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Swiss Federal Nuclear Safety Inspectorate

# Regulatory Body Representatives Meeting ISOE Symposia in Cambridge 2010

## Results from Questionnaire





# Proposal for today's Schedule

- preface
- introducing the new participants
- reports: national approach to handle with information on events
  - Canada
  - France
  - Germany
  - Slovenia
  - Sweden
  - Switzerland
  - USA (answers on questionnaire, information on internet)
  - Japan (example from Nuclear Information Archives)
- coffee break ?
- **overview on answers**
- discussion on most interesting aspects
- outlook: discussion on further steps
- lunch ?



# 1. Legislation on Criteria for Nomination

Does your legislation specify **criteria for nomination** of radiological events?

Almost all: YES

(some in the law, some in ordinance, some in guidelines)

These criteria are identical for the nomination and the requirement for reporting to the authority by the licensee

Slovenia: No, see the documents of the licensee



## 2. Company Internal Rules on the Criteria for Nomination

Does some official document of the licensee specify these criteria?

Sweden: The licensee also do.

Slovenia: Criteria for extraordinary reporting are in the „RP-Manual“, the „Assessment of RP“ and the „Radiological Effluent Technical Specifications“ of the licensee

Spain: All the nuclear facilities have included in their Operating Technical Specifications the notification criteria of IS-10, periods for the issuing of reports, format, notification criteria and scope. This content and the corresponding criteria are **further developed** in the corresponding plant procedures.

France: EDF has produced an internal prescriptive notice

- in order **to promote experience** feedback,
- is **more demanding** than the ASN's guide and
- defines **some criteria of lower levels** than those used to declare significant events (called “interesting events”).



### 3. Criteria for Nomination: Conformity (most countries)

What are the most important radiological criteria?

Switzerland: all criteria listed

USA: all criteria listed are included except exceeding particular limits for incorporation and contamination of persons

All: exceeding of the annual dose limit or exceeding suspected (1 mSv public, differences are occurring because of different limits e.g. 20 or 50 mSv occupational exposed persons, dose limits for organs and tissues)



### 3. Criteria for Nomination: Differences, remarkable specialities (1)

What are the most important radiological criteria?

France: Exceeding one fourth of the annual dose limit

Switzerland: Exceeding 0,3 mSv for the public

Finland: Releases leading to exceed 0,1 mSv for the public

Slovenia: Exceeding 1,6 mSv per month for occupational exposed persons OEP, if the dose was not planned (normally not for NPP)

Switzerland: Exceeding 2,0 mSv incorporation dose for the OEP

Slovenia: Exceeding 0,2 mSv incorporation dose for the OEP

Sweden: Exceeding 0,25 mSv incorporation dose for the OEP



## 3. Criteria for Nomination: Differences, remarkable specialities (2)

What are the most important radiological criteria?

France: Events linked with radioactive contamination

Finland: Uncontrolled radioactive leakage inside the plant

Sweden: Contamination above 40 kBq/m<sup>2</sup> (beta, gamma)  
or above 4 kBq/m<sup>2</sup> (alpha) in areas where you can drink water

France: Job realized without a proper radiation protection pre-analysis (taking into account ALARA principle), or without fully respecting the measures of this pre-analysis

Slovenia: exceeded the planned dose set in the work permit (only for internal analyzing and documentation)

France: Malicious acts affecting occupational radiation protection

France: Any unexpected situation involving radioactive source



### 3. Criteria for Nomination: Differences, remarkable specialities (3)

What are the most important radiological criteria?

France: Failing signalisation or disrespect of technical conditions for access or stay in a classified area

France: Failing detection and/or monitoring systems, that no more guarantee occupational radiation protection

France: Exceeding periodicity of control of monitoring systems

France: Other events concerning radiological event

Finland: All events which may cause public interest





## 4. Differences in Criteria in order of Reporting to different Addressee (company internal, RB, emergency organisation, to the public, to government, ... )

Finland: There are 3 different kinds of reports

- special reports (significant, INES 1 or higher),
- event reports, and
- close call situation reports for company internal information

Finland: All NPP are informed about events INES 1 and higher

France: Events categorized as INES 1 or higher has to be published

France: Events categorized as INES 2 or higher has to be reported to  
Prime Minister

USA: Criteria for reporting NPP internal are lower

Sweden: For starting up emergency organization



## 5. Categorization of events

Do the legislation/company rule define different types/categories of radiological events?

France, Finland: using INES

Switzerland: using INES with some extra categorization levels below INES 1

Sweden: additional to INES

1) radiological events during normal operation (not categorized further but if an intake more than 5 mSv there should be a more thorough report made.)

2) other radiological event (these are categorized H2 – H5 depending on their severity)

USA: NRC has its own categorization regime

In most countries the regulatory bodies inform IAEA (IRS) about INES 2 and above events



## 6. Event Analyzing Management: Aspects or Steps to be Considered when Analysing and Reporting Events

Does your legislation specify different aspects or steps for management of radiological events?

If so, which aspects or steps are specified in the legal framework?

France: The aspects b) – e) are set in the reporting formular

Finland: Root cause analysis reports have to be prepared especially if the event has be recurrent



# 7. Legal Requirements on Experience Feedback:

Does your legal framework have requirements on the operational experience feedback (OEF) from radiological events?

How does the licensee manage the feedback from events to the own organization / staff?

Which event database have the licensee to consider as an input of lessons learned from events in other nuclear facilities in his own organization?

France, Switzerland, ...: No concrete requirements

Finland: Every year the NPP have to report which activities they have taken during the previous calendar year to utilise the operating experience gained at own and other nuclear facilities



# 7. Legal Requirements on Experience Feedback:

## USA:

- a) In legislation/guidelines/company rules a reporting system (via e-mail/intranet/internet) is required and installed, which helps to write and read informations like lessons learned within a reasonable group of users.
- b) NPP utility meetings/conferences (Electric Power Research Institute, Institute of Nuclear Power Operators, Nuclear Energy Institute)
- c) NPP utility owner's meetings (Boiling Water Reactors, Pressurized Water Reactors)
- d) Professional society meetings (American Nuclear Society, Health Physics Society, American Society of Mechanical Engineers, American Society for Testing and Materials, etc.)



**Thank you for your attention !**