

4th REVIEW MEETING

Convention on Nuclear Safety

Questions submitted to Luxembourg on the national report by

Canada:

Question 1:

Context: Entire report / general

Comment: The revised format of Luxembourg's report represents a big improvement over that of the previous report. The addition of the table of contents, introduction, and observations from the 3rd Review Meeting; underlining of new or updated material; and the reporting by article only when applicable; make for easier read.

Answer: Thank you very much

Question 2:

Context: Introduction / general

Comment: The description provided on the geographical locations of the neighbouring countries with nuclear installations in the Introduction of the report was helpful in obtaining a clear picture of the proximities of the plants.

Answer: Thank you

Question 3:

Context: Page 7, paragraph 1 / Article 8.1

Question: It is stated that the Minister of Health (the Regulatory Body) is "given the financial and human resources necessary for the fulfilment of the responsibilities assigned to him". Who assigns these funds? How is the Regulatory Body involved in the process of securing such funds? How often are these resources reviewed? How would additional funding and staff be requested, if necessary?

Answer: To the Ministry of Health and its technical departments, funds are assigned by the public budget, which is negotiated on a yearly bases. In practise, the regulatory body applies each year for financial founds to be able to meet running costs and to realize new projects. The final decision lies within the parliament when agreeing on the budgetary law. In order to cover important costs, which cannot be planned in advance, some of the budgetary posts allocated to the Ministry of Health are non-limited. In certain circumstances, like after a nuclear or radiological accident or when external expertise is needed, the total amount of such a budgetary post can be exceeded by simple decision of the Minister of Budget.

Concerning human resources, a law providing guidelines to the Ministry of Health fixes the total amount of public servants for each position and each department. For having additional stuff an application has to be

made to the Prime Minister. The Council of Government takes the final decision. These additional people are engaged as public employees.

Question 4:

Context: Page 7, paragraph 2 / Article 8.1

Question: It is stated that both the Ministry of Health and the Minister of Interior are responsible for executing the emergency plan. Which Ministry takes the lead and what would be the associated roles and responsibilities? Please clarify the relationship between the two ministries.

Answer: The Rescue Services Agency of the Ministry of Interior is in charge with all kind of accidental emergency situations. The philosophy is, that depending on the type of crises, the agency can rely on the expertise of other competent administrations. In the case of a nuclear emergency the Ministry of Health, precisely its department of radiation protection of the Directorate of Health, provides these expertise. The roles and responsibilities of each Ministry are defined by the special intervention plan. As a general rule the Rescue Service Agency is coordinating all rescue and protection measures, whereas the department of radiation protection is in charge with the evaluation of the situation from a radiological point of view. The Minister of Health is enabled to decide on protective measures.

Question 5:

Context: Page 7, paragraph 4 / Article 8.1

Question: What were the reasons for restructuring the rescue services in 2004 and for bringing all rescue teams together under the newly-created Rescue Services Agency? Please describe any noticeable benefits to date. It is indicated that the Agency is now managed by 25 state employees and 16 Emergency Assistance Centre (also known as "112") operators. Please explain whether these numbers represent a sufficient staffing level to do the job?

Answer: In Luxembourg the municipalities finance the fire brigades, whereas the Civil Protection is financed by the state budget. Considering the many overlapping responsibilities of both units, it was decided in 2004 to bring them together under a common coordination by creating the Rescue Services Agency. The goal was to make use of synergies and to better deploy available resources. However the problem of both units being differently financed and representing municipality interests and governmental interests respectively remained. Thus the expected benefit has not yet entirely been gained.

The 25 state employees of the agency are mainly responsible for administrative organization and coordination of the activities. On the technical and scientific side professional coordination is indeed missing. On the background of increasing scientific complexity within the field of emergency and rescue, activities linked to coordination, guidance and elaboration of emergency plans are more and more difficult to be exclusively achieved by volunteers.

Question 6:

Context: Page 7, paragraph 3, and page 8, para. 1 / Article 8.1

Question: How do the 2,232 volunteers with the Rescue Services Agency's Division of Civil Protection participate in an emergency preparedness training program? How are these volunteers compensated for their services, if needed? What formal agreements exist with non-governmental/ municipal employers?

Answer: All the volunteers have to participate in a specific training program according to their tasks, as defined by regulation. Each of these training courses also comprises the basic elements of radiation protection and nuclear emergency preparedness. The engagement is on a fully volunteer basis and they are not compensated for their services. All volunteers are private people and no distinction is made between volunteers from a private or public organization.

