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Benchmarking on Inspection Practices

First Triennal Report of the Working Group on Inspection Practices

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NUCLEAR ENERGY AGENCY
COMMITTEE ON NUCLEAR REGULATORY ACTIVITIES

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List of abbreviations and acronyms

ASN	Autorité de sûreté nucléaire (Nuclear Safety Authority, France)
BWR	Boiling water reactor
CAP	Corrective action programme
CANDU	Canadian deuterium uranium reactor
CNRA	Committee on Nuclear Regulatory Activities
CNSNS	Comisión Nacional de Seguridad Nuclear y Salvaguardias (National Commission on Nuclear Safety and Safeguards, Mexico)
CSN	Consejo de Seguridad Nuclear (Nuclear Safety Authority, Spain)
EDF	Electricité de France
IRSN	Institut de radioprotection et de sûreté nucléaire, France
KINS	Korea Institute of Nuclear Safety, Korea
NEA	Nuclear Energy Agency
NPP	Nuclear power plant
NRC	Nuclear Regulatory Commission (United States)
ONR	Office for Nuclear Regulation (United Kingdom)
PSA	Probabilistic safety assessment
PWR	Pressurised water reactor
RB	Regulatory bodies
RP	Radiation protection
UK	United Kingdom
USNRC	United States Nuclear Regulatory Commission
WGIP	Working Group on Inspection Practices

1. Introduction

In June 2012, the Working Group on Inspection Practices (WGIP), at the suggestion of the Nuclear Energy Agency (NEA) Committee on Nuclear Regulatory Activities (CNRA) initiated a benchmarking of inspection practices among the different international regulatory bodies (RBs) that are members of the NEA. This task was led by the United States Nuclear Regulatory Commission (USNRC) and initially supported by Mexico, Poland, South Korea and Spain. The WGIP decided to begin the task by conducting two pilot WGIP observed inspections in order to confirm its applicability to other future inspections.

After the two pilot observed inspections were performed, the CNRA approved, in December 2013, the WGIP´s inspection benchmarking proposal as a routine task.

In November 2014, WGIP members approved a protocol document, titled "Nuclear Power Plant Observed Inspection Practices Programme (WGIP-01)" (see in NEA/SEN/NRA/WGIP(2014)2, pages 20-31), which establishes a methodology to better accomplish the objectives of the task. Specifically, this document describes the way to observe the planning, conduct and enforcement actions of inspections by other member countries, and for documenting potential commendable practices[1] and lessons learnt. It was developed by the NRC and supported by Spain, France and Canada.

Since 2013, inspectors from 11 countries have participated in six observed WGIP inspections, including the two pilot inspections. These WGIP observed inspections were hosted by the United States (US), Spain, the United Kingdom (UK), Canada, France and Mexico. Also, regulators from Korea, Sweden, Finland, Poland, and Belgium participated on the inspection teams. The WGIP teams observed inspections of varying reactor technologies, including pressurised, boiling-water and CANDU reactors. The following observed inspections were completed:

Country	NPP/reactor	Date of observed inspection
USA (pilot #1)	Comanche Peak / PWR	April 2013
Spain (pilot #2)	Cofrentes / BWR	October 2013
UK	Sizewell B / PWR	September 2014
Canada	Darlington / CANDU	April 2015
France	Bugey / PWR	September 2015
Mexico	Laguna Verde / PWR	September 2016

Consequently, participants have had an opportunity to learn, observe and discuss various inspection practices used by participating regulatory bodies (RB). This has allowed them to identify potential commendable practices that cannot be easily obtained through other means, such as workshops.

On the basis of the separate reports issued after each observed inspection, this first triennial report highlights some challenges, such as:

- An observed inspection can be resource intensive for the host country.

1. For the purpose of this report, a "potential commendable (or "good") practice" is an inspection practice identified by the observed inspection team for discussion within the working group. If deemed as a practice that should be promoted within the regulatory bodies, the "potential commendable practice" is a "commendable practice". Commendable practices are neither international standards nor guidelines. Considering its own legislative and regulatory framework, as well as its historical, social, cultural etc. backgrounds, it is up to each country to implement a given commendable practice which is supposed to improve its inspection practices.

- Language may be a key barrier for WGIP observed inspection participants.
- A host country needs time to process the observed inspection results.

