



## INTERNATIONAL WORKSHOP ON THE ROLE OF THE SECURITY DEPARTMENT DURING A NUCLEAR SAFETY ACCIDENT AIX EN PROVENCE, FRANCE (02 – 04 OCTOBER 2018)

### BACKGROUND

*The contribution of Security Departments to onsite response and mitigation efforts plays an essential role in a nuclear safety accident. A coordinated response in a major incident with offsite security agencies and a common understanding of the situation and the risks will help to prevent the incident from becoming a major crisis that could lead to a radiological release affecting people, society and the environment.*

*WINS has detected a need to assess gaps and opportunities to optimise the contribution of the Security Department and offsite security agencies to emergency plans and procedures. Although robust onsite and offsite incident management and emergency plans may be in place, a systematic review needs to be undertaken to assess the actions of the Security Department and offsite security agencies when responding to accidental events.*

*To address these issues, The French Alternative Energies and Atomic Energy Commission (CEA) and the World Institute for Nuclear Security (WINS) jointly held an international event on The Role of the Security Department during a Nuclear Safety Accident. This workshop attracted 37 participants from a variety of national and international stakeholders and included managers and specialists from regulatory authorities, operators, law enforcement agencies, and others who wanted to gain a specialised understanding of the issues and best practices.*

### OBJECTIVES

*The primary objective of this workshop was to discuss the roles and responsibilities of the Security Department in preparing for nuclear safety incidents, large industrial accidents, natural catastrophes and other situations requiring the implementation of emergency procedures.*

*This event provided security managers of nuclear facilities and other security stakeholders involved in incident and emergency management with an opportunity to share and discuss their experiences and lessons learned in responding to various situations that may occur at their facilities.*

*The workshop focused on safety scenarios and did not explore security response plans established for mitigating sabotage or other malicious acts. Instead, it reviewed how safety and security response is coordinated and discussed good practices for effective integration. Topics of discussion ranged from immediate responses by the Security Department to the full coordination of the Security Department with other onsite departments and offsite organisations.*

The workshop sought to answer the following questions:

- What is the role of the Security Department in responding to nuclear accidents? For selected scenarios, what are the immediate and long-term actions of the Security Department?
- How can an onsite response framework be developed that effectively integrates safety and security requirements? Who has the lead? How is this decided?
- What is the process for coordinating onsite response procedures with offsite security agencies during an accident?
- What are the challenges related to maintaining effective nuclear security during an accident? What are the specific challenges of enforcing access control and egress procedures while maintaining physical security arrangements during actual or simulated emergency situations?
- What have we learnt from exercises and actual safety incidents in the nuclear sector? What planning and preparation, such as exercises and performance testing, can be performed in advance to ensure effective response?
- What can we learn from other industries? How do we ensure the effective transfer of lessons learned?

## WORKSHOP PROCESS

The event was moderated and professionally facilitated by **Mr Julian Powe**. Experts from France and other international stakeholders gave a variety of presentations during the sessions, setting the scene for the discussions that followed. Mr Powe guided the discussions using such methods as plenary sessions, table and breakout discussions, and expert panels. An instant electronic voting system (e-voting) was used during the workshop to learn more about participants' opinions and concerns. Some results of these votes are illustrated in this report. Discussions were subject to Chatham House rules (i.e. what was said can be reported, but not attributed).

## INTRODUCTION SESSION

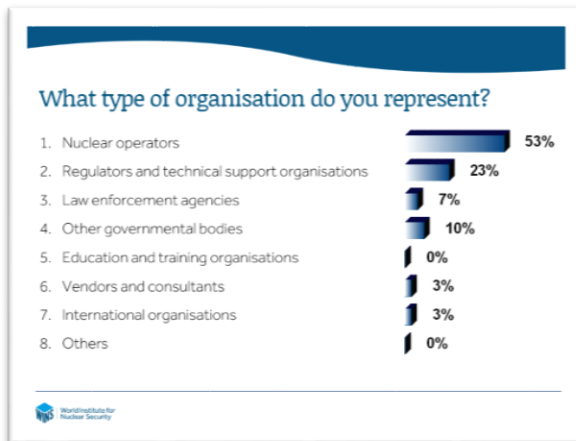
### Presentation

**Mr Pierre Legoux**, WINS Head of Programmes, welcomed the participants and provided a preliminary overview of the objectives and agenda of the workshop. Mr Legoux also displayed and commented on the most relevant results from the pre-workshop survey.

