Conclusions

OBJECTIVES OF THE QUESTIONNAIRE

In order to introduce the Regulatory Body representatives meeting it is expected to draw an overview of regulatory control on contamination management in NPPs from an occupational perspective in the different ISOE member countries with their similarities and differences. Therefore we would like you to answer, briefly, to the following questionnaire to stimulate information exchange and discussions. Only one response per country is necessary.

Please do not go into the details, just describe a few "objective data".

Even in case you will not be able to attend the meeting the information you can provide is precious. If you agree, questionnaires filled in by national authorities will be sent to the regulatory contacts participating in ISOE.

Yes, I agree

The information can be used only in the RB meeting

COUNTRY AND REPRESENTATIVE IDENTIFICATION

- ❑ **Country:** Sweden
- ❑ **Name of the Regulatory Body:** Swedish Radiation Protection Authority
- ❑ **Name and post of the person(s) who fill in the questionnaire:** Peter Hofvander

REGULATORY CONTROL ON CONTAMINATION MANAGEMENT IN NPP

- ❑ **Legal framework on contamination control**
 - Does your legal framework have requirements on radioactive contamination control?
YES. If so, give a short description of the content of references.
SSI FS 2000:10 Regulations on Radiation Protection of Workers Exposed to Ionising Radiation at Nuclear Plants:
§ 19 and 20 - external contamination control of persons
§ 21 and 22 – internal contamination control of persons
§ 23- 26 instruments and equipment

SSI FS 1996:2 Regulations on the Discharging of Goods and Oil from Controlled Areas in Nuclear Plant
 - Does your legislation specify reference levels for contamination? No
- ❑ **Reference contamination levels on official documents**
 - Does some official document of the licensee specify levels for contamination? YES
 - If so specify the document. I should be specified in licensees RP instructions.
 - Are the reference levels for contamination in NPP the same for all NPPs in your country?
YES. The Swedish utilities have a common agreement to use the same reference levels on contamination.
- ❑ **Contamination control in controlled or supervised areas in NPPs.**
 - How many controlled area categories could exist on NPP site?
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 - What are the maximum contamination levels allowed in the different categories of controlled areas of NPPs for different categories of radionuclides/ types of emissions? If levels are specific for each site, please give an order of magnitude of the range covered for the different reference levels (Registration, Investigation and Intervention)
See table 1.
 - What are the basic technical requirements in NPP to control spread of contamination? Which of them are specified by legal or approved documents and on which the licensee may decide in his own responsibility?
 - Access restriction to controlled areas and different zones within the area.
 - Labelling of areas
 - Surveillance of surfaces and atmosphere
 - Use of protective personal equipment
 - Decontamination measures

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- Ventilation
- Individual monitoring of external contamination when leaving controlled area

General requirements and measures to control contamination are established in the SSI regulations. Specific measures are decided by the licensee.

- Does your legislation or approved documents include requirements about the monitoring program? **YES**. Which document? **SSI FS 2000:10 Regulations on Radiation Protection of Workers Exposed to Ionising Radiation at Nuclear Plants**. What kind of requirements (periodicity, certificated instruments, exclusive performed by RP-personal with special education and training, averaging surface (volume, duration), registration and reporting)?

□ Contamination control of personal protective equipment.

Does your legislation or approved documents (company instructions) include requirements about contamination of protective personal equipment? **YES**. Which document? **SSI FS 1996:2 Regulations on the Discharging of Goods and Oil from Controlled Areas in Nuclear Plant**

- Which requirements?
- What are the reference levels for contamination of protective personal equipment?
- Is it allowed to enter controlled areas with street clothes? **It is to be decided by the licensee and usually depends on the type of work. If there exist a risk for contamination or not.**
- Is it allowed to wear protective clothes outside controlled areas on the NPP site? **It is to be decided by licensee. All equipment including protective clothes must be monitored before it is removed from the controlled area. The cont level must of course be below the limit for free use (in the regulation).**

□ Contamination control of reusable working materials at the exit of controlled areas.

Does your legislation or approved documents (company instructions) include requirements about the levels of contamination allowed for reusable working material at the exit of controlled areas? **YES**. Which document? **SSI FS 1996:2 Regulations on the Discharging of Goods and Oil from Controlled Areas in Nuclear Plant**

- If affirmative, provide reference levels: **40 kBq/m² for gamma/beta and 4 kBq/m² for alfa.**

□ Estimation of effective dose from internal contamination

- Does your legislation or approved documents include requirements about internal contamination of occupational exposed persons? **YES**. Which document? **SSI FS 2000:10 Regulations on Radiation Protection of Workers Exposed to Ionising Radiation at Nuclear Plants**
- Which requirements?
 - **General requirements for when to perform internal dosimetry (whole body measurements), § 21**
 - **General requirements on whole body measurements procedures § 22**
 - **Requirements for registration of doses §§ 38-39**

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- What are the methods and criteria for assessment of internal doses?
For NPPs WBC (se above). For fuel and waste plants wbc combined with bioassay.
- What are the reference levels for internal doses (please give examples for typical nuclides, allowed averaging volume or surface or ...)? No regulatory reference levels. A reporting level of 0.25 mSv effective dose.

□ Estimation of effective dose from external contamination. Skin doses

Does your legislation or approved documents (company instructions) include requirements about contamination of skin? YES. Which document? SSI FS 2000:10 Regulations on Radiation Protection of Workers Exposed to Ionising Radiation at Nuclear Plants

- Which requirements?
 - Monitoring requirements when leaving controlled areas. §§ 19-20
 - What is the triggering level of contamination to carry out an assessment of skin dose?
We have no such level
 - What is the maximum level allowed for personal contamination at the exit of the controlled area: 40 kBq/m² (gamma/beta) and 4 kBq/m² (alfa)
 - How contamination is measured in 1 cm²? For discussion in plenary session.
- ### □ External risk versus internal risk perception
- External risk versus internal risk perception and practice in your country? How and why do you weight the risks different? What is the practice in your country? What are the experiences? For discussion.

Do you have some additional topics, which you would like to discuss during the RB meeting:

TABLES

Table 1 Maximum contamination levels allowed in controlled areas

	Blue	Yellow	Red
External radiation mSv/h	< 0.025	0.025-1	>1
Surf.kont kBq/m**2 Alfa	< 4	4-100	>100
Surf.kont kBq/m**2 Beta	<40	40-1000	>1000
Air cont DAC	<1	1-10	>10