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
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**: Switzerland
- **Name of the Regulatory Body:** Swiss Federal Nuclear Safety Inspectorate (ENSI)
- **Name and post of the person(s) who fill in the questionnaire:**
  Swen-Gunnar Jahn
  Radiation Protection Expert
  Occupational Radiological Protection Section

REGULATORY RIQUIREMENTS ABOUT REPORTING RADIOLOGICAL EVENTS

- **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
    occupational exposed persons: 20 mSv effective dose,
    500 mSv dose for skin,
    500 mSv for extremities,
    150 mSv for the lens
    not occupational exposed persons: 1 mSv effective dose
    persons of the public: 0,3 mSv effective dose
    b) Investigation of an unexpected incorporation of activity above the minimum detectable level of 1 mSv
    c) Investigation of a fixed contamination of skin or wound above 2 CS (nuclide specific constrain of contamination per 100 cm2, e.g. 300 Bq Cs-137 or 1000 Bq Co-60)
    d) Exceeding the maximum permitted activity of a facility, room, storage or compartment (values are put down in license or safety report)
    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 (values are put down in technical specification)
    f) Not expected increase of coolant activity or dose rate by a factor of 3 at primary circuit showing unintended activation of impurities (excluded dose rate below 0.25 mSv/h)
    g) Loss of a radioactive source with an activity greater than 1 LA (Licence Limite: 1LA Co-60 = $7x10^5$ Bq)
    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 (1 CS) or dose rate (0.02 mSv/week on permanent work places otherwise 0.1 mSv/week) 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 (values are put down in license)
    k) Uncontrolled release of activity
    l) Exceeding the maximum permitted contamination or dose rate outside of the supervised plant area in the environment (1/50 LE in lakes and rivers, 0.1 mSv/a at places where people may live, 1/300 CA)
    m) Exceeding the clearance levels (activity < 1LE, dose rate < 0.1 microSv/h, contamination < 1CS) for material transported out of supervised plant area declared to be free of radioactivity or below levels for qualified disposal
    n) incident with persons inside controlled area if an unexpected dose > 0.1 mSv occure

  - Does your legislation specify criteria for reporting
    a) only to company internal,
    b) to the regulatory body,

REGULATORY RIQUIREMENTS ABOUT REPORTING RADIOLOGICAL EVENTS

c) to international information platforms as INES, IRS and so on?
only b), not a) and not c)

- If yes, do the criteria for nomination (for NPP internal analysis and feedback) differ from those criteria for reporting to the regulatory body?
  …..

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

- Do the legislation/company rule define different types/category of radiological events?
  Yes
- If yes, for which purpose do you use different types of radiological events?
  a) to decide whether to start up the emergency organisation and in which way
- Do the legislation use another categorisation instead of INES?
  No
- Which categories are defined in your legislation?
  INES-Scale and additional if the event could be of public interest

❑ **Legislation concerning different aspects or steps for management of radiological events**

- Does your legislation specify different aspects or steps for management of radiological events?
  Yes
- If so, which aspects or steps are specified in the legal framework?
  In the very first telefon call or fax following information have to be reported
  a) Date, time, location, course of event, state of facility in order of further release of activity, first measures taken, further measures considered, categorisation within INES-Scale, criteria

  The results of following analysis have to be reported either by the “first and only one report” or if the analysis is complex in a final report
  b) Analyse the cause (with a differentiation between direct cause, root causes, increasing and decreasing factors in the fields technique, human and organisation)
  c) Analyse the radiological consequences (really happened or probably could happened)
  d) Analyse the lessons learned
  e) Determination of measures to improve the RP

❑ **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:
  In the final report
- Does your legislation specify different aspects or steps of operational experience feedback?
  Yes and No
- If so, which aspects or steps of OEF are specified in the legal framework?
  Yes: b) Reporting of information about event to regulatory body
  No: a) Distribution of lessons learned company internal
  c) Spreading information about lessons learned to RP training facilities
  d) Spreading information about lessons learned to other organisations as INES, IRS, ISOE

❑ **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?
  In Switzerland only in some companies a reporting system is installed, which helps to write and spread informations like lessons learned within the company and within the VGB.