QUESTIONNAIRE FOR PREPARING THE REGULATORY BODY MEETING in conjunction to the ISOE-Symposium in Cambridge 2010

INVITATION

In conjunction with the 2010 ISOE Symposium, 17-19 November 2010, we are preparing a 4rd Senior Regulatory Body Representatives meeting, to be held 16 November 2010 in Cambridge (UK). We hope to encourage your participation in this meeting which follows on from the very successful Regulatory Body representatives meetings in 2004 (Lyon), 2006 (Essen) and 2008 (Turku). The purpose of the meeting is to provide a forum for open exchange and discussion within specialised regulatory audience concerned with occupational radiation protection. Subsequent to the ISOE-Symposium 2009 in Vienna several representatives of regulatory bodies expressed their interest on the exchange of information about: "How **Lessons Learned from Radiological Events** are drawn up, reported and distributed among RP-responsibles in NPP, training facilities, companies and countries".

MOTIVATION

The feedback from events is highly valuable, because the lessons learned show necessary improvements on actual weak points in the Radiation Protection Program. Lessons learned from events may show aspects, which are not considered either in legal regulations, company rules, RP-planning nor in RP training courses. These weak points may exist also in other units, plants, companies or countries. Therefore lessons learned have to reach all persons who may be concerned, so the repetition of similar events will be prevented.

About the distribution of information about radiological events on an international level, see the instructive presentation from Helena Janzekovic "Use of IRS and OSMIR Database – Lessons Learned" at the last ISOE 2009 Symposium. It is shown that both databases can be successfully used complementary to the ISODATA. These international reporting systems shall not be the main topic of this RB information exchange.

OBJECTIVES OF THE MEETING

The main objectives of the meeting are:

- To meet with regulators from other organisations to exchange information regarding regulatory standards and rules on
  - the criteria defined for nomination a deviation or departures from standard operational parameters, faults, defects, finding, malfunction, incident or accident as a radiological event of interest,
  - the company procedure on reporting internal, analysing the direct causes, the root causes, the increasing or decreasing factors, the radiological consequences, determining the lessons learned and package of measures (the common expression for this procedure is "Operational Experience Feedback" OEF, see for example NEA Committee on Nuclear Regulatory Activities/ Working Group on Operating Experience)
  - the criteria and the way for reporting the information about event to the regulatory body
  - the way how the information are distributed among RP-responsibles in other NPP, training facilities, companies and countries
- The focus should be on events, which have or may have radiological consequences on the staff or which occurred in the area of responsibility of the NPP Radiation Protection Organisation (this may include also uncontrolled releases inside and outside the NPP)

- This meeting will not deal with aspects of events in other fields of nuclear safety (loss of control on criticality, loss control on fuel cooling, deviation from transportation rules, …) will not be considered.
- To help to improve national regulatory effectiveness on occupational radiation protection by comparing national reality versus international context

AGENDA OF THE REGULATORY BODY MEETING

- Introduction of the different representatives
- Brief presentation on national requirements to support feedback from radiological events. Additional some interesting examples of lessons learned may be shown (around 15 min)
- Discussion of terms, differences, special approaches and innovative ideas to support the feedback
- Conclusions: Collection of exemplary approaches to get and distribute lessons learned

OBJECTIVES OF THE QUESTIONNAIRE

In order to introduce the Regulatory Body representatives meeting it is expected to draw an overview of **regulatory control on feedback from radiological events 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, 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 all contacts participating in ISOE.

Yes, I agree X
No, the information should be sent only sent only to the RB participating in ISOE
No, the information should be used only in the RB-meeting

COUNTRY AND REPRESENTATIVE IDENTIFICATION

- **Country**: United States
- **Name of the Regulatory Body:** U.S. Nuclear Regulatory Commission
- **Name and post of the person(s) who fill in the questionnaire:** Ms. Doris Lewis, Health Physicist/ISOE Management Board – US Regulatory Representative

REGULATORY RIQUIREMENTS ABOUT REPORTING RADIOLOGICAL EVENTS

In the following questionnaire some possible answers are marked in blue color. Please cut of, change or complete (also if there are quantitative levels specified in the legislation)