This report, developed by the United States with the contributions of France and Canada, and under the co-ordination of Spain, contains the results of more than three years work.

2. Scope and purpose

The WGIP Nuclear Power Plant (NPP) Observed Inspection Practices Programme is intended to promote co-operation and learning among member countries and to collect and provide them with information for improving the effectiveness of existing regulatory inspection practices. This is accomplished by observing how inspections are carried out by other member countries and issuing a WGIP observed inspection report that includes observations (e.g. inspection techniques, obstacles encountered), lessons learnt and potential commendable practices that could be used by a regulatory body.

This first triennial report documents the results of a consistency check performed between all six WGIP observed inspection reports and ratifies certain observations, lessons learnt and potential commendable practices identified by WGIP observed inspection participants (see Enclosure 2).

3. Objectives

The Nuclear Power Plant Observed Inspection Practices Programme has five objectives:

1- Facilitate volunteering member countries traveling to a host member country's NPP facility to observe plant operations and inspection techniques implemented by the RB or the licensee.

2- Expand a member country's knowledge of country-specific inspection programmes, rules, regulations, configuration, and layouts of plants and licensee and RB interactions, organisations, and operations.

3- Exchange inspection techniques and determine "commendable practices" that may be implemented by RBs in other countries.

4- Facilitate networking of individuals employed by member country RBs with the objective to foster co-operation and a free flow of information and knowledge related to safe operation of NPPs worldwide.

5- Provide inspection assessment input into the inspection report for the host country RB at the discretion of the RB.

The first six observed inspections mentioned above have achieved all these objectives.

4. Methodology

Section 07 Methodology of WGIP-01, Nuclear Power Plant Observed Inspection Practices Programme, outlines recommendations for participants visiting the NPP of the host country regarding pre-site preparations, site visit and post-site activities.

This methodology was strictly followed for all six WGIP observed inspections.

5. Summary of observed inspection results

Enclosure 1 – Summary of potential good practices and observations documented in WGIP observed inspection – of this report includes a table of observations, lessons learnt and potential commendable

practices that observed inspection participants identified and documented during the six WGIP observed inspections.

Potential commendable practices were identified by observed inspection participants as noteworthy inspection practices that WGIP member countries should consider. Since 2013, the participants documented 35 potential commendable practices based on reviews of the following:

- Comanche Peak NPP (5)
- Cofrentes NPP (3)
- Sizewell NPP (3)
- Darlington NGS (3)
- Bugey NPP (18)
- Laguna Verde NPP (3)

WGIP observed inspection reports use a variety of different labels such as potential good practices, observations, observer's remarks, good practices and potential inspection issues. As stated previously, the main purpose of this report is to assess which of these are commendable practices. The resulting commendable practices have been approved by the WGIP (see Enclosure 2).

Potential commendable practices that required clarification or did not appear to meet the definition were noted in italics. Commendable practices are extracts from the topics, which were discussed by the WGIP and were thought to be of benefit for the member countries. These are neither international standards nor guidelines. Each country should determine inspection practices, considering its own historical, social and cultural backgrounds and the commendable practices can be useful reference when each country improves its inspection practices.

An evaluation of the potential commendable practices listed in Enclosure 1 indicates six themes:

1- Inspection planning

2- Use of procedures

3- Communications

4- Licensee programmes

5- Inspection resources

6- Availability of office space and office equipment

The themes are identified in [red] for each potential commendable practice listed in Enclosure 1. The observed inspection participants identified the value of frequent communications with the licensee when conducting daily briefings, interviews, and exit meetings to discuss observed inspection issues. Also, participants noted that licensees that provided pre-inspection presentations focused on topics related to the inspection scope, improved communication and encouraged inspection efficiencies. Furthermore, daily debriefings among inspection participants and teleconferences with RB headquarters staff to discuss inspection issues also proved beneficial.

The observed inspection participants recognised that using access to the licensees' information technology systems and inspection specialists or contractors to augment their observation activities were important resources.

The participants considered scheduling the observed inspections during outages, using unannounced inspections by the host countries RB, and developing inspection flowcharts and databases as essential for effective observed inspection planning.

