

# **T**he Role of the Inspector during an Emergency

Addendum to the Inspection  
of Emergency Arrangements  
[NEA/CNRA/R(2013)2]

**Unclassified**

**NEA/CNRA/R(2015)6**

Organisation de Coopération et de Développement Économiques  
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**NUCLEAR ENERGY AGENCY  
COMMITTEE ON NUCLEAR REGULATORY ACTIVITIES**

NEA/CNRA/R(2015)6  
**Unclassified**

**The Role of the Inspector during an Emergency**

**Addendum to Inspection of Emergency Arrangements [NEA/CNRA/R(2013)2]**

**Working Group on Inspection Practices (WGIP)**

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- to assist its member countries in maintaining and further developing, through international co-operation, the scientific, technological and legal bases required for a safe, environmentally friendly and economical use of nuclear energy for peaceful purposes;
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The Committee shall promote transparency of nuclear safety work and open public communication. The Committee shall maintain an oversight of all NEA work that may impinge on the development of effective and efficient regulation.

The Committee shall focus primarily on the regulatory aspects of existing power reactors, other nuclear installations and the construction of new power reactors; it may also consider the regulatory implications of new designs of power reactors and other types of nuclear installations. Furthermore it shall examine any other matters referred to it by the Steering Committee. The Committee shall collaborate with, and assist, as appropriate, other international organisations for co-operation among regulators and consider, upon request, issues raised by these organisations. The Committee shall organise its own activities. It may sponsor specialist meetings and working groups to further its objectives.

In implementing its programme the Committee shall establish co-operative mechanisms with the Committee on the Safety of Nuclear Installations (CSNI) in order to work with that Committee on matters of common interest, avoiding unnecessary duplications. The Committee shall also co-operate with the Committee on Radiation Protection and Public Health (CRPPH) and the Radioactive Waste Management Committee (RWMC) on matters of common interest.



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## 1. FOREWORD

The Committee on Nuclear Regulatory Activities (CNRA) believes that safety inspections are a major element in the regulatory authority's efforts to ensure the safe operation of nuclear facilities. Considering the importance of this issue, the Committee established a special Working Group on Inspection Practices (WGIP) in 1990. The purpose of the WGIP is to facilitate the exchange of information and experience related to regulatory safety inspections among NEA member countries.

A fundamental goal in a regulatory authority's oversight of nuclear facilities is to establish confidence that adequate arrangements are in place for emergency preparedness and response. The CNRA published a report in 1998 on the inspection of licensee activities in emergency planning [NEA/CNRA/R(98)2]. Significant changes have occurred in the interim period, including early lessons learnt from the Fukushima accident. Therefore, the WGIP determined that it would be prudent for member countries to share good inspection practices associated with emergency arrangements (preparedness and response) in an updated report. In December 2013, the WGIP therefore presented the report entitled *Inspection of Emergency Arrangements* [NEA/CNRA/R(2013)2] for CNRA approval. While the report was approved at the December 2013 CNRA meeting, members requested that a short addendum be developed to compile member countries experiences of the role of the inspector during an emergency. The present addendum to NEA/CNRA/R(2013)2 identifies six additional commendable practices.

The CNRA would like to thank Mr Olivier Veyret (France) and Mr Jukka Kupila, (Finland) for taking the lead on this activity.





## 2. BACKGROUND

At the 38<sup>th</sup> meeting of the Working Group on Inspection Practices (WGIP), members made a proposal to the CNRA to examine and evaluate the extent to which emergency arrangements are inspected and the benefits of these inspections. The information would then be used to identify areas of importance for the development of good inspection practices. The CNRA approved the task in December 2009.

This task built on a previous WGIP report published in 1998 – Inspection of Licensee Activities in Emergency Planning [NEA/CNRA/R(98)2]. WGIP members considered that it was timely to revisit this topic, since significant changes had occurred and required updating. The 1998 report was concerned with the inspection of emergency planning within WGIP member countries. The 2009 task modified the scope to address all aspects of emergency arrangements, including preparedness and response. The accident at Fukushima Daiichi nuclear power plant (NPP) occurred during early preparations for this report and the scope was modified to address a request from the CNRA Senior Level Task Group on the Impacts of Fukushima to include some of the early lessons learnt from the accident, such as the inspection of centrally held equipment.

The objectives of this task were to report on inspection practices currently adopted by WGIP members to assist with self-assessment and to identify commendable inspection practices that would promote more effective inspection activities on emergency arrangements.

The CNRA/WGIP report entitled, *Inspection of Emergency Arrangements* (ref: NEA/CNRA/R(2013)2) was approved by the CNRA at the December 2013 meeting. At the same meeting, the CNRA requested that a short addendum to NEA/CNRA/R(2013)2 be developed to compile member countries experiences concerning the role of the inspector during an emergency. The WGIP generated a questionnaire to address aspects of the role of the inspector during an emergency. Details of the questions posed to WGIP members are set out in Section 3 of this report.

The following twenty countries responded to the questionnaire: Belgium, Canada, Czech Republic, Finland, France, Germany, India, Italy, Japan, Korea, Mexico, the Netherlands, Russia, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom and United States.

The WGIP members were requested to response concisely to the two main questions in the questionnaire. Appendix A provides the detailed responses to the questions. Appendix B includes supplementary information provided by several countries.

An analysis of WGIP members' responses is presented in Section 4 of this report and conclusions are presented in Section 5.



### 3. QUESTIONNAIRE

The WGIP members generated the following questionnaire to gather information for their analysis on the role of the inspector during an emergency:

#### **Questionnaire – The Role of the Inspector during an Emergency**

Members were requested to respond (being concise if possible) to the following two questions:

- 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**
- 2. What is the interaction between responding inspectors and licensees during an emergency?**

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Note: When responding to the two questions above, please consider the following items (Members do not have to answer the following items, as they are offered simply as a guide).

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;
- emergency centre (licensee's emergency management on site);
- licensee's technical support centre (licensee's onsite/offsite support functions);
- regulatory body's own office at site;
- local emergency service's emergency centre;
- local/area administration; or
- other.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

- Is this procedure established by the licensee or the regulatory body (RB)?

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

- How often?
- Do they compare it with the licensee's technical assessment?

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?
- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?
- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in detail? Do they have to assist/witness some key operations in these procedures?
- Are the inspectors periodically trained on simulators?
- Do the inspectors participate in exercises to test the role of the inspector during an emergency?

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?
- Inspect with the possibility for immediate enforcement if there are any violations?
- Gathering information for the remote RB teams?
- Gathering information to support potential enforcement after the emergency?

What are the key elements in the share of responsibilities between the licensee and the inspectors?

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

How does the inspector interact with the licensee during an emergency?

- Is there a procedure?
- If the inspector identifies a violation during an emergency, what does he/she do?

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

See Appendix A of this report for WGIP members' detailed responses to the two main questions. See Appendix B for supplementary information provided by several countries.

#### 4. ANALYSIS OF THE RESPONSES

As documented in NEA/CNRA/R(2013)2, all WGIP member countries have legislation in place that sets national requirements for emergency preparedness and clearly assigns responsibilities for preparedness and response to a nuclear or radiological emergency. These responsibilities may be assigned at national or local levels and to national organisations (including the RB) and operators, depending on the countries legislative framework and system of government.

Responsibilities for emergency preparedness and response are typically assigned at three levels: operator, offsite and international. Operators of NPPs are responsible for managing the onsite response in all WGIP member countries, with RBs providing regulatory oversight. Responsibility for managing the offsite response invariably falls to local or regional government bodies and most RBs have more of an advisory role at this level. International obligations are managed at a national level and RBs often provide this role on behalf of central government.

This additional analysis highlights both common and unique approaches regarding the role of the inspector in response to an emergency. In the following analysis the expression “the deployed onsite inspector(s)” is used to designate the RB’s inspector(s) that is (are) present onsite during an emergency. Depending on the RB’s philosophy, it may refer to a resident inspector<sup>1</sup> or a site inspector.<sup>2</sup>

##### 4.1. Inspectors’ deployment

In seventeen countries, the RB’s emergency organisation includes the deployment of inspectors to the facilities. In Germany, both the RB and its Technical Support Organisation (TSO) are obliged to deploy an inspector and a technical expert, respectively.

Three countries mentioned that there is no requirement to deploy onsite inspectors to NPP in the event of an emergency:

- In India, the RB’s inspectors do not have a direct role to play during an emergency. During an emergency, the RB’s remote emergency centre is kept informed by the licensee. If required, the RB may deploy inspectors to collect first-hand information for further assessment;
- In Italy<sup>3</sup>, the inspectors are not deployed onsite;
- In Korea, during an emergency, resident inspectors are deployed to a RB’s offsite emergency management centre which is located in the vicinity of the nuclear facility.