### Participants' introduction and expectations

Participants were first asked to use the e-voting system to indicate which sector they represent (e-voting results below). Then they were asked to introduce themselves at their tables and to discuss their expectations coming into this workshop.

## E-voting



## Presentation

**Mr William Graydon**, Director of Emergency and Protective Services from Canadian Nuclear Laboratories (CNL), began his presentation with an overview of CNL, Nuclear Emergency Preparedness in Canada and Emergency and Protective Services at CNL. He highlighted CNL security involvement in Nuclear Safety accidents and provided two sample exercises: Fire in the tritium facility (stay-in exercise) and a major incident with site evacuation and offsite response. Mr Graydon finished his presentation by highlighting some key points:

- Security of nuclear material takes priority, but excess capacity provides flexibility to the incident commander.
- Interoperability with onsite and offsite emergency responders is critical.
- Contingency planning with follow-on exercises and drills is the key to a well-prepared site (not just first responders).
- Sharing of lessons learned is essential (hot wash, cold wash, review).

Some key points were also addressed during the Questions and Answers period:

- It is important to understand the national level structure and the availability of national resources and responsibilities for engagement.
- Health, Safety and Environment (HSE) people need to be involved.
- It is important to understand the difference between advisory functions and operational contributions.
- The activation of the Emergency Operations Center (EOC) for some incidents has clear parameters and is automatic. Most accidents require judgment and critical thinking.
- Because exercises consume resources, they need to be limited to only part of the plans.
- Interoperability plays a key role during a nuclear safety accident.
- The most challenging issue is the structure of communication in relation to responsibilities. This requires building relationships.
- Low-level table top exercises (TTXs) will have a greater impact.

## Table Discussions

To develop a common understanding, participants were asked several questions. Following are the questions and some of their answers:

*How would you define the role of security during an accident?*

- *To support safety during the initial phase and help them take the best decisions.*
- *To facilitate the safety process/integration of players, help communicate with stakeholders, and assist in evacuation and other emergency actions.*

*Participants noted that the security function is an enabler and that security people should be flexible. They also commented that a way to do this is to protect people first by protecting the material. A common discussion question was: What comes first: nuclear material or people? Participants also suggested undertaking a situational awareness analysis.*

*What security implications could result from an accident? Are they different from an incident with a malicious initiator?*

- *Security implications are based on the consequences generated by the accident.*
- *It needs to be verified that the incident is not a distraction, and diversion should be prevented.*
- *Security needs to understand the risks and equipment/procedures to protect themselves against these risks.*
- *The basic principles of security need to be maintained. It is important to identify spare resources and make them available.*

*What do you believe works and what needs improvement in the way the Security Department contributes during an accident?*

*Participants commented that the following aspects work well:*

- *Joint training with other responders*
- *Initial actions*
- *Trust and communication*
- *Individual response (safety or security)*
- *Graduation of the response*
- *A good connection between onsite and offsite response forces*
- *Good planning (implementation of the plans is not as good)*

*According to the participants, the following aspects need improvement:*

- *Interoperability from a tactical point of view*
- *Integrated security and safety culture*
- *Transparency and communication with mass media and the public*
- *Lack of understanding by safety people of how security can contribute*
- *Risk identification in the decision-making process*
- *Going beyond individual priorities of safety, security and other key players*
- *Exercise scenarios that go beyond the comfort zone or the design basis threat (DBT)*
- *Performing outside of the plans*

## SESSION I: THE ROLES AND RESPONSIBILITIES OF THE SECURITY DEPARTMENT IN RESPONDING TO ACCIDENT EVENTS

*The purpose of this session was to help participants understand roles and responsibilities of the Security Department from a regulator and operator point of view.*