Question 7:

Context: Page 7, paragraph 3, and page 8, para. 1 and 3 / Article 8.1

Question: What are the differences between the roles and responsibilities of Ministry of Health's "Department of Radiation Protection" and those given for the Ministry of Interiors' "Radiological Protection Unit" of the Rescue Services Agency. What are the shared responsibilities between the two (for example, environmental monitoring) and how they are handled?

Answer: The department of radiation protection is the technical administration of the competent authority, namely the Ministry of Health. This department is charged to implement all European legislation on ionizing radiation, non ionizing radiation and nuclear safety. This includes among others authorization procedures for use or transport of radiation sources, environmental monitoring, radiological analyses and radiation protection of workers, medical patients and the public.

The Radiological Protection Unit was created to be able to rely on additional expertise and manpower in the case of a nuclear or radiological accident. It is exclusively composed of volunteers who would collaborate very closely with the department of radiation protection in the response of an emergency situation. Indeed, a strong link exists between both units, as five agents from the department of radiation protection are also volunteers within the Radiological Protection Unit.

Question 8:

Context: Page 9, paragraph 4, / Article 16.3

Question: Under "Radiological Surveillance", what is the frequency for testing, calibrating and replacing the air sampling instrumentation and monitoring equipment?

Answer: As the measurement network is 24 over 24 hours online no particular tests are performed but deviations from the background variations

trigger automatic alert. Small shifts of the signal are generally detected by the operator.

All alpha and beta monitors, as well as the online gamma-spectroscopy are subject of biannual calibrations, performed by the producer.

The department of radiation protection is assuring regular quality controls and maintenance of all the equipment and performs additional calibrations if needed. However the frequency of quality controls is not defined. Replacement of the instrumentation or parts of the instrumentation is decided on the bases of quality evaluations.

Question 9:

Context: Page 11, paragraph 2, / Article 16.3

Question: Under "Radiological Surveillance," the report indicates that in addition to the triggering of the computer alarm, the duty agents are now notified via SMS (text messaging) of elevated radiation levels. What procedure is followed by the recipients of the message (initial assessment, actions/decisions, and requests for additional testing/sampling)?

Answer: Concerning the radiological surveillance of drinking water a detailed procedure was elaborated, defining the people to be contacted as well as imposing immediate sample taking to be analysed and respond within 24 hours.

In all other cases the intervention plan defines the responsibilities of the duty agent. Depending of the level of alert, this includes analysing the situation, alerting the Rescue Agency Services, informing, if needed, the Government, engaging environmental sample taking and informing the public. However the SMS system helps for the duty agent to better analyse the situation from home, such as the possibility to recognize radon caused alerts. One of the duty agents is a public servant and has the legal power of ad hoc decisions.

It should be added that only two people received these SMS notifications up to now. It is foreseen to expand it to four people. The more than 5000 automatic SMS notifications since 2006 have in their majority contained technical information. This facilitates to operate the measurement network.

Question 10:

Context: Page 11, paragraph 6 / Article 16.2

Question: Under "Information to the public," what is the length of the current pilot project for alerting local authorities and schools via SMS? Please indicate whether a training, testing and implementation plan was developed. Have training and testing been completed?

Answer: The pilot project has stepwise expanded over the last 18 months and became officially on 1 of January 2008 an operational additional information system. As the system is just complementary to existing

notifications, only short training was needed for the operators. Testing was limited on technical aspects.

The Rescue Services Agency has a centralized database of the phone numbers of all concerned officials and all the volunteers of the agency. ASS is also responsible for updating and expanding the database. Each procedure applicable to a certain type of incident defines a group of individuals within an alert list for being notified via this additional information system. With regard extraordinary incidences, as certainly a nuclear emergency, the members of the crisis centre could also decide on sending particular messages to a group of people.

Question 11:

Context: Page 11, paragraph 7 / Article 16.2

Question: Under "Information to the public," when does the Ministry of Health "foresee" reorganizing and updating its homepage? What steps are taken to consult the users (public) and involve the Ministry of Interior?

Answer: As stated under "planned activities" it is foreseen updating the information to the public concerning emergency preparedness on a new homepage of the Ministry of Health. This project has started immediately after uploading our national report and is currently running. It is foreseen to go online at the middle of 2008. Whereas the Rescue Services Agency of the Ministry of Interior is involved in the content for nuclear emergency, it is at this stage not foreseen to involve the public.

Question 12:

Context: Page 13, paragraph 5 / Article 16.3

Question: Under "Bilateral Agreement with France," what communication plans (training, trial period and implementation date) have been developed for the introduction of the "planned" internet system for exchanging information between Luxembourg and France? Has consideration been given to mobile email-based devices, such as the Blackberry?