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<sup>1</sup> Resident inspectors live in the area of the nuclear power plant and maintain offices at the plant during regular business hours.

<sup>2</sup> Site inspectors are not located permanently on the nuclear facilities but in a regional / national office.

<sup>3</sup> Italy has decommissioned NPPs and research reactors.

#### **4.2. Inspectors' location**

The deployed onsite inspectors are normally located in a licensee's emergency centre and not in the control room. A few highlights include:

- In Belgium, an additional inspector may be sent to a centre located in the vicinity of the main control room. This centre is equipped with recorders and indicators providing the same information available in the control room but limited to the parameters that are important in case of an emergency;
- In Germany, the deployed onsite inspectors may independently verify the information obtained during meetings by checking the control room or other relevant areas of the NPP;
- In Mexico, the deployed onsite inspector is located in the main control room to gather information required by the Emergency Care Centre located in the Headquarters in Mexico City;
- In the United States, the deployed onsite inspectors continue to have access to the control room in order to observe or monitor the licensee's activities.

#### **4.3. Inspectors' training**

The deployed onsite inspectors' training may include the following aspects:

- advanced technical training, including the use of simulators to understand the technical situation of the plant;
- general training on emergency preparedness and response organisation.

#### **4.4. Inspectors' role**

In most countries, the first duty of the deployed onsite inspectors is to take note of the actions taken by the licensee in response to the emergency and to maintain communication links with their home office. In many responses, the expression "liaison officer" was used to describe and summarise the role of the deployed onsite inspector.

In some countries, the role of the deployed onsite inspector also includes an oversight aspect in order to verify that the licensee complies with the regulatory requirements and responsibilities:

- In Belgium, France and Germany, the deployed onsite inspectors provide an oversight role which is limited to verifying whether the licensee is complying with its onsite emergency response plan;
- In Slovak Republic, the deployed onsite inspectors perform an independent assessment of the situation and may recommend actions to the RB's remote emergency centre;
- In the United States, where a "resident inspector" system is implemented, the oversight is more technical and concerns the implementation of both the emergency plan and technical procedures.

In the Czech Republic, the role of the inspectors during an emergency is not formally defined; however, this situation should change in response to a recent IRRS mission.

#### **4.5. Enforcement**

In most countries, the first priority for both the RB and the licensee is to exit the emergency conditions. Therefore, the deployed onsite inspectors let the licensee act according to its procedures.

The countries' responses indicated a variety of actions regarding potential violations:

- In Russia, the deployed onsite inspector is expected to perform immediate enforcement;
- In Canada, the Netherlands and the United Kingdom, the inspectors may take immediate enforcement, but it is more likely that violations would be recorded and enforcement actions would be postponed to a more appropriate time, preserving potential evidence and information;
- In Slovenia, during an emergency, inspectors do not perform inspections or enforcement. In the Slovak Republic, the interaction with the licensee is limited to observations and attending meetings. If the inspector identifies any violation, he/she would inform the RB's remote emergency centre. In Finland, the deployed onsite inspectors do not make any regulatory enforcement during an emergency.

#### **4.6. Other relationships with the licensee in emergency management**

In most countries, deployed onsite inspectors are directed not to interfere with the licensee's actions taken to mitigate or end the emergency. All countries reported that deployed onsite inspectors are not allowed to operate the facilities (e.g. manipulate switches or devices).

In most countries, the potential offsite consequences are assessed by the RB's remote emergency centre or the home office.

In Japan, if necessary, the RB can provide technical instructions to the licensee in order to ensure plant safety; in that case, instructions are based on technical and expert knowledge, but these instructions are addressed by the remote emergency response centre and not by the deployed onsite inspectors whose business remains to gather information. In Germany, the RB can give technical directives to the licensee, if necessary.

#### **4.7. Commendable Practices**

Commendable practices are based on WGIP analysis of the role of the inspector during an emergency and do not reflect a consensus NEA opinion. Nevertheless, the commendable practices can be utilised as a general benchmark for basic comparisons of those issues which inspectors from participating countries share.

The following commendable practices should be considered by the member countries when defining their procedures and the role of the inspectors who are likely to be deployed onsite during an emergency:

1. The RB inspectors are deployed onsite during an emergency to provide additional independent information to the RB's remote emergency centre ("liaison officer").
2. A deployed onsite inspector is located at the licensee's emergency centre to allow him/her to observe the licensee's emergency response, especially the decision-making process. An additional inspector may be deployed in the main control room or any other relevant areas of the plant, to observe the licensee's emergency response.
3. The RB's inspectors participate in the licensee's periodic emergency drills in order to exercise the RB's emergency organisation and train the inspectors on their roles and responsibilities during an emergency.
4. Arrangements are made by the RB for the deployed onsite inspectors to have an official location and communication equipment inside the licensee's emergency centre.
5. The deployed onsite inspectors do not unduly interfere with the licensee's work or decision making and must not be allowed to operate the facility. The deployed onsite inspectors are not intrusive to



the licensee's management of the facility (e.g. the decision making process and the operators in the control room).

6. The RBs implement policies and guidance regarding personal safety and radiological protection of deployed onsite inspectors.

## 5. CONCLUSIONS

Overall, the role of the inspector during an emergency is very similar in most countries, whether the deployed inspectors are resident or site inspectors.

Detailed responses to the questionnaires from WGIP member countries have been compiled and are presented in the appendices to this report. The following commendable practices may be drawn from the completed questionnaires and views provided by WGIP members:

1. The RB inspectors are deployed onsite during an emergency to provide additional independent information to the RB's remote emergency centre ("liaison officer").
2. A deployed onsite inspector is located at the licensee's emergency centre to allow him/her to observe the licensee's emergency response, especially the decision-making process. An additional inspector may be deployed in the main control room or any other relevant areas of the plant, to observe the licensee's emergency response.
3. The RB's inspectors participate in the licensee's periodic emergency drills in order to exercise the RB's emergency organisation and train the inspectors on their roles and responsibilities during an emergency.
4. Arrangements are made by the RB for the deployed onsite inspectors to have an official location and communication equipment inside the licensee's emergency centre.
5. The deployed onsite inspectors do not unduly interfere with the licensee's work or decision making and must not be allowed to operate the facility. The deployed onsite inspectors are not intrusive to the licensee's management of the facility (e.g. the decision making process and the operators in the control room).
6. The RBs implement policies and guidance regarding personal safety and radiological protection of deployed onsite inspectors.

The commendable practices are neither international standards nor guidelines. Each country should determine inspection practices, considering its own historical, social and cultural backgrounds. The commendable practices can be useful references for each country to improve its inspection practices.



**APPENDIX A:  
QUESTIONNAIRE RESPONSES**

**BELGIUM**

**1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

During an emergency, an appointed inspector will be present at the licensee's onsite Emergency Operations Facility (EOF). If needed and/or requested by him, an additional Bel V representative could be sent in the onSite Technical Centre (OTSC) located in the vicinity of the Control Room (CR) of the affected unit.

This(ese) Bel V representative(s) has(ve) a supervision role on site: verification of the respect of the onsite emergency plan, supervision of the actions taken by the Licensee to cope with the emergency situation and to protect the people on the site, and ensure the communication between the Licensee' emergency response organization and the Governmental Crisis Centre (GCC).

**2. What is the interaction between responding inspectors and licensees during an emergency?**

Bel V representative(s) on the site:

- do not inspect during an emergency;
- do not operate buttons/switches in the control room;
- do not actuate components in the field;
- are not expected to monitor field operations as they are not trained to interact with station equipment or operational procedures.

Licensee:

- is responsible for managing and implementing the onsite emergency response;
- does not normally need RB approvals to take safe actions or shutdown;
- is responsible for safety and, as such, takes action to identify and assess the safety significance of the emergency, to control and mitigate the emergency, and to notify and consult with offsite authorities.

During an emergency, there is typically limited interaction between Bel V representative(s) on the site and the licensee's emergency response staff. However, This(ese) representative(s) may:

- seek clarification on the event/issues/situation;
- request information.

## CANADA

### 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?

During an emergency, a resident inspector takes a seat at the licensee's onsite Emergency Operations Centre (EOC). If the licensee's offsite EOC and the provincial government's EOC are activated, they will also be staffed by resident inspectors if approved by the RB EOC.

These resident inspectors:

- assess the situation (e.g. perform an independent assessment of the onsite conditions and potential offsite consequences and communicate to RB EOC);
- attend briefings/meetings and observe licensee actions;
- communicate the details of the emergency to the Regulatory Body's (RB) EOC;
- provide site specific information support to the RB's EOC;
- provide any information requested by the RB EOC;
- perform regulatory oversight;
- support the RB actions as required (e.g. emergency orders).