The participants also observed situations or activities that were unexpected or different from their previous experiences as a regulator. Some examples include the following:

- differences in frequency that inspectors attend inspector counterpart meetings;
- differences on how inspection issues are resolved, characterised, and transmitted to internal and external stakeholders;
- using or not using risk-informed inspection samples;
- using or not using inspection procedures while conducting inspections;
- differences in regulatory terminology (e.g. the meanings of "availability" versus "operability").

In some instances, these observed situations or activities became recommendations for the host or other participating RBs to consider implementing. The recommendations included the following:

- implementing risk-informed inspection samples;
- requiring medical exams for inspectors to access an NPP;
- having inspectors use cameras to record field observations;
- using checklists and guides during the conduct of inspections.

Issues that did not fit into the commendable practices, observations and recommendations categories were considered miscellaneous comments. The inspection team from Comanche Peak (US) documented five miscellaneous comments, which are:

- differences between the US and European countries in radiation dose regulations;
- the frequency that thermo-luminescent dosimeters (TLDs) are analysed;
- the US Nuclear Regulatory Commission (USNRC) inspectors do not use radiation detector to independently confirm radiation levels;
- the USNRC inspectors wear civilian clothes inside radiologically controlled areas (except in containment);
- both US licensee and the USNRC provide inspectors with TLDs.

Additionally, observed inspection participants mentioned that the observed inspection should have lasted 2 weeks instead of 1 week. The WGIP considered this recommendation and decided to maintain the length of observed inspection to 1 week.

While evaluating the information from the observed inspection reports, it was noted that the reports showed some differences in the type and quantity of information documented and in the categorisation of potential commendable practices, observations and recommendations. For example:

- The Bugey WGIP observed inspection report documented significant plant technical information and information on operations and philosophy of the French Nuclear Safety Authority.
- Only the WGIP observed inspection reports for Sizewell B, Darlington, and Bugey included inspection plans and schedules.
- Good practices and observations in the Bugey WGIP observed inspection report were documented daily and not summarised in the conclusions' section.
- Some WGIP observed inspection reports used the sentence "potential good practices" or "good practices" instead of "potential commendable practices".

- Only WGIP observed inspections at Comanche Peak, Cofrentes, and Sizewell listed recommendations.
- Only the WGIP inspection at Comanche Peak listed "miscellaneous" comments.

Feedback will be provided to future WGIP observed inspection team leaders to follow the WGIP-01 report template for capturing consistent information and implementing criteria for characterising potential commendable practices, observations and recommendations, and, if necessary, to recommend changes to WGIP-01 to ensure consistency.

6. Conclusions

Since the conduct of the two first pilot observed inspections in 2013 and the issuance of the document Nuclear Power Plant Observed Inspection Practices Programme (WGIP-01) in 2014, six observed inspections involving participants from 10 different countries were performed.

Inconsistencies between some WGIP observed inspection reports were identified and these need to be addressed through feedback to future WGIP observed inspection participants and/or potential changes to WGIP-01.

In spite of some identified challenges such as host country resource impacts, language barriers, and extra time needed to process the observed inspection results, participants are reporting advantages of the activities while carrying out the WGIP tasks, which include:

- identifying potential commendable inspection practices that cannot be easily obtained through other means, such as workshops;
- facilitating of networking among inspectors;
- fostering a better understanding of RB inspection techniques and country-specific regulations;
- increasing knowledge of varying plant layouts and technologies.

Based on the benefits gained by this programme, its support by CNRA members is imperative to encourage countries to participate, including considering the option of NEA providing economic assistance to some countries.

It is recommended that observed inspections should include opportunities for field observations. Therefore it is suggested that some observed inspections are conducted during outages, particularly in cases where the language barrier can be more noticeable.

It is recommended to continue with Nuclear Power Plant Observed Inspection Practices Programme (WGIP-01).