### Presentation

*Mr Marco Schraver, Authority for Nuclear Safety and Radiation Protection (ANVS), the Netherlands, opened Session I with a presentation titled *Safety and Security: An Equal World Apart*. He started with an overview of the roles and responsibilities of the operator and the regulator during a safety accident and then discussed the role of ANVS in the Netherlands and its policy framework. Mr Schraver mentioned that safety and security are equally important and that the security and safety interests must be properly secured within the organisation.*

### Group discussion

*As a follow-up to the presentation, participants were asked to identify the key internal stakeholders involved in preparing for and responding to an accident. They were also asked to evaluate the quality of the relationship across these stakeholders when preparing for and responding to an accident. Finally, participants discussed the elements that required further action.*

*One of participants' key comments was that joint interdisciplinary exercises are essential. Another was that the skills and competences of both safety and security professionals need to be recognised.*

### Presentation

*Ms Florence Bloise, French Alternative Energies and Atomic Energy Commission (CEA), France, closed Session I with a presentation titled *CEA: from Research to Industry*. Ms Bloise began with an overview of CEA, including its mission and vision. She then described the hazard mapping at Cadarache, safety in the nuclear facilities of CEA, national and local crisis organisations, and the relationship among safety, the Security Department and emergency response.*

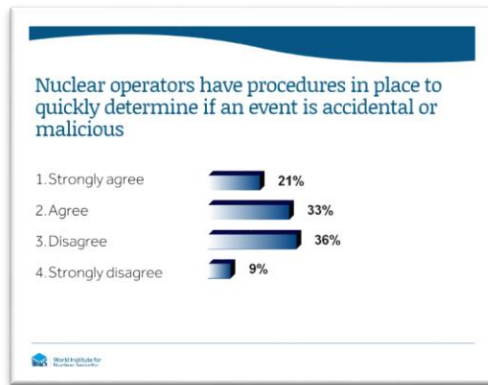
### Group discussion

*The discussion that followed focused on key topics from Ms Bloise's presentation. Some key points included:*

- In a safety crisis, the operator involves the administrative authorities of the State. If death or injury occur, prosecutors and jurisdictional authorities must be taken into account. Forensics will play an important role in a nuclear accident.*
- Security culture is a major barrier to the integration of nuclear safety and security. The background of the people has a strong influence.*

### E-voting

*An e-vote was taken to determine whether participants had procedures in place to quickly determine whether an event stems from an accident of malicious intent. The results showed different opinions among the audience.*



## SESSION II: OPTIMISING THE CONTRIBUTION OF THE SECURITY DEPARTMENT TO ACCIDENT MANAGEMENT AND EMERGENCY

*The objectives of Session II were to describe the onsite implications of the Security Department.*

### Presentation

*Ms Muriel Schaub, French Alternative Energies and Atomic Energy Commission (CEA), France, opened Session II with a presentation titled Crisis Management in CEA Cadarache. She began with an overview of the essentials of crisis management: organisation and exercises. Ms Schaub also described CEA's intervention capacities and the way in which the organisation undertakes exercises. (She provided a real-life example of National Exercises that took place in 2015.) Ms Schaub concluded her presentation with detailed information about the CEA's Rapid Nuclear Actions Force (FANR).*

*Some conclusions from the discussions that followed the presentation include:*

- It is beneficial to have a big exercise once a year. This exercise should involve all stakeholders and have no more than 4-5 goals to measure.*
- Extensive experience and guidance are available when it comes to preparing local and regional exercises.*
- The nuclear industry has clearly written procedures on when to bring in external forces. Such decisions are consequence-driven. When the EOC is activated, provincial authorities are informed immediately. Moreover, EOC commanders meet monthly.*

### Group discussion

*Participants were then asked to share their experiences with exercises using real-life examples. They were also asked to describe the challenges related to maintaining effective security (e.g. access control, physical protection, information security, available resources) they could face during an accident and how they would mitigate them. Some major conclusions included:*

#### *Interoperability*

- Numerous stakeholders are involved, such as Security, Health and Safety, Emergency Preparedness, firefighters, logistics, radiation protection, operations, Human Resources, communications and technical support.*



- Everybody should gather around the same table to improve relationships. The relationships should be in place as early as possible. Partnerships need to be considered and have clear objectives.
- Exercise scenarios/types drive who is invited around the table.
- The cost of exercises is a critical factor. The frequency of scenarios and who is funding them needs to be taken into account.
- Communication among different entities is very important. Therefore, languages need to be harmonized.
- Stick to clearly defined roles and responsibilities.
- Aim towards unified command.
- Give the most qualified person leadership responsibilities, not the person with the highest rank.