### 2. What is the interaction between responding inspectors and licensees during an emergency?

Resident inspectors:

- do not inspect during an emergency;
- are not expected to make an independent technical assessment of the safety of the facility;
- do not operate buttons/switches in the control room;
- do not actuate components in the field;
- are not expected to monitor field operations as they are not trained to interact with station equipment or operational procedures.

Licensee:

- is responsible for managing and implementing the onsite emergency response;
- does not normally need RB approvals to take safe actions or shutdown;
- is responsible for safety and, as such, takes action to identify and assess the safety significance of the emergency, to control and mitigate the emergency, and to notify and consult with offsite authorities.

During an emergency, there is typically very little interaction between responding resident inspectors and the licensee. However, resident inspectors are not precluded from interacting with licensee staff and may:

- seek clarification on the event/issues/situation;
- request information;
- identify and discuss violations either during or post emergency.

## **CZECH REPUBLIC**

**1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

Currently, there is no formal difference between routine inspection activities of resident inspectors during smooth operation and emergency situation related to operation of NPP unit. Except regarding to event classified INES 2 and higher – in these cases RB on the base of managerial decision launches unplanned team inspection.

According to respective recommendation of the IRRS mission in the 2013, this process going to be modified and the position of inspectors onsite during emergency going to be defined.

**2. What is the interaction between responding inspectors and licensees during an emergency?**

Currently, meanwhile there is no difference between normal operation and emergency, except, that during emergency licensee is obliged to send topical data related to emergency situation to the RB by an established communication channel (between technical support center of the licensee and the RB emergency response center) in a defined period.

This process is going to be modified according to recommendation of the IRRS mission.

## FINLAND

- 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**
- 2. What is the interaction between responding inspectors and licensees during an emergency?**

When an emergency situation is declared the regulator activates its own response. RB have resident inspectors who go to the licensee's emergency centre where there is official work place provided by the licensee. STUK also dispatches people to emergency service's emergency centre as liaison officer, because rescue service is in charge of rescue efforts. All other RB's personnel report to STUK HQ emergency centre where the RB activity is taking place during emergencies.

Role of inspector is to provide independent information on situation via licensee contact persons but also by making necessary inquiries of their own or directed by the RB HQ. They have position in emergency centre but only overall task description but it is not a procedure. Their task is to evaluate if the licensee's and STUK's situation assessment and activities seem to be in line with each other. They also provide a channel for more detailed inquiries during emergencies (eg. clarify if certain equipment are under repairs or confirm certain data by direct questions) They also can provide quick information for urgent events or decisions taking place in the plant.

They are trained (incl. simulators) to understand the plant and they train regularly in every emergency exercise. They do not however take the role of STUK HQ in making situation assessment but they can provide insights.

Their overall role is very clear: They do not interfere or enforce licensee actions during emergencies. They just provide additional and/or detailed information to STUK and also clarify/confirm certain facts. They do not operate nor give advice to licensee. They do not make regulatory decisions or actions during emergencies. They do not gather evidence. Even STUK do not decide rescue efforts or countermeasures taking place but STUK has advisory role for Rescue Services. (of course very strong).

STUK HQ may ask questions from licensee during emergency if seen relevant and this kind of questions may in some exceptional cases be relevant interactions between inspector and licensee but they are not orders for licensee to do something.

## FRANCE

### 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?

#### Short description of the ASN emergency response organisation

The ASN emergency response organisation set up for an accident or incident in a BNI more specifically comprises:

- at the national level, an emergency centre in ASN Headquarters (Montrouge), consisting of three Command Posts (PC):
  - a “Strategy” Command Post, consisting of the ASN Commission, which could be called on to issue resolutions and impose prescriptions on the licensee of the installation concerned in an emergency situation;
  - a Technical Command Post in constant contact with its technical support organisation, IRSN, and with the ASN Commission. Its role is to adopt a stance for advising the Prefect, who acts as the director of contingency operations;
  - a Communication Command Post, located close to the Technical Command Post and headed by an ASN representative.

The ASN Chairman or his representative acts as spokesperson, a role which is distinct from that of the head of the Technical Command Post.

- at the local level:
  - ASN representatives working with and advising the Prefect in his decisions and communications;
  - ASN inspectors present on the site affected by the accident.

ASN is supported by an analysis team working at the IRSN’s Technical Emergency Centre (CTC).

#### Onsite role of the responding inspectors during an emergency

According to the ASN quality assurance manual, the onsite inspectors’ missions are:

- To represent ASN onsite ;
- To ensure that information is adequately given to the different actors (prefect, ASN HQ).

The main actions that the responding inspectors have to undertake:

When arriving onsite, he has to confirm his arrival to the different PCs;

- He has to take note of the most important events, including the evaluation of the situation;
- He has to ensure that the licensee exercises its responsibilities fully, without interfering in any manner : the ASN inspector is NOT participating to the analysis neither to the licensee’s technical decisions;
- He may intervene with the licensee’s directorate but only under ASN’s command and ASN PC request;
- Anyway, the inspector keeps his prerogatives as an inspector even during an emergency;
- He has to follow the implementation of the actions that have been decided by the licensee and he has to follow the evolution of the general situation (releases, levels of radioactivity, facilities safety status...);



- He has to check if the licensee is transmitting written report to the ASN HQ and the prefect on a regular basis;
- He has to keep in touch through regular phone calls to the ASN HQ and the ASN regional office to:
  - Deliver his own statement of the situation considering his own observation;
  - Take note of both prefect and ASN's positions and decisions;
  - Clarify the technical information transmitted by the licensee to ASN and Prefect;
  - Ensure that the licensee's information and information comply with Prefect and ASN's knowledge of the situation (but without substitution to licensee's duty to deliver official information in a regular way);
  - Ensure that the understanding of the situation is shared between ASN and the licensee (some important information may not be understood correctly during a very formal audio conference)

**2. What is the interaction between responding inspectors and licensees during an emergency?**

The responding inspector is settled in the main command and decision post of the facilities. He's got a desk nearby the Licensee's crisis director. He is attending to all the meeting whether they are internal licensee's ones or audio conferences with the other stake holders (ASN HQ or prefect).

The ASN responding inspector onsite is mostly in charge of catching information and of reporting it back to ASN HQ. He must not interfere with the licensee in its management of the situation.

## GERMANY

Both questions are correlated and therefore answered together

1. **What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**
2. **What is the interaction between responding inspectors and licensees during an emergency?**

In Germany, there are no resident inspectors onsite. The inspectors are located in the headquarters of the RB in the capital of the respective *Land*. They are generally able to reach a plant in not more than a very few hours. Typically, one inspector is onsite several times a week during office hours. Furthermore, the RB is supported by TSOs, whose staffs are onsite more frequently. Besides this, there is an on-call duty 24 hours a day for immediate response by the RB as well as by the supporting TSO. The RB's contract with the TSO obligates the TSO to send out specialists within a certain timeframe (few hours). During an emergency, the licensees provide rooms and all communication means necessary to the responding inspectors onsite.

In case of an emergency, the RB convenes also its own emergency organisation, prescribed in a separate emergency manual. The content of such an emergency manual and the existence of detailed procedures or process descriptions depend on the organisation of the RB of the respective *Land*. The primary onsite role of the responding inspector(s) during an emergency is to act as liaison officer(s) between the licensee and the RB's headquarter. Therefore, the licensee also provides a contact person from its crisis management team responsible for communication. This ensures that the RB gets the relevant information from the licensee as soon as possible and thus permitting immediate response of the RB, including giving directives to the licensee if necessary.

A further task of the responding inspector(s) is to enable the RB to gain independent and full insight of the accident. This requires gathering of information about the causes of the accident, the plant state, the course of actions and the consequences. The crisis team of the RB includes a team that assesses the state of the plant and a team that monitors the radiological situation. The teams use a remote monitoring system that provides a various number of plant parameters as well as on- and offsite radiation levels. The responding inspector(s) onsite supports these teams. It is therefore of special importance to participate in meetings of the licensee's crisis teams and to provide the contact point between the licensee and the RB, as mentioned above. Additionally, the information obtained in the meetings can be verified by visiting the control room or other relevant parts of the plant and interviewing the staff etc. Besides the information mentioned, the crisis teams of the RB and the TSO have copies of EOPs and SAMGs as well as other operating procedures and technical descriptions available at their headquarters.

The inspectors of the RB are trained for coping with accidents and emergencies but will not perform any operations in the control room or other parts of the plant. Training of the RBs staff includes training on plant specific simulators to get to know the plant behaviour in accidents and the measures to be taken by the licensee. Furthermore, inspectors participate in emergency drills. Several levels of participation are possible. Approximately once a year the RB participates with its complete staff in an emergency drill performed by the licensee. More often it participates with parts of its staff, e.g. only the team that monitors plant parameters. Emergency drills performed by the licensee are often observed and evaluated by members of the RB and/or the TSO.