Enclosure 1: Summary of potential good practices and observations documented in WGIP observed inspection reports

Potential Commendable Practices	Observations
Comanche Peak Nuclear Power Plant (PWR) First Pilot Inspection (USA): 7 – 13 April 2013	
The inspections conducted during the refuelling outage allow [time] to significantly set bounds to the handling of documents and to carry out inspections that are more focused on field activities than on documentary review. [Thus, the commendable practice would be coordinating regulatory body (RB) inspections to coincide with refuelling outages.]. **[planning]**	In U.S. regions with nuclear power plants (NPPs), two 3-day meetings are held per year, whereas in Spain, four 2-day meetings are held every year. The plant's RP [radiation protection] service does not ask people for their medical examination or dose history before going into the controlled area. It only requests verbal information on the dose accumulated in the current year. The visiting inspectors were not subjected to a whole body count before entering the plant's controlled area and before leaving the plant. Dose requirements for exposed workers are different. In Europe: 50 mSv [milli-Sieverts]/year, no more than 100 mSv in 5 years, never exceeding 50 mSv in any single year. TLDs [thermoluminescent dosimeters] are read on a quarterly basis. In the United States, unlike in Spain, licensee refuelling outage reports are not prepared or are not reviewed by the NRC. The CSN's resident inspector checks the preliminary refuelling outage report, whereas the final report is particularly useful to RP experts for comparing what was initially planned and what finally happened during a refuelling outage with regard to "as low as is reasonably achievable" practices. NRC inspectors prepare a quarterly findings report where they include possible violations, whereas in Spain, the quarterly meeting minutes, the findings assessment report, and the report on noncompliances, if any, are documented The ASN representative considers it important to specify the deadlines for all actions important to safety. The different practices applicable to relations and communications between the head office or regional offices and the resident inspectors were highlighted. In the United States, there is a fluid relationship between resident inspectors and regional offices, but there is almost no communication with the head office–NRR. In France, the relationship between regional inspectors and the head office is considered to be very fluid. In Spain, this relationship is mainly channelled through the chief resident inspector, although it could be said that the CSN's head office is not only the equivalent of an NRC regional office but also acts as the NRC's head office–NRR. The NRC's resident inspectors have the capacity to fully close reportable events but, if necessary, they can bring up the matter to the regional experts. A clear difference in the way information is channelled by resident inspectors was also observed; thus, while in the United States, the resident inspectors send their requirements and questions to their [licensee] immediate superior (maintenance, security, operation, etc.). In Spain, all daily communication mainly takes place between the resident inspector and the station's production manager, which has its advantages and disadvantages.
Here, the inspector representing the French regulatory body stressed the idea of the invaluable help for inspectors to have a full set of inspection procedures, as is the case for both the NRC and the CSN. [The commendable practice is to have the RB develop and implement inspection procedures]. **[use of procedures]**	
The daily communication between resident inspectors and their superiors by means of conference call that allows all of them to participate at the same time had a positive impact. The phone messages sent by the licensee to the resident inspectors on a daily basis about the unit in refuelling outage and the unit in operation, during which they are informed of the main events that have occurred during the day, is also considered a good practice. The French regulator's representative inspector again took the floor to mention, by way of example of a different practice, that in France there are no resident inspectors. Instead, there are regional inspectors, who work at the same regional offices, which makes [sic] it easier for them to talk to each other. [This comment was noted in the report as a good practice but could be categorised as an observation]. **[communications]**	
It is considered that the handling of the CAP [Corrective Action Programme] at this station is good because, by keeping all conditions that might affect quality separate from other information, such as work orders, maintenance orders, and so on, the inspectors' task is made easier. The inspector representing the French regulatory body–the Nuclear Safety Authority (ASN)–pointed out that a limited use of this tool is made at ASN. The Spanish inspectors said that not all Spanish NPPs manage the CAP in the same way. **[licensee programmes]**	
The visiting inspectors thought very highly of the licensee's initiative to draft its own quarterly findings report based on the information provided by the station's resident inspectors, which is later discussed, and agreed to week by week in order for the licensee and the NRC to reach an almost complete pre-agreement on said information before it is presented at the quarterly meeting between the resident inspectors and the licensee. (Keep in mind this practice is only applied at CPNPP). In addition, the attitude shown by licensee managers when they accept or refute findings and acknowledge poor practices in recurring cases and when they tell the NRC's representatives that they would solve them promptly is commendable. *[The commendable practice is to communicate frequently with the licensee the issues identified during inspections conducted by the RB so that the issues are clearly understood and allow the licensee to address plant performance]*. **[communications]**	