Answer: At the moment the discussions on the new Internet-based system are still on a technical level, where several alternatives are considered. Implementation will be decided on agreement of all involved actors. Once implemented, it will have to follow the monthly testing as defined by the bilateral agreement. The operators of the "112" will be trained as they figure as contact point.

Germany:

Question 1:

Context: Article 10

Comment: The following question is of special interest for Germany for the further development in this field. As this item may already be covered by your

report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting.

Question: Is the principle of priority to safety laid down explicitly in any binding national law or is this principle met by a sum of regulatory requirements?

Answer: This is a difficult question for a country that does not operate nuclear facilities. As brought forward in the national report, Luxembourg does not dispose of a very detailed regulation on nuclear matters which would cover all aspects related to the operation of nuclear installations. But we understand that, at least with regard to the use of radioactive material, the principle of safety first is met by the sum of the regulatory requirements, although it is not explicitly written.

Question 2:

Context: Article 9

Comment: The following question is of special interest for Germany for the further development in this field. As this item may already be covered by your report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting.

Question: Is the principle, that prime responsibility for the safety of nuclear installations rests with the holder of the relevant license laid down explicitly in any binding national law or is this principle met by a sum of regulatory requirements?

Answer: According to grand-ducal regulation of 14 December 2000 concerning the protection of the population against the dangers arising from ionizing radiation, the license holder is fully responsible for the respect of all regulatory provisions.

Question 3:

Context: Article 8.2

Comment: The following question is of special interest for Germany for the further development in this field. As this item may already be covered by your report or by other questions posted by Germany, we do not expect repetitions of information already delivered. Please just give additional information as appropriate. It was decided at the Third Review Meeting to discuss this topic at the Fourth Review Meeting.

Question: Is the principle of effective separation (as given in Art. 8 Para 2) laid down explicitly in any binding national law or is this principle met by a sum of state organisational measures?

Answer: The principle of effective separation is not laid down explicitly but the regulatory body is attributed to the Ministry of Health by law, whereas the Directorate of Energy, whose role is the promotion of energy resources, is placed under the Ministry of Economy.

Question 4:

Context: page 7-8 / Article 8.1

Question: The number of staff of the regulatory body as well as staffing of the civil protection agency is given.

Could you give some information on the organisational structure, on management systems and quality management of your organisation? Information on the available expertise and competencies would also be appreciated.

Answer: The Radiation Protection Department is placed within the Directorate of Health of the Ministry of Health. The Directorate consists of a general secretariat, 7 departments and 4 services. Each department is composed of a Head of department and no further organizational subdivision. The Radiation Protection Department consists at this moment of 7 agents of higher education, specialized in radiological protection (1), medical physics (2), nuclear engineering (1), biology (1), chemistry (1) and geology (1). For regulatory purposes, they rely on lawyers of the Ministry of Health. One technical engineer, 2 technicians, 2 laboratory assistances and one secretary complete the department. 3 of the agents are further attributed with the legal power of police officers. 4 of the agents figure as inspectors for controlling any equipment emitting ionizing radiation.

A first project of introducing a management system was launched in 2007 within the laboratory of the Radiation Protection Department. The target is to get an accreditation according to ISO 17025.

Question 5:

Context: page 7 / Article 7.2.2

Question: It is understood that the Department of Radiation Protection within the Ministry of Health, acting as regulatory body also is responsible for licensing other activities related to the application of radioactive substances. Can Luxembourg give some more information on these licensing issues, as well as on regulatory oversight, inspection and enforcement?

Answer: The system of licensing and prohibition:

In dependence of the accumulated activity of radioactive substances, facilities are ranged in four different categories, which imply different licensing procedures:

- Category I defines facilities of the nuclear fuel cycle, their decommissioning, radioactive waste management facilities and facilities for the final disposal of radioactive waste. Currently no undertaking of category I exists in Luxembourg.
- Category II is dedicated to facilities using or holding radioactive substances exceeding by a factor of thousand the exemption limits as fixed by the Council Directive 96/29/EURATOM of 13 May 1996 or conditioning, respectively having an interim storage of radioactive waste.

- In Category III are ranged all facilities using or holding radioactive substances above the exemption limits fixed by the Council Directive 96/29/EURATOM of 13 May 1996, but not exceeding these levels by a thousand fold.
- In category IV are classified all facilities using or holding radioactive substances staying below the exemption limits fixed by the Council Directive 96/29/EURATOM of 13 May 1996 but exceeding 1/100 of these limits.

The regulation lays down separate licensing conditions for each category of installation, notably in relation to the technical information to be supplied, public information and participation in the licensing procedure. A prior license from the competent authorities is nevertheless required for categories I-III. Declaration is sufficient for category IV.