#### *Maintaining effective security*

- When it comes to access control, it is challenging to control the flux of people going inside and outside a nuclear facility during a safety accident. Effective techniques need to be used to identify newcomers.
- In terms of physical protection aspects, the loss of a large area in a nuclear facility could cause limitations when responding to an accident.
- It is crucial that stakeholders' mindsets be flexible.
- A strong and well-defined communication method needs to be in place and properly implemented to control social media leaks and rumours that could create unnecessary chaos among the public.

#### **Presentation**

*Mr Iain Goulding, Sellafield, United Kingdom, concluded Session II with a presentation titled Developing a Unified Approach to Emergency Response. He described the structure, roles and responsibilities of the Joint Emergency Services Interoperability Programme (JESIP), pointed out that JESIP has a Main Site Command Facility (MSCD), and described the benefits of co-location. He concluded his presentation by highlighting the importance of situational awareness and security culture. Building relationships, progressing towards interoperability, and ensuring that different stakeholders work together on a routine basis is the best solution.*

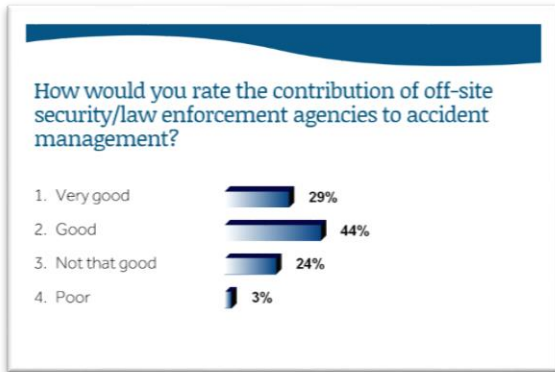
### **SESSION III: COORDINATING ONSITE AND OFFSITE RESPONSE**

*Session III was designed to broaden the understanding of principles of interoperability and joint working and to discuss the range of offsite arrangements that need to be put in place.*

*The three speakers represented the regulator, operator and law enforcement. Before the first presentation, they introduced the topics and shared their ideas about a coordinated onsite and offsite response.*

#### **E-voting**

*Participants were asked about their view on the contribution of external law enforcement in case of an accident. Almost three-quarters of the audience thought that it was good or very good.*



### Presentation

*Mr Christian Elechosa, Nuclear Regulatory Authority (ARN), Argentina, opened Session III with a presentation titled Responding to Nuclear Accidents. He started with an overview of how interoperability works in Argentina and some common challenges that the regulator faces. He then described the roles and responsibilities of the Argentinian regulator and the organisations involved in radiological/security emergency response. He concluded by emphasising the need for common systems and appropriate standards for establishing and maintaining interoperability. He also emphasised the importance of teamwork and team effort; open, honest relationships; and focusing on the same goals.*

*During questions and answers, Mr Elechosa pointed out some difficulties that arise when non-military personnel command a military force. He also said that special brigades from outside and inside nuclear facilities are well equipped in Argentina, which is not necessarily the situation in some European countries.*

### Presentation

*Mr Pierre Eymond, Electricity of France (EDF), gave a presentation titled What help Expected from Security Department? He began with an overview of the EDF French nuclear fleet and then introduced the Nuclear Rapid Response Force (FANR). He emphasized the importance of time to strengthen the organisation when responding to an accident. He mentioned that the response scheme for FANR is based on organisation at three levels: corporate, regional and site. Mr Eymond also described logistics and the interaction of FANR with the Security Department. He said the key factor for his team was the need to enter into a facility while understanding how to comply with security procedures.*

*During questions and answers, Mr Eymond provided some details about his response equipment and the importance of the recruiting process when selecting individuals for his team.*

### Presentation

*Mr Duncan Worsell, Civil Nuclear Constabulary, United Kingdom, concluded Session III with a presentation titled Joint Emergency Services Interoperability Principles. He began by sharing his experience as Chief Superintendent responsible for the northern part of the country and describing the nuclear facilities in the UK. He also described JESIP and explained the principles of joint working. These included co-location, communication, co-ordination, and a joint understanding of the risk and shared situational awareness.*



During questions and answers, Mr Worsell provided some details about the challenges that joint response faces, such as multiple lines of accountability, information sharing conflicts and communication with the mass media.