Potential Commendable Practices	Observations
The last potential good practice is that resident inspectors have a place of their own where they can integrate different spaces and tools with which to do their job more efficiently, such as resident inspector offices, an HQ inspector office, a meeting room, a room provided with hardware and software to look up plant documents, printers, photocopiers and so forth. Additionally, NRC inspectors have a part-time secretary at their disposal (2 days, 4 hours each). [Providing RB inspectors with a work space (office), information technology equipment and administrative staff is a commendable practice]. **[equipment]**	
Cofrentes Nuclear Power Plant (BWR) Second Pilot Inspection (Spain); 14 – 18 October 2013	
Using a standardised format for quickly communicating the results of field inspections to the plant operators. **[procedures/communications]**	It could be also considered as a good practice to require RB inspectors to show medical test results, as well as a record of basic training in RP to enter in an NPP.
CNSC and CSN site inspectors regularly use full access to the license holder [licensee] computer system. The KINS site inspectors do not have access to the license holder computer system and must specifically request documentation from the license holder. [Thus, the commendable practice would be to allow RB inspector access to the licensee's information technology system]. **[inspection resources]**	
Frequent use of gamma meters during inspection walk downs to verify and control radiological protected areas, hot spots, components, and other items. **[equipment]**	
Sizewell B Nuclear Power Plant (PWR) (United Kingdom): 9 – 11 September 2014	
ONR possesses a tracking tool (issues database) for site-specific issues considered significant by the regulatory body. This system included correspondence history between ONR and the licensee and identified a responsible inspector for each issue. **[inspection planning]**	The use of photographic evidence as part of the inspection was observed as a good practice in the pilot inspections. The UK inspectors have access to cameras, but their use is not widespread and should be extended. [This comment was noted as a recommendation in the report and could also be considered a commendable practice]. **[equipment]**
Maintaining access to the licensee's computer system at the site inspector's headquarters office and onsite office. **[inspection resources]**	
The lead inspector developed a flow chart that effectively tracked completion of inspection activities from the site's safety case through the various license conditions until a final conclusion on licensee performance could be assessed. In addition, this flow chart was shared with the licensee to assist in the timeliness of providing the inspector with documents for review, as well as providing a visual demonstration of how deficiencies identified by the inspector were associated with specific license conditions. This practice was not standard for ONR inspectors, but the visiting inspectors found it a very effective means of keeping a deep vertical slice inspection, which was only allotted 2 days for completion, focused and sufficiently probed of a wide range of licensee activities, and recorded the scope and extent of the sample inspected. **[inspection planning]**	
Darlington Nuclear Generating Station (CANDU) (Canada): 27 April – 1 May 2015	
Develop and use inspection guides (a.k.a., checklists) that include regulatory criteria, expected outputs and inspection activities. [Developing inspection guides and checklists that includes the regulation associated with that inspection is a commendable practice] **[procedures]**	The observed inspection team was able to conduct or attend almost all activities on the observed inspection schedule (Appendix A). However, the first 4 days of the inspection ran from about 07h30 to 20h00. In conclusion, too many activities had been scheduled over too little time. [inspection planning]

Interview system engineers as part of system inspections. [Conducting interviews of applicable licensee staff as part of an inspection is a commendable practice]. **[communications]**	
Allow for adequate time to request and read documents before, during, and after completion of inspection activities. [A commendable practice includes preparing for inspections by researching applicable documents throughout the inspection] .**[inspection planning]**	
Bugey Nuclear Power Plant (PWR) (France): 7 – 11 September 2015	
A multidisciplinary team of inspectors from other regions and specialists make very strong inspection teams performing parallel comprehensive inspections on multiple topics. **[inspection resources]**	There is no specified ASN internal service standard regarding the number of days required to issue the report for this type of inspection. For example, the report for the last inspection of this type, performed almost 1 year ago, has not yet been issued to the licensee. It appears that this is because of the many levels of reviewers and approvals required before issuing the report. [inspection planning] ASN does not focus its maintenance sampling activities based on risk to core damage. The ASN inspectors do not carry their own cameras on their inspections to take pictures of observations and records in the field. ASN does not inspect systematically diesel generators (availability/maintenance). Inspection guides or check-sheets not in hand for reference during the field inspections. ASN does not have a procedure or checklist that assists inspectors in conducting heat sink paperwork reviews and interviews. Such guidance could help ensure all topics—training, verifying abnormal operating procedures, reviewing condition reports, and reviewing parameters collected by the operators are within tolerance are completed. Documenting execution of the inspection could help and effectively use newly hired inspectors as a resource ASN and EDF have different interpretations regarding the definