# 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**: Finland
- **Name of the Regulatory Body:** Finnish Centre for Radiation and Nuclear Safety (STUK)
- **Name and post of the person(s) who fill in the questionnaire:**

Veli Riihiluoma
Senior Inspector
Nuclear Regulation
Radiation Protection Unit

## 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
    By virtue of the acts and regulations STUK issues detailed regulations that apply to the safe use of nuclear energy. There is a specific regulatory guide for reporting on NPP operation to STUK (YVL 1.5). In the guide it is stated the requirements for NPP's reporting and contents of the reports (special reports, event reports, close call incidents). The purpose is to enable effective regulatory supervision.

  - If no, does some official document of the licensee specify these criteria?
    …..

  - What are the most important radiological criteria?

  - Special report related to radiation safety have to be written for events:

    Uncontrolled radioactive leakage inside the plant so that air or surface contamination or radiation dose rate in the premises in question has essentially risen.
    Some individual's radiation dose may have exceeded the dose limit (Guide **YVL 7.10**):
    The effective dose caused to a worker by radiation work shall not exceed an average of 20 mSv per year reckoned over a period of five years, nor 50 mSv in any one year. The annual equivalent dose in the lens of the eye shall not exceed 150 mSv, nor shall the annual equivalent dose at any point on the hands, feet or skin exceed 500 mSv.

    Radioactive releases into the environment have exceeded the limit requiring corrective measures (Guide **YVL 7.1**):
    Persons of the public: 0,1 mSv effective dose (based on calculation)

    In practice the information threshold is lower. All events which may cause public interest are informed to STUK.

    Does your legislation specify criteria for reporting
    a) only to company internal,
    b) to the regulatory body,
    c) to international information platforms as INES, IRS and so on?

    The reporting by NPP to STUK is described in the guide YVL 1.12. It also states the roles of STUK and NPP in reporting.

    The duty of the STUK is to communicate and publish information in its field of activity (Decree on the Radiation and Nuclear Safety Authority, 618/1997, section 1). As regards the regulatory control of the use of nuclear energy, STUK informs among other things on events at nuclear facilities. STUK uses the INES scale in communication of events at Finnish nuclear facilities. STUK is its contact organisation in Finland to IAEA.

- 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, the YVL-guides do
- If yes, for which purpose do you use different types of radiological events?
  The events itself can be of different type.
- Do the legislation use another categorisation instead of INES?
  Yes and no
- Which categories are defined in your legislation?
  INES-Scale is used as the main tool as mentioned previously.

  **A special report:** shall be compiled of any special situations. Special situations for example are such incidents, defects, deficiencies and problems that may have significance to the safety of the plant personnel or to radiation safety in the plant's environment. A special report shall be submitted to STUK for approval.

  **An event report:** for such events which do not require the preparation of a special report but may still be significant e.g. for the functioning of quality or environmental management systems, the recognition of safety deficiencies or training needs, industrial safety or the operability of the plant.

  Also close call -situations may be such events. An advanced quality management system requires the handling and internal reporting of these kinds of events. The event report shall be submitted to STUK for information.

❑ **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?

  When notifying of nuclear facility plant events, STUK's on duty telephone number shall be primarily used; the number is available 24 hours per day. On duty telephone number, spare numbers and other more detailed instructions are included in separate decisions submitted by STUK to licensees.

  For the national and international communication activities, STUK needs a description of the event and an estimate of the INES level according to the International Nuclear Event Scale. The estimate of the INES level and the description of the event shall be submitted on events defined in Guide YVL 1.12. The content of different reports is described above.

  The results of operating experience shall be systematically followed and assessed. In order to effectively utilise operating experience, the licensee shall analyse events related to the operation of a nuclear facility. STUK evaluates the safety significance of operational events and the need for changes concerning the operation or plant as well as communication outside of STUK. With the help of reports and other records, the operation of the plant, operational events and implemented plant modifications can be assessed and analysed also afterwards.

❑ **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 need to conduct a root cause analysis from a special situation shall be considered. Especially if the incidents are recurrent, a root cause analysis shall be made. If a root cause analysis is not made, explanations shall be presented in the special report. The carrying out of a root cause analysis is dealt with in the Guide **YVL 1.11**. The report on the root cause analysis shall be submitted to STUK for information within six months from the incident.

## REGULATORY RIQUIREMENTS ABOUT REPORTING RADIOLOGICAL EVENTS

- Does your legislation specify different aspects or steps of operational experience feedback?
  Yes

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

In addition to what is stated previously (above), the licensee shall submit a summary report to STUK for information by the 1st day of March of the following year on the activities it has taken during the previous calendar year to utilise the operating experience gained at own and other nuclear facilities. The report shall include

- descriptions of significant operational events dealt with and their handling phases during the reporting period
- recommendations and decisions based on event reports, root cause analyses or other studies with schedules and responsible units
- information of implemented and not yet implemented corrective and preventive measures with schedules and responsible units
- information on events completely dealt with and on events taken under consideration.

A list of events under consideration and a brief description of their handling status shall be attached to the report. Operating experience feedback is dealt with in the Guide **YVL 1.11**.

❑ **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?

  This issue is dealt with in pervious answer (above)