- **Criteria**

  - Does your legislation specify criteria for nomination a near miss event, a minor damage, a deviation, a finding, an incident or an accident as a radiological event of interest: **Yes**
    …..
  - If no, does some official document of the licensee specify these criteria?
    …..
  - What are the most important radiological criteria?
    a) Exceeding the annual exposure limit or any other dose constraints of persons (dose limits may be different depending on the category of persons, organs and tissues)
    b) Investigation of an unexpected incorporation of activity above the minimum detectable level
    c) Investigation of a fixed contamination of skin or wound
    d) Exceeding the maximum permitted activity of a facility, room, storage or compartment
    e) Not expected increase of coolant activity, air contamination or surface contamination showing a leakage of fuel cladding, of transport cask, of waste container, of sealed source, of glove box or of hot cell
    f) Not expected increase of coolant activity or dose rate at primary circuit showing unintended activation of impurities
    g) Loss of a radioactive source
    h) Unexpected exceeding the maximum permitted level for fixed (= not easily decontaminable) contamination or maximum permitted dose rate inside controlled zones (levels may be different depending on the category of zone)
    i) Exceeding the maximum permitted contamination or dose rate outside of controlled zone inside the supervised plant area
    j) Exceeding the maximum permitted activity released via the controlled exaust air stack or waste water
    k) Uncontrolled release of activity
    l) Exceeding the maximum permitted contamination or dose rate outside of the supervised plant area in the environment
    m) Exceeding the clearance levels (activity, dose rate, contamination) for material transported out of supervised plant area declared to be free of radioactivity or below levels for qualified disposal
    n) *others …*
    o) *others…*
    p) *others …*
    q) any event which may easily fullfil one of the listed criteria above, but missed fortunately
  - Does your legislation specify criteria for reporting
    a) only to company internal - **No**
    b) to the regulatory body - **Yes**
    c) to international information platforms as INES, IRS and so on? **No, but the US NRC submits information to INES as an IAEA member nation.**
    …..
  - If yes, do the criteria for nomination (for NPP internal analysis and feedback) differ from those criteria for reporting to the regulatory body? **Yes, the criteria differ because many NPPs also have their own internal reporting/auditing processes that are more restrictive than the regulatory body's legislation.**

- **Differentiation of types/categories of radiological events?**

  - Do the legislation/company rule define different types/category of radiological events? **Yes**

REGULATORY RIQUIREMENTS ABOUT REPORTING RADIOLOGICAL EVENTS

- If yes, for which purpose do you use different types of radiological events? **Since the US NRC has jurisdiction over many nuclear sectors, there are subtle differences in the reporting of radiological events for the different types of licensees (e.g., NPPs, fuel cycle licensees, medical licensees, etc.)**
  a) to decide whether to start up the emergency organisation and which parts
  b) others …..
- Do the legislation use another categorisation instead of INES? **Yes, the US NRC has its own radiological event reporting criteria. However, the US NRC also provides radiological event report information to INES.**
  …..
- Which categories are defined in your legislation? **The US NRC has radiological event reporting criteria for all nuclear sectors under its regulatory jurisdiction. In some cases, these radiological event criteria are the exact same for all licensees. In addition, there are some specific radiological event reporting criteria for the different nuclear sectors under US NRC regulatory jurisdiction.**
  …..

❑ **Legislation concerning different aspects or steps for management of radiological 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?
  Please cut of, change or complete:
  a) Ways to commit events company internal or to inform the responsible persons
  b) Analyse the direct cause, root causes, increasing and decreasing factors
  c) Analyse the radiological consequences (really happened or probably could happened)
  d) Analyse the lessons learned
  e) Determination of measures to improve the RP
  f) others …
  g) others…
  h) others …

❑ **Legal framework on experience feedback from radiological events**

- Does your legal framework have requirements on the operational experience feedback (OEF) from radiological events? **Yes**
  …..
- If so, give a short description of the content of references: **The US NRC requires its licensees to report events to the regulatory agency, conduct root-cause analysis, and submit corrective action reports to the regulatory agency.**
  …..
- Does your legislation specify different aspects or steps of operational experience feedback? **Yes. The US NRC requires licensees to submit corrective action reports. Other aspects are specified in each licensee's license condition and/or technical specification documents, which may or may not involve communications to the regulatory agency.**
  …..
- If so, which aspects or steps of OEF are specified in the legal framework?
  Please cut of, change or complete:
  a) Distribution of lessons learned company internal
  b) Reporting of information about event to regulatory body
  c) Spreading information about lessons learned to RP training facilities
  d) Spreading information about lessons learned to other organisations as INES, IRS, ISOE
  e) others …
  f) others…
  g) others …

❑ **Ways and tools to support the operational experience feedback OEF from radiological events?**

- Which ways or tools exist or are described in the legislation, guidelines or company instruction to support the OEF from radiological events within companies, among other NPP or country wide?
  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

REGULATORY RIQUIREMENTS ABOUT REPORTING RADIOLOGICAL EVENTS
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.)** **Do you have some additional topics, which you would like to discuss during this or on the next RB meeting:**