### Table Discussion

Mr Powe then led a brief discussion involving the last three speakers. Some major conclusions that arose as a result of this discussion include:

- The need to strengthen the relationship between onsite and offsite responders.
- The need for more resources and the possibility to share them among different stakeholders.
- The need for clear and effective MOUs that indicate who is in charge and that mean the same thing for all stakeholders involved.
- The need to have motivated people in the Security Department who understand that they have a relevant role to play in the entire organisation.

## SESSION IV: EXERCISING RESPONSE ARRANGEMENTS AND EVALUATING THEIR PERFORMANCE

The objective of Session IV was to discuss the competencies of response forces and some effective exercises and tools that can be used to train and exercise them.

### E-voting

Before the last presentation of the workshop, participants were asked whether their Security Departments understand safety elements beyond their security tasks. As demonstrated in the graphic, approximately 50% percent agreed and disagreed with the statement.

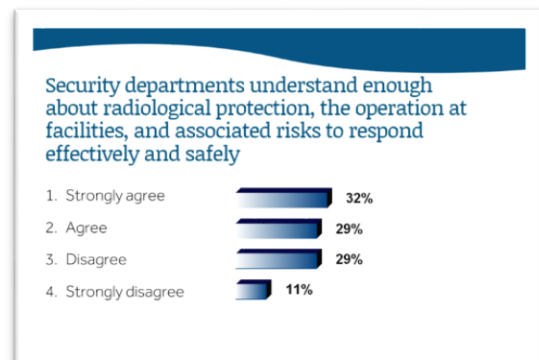
### Presentation

**Ms Samantha Wood**, Babcock International, United Kingdom, opened Session IV with a presentation titled *Remaining Competent*. She began by addressing the importance of remaining competent when working in the safety and security fields. She explained the types of competence required in the field of security, said that safety and security are a cross-competence, and explained the point at which overall competence is achieved. She completed her presentation by highlighting the importance of benchmarking the requirements for each role and explaining how to achieve competence within each role.

### Break-out groups

After the presentation, participants were asked to discuss the following questions in small groups:

- What skills and competences are necessary for the security staff to effectively contribute to accident management and emergency response?
- What are the opportunities for professional development?
- Are there any gaps?



- *What would you recommend for the enhancement of necessary skills?*
- *What best practice stories do you have?*

*Participants' major conclusions were:*

- *Recruiting the right people for the Security Department has an important impact on an organisation's nuclear security culture.*
- *The competences, attitudes and behaviours of every employee working in nuclear security should be evaluated periodically to determine whether they are competent enough.*
- *Periodic exercises should be conducted within the organisation, and best practice should be shared.*
- *The amount of classified information needs to be reviewed.*
- *A communication plan framework needs to be carefully defined for sharing best practice among different stakeholders.*

## **SESSION V: THE WAY FORWARD**

*The purpose of the final session of the day was to highlight some of the opportunities for improvement and to identify remaining challenges, lessons learned and the next steps forward.*

*Participants were asked to break into groups to discuss the following questions:*

- *What are the key lessons that have arisen from this workshop?*
- *What questions and challenges remain unaddressed?*
- *What will you take away and act on as you return to your organisation?*
- *What is the most important thing you would recommend to the community, including WINS, on enhancing the role of the Security Department during a nuclear safety accident?*

*Some of the conclusions are reflected below:*

<b>Conclusions</b>	<b>Take away</b>	<b>Wish</b>
<i>Use a unified approach, the JESIP model, and exercise across the whole spectrum.</i>	<i>Encourage JESIPS, look at lessons learned, and foster competence.</i>	<i>Empower security staff to have a voice and to understand their role is as relevant as that of safety staff.</i>
<i>Ensure a common understanding of safety and security using co-location and coordination and by undertaking regular joint exercises and TTX.</i>	<i>React to the competence diagram of one of the sessions.</i>	<i>Exercises should be more realistic and integrated. Meetings should involve all stakeholders to define action plans and ensure face-to-face discussions</i>
<i>Interoperability between internal and external organisations (safety, security and emergency) should be a high priority. Leadership plays a crucial role in security/safety culture.</i>	<i>Stakeholders should sign MOUs and participate with each other more often in emergency exercises with a clearly defined scope.</i>	<i>It is important to ensure and promote continued training for internal and external forces.</i>
<i>Better communications are needed among all of the parties involved, as is a better understanding of organisational relationships. It is important to understand the relations with neighboring countries. The culture of awareness needs to be encouraged. Exercises between safety and security need to have clear procedures and emphasise situational awareness.</i>	<i>MOUs need to be signed among different parties that clearly define the roles and responsibilities of each party. Safety exercises need to be organised that focus on the position of security. More guidelines for operators are needed. TTXs need to take place between safety and security.</i>	<i>More guidance is needed regarding the safety-security interface. It is important that all parties share information with each other. More transparency is required regarding security information.</i>
<i>It is important: to understand the correlation between safety and security; develop security competencies to maintain strong performance. A unified framework needs to be planned for safety and security.</i>	<i>Stakeholders need to conduct self-assessments and document lessons learnt. Survey and MOU for people liaising with Barakah Nuclear Power Plant (BNPP)</i>	<i>WINS should develop a BPG for onsite and offsite response.</i>

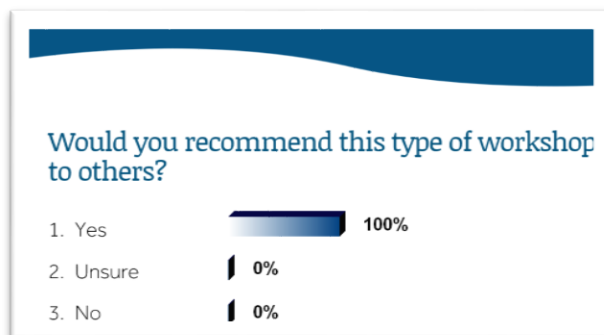
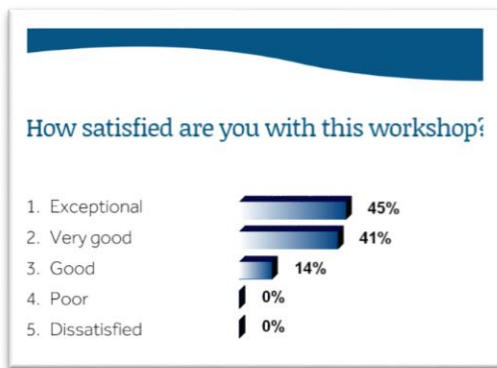




## EVALUATION SESSION

### E-voting

The e-voting system was used to obtain a final evaluation. Participants indicated that they were very satisfied with the event, that it had been an excellent and useful learning experience, that Mr Powe had been an effective facilitator, and that they would recommend the event to others. The results are illustrated below:



In his closing remarks, WINS representative Mr Pierre Legoux emphasised that the success of the workshop was largely due to the active contributions of all participants. He praised the willingness of the group to learn from the speakers' team and from each other despite a challenging topic. He added that the discussions had shown that participants (and likely the stakeholders they were representing) had a strong appetite for increasing their capabilities to strengthen their already existing incident management programmes.

### SITE VISIT

The third and final day of the workshop consisted of a trip to a Cadarache nuclear site. The visit began with an overview of the site and its facilities. During the visit, the group was divided into two smaller groups to visit the construction field of the Jules Horowitz Reactor and the training facility of the fire brigade. At the end, there was a demonstration of equipment use by the Security Department.



*The event concluded with a lunch and review of key findings from the tour led by Mr Powe and Mr Legoux. Participants mentioned their satisfaction with the site visit and thanked WINS and CEA for the opportunity to visit the facilities.*