## **INDIA**

### **1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

Resident inspectors are not posted at Indian NPPs. Regulatory inspections are carried out by a team of inspectors, who visit the NPP for this purpose. Hence inspectors do not have a direct role to play during an emergency.

### **2. What is the interaction between responding inspectors and licensees during an emergency?**

As inspectors are not at NPPs (except during the period of inspection), the interaction between the responding inspectors and licensee is not expected during an emergency. However, Regulatory Body keeps itself informed about the situation at the NPP during emergency and the licensee has the obligation to inform the RB about the event and the actions being taken to mitigate the situation. If required, RB may depute inspectors to collect first-hand information for the purpose of checking compliance with the set procedures, informing the public and for review and assessment of the situation.

The licensee is primarily responsible for the safety of the NPP, public & environment and for taking corrective measures in accordance with the emergency procedures approved by the regulatory body.

AERB inspectors participate (as observers) in the periodic mock up exercises of emergency plans at each NPP site to verify compliance with regulatory requirements.

## ITALY

Due to the situation of nuclear plants in Italy (decommissioning in progress for Nuclear Power Plants and exercise for research reactors) the applicability for the proposed questions is listed below:

### **1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

Normally, inspectors are not on site, consequently the behaviour during an emergency can be directly reported to their own main office, particularly at their own emergency centre.

Generally speaking, the management of an emergency at nuclear installation is based taking into account, for the licensee, a dedicated plan for a nuclear emergency. This plan is set on a previous evaluation for the maximum nuclear accident and contains the specific indications for the direction of the plant, including the role for the staff.

The inspector follows, at the same level of his/her own colleagues, the evolution of the accident and the management of the emergency.

Our institute has an emergency centre dedicated to follow the accident and specific trained colleagues to exchange information with the plant.

### **2. What is the interaction between responding inspectors and licensees during an emergency?**

During an emergency, if the inspector is onsite the behaviour is the same in normal condition; only the staff of the plant can operate in the control room, without exception.

If the inspector identifies any kind of violations of the rule in the frame of the license, must impose fine or prosecution.

## **JAPAN**

### **1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

In the Nuclear Emergency Response Manual (October 19, 2012 Nuclear Disaster Management Council Executive Committee decision), response of relevant ministries and agencies in the case of accident or earthquake or the like in the nuclear facilities is defined for each phase of the situation.

For example, in the case of a seismic intensity of 5 on the Japanese seven-stage seismic scale or more earthquake in the municipality where nuclear facility is located, on the local activities as a phase of the information gathering situation, a senior specialist for nuclear emergency preparedness takes measures relating to offsite matters at the offsite centre and a resident nuclear safety inspector gathers information relating to onsite matters at the licensee's onsite emergency station.

Furthermore an accident is progress, when it becomes a nuclear emergency situation, the licensee is required to take all the necessary measures for managing and implementing the onsite accident response at the licensee's onsite emergency station, etc.

On the other hand, if necessary, the Regulatory Body (RB) is possible to instruct the licensee for ensuring the plant safety, based on the technical and expert knowledge. Therefore, during an emergency, a resident nuclear safety inspector is required to gather and provide information at the licensee's onsite emergency station, and to share information closely with the Prime Minister's Official Residence and the RB's Emergency Response Centre (ERC), etc.

### **2. What is the interaction between responding inspectors and licensees during an emergency?**

The licensee takes all the necessary measures for managing and implementing the onsite accident response at the licensee's onsite emergency station, etc.

Resident nuclear safety inspectors gather and provide information at the licensee's onsite emergency station and share information with the RB's ERC, etc. It should be noted that resident nuclear safety inspectors do not operate buttons/switches and do not instruct the plant operators in the control room.

**KOREA****1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

In case of emergency situation, OEMC (Offsite Emergency Management Centre) is activated in an area adjacent to the site by the regulatory body. The purpose of OEMC is for rapid command and control of the emergency. During the emergency, the resident inspectors are supposed to join OEMC which have the specialists from the regulatory body headquarters, local government, and KIRAM (Korea Institute of Radiological and Medical Sciences) to provide protective measures through accident analysis and radiological assessment.

**2. What is the interaction between responding inspectors and licensees during an emergency?**

During an emergency, there is usually little interaction between resident inspectors and the licensee except collecting information on the accident, licensee's measures for mitigation, and onsite radiation monitoring results.

## **MEXICO**

### **1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

In the case of a real emergency (class alert or higher), the Senior Resident Inspector shall carry out the functions of liaison with the Organization of Nuclear Contingencies of CNSNS; so he must move to the Emergency Control Center (ECC), located at 12 kilometers from the nuclear installation. While the Resident Inspector must go to the Technical Support Center (TSC) located inside the main control of the plant unit in which the emergency arises and develop tasks that are assigned from the Regulatory Body Emergency Response Center located in Mexico City.

In any case the information provided by the Senior Resident Inspector and the Resident Inspector to the CNSNS headquarters located in the city of Mexico, it does not exempt the holder of its obligations to notify and maintain promptly informed the CNSNS staff which stay in the ECC and how it is anticipated to evolve the emergency.

Also, the holder, aside from informing the ECC obligations, must take care that Senior Resident Inspector and Resident Inspector are adequately informed of the evolution of emergency in the plant unit, making them part of all relevant changes which are taking place during such this emergency.

### **2. What is the interaction between responding inspectors and licensees during an emergency?**

As it was mentioned above the Senior Resident Inspector and Resident Inspector shall carry out the functions of liaison with the Organization of Nuclear Contingencies of CNSNS so there interaction between the resident inspectors and the licensee is kept just to the most relevant information, mainly related with critical parameters about the evolution of the emergency and answering the information required by the Regulatory Body Emergency Response Center.

**NETHERLANDS**

- 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

In the Netherlands we will have two (2) inspectors on the site during emergency. One inspector is monitoring the activities of the licensee and the other one is for the exchange of information between the site and the RB emergency organisation.

- 2. What is the interaction between responding inspectors and licensees during an emergency?**

See answer to question 1. So there are two roles, monitoring and exchange of information.



**RUSSIA**

- 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**
- 2. What is the interaction between responding inspectors and licensees during an emergency?**

During an emergency, inspectors supervise:

- Completeness and timeliness of the measures taken by licensee on elimination of accident;
  - Compliance with rules and regulations;
  - The accuracy and timeliness of the information submitted by the licensee;
- They have possibility for immediate enforcement;  
Licensee submits information to inspectors.

**SLOVAK REPUBLIC****1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

During an emergency the licensee's onsite emergency response centre (ERC) as well as the regulatory body's ERC is activated (regulatory body's ERC is located offsite). The resident inspector takes a seat in the licensee's ERC. He is a member of the reactor safety group of regulatory body's ERC. His main task is to gather and provide information for the regulatory body's ERC.

The other responsibilities of the resident inspector during an emergency are:

- Perform his own independent assessment of the situation and to recommend actions to the regulatory body's ERC in order to stabilize the situation.
- Provide information to the reactor safety group of regulatory body's ERC in order for them to be able to calculate the source term.
- Inform the regulatory body's ERC on the situation onsite.
- Provide the regulatory body with requested information.
- Attend licensee's briefings and meetings if necessary.
- Observe licensee's actions.
- Provide any support that the regulatory body's ERC requires.

**2. What is the interaction between responding inspectors and licensees during an emergency?**

The resident inspectors do not perform inspections during emergency. They are part of the regulatory body's emergency response team. Their interaction with the licensee is limited to observation, meetings and negotiations. They do not operate any gear, buttons or any other devices.

The licensee retains the responsibility for nuclear safety. He does not need regulatory body's approval for most actions in order to control or mitigate the emergency, since he is the one that has the responsibility and also has the best knowledge of the facility.

## SLOVENIA

### **1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

The regulatory body (SNSA) maintains on-call officer 24/7. Inspectors make 50% of the roster. In case of an emergency the SNSA emergency team is activated. The team is staffed mainly from the SNSA and inspectors take different team positions as well.

Primary role of on-call officer is to activate the SNSA emergency team. During an emergency, on-call officer reports to the SNSA emergency director. Depending on the type of emergency the on-call officer can be sent to the location of an emergency. If the emergency is at the NPP, that would be the licensee's onsite emergency center. In case of a radiological emergency the on-call officer makes assessment and provides advice to incident commander on location.

Employees who are part of the on-call roster take part in exercises and are regularly trained within the SNSA emergency training program.

### **2. What is the interaction between responding inspectors and licensees during an emergency?**

During an emergency, inspectors do not perform inspections and enforcement. They are involved in liaison between the licensee and the SNSA emergency team as on-call officers.

**SPAIN**

- 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**
- 2. What is the interaction between responding inspectors and licensees during an emergency?**

First of all to comment that in every Spanish nuclear site there are two resident inspectors (RI), in case of emergency (can be offsite as well as onsite emergency) one goes always to the Regional/Local authority emergency centre and becomes head of the radiological group.