The Government in Council (category I), the Minister of Health (category II) and the Health Directorate (categories III and IV) are competent in authorizing facilities of the respective categories. Refusal is motivated. The Minister of Health may suspend or withdraw a license when the licensee contravenes the regulation in force or the conditions of the license.

Control, inspection and responsibilities

The control and inspection of radioactive sources and waste are a shared responsibility of the undertaking and the Radiation Protection Department of the Ministry of Health.

Before first use all source or equipment emitting ionizing radiation has to undergo an inspection by the Radiation Protection Department. The operational radiation protection system is also inspected. Furthermore, facilities holding and handling radioactive sources are monitored and inspected at regular intervals by the Radiation Protection Department. These periodic inspections may also cover leakage tests of sealed sources. Leakage tests of the sealed sources are mandatory in case of an incident involving the source and at latest when the source is 10 years in use. Facilities have to hold a register of all the sources used or stored on their premises with indicating their exact respective location.

The Radiation Protection Department is holding a national register of all sources, devices, equipment and installations emitting ionizing radiation. It is further charged with controlling the facilities in respect to all regulatory provisions, such as protection of workers, outside workers, apprentices and students exposed to radiation, as well as taking all appropriate measures to avert danger in case of an incident involving these sources, devices, equipment and installations. Agents of the Radiation Protection Department are further attributed with the legal power of police officers.

Question 6:

Context: general

Question: Luxembourg has presented a well compiled, comprehensive and very informative report. Changes are clearly marked, and due reference is made to challenges arising for Luxembourg from the 3rd Review Meeting.

Good progress has been made.

Answer: Thank you very much

Hungary:

Question 1:

Context: Article 16.3

Comment: The emergency preparedness is well developed especially in the relation of the adjacent counties and the NPPs in a narrow range of 150 km. Since the civil defence is subject of internal affairs in a country, any emergency countermeasure bring up the responsibility aspect. From this aspect it is lucky if the country has an organisation which provides estimations about the further development of an emergency situation and the potential consequences parallel to the international information interchange. Realistic local consequence estimations should determine the emergency countermeasures.

Q: Do you plan the development of domestic capabilities to estimate independently the consequences of emergency situations?

Answer: We started in emergency preparedness with developing own capabilities. These capabilities are concentrated and maintained within the Alert Group (CNA) of the Rescue Services Agency (ASS).

However, we are aware that a small group, composed of 10 volunteers does not have the same possibilities than professional Institutes. We also think, that radiological evaluations across borders are crucial in decision taking. For this reasons, we changed our philosophy and give now priority to putting resources together with our neighbouring countries in a European environment.

From the aspect of responsibilities, it is clear that preventive actions are always decided on Luxembourg's side, namely on governmental level.

Netherlands:

Question 1:

Context: Article 15

Question: Luxembourg considers emergency preparedness as the most important issue within the scope of the Convention on Nuclear Safety. The implemented intervention plan as been described in the report, is focussed on emergencies in nuclear installations in neighbouring countries.

Because of its location there will be several in-transit transports in Luxembourg, including transports of radioactive or nuclear materials. Is the intervention plan also capable to handle accidents with such transports?

Answer: Indeed, there is an important transit of radioactive materials, but not of nuclear materials, in and through Luxembourg. Alerting, protection and rescuing of the concerned population is covered by the intervention plan. Thus, in case of an accident involving radioactive material, the duty agent of the radiation protection department is automatically called via "112" with other emergency teams to the site of the accident. He can decide on any moment on activating the intervention plan and deploying the Radiological Protection Unit.

Additional to the intervention plan, radiological training was introduced in 1999 at the police academy in order that police officers are able to see and to react accordingly if a transport of radioactive material is involved in an accident.

USA:

Question 1:

Context: General

Question: The report identifies the emergency planning challenge of a substantial number of trans-border commuters, as well as a significant foreign presence in the population, with no common language to facilitate timely and adequate emergency communications. How is this challenge being addressed?

Answer: The following addresses these challenges during an emergency situation:

- During pre-alert, the special intervention plan obliges the municipalities to take all necessary steps to make sure that the full population is alerted. Especially concerning alone standing houses and residents who are only temporarily or short time living in the area, this additional alert is executed by the local fire brigade or by phone calls.
- Messages are constantly broadcast in five different languages, namely Luxembourgish, French, German, English and Portuguese.
- Our emergency centre is in permanent contact with national and closer regional crisis centres of our neighbouring countries. This helps organizing the return of trans-border commuters to their homes or in case this is not possible to inform their families about the situation. It should be noted that these people generally speak and understand one of the official languages of Luxembourg;
- The population is also asked to have a look at their neighbours, especially at older people and people with health problems, but also at those people with different origin to make sure that they properly understand the messages.