There are a strong interaction between the resident inspector that works with the local authority and the resident inspector that remains on the site during the emergency.

The main role of the resident inspector which remains on the site is to keep informed the staff of the Emergency Centre of the regulatory body (RB) about the evolution of the emergency, focussing in the RB perspective and, additionally, must interpret and confirm the information transmitted by the licensee and to cooperate with the groups established by the RB to respond to the emergency.

The interaction with the licensee remains equivalent to that under normal operation, the resident inspector interacts with an interlocutor of the licensee, usually head of operations.

**SWEDEN\***

(\* Note: Sweden answered the initial draft questions and not the final questionnaire. The presentation therefore differs from that of other countries).

**Q1:** Is the inspection philosophy of your regulatory body (RB) based on a program of resident inspectors who are permanently stationed on the facilities (Yes / No)?

No.

**Q2:** What is the RB's inspector's position during plant emergency?

If you dispatch multiple inspectors, specify if they are resident/site inspectors or HQ inspectors.

- main control room;
- emergency centre (licensee's emergency management on site);
- licensee's technical support center (licensee's onsite /offsite support functions);
- regulatory body's own office at site;
- local emergency service's emergency centre;
- local/area administration; or
- other.

All inspectors are based at the head quarter. During a plant emergency situation the inspectors could have several roles in the RB's emergency organization. Normally they have a role in the group for technical analysis which receive information periodical from the licensee and calculate a possible release of radioactivity (source term). The group for technical analysis also sends one or two persons, normally inspectors, to the licensee's emergency center to facilitate the communication with the RB.

**Q3:** Do the RB's inspectors have their own dedicated technical procedure to implement that will interfere/supervise the licensee's action in the operating of the facilities, especially in the control room?

- Is this procedure established by the licensee or the RB?  
The RB's inspectors have not their own dedicated technical procedure. See Q2.

**Q4:** During the situation, do the RB's inspectors have the duty to make their on technical assessment of the safety of the facilities?

- How often?
- Do they compare it with the licensee's technical assessment?  
No, they have a role in the RB's emergency organisation. See Q2.

**Q5:** Safety assessment and concrete role of the inspectors during the emergency

- **Q5-a:** Are the RB inspectors specifically trained to understand all the control room indications that are used during the emergency management?

No.

- **Q5-b:** Are the RB resident inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?

No.

- **Q5-c:** Are the RB resident inspectors specially trained and therefore able to understand the **licensees'** emergency running procedures of the facilities in details? Do they have to assist/witness to some key operations in these procedures?

No.

- **Q5-d** Are the RB's inspectors periodically trained on simulators?

No.

**Q6:** Would you say that the role of the inspectors towards the licensee during the emergency management is:

- Supervision with more or less advice?
- Control with the possibility to immediate enforcement if there are any violations?
- Gathering information to the remote RB teams?

Gathering information to the remote RB teams.

**Q7:** In a few words, what are the key elements in the share of responsibilities between the licensee and the inspectors?

The licensees are fully responsible for handling the situation at site. The RBs responsibility is to inform and advice and cooperate with other authorities.

**Q8:** Hierarchical chain of these inspectors: Do they obey only one person or do they have to respond to different managers, or to a kind of "working group"?

See Q2.

## SWITZERLAND

### **1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?**

Switzerland does not have any resident inspectors, each facility has however a dedicated site inspector within the regulatory authority. This site inspector is based at the authority's headquarters. Since all employees of the regulatory authority are members of its emergency organisation, the site inspectors may be called upon to serve as liaison officer to the facility concerned by the emergency. Other members of the authority may serve as liaison officers as well. See below for the role of the liaison officer.

### **2. What is the interaction between responding inspectors and licensees during an emergency?**

Switzerland does not have any resident inspectors, each facility has however a dedicated site inspector within the regulatory authority who may serve as a liaison officer at the site. The duties of these liaison officers are defined as follows:

- Maintain communication between the licensee's emergency board and the regulatory authority's emergency organisation.
- Follow and assess the accident's progression.
- Follow the discussions of the licensee's emergency board, its evaluations and decisions (with a focus on radiation protection or reactor safety).
- Take part in periodic emergency board meetings, either passively to pick up the latest information, or actively to interpret measures and suggestions by the regulatory authority.
- Support the decision-finding process between regulatory authority and licensee, e.g. concerning alarming or venting.
- Collect all documents produced by the licensee for its periodic emergency board meetings.

In an emergency, the liaison officer(s) will be based at the licensee's emergency operations centre, or alternatively at the technical support centre if necessary.

## UNITED KINGDOM

### 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?

The main duties of the deployed ONR site inspector during a nuclear emergency are to:

- Monitor the progress of actions taken by the site operator to end the emergency and mitigate consequences;
- Witness and make contemporaneous records of decisions made and activities undertaken by site staff;
- Maintain communications links with the ONR Incident Suite at Redgrave Court (RCIS).

To do this, they are expected to attend the site Emergency Control Centre (the licensee's onsite centre) and to:

- Ascertain the facts surrounding the emergency, the actions taken to secure plant safety and the probability and consequences of escalation;
- Monitor and record decisions and activities undertaken by the site personnel;
- Ascertain what information the site operator has provided to authorities and agencies off the site;
- Make regular briefing reports to the RCIS regarding the site operator's activities and plant status;

Maintain a record of events witnessed and identify information and matters of interest that may be relevant to subsequent investigations into the emergency and its consequences, including (where it is possible to do so without adversely affecting the site operator's response to the emergency) the preservation of potential evidence.

The ONR guidance for deployed site inspectors specifically advises them to "avoid actions that might interfere with the site operator's Command and Control capabilities during the emergency response phase". This guidance is provided because it is (and remains) the site operator's responsibility to secure safety on the affected site.<sup>4</sup>

Additional teams of inspectors attend the licensee's technical support centre (at the licensee's Headquarters), the local emergency service's emergency centre (known as the "Strategic Coordination Centre" (SCC)); the central government Nuclear Emergency Briefing Room (NEBR).

The team at the licensee's technical support centre, performs a similar role to the site inspector, i.e. monitoring the activities of the licensee and briefing the RCIS. The SCC and NEBR teams include senior ONR personnel and provide advice to inform the local and central government responses.

The RCIS acts as a central communications hub, and includes a team of inspectors (the "Technical Cell") who will undertake a technical assessment of the incident. The ONR assessment of the incident is used to challenge and test the licensee's assessment and to explore potential scenarios as the situation develops.

All of these roles are tested within the annual emergency exercise programme. This programme includes onsite exercises at all NPP sites, and off site exercises at selected NPP sites.

### 2. What is the interaction between responding inspectors and licensees during an emergency?

Gathering information for other ONR teams.

Gathering information to support potential enforcement after the emergency.

Gathering information to inform potential regulatory action on other sites ( which may include, for example, a direction to (safe) shutdown an adjacent site or a facility of similar design )

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<sup>4</sup> This is considered the important practice from a United Kingdom perspective



## UNITED STATES

### 1. What is the onsite role of the responding inspectors during an emergency (whether this emergency is onsite or offsite)?

Onsite responding USNRC inspection staff monitor licensee actions with respect to implementing site-specific Emergency Operating Procedures, compliance with Technical Specifications, mitigating equipment status, incident evolution, and overall facility status consistent with USNRC Management Directive 8.2., “NRC Incident Response Program.” and the “NRC Incident Response Plan” (NUREG-0728). Onsite NRC inspection staff also serves to maintain constant communication with the NRC Headquarters Operations Center (HOC) and the NRC Regional Incident Response Centers (IRCs) as the emergency unfolds. During the initial response to an emergency, it is the licensee's primary responsibility to implement emergency operating procedures to place the plant in a stable condition and to notify local governmental authorities responsible for implementing offsite emergency response measures. Throughout the event, the licensee remains in control of all activities at the facility and responsible for all decisions concerning emergency response at the site. While onsite NRC inspection staff will continue to have access to the Control Room during an emergency (consistent with licensee-established protocol), their presence is justified only to the extent that it allows licensee activities to be effectively observed and monitored. Onsite NRC inspection staff are explicitly instructed to “not advise or direct licensee personnel.”

In addition to the responding onsite NRC inspection staff, and depending upon the nature of the incident and its severity, the NRC HOC maintains staffing around-the-clock mainly to receive safety and security incident notifications and to communicate related information to NRC management and other stakeholders. The IRCs also rely on the NRC onsite resident inspectors to maintain constant channels of communication at the outset of any radiological or security event. If warranted by the nature or severity of the incident, the HOC and the affected IRC will be activated and additional NRC inspection personnel will be dispatched to augment the onsite NRC resident inspection staff accordingly. Technical experts at the NRC HOC and IRC rely on the information provided by onsite NRC inspection staff to evaluate and assess the effectiveness of licensee’s mitigating actions and recovery efforts to protect public health, safety, and security.

### 2. What is the interaction between responding inspectors and licensees during an emergency?

Onsite NRC inspection staff provides event response and regulatory interface functions with the licensee based on the licensee’s (site’s) own emergency response plan as well as NRC-specific policy guidance for emergency response. The onsite NRC inspection staff assesses the licensee's technical and human performance responses to the incident, and makes independent measurements or observations. Monitoring activities by onsite NRC inspection staff will take place in the control room and at the licensee’s technical support or emergency response center (if activated by the licensee) at or near the site.

As the event unfolds, onsite NRC inspection staff verifies the accuracy of information provided by the licensee, report incidents with the potential for emergency classification or a change in emergency classification, or of an otherwise significant nature, to senior NRC regional and headquarters management through the NRC HOC, and to act as senior NRC Coordinating Agency representatives onsite. However, onsite NRC inspection staff do not advise or direct licensee personnel and will take every precaution to avoid distracting them from their primary emergency response task.

Notwithstanding the NRC presence at the site, the licensee remains solely responsible for effective implementation of its Emergency Operating Procedures in accordance with requirements in its facility license and applicable regulations, including the exchange of information with offsite governmental authorities responsible for coordinating and implementing offsite emergency response measures.

**APPENDIX B:  
SUPPLEMENTARY INFORMATION**

**BELGIUM**

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;  
No.
- emergency centre (licensee's emergency management on site);  
Yes.
- licensee's technical support center (licensee's onsite /offsite support functions);  
Licensee's onsite (at NPP).
- regulatory body's own office at site;  
Possibly, if the common FANC-Bel V emergency centre (EC) is activated by the FANC (= Federal Agency for Nuclear Control).
- local emergency service's emergency centre;  
No.
- local/area administration; or  
No.
- other.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

No, only general description of expected role & missions is established in the framework of the internal Bel V Emergency Response Organisation.

- Is this procedure established by the licensee or the regulatory body (RB)?  
By RB, see above.

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

No. However, they could verify the onsite conditions and potential offsite consequences (through an independent assessment) and communicate the results of this verification to the representatives at the federal level (in the GCC and/or in the common FANC/Bel V EC).

- How often?  
Frequency in function of the situation and its evolution.
- Do they compare it with the licensee's technical assessment?  
Yes, in the framework of its supervision's role.

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?  
Yes, through regular training sessions (including full-scope simulator).
- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?  
No.
- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in details? Do they have to assist/witness some key operations in these procedures?  
No. However, global knowledge through regular training sessions (including full-scope simulator) and regular participation in emergency response exercises.
- Are the inspectors periodically trained on simulators?  
Yes (1 week duration, on yearly basis).
  - Do the inspectors participate in exercises to test the role of the inspector during an emergency?  
Yes, systematic participation of Bel V representative in offsite exercises (once a year). There is also possible participation in internal (onsite) exercises focusing on function of scope and objectives.

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?  
Yes (see above).
- Inspect with the possibility for immediate enforcement if there are any violations?  
No.
- Gathering information for the remote RB teams?  
Possibly.
- Gathering information to support potential enforcement after the emergency?  
Possibly.

What are the key elements in the share of responsibilities between the licensee and the inspectors?

The licensee is responsible for the safety of the affected facilities and for the safety of the all the persons present on the site (also contractors and visitors).

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

In the event of a nuclear emergency, the Bel V representative(s) onsite communicate with the federal level (GCC and/or common FANC/Bel V EC).

How does the inspector interact with the licensee during an emergency?

See above.

- Is there a procedure?

No.

- If the inspector identifies a violation during an emergency, what does he/she do?  
Bel V inspector will communicate it to licensee and to FANC / Bel V management for consideration on further action (enforcement by FANC,...).

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

The inspector should take good notes on licensee actions (and then establish a formal report) in case of liability issues after the accident. Have a good knowledge of the processes and responsibilities and comply with them.

## CANADA

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;  
No.
- emergency centre (licensee's emergency management on site);  
Yes.
- licensee's technical support centre (licensee's onsite /offsite support functions);  
Licensee's onsite (at NPP) and the licensee's offsite (about 10-20 km from NPP) EOCs and the provincial government's EOC.
- regulatory body's own office at site;  
Possibly.
- local emergency service's emergency centre;  
Possibly.
- local/area administration; or  
Possibly.
- other.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

No. During an emergency, resident inspectors do not perform inspections.

- Is this procedure established by the licensee or the regulatory body (RB)?
- During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

No. However, they do perform an independent assessment of the onsite conditions and potential offsite consequences and communicate to RB EOC.

Certain technical assessments are performed at the RB EOC.

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?  
No.
- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?  
No.
- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in details? Do they have to assist/witness some key operations in these procedures?

No. However, resident inspectors do have an awareness of what procedures are needed to be performed and how they are performed.

- Are the inspectors periodically trained on simulators?

No.

- Do the inspectors participate in exercises to test the role of the inspector during an emergency?

Yes. Resident inspectors participate in major exercises as participants to verify RB response capability. Resident inspectors, in concert with head office emergency preparedness specialists, also inspect the licensee's capability to respond.

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?

No.

- Inspect with the possibility for immediate enforcement if there are any violations?

Possible, but unlikely. During an emergency, the licensee takes actions it judges appropriate while resident inspectors observe. Resident inspectors do not interfere unless licensee actions are obviously inappropriate. Also, licensee violations may be judged by the RB after the event.

- Gathering information for the remote RB teams?

Yes.

- Gathering information to support potential enforcement after the emergency?

Yes.

What are the key elements in the share of responsibilities between the licensee and the inspectors?

The licensee is responsible for the safety of the station, people and environment.

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

In the event of a nuclear emergency, the RB activates its EOC. Resident inspectors collect and communicate information between the site where the emergency is unfolding and the RB EOC. They also communicate with other resident inspectors involved in the emergency and possibly specialists at headquarters.

How does the inspector interact with the licensee during an emergency?

Generally, resident inspectors attend licensee briefings and communicate the details of the emergency to the Regulatory Body's (RB) EOC. They may ask the licensee to clarify the situation.

- Is there a procedure?

The procedures are in draft.

- If the inspector identifies a violation during an emergency, what does he/she do?

If a resident inspector observes a violation during an emergency, he/she would discuss the issue with the licensee as well as the RB EOC. Depending on the situation, the resident inspector would not necessarily take action against the licensee. Ultimately, the licensee is responsible for safety of station, people and the environment.

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

Watch the action. Do not get in the way of the licensee managing the accident as they are ultimately responsible.

Use his/her best judgment on the issues that arise. Do not go outside the box as you may be held liable for something (i.e. don't overstep your duties).

Take good notes on licensee actions in case of liability issues after the accident.

**CZECH REPUBLIC**

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;
- emergency centre (licensee's emergency management on site);
- licensee's technical support center (licensee's onsite /offsite support functions);
- regulatory body's own office at site;
- local emergency service's emergency centre;
- local/area administration; or
- other.

Currently, the RB formally does not define location of the responding inspector's. Nevertheless, entrance of resident inspectors is practically unlimited within the NPP side, and includes the main control room and the licensee's emergency and technical support centre.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

- Is this procedure established by the licensee or the regulatory body (RB)?

Currently, resident inspectors have procedures for routine inspection activities in the control room (related to especially normal operation). These procedures have been established by RB. No procedures for emergency situation.

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

- How often?
- Do they compare it with the licensee's technical assessment?

This duty is incorporated into duties of the RB inspectors and it is included in the description of this kind of working position. Frequency is described in respective procedures for performing (routine) inspection activities.

Safety assessment and specific role of the inspectors during the emergency:

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?

Yes, resident inspectors are trained similarly as licensee's operation staff. This training also includes emergency operation procedures. The training of inspectors from SAMGs is under preparation.

- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?

No, licensee is fully responsible for NPP operation, including resolving of emergency situation.

- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in details? Do they have to assist/witness some key operations in these procedures?

Yes, resident inspectors are periodically trained from emergency operation procedures; the training is also performed on full scope simulator.



- Are the inspectors periodically trained on simulators?

Yes.

- Do the inspectors participate in exercises to test the role of the inspector during an emergency?

Yes.

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?
- Inspect with the possibility for immediate enforcement if there are any violations?
- Gathering information for the remote RB teams?
- Gathering information to support potential enforcement after the emergency?  
Supervision and also gathering information for the remote RB teams.

What are the key elements in the share of responsibilities between the licensee and the inspectors?

RB does not share responsibilities with licensee. According to legislative framework (Atomic Law) licensee is fully responsible for NPP operation including resolving emergency situation. The RB is authorized to provide recommendations within its position in emergency response centre on governmental level.

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

Usually inspectors communicate with immediate superior managers.

How does the inspector interact with the licensee during an emergency?

- Is there a procedure?
- If the inspector identifies a violation during an emergency, what does he/she do?

Currently, (meanwhile) there is no difference between normal operation and emergency. Except, that during emergency licensee is obliged to send topical data related to emergency situation to the RB by established communication channel (between technical support center of the licensee and the RB emergency response center) in defined period. This process is going to be modified according to recommendation of the IRRS mission.

## **FINLAND**

### Recommendations:

- 1) Onsite inspectors have a official place and equipment inside licensee emergency organisation to provide more clear picture to RB what is situation and activities on site
- 2) Emergency exercises are held on regular bases and onsite inspectors always participate.
- 3) Onsite inspectors should NOT have a regulatory ENFORCEMENT mandate nor tasks during emergencies. Their role should be only support RB´s activities taking place elsewhere.

**FRANCE**

**GERMANY**

**INDIA**

**ITALY**

**JAPAN**

**KOREA**

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;
- emergency centre (licensee's emergency management on site);
- licensee's technical support center (licensee's onsite /offsite support functions);
- regulatory body's own office at site;  
Offsite Emergency Management Centre (OEMC) is activated in an area adjacent to the site, and resident inspectors are supposed to join OEMC.
- local emergency service's emergency centre;
- local/area administration; or
- other.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

No, resident inspectors do not carry out inspections during an emergency.

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

No. However, resident inspectors who are supposed to join OEMC perform the accident analysis and radiological assessment during emergency situation.

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?  
No.
- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?  
No.
- Are the inspectors specially trained and therefore able to understand the licensee's emergency running procedures of the facilities in details? Do they have to assist/witness some key operations in these procedures?

No. However, resident inspectors have enough knowledge on licensee's emergency procedure since they have participated in drills for emergency preparedness and also evaluated the licensee's capability during the exercise.

- Are the inspectors periodically trained on simulators?

No.

- Do the inspectors participate in exercises to test the role of the inspector during an emergency?

Yes. Resident inspectors participate in major emergency exercises such as Unified Radiological Emergency Exercise and Integrated Radiological Emergency Exercise. Also, resident inspectors evaluate the licensee's capability during the exercise.

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?

No supervision at all.

- Inspect with the possibility for immediate enforcement if there are any violations?

Resident inspectors may possibly take immediate enforcement, if there are any obvious s. However, it is unlikely for this to happen since the primary and ultimate responsibility for safety is on the licensee and the licensee takes the measures it judges appropriate while resident inspectors observe.

- Gathering information for the remote RB teams?

Yes.

- Gathering information to support potential enforcement after the emergency?

Yes.

What are the key elements in the share of responsibilities between the licensee and the inspectors?

The licensee has the full responsibility for the safety.

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

There are 6 different working groups, Joint public information center, Joint Environmental Monitoring Center, and advisory committee at OEMC. Resident inspectors joining OEMC have to respond to the working group leader.

How does the inspector interact with the licensee during an emergency?

The licensee is supposed to provide the information to OEMC.

- Is there a procedure?

The licensee has the procedures and is supposed to provide the information, accordingly.

- If the inspector identifies a violation during an emergency, what does he/she do?

If the resident inspector identifies a violation during an emergency, he/she reports the identification to OEMC. OEMC may possibly take action for correction against the licensee.

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

Do not make impetuous decision based on not enough information.

Remember the primary and ultimate responsibility for safety is on the licensee.

## MEXICO

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;  
Yes; the resident inspector must go to the Technical Support Center (TSC) located inside the main control of the unit in which the emergency arises, and if is necessary he could check some information required by the ECC in the main control room.
- emergency center (licensee's emergency management on site);  
Yes; as above mentioned.
- licensee's technical support center (licensee's onsite /offsite support functions);  
Yes; the Senior Resident Inspector shall carry out the functions of liaison with the Organization of Nuclear Contingencies of CNSNS; so he must move to the Emergency Control Center (ECC), located at 12 kilometers from the nuclear installation.
- regulatory body's own office at site;  
No, although there is a regulatory body office at site is not expected that the Resident Inspector remains in such office during the emergency.
- local emergency service's emergency centre;  
Yes; the Resident Inspector has the faculty to stay in any of the emergency local center during any phase of the emergency such as emergency reparations center, environmental monitoring group on the site, group of projection of doses, operational support group, etc. This can be done when the radiological conditions are under acceptable values.
- local/area administration;  
No.
- other.  
No.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

No. During an emergency, resident inspectors do not perform inspections. But there are two procedures related with their participation in both before and after the plant emergency.

The procedure PRE-200 "Nuclear contingency plan", indicates that the Senior Resident Inspector will serve as the link with the Nuclear Contingencies Organization of the CNSNS and the rest of the resident inspectors as alternates of this post, and in normal operation the activities that will develop are aimed to verify the operation of External Radiological Emergency Plan.

The procedure DVO-GIT-61 "Inspection emergency drills and real emergencies", indicates criteria for inspecting the implementation of the Internal Emergency Plan (IEP) of the owner of the installation after that has been filed a real emergency.

- Is this procedure established by the licensee or the RB?  
These procedures have been established by the regulatory body.

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

Yes, as it was mentioned above the Senior Resident Inspector and the Resident Inspector shall carry out the functions of liaison with the Organization of Nuclear Contingencies of CNSNS so they perform an independent assessment of the onsite conditions and potential offsite consequences which would be communicate to the CNSNS headquarters.

- How often?

When there are a change in the critical parameters or when is require of the ECC ejective group.

- Do they compare it with the licensee's technical assessment?

Yes.

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?

Yes, the Senior Resident Inspector, the Resident Inspector and the inspectors involved with the Plant's Operation have the same training as the reactor operators' team.

- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?

No.

- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in details? Do they have to assist/witness some key operations in these procedures?

Yes, as it was mentioned above the Senior Resident Inspector, the Resident Inspector and the inspectors involved with the Plant's Operation have the same training as the reactor operators' team so they know the licensees' emergency running procedures of the facilities in details, for that reason they witness to some key operations in these procedures.

- Are the inspectors periodically trained on simulators?

Yes.

- Do the inspectors participate in exercises to test the role of the inspector during an emergency?

Yes. Resident inspectors participate in major exercises as participants to verify regulatory body response capability.

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?

No.

- Inspect with the possibility for immediate enforcement if there are any violations?

As it was mentioned above the Senior Resident Inspector and the Resident Inspector do not interfere with licensee actions. The licensee violations may be judged by the regulatory body after the event.

- Gathering information for the remote RB teams?

Yes.

- Gathering information to support potential enforcement after the emergency?  
Yes.

What are the key elements in the share of responsibilities between the licensee and the inspectors?

There is not share of responsibilities; the licensee is responsible for the safety of the station, people and environment.

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

The procedure PRE-200 "Nuclear contingency plan", indicates that the Senior Resident Inspector will serve as the link and that he must communicate only with the person in charge of the communications in the with the Nuclear Contingencies Organization of the CNSNS.

How does the inspector interact with the licensee during an emergency?

During a nuclear emergency, the resident inspectors gather the information and communicate such information to the Nuclear Contingencies Organization of the CNSNS.

- Is there a procedure?  
Yes, The procedure PRE-200 "Nuclear contingency plan".
- If the inspector identifies a violation during an emergency, what does he/she do?  
If a resident inspector identifies a violation during an emergency, he/she would discuss the issue with the licensee and gather all the information related with the violation for take actions after that has been filed a real emergency.

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

- a) Do not interfere with the way in which the installation is managing the emergency.
- b) Gather all the information about the emergency and have a good communication with the Regulatory Body headquarters
- c) For extended time of the emergency evolution should exist a role to replace the resident inspectors in order they can rest.
- d) Resident inspectors should be trained on how to respond for extreme radiological conditions during the emergency. This, is in order to warrant their safety.

## NETHERLANDS

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;
- emergency centre (licensee's emergency management on site);
- licensee's technical support center (licensee's onsite /offsite support functions);
- regulatory body's own office at site;
- local emergency service's emergency centre;
- local/area administration; or
- other.

In the Netherlands, at the Borssele NPP it will be the plant emergency centre.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

- Is this procedure established by the licensee or the regulatory body (RB)?  
We do have our own RB procedure

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

- How often?  
Generally, on an hourly basis.
- Do they compare it with the licensee's technical assessment?  
Generally, on an hourly basis.

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?  
Yes, they are trained on this subject.
- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?  
No, they are not allowed to.
- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in details?
- Do they have to assist/witness to some key operations in these procedures?  
Yes, the inspectors are trained on the licensee's emergency procedures.
- Are the inspectors periodically trained on simulators?  
Yes.
- Do the inspectors participate in exercises to test the role of the inspector during an emergency?  
Yes, every inspector at least once a year.



What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?  
Primarily supervision.
- Inspect with the possibility for immediate enforcement if there are any violations? Theoretical spoken,  
Yes.
- Gathering information for the remote RB teams?  
Yes
- Gathering information to support potential enforcement after the emergency?  
Yes

What are the key elements in the share of responsibilities between the licensee and the inspectors?

The inspectors have no responsibility as seen from the licensee. The inspectors do only have responsibilities as seen from the RB.

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

The Borssele NPP has a Site Emergency Director during the event. The inspectors respond to this function. On the other hand they keep the RB emergency organization informed.

How does the inspector interact with the licensee during an emergency?

- Is there a procedure?  
Yes.
- If the inspector identifies a violation during an emergency, what does he/she do?  
The facts will be recorded and action will be taken at the appropriate moment.

**RUSSIA**

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;
- emergency centre (licensee's emergency management on site);
- licensee's technical support centre (licensee's onsite /offsite support functions);
- regulatory body's own office at site;
- local emergency service's emergency centre;
- local/area administration; or
- other.

Their location depends onsite situation.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

- Is this procedure established by the licensee or the regulatory body (RB)?  
No, inspectors do not interfere in the work of operator.

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

- How often?
- Do they compare it with the licensee's technical assessment?  
Technical assessment is done by Central Information-Analytical Centre of RB (CIAC) in Moscow (4 groups – management, technologist, radiation safety and public relations group). Detailed information, including technological parameters, is transmitted to CIAC. During an emergency, experts from CIAC continuously assess the situation and compare it with technical assessment of licensee.

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?
- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?
- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in details? Do they have to assist/witness some key operations in these procedures?
- Are the inspectors periodically trained on simulators?
  - Do the inspectors participate in exercises to test the role of the inspector during an emergency?

No, inspectors do not interfere in the work of operator.

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?
- Inspect with the possibility for immediate enforcement if there are any violations?
- Gathering information for the remote RB teams?
- Gathering information to support potential enforcement after the emergency?

Role of the inspectors is supervision with the possibility for immediate enforcement if there are any violations and gathering information for the remote RB teams (CIAC).

What are the key elements in the share of responsibilities between the licensee and the inspectors?

All responsibility for safety is on the licensee.

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

He submits only to the head of site inspection.

How does the inspector interact with the licensee during an emergency?

- Is there a procedure?
- If the inspector identifies a violation during an emergency, what does he/she do?

No special procedure for interaction with the licensee during an emergency. If an inspector identifies a violation during an emergency, he must stop violation.

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

Training is important.

**SLOVAK REPUBLIC**

What is the responding inspector's location during plant emergency? They may be located in:

- main control room;  
No.
- emergency centre (licensee's emergency management on site);  
Yes.
- licensee's technical support center (licensee's onsite /offsite support functions);  
Yes (it is the same as licensee's ERC).
- regulatory body's own office at site;  
possible.
- local emergency service's emergency centre;  
possible.
- local/area administration; or  
possible.
- other.

Do the inspectors have their own dedicated technical procedure to implement that will inspect the licensee's action in the operating of the facilities, especially in the control room?

The resident inspectors do not perform inspections during emergencies.

- Is this procedure established by the licensee or the regulatory body (RB)?  
There is a procedure that defines what the resident inspector has to do during an emergency. This procedure is one of the procedures for regulatory body's ERC.

During the situation, do the inspectors have the duty to make their own technical assessment of the safety of the facilities?

Yes the resident inspector makes his own technical assessment of the situation. This assessment is send to the reactor safety group of the regulatory body's ERC together with the recommendations of the resident inspector how to stabilise the situation on the unit.

- How often?  
This is done at the beginning of the emergency and then when the resident inspector finds it necessary.
- Do they compare it with the licensee's technical assessment?  
The licensee's technical assessment is one of the bases of the resident inspector's assessment.

Safety assessment and specific role of the inspectors during the emergency

- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?  
Most of the inspectors (including the resident inspectors) undergo the same training as the control room staff (primary circuit operator, secondary circuit operator...). However this is done as part of their training when they are hired by the regulatory body and is not periodically repeated. That is

why they have some knowledge of the information and the control room indications but they are not specifically trained for this.

- Are the inspectors allowed to operate some buttons/switches in the control room or to actuate some components on the field if necessary during an emergency?

No

- Are the inspectors specially trained and therefore able to understand the licensee's emergency running procedures of the facilities in details? Do they have to assist/witness some key operations in these procedures?

The same applies as in the previous answers. Inspectors have some knowledge of the licensee's emergency procedure but they do not receive specialized training for them. However the resident inspectors do have a deeper awareness of the licensee's procedures.

- Are the inspectors periodically trained on simulators?

No

- Do the inspectors participate in exercises to test the role of the inspector during an emergency?

Yes, so does the whole regulatory body's ERC.

What is the role of the inspectors towards the licensee during the emergency management?

- Supervision with more or less advice?

Yes.

- Inspect with the possibility for immediate enforcement if there are any violations?

As said before the resident inspector does not inspect during an emergency.

- Gathering information for the remote RB teams?

Yes, the resident inspector sends requested information to the reactor safety group of regulatory body's ERC in order for them to be able to calculate the source term as well as for other reasons.

- Gathering information to support potential enforcement after the emergency?

Possible, but this is not his main task. However if he notices any violation he may seek clarification from the licensee and inform his superiors.

What are the key elements in the share of responsibilities between the licensee and the inspectors?

The licensee is responsible for safety of the plant and its surroundings. There is no shared responsibility.

Hierarchical chain of these inspectors: Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

In an emergency situation when regulatory body's ERC is activated, the resident inspector communicates mainly with the reactor safety group of ERC on the situation of the plant. However he also communicates with other regulatory body's staff members as needed.

How does the inspector interact with the licensee during an emergency?

- Is there a procedure?

The role of the resident inspector during an emergency is specified in regulatory body's ERC procedures. This procedure includes the interaction with licensee in order to gather all necessary

data for the reactor safety group or regulatory body's ERC. However other communication with the licensee is not described in this procedure.

- If the inspector identifies a violation during an emergency, what does he/she do?

This is up to the resident inspector. He most likely would seek clarification from the licensee and depending on the severity of the violation he would immediately inform the regulatory body's ERC or it would be dealt with after the emergency has passed.

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

The licensee is always responsible for safety. Do not take any steps that might indicate otherwise. Also it is necessary to gather as much information on the emergency situation and licensee's action as possible, in case there is a subsequent investigation. This information should also be taken into account during emergency drills since it might also be helpful in finding weaknesses in the licensee's as well as the regulatory body's emergency preparedness.

## SLOVENIA

## SPAIN

In response to some of the guide questions:

- What is the responding inspector's location during plant emergency?  
The onsite RI is located in the licensee technical support centre (TSC).
- Do the inspectors have their own dedicated technical procedure?  
The RIs do not have any specific protocol or procedure to be implemented during an emergency.
- Are the inspectors specifically trained to understand all information and the control room indications that are used during the emergency management?  
The RIs are trained to understand the controls, alarms, etc. located in the control room. In fact one of the routine activities of the resident inspectors is to go together with the supervisor and operators in the periodic revision of the control room panels every 12 hours. Nevertheless, and as mentioned before, the main location of the RI during emergencies is the TSC.
- Are the inspectors specially trained and therefore able to understand the licensees' emergency running procedures of the facilities in details? Are the inspectors periodically trained on simulators?  
It is understood that the RI has enough knowledge to understand licensee controls since the RI visits every day the control room and check the operator logs and alarms and also knows how to follow the operating emergency procedures of the plant. In addition, the RIs have some periodic training in the simulator of the NNPP
- Are the inspectors allowed to operate some buttons, devices, etc.?  
No.

What is the role of the inspectors towards the licensee during the emergency management?

Gathering information for the remote RB teams.

Do inspectors communicate with only one person or do they have to respond to different managers, or to a kind of "working group"?

The inspectors, usually, mainly communicates with the responsible of the group in charge of the evaluation of the operative aspects of the emergency but also could have to respond to members of other groups located in the emergency centre of the RB, in charge of radiological protection, security, etc.

How does the inspector interact with the licensee during an emergency?

The Licensee, regardless of their obligations to inform the Emergency Room of the CSN, must comply with the objective that the members of the IR present at the facility are properly informed on the evolution of the emergency, recovery activities and ongoing operational maneuvers.

If the inspector identifies a violation during an emergency, what does he/she do?

The inspectors inform to the Licensee and to the RB.

What kind of important practices would you recommend concerning the role of the inspector during an emergency?

A question to be considered by the different RBs: In case of severe accident are the resident/site inspectors considered personnel to be evacuated, or should they remain in the site?

**SWEDEN**

**SWITZERLAND**

**UNITED KINGDOM**

**UNITED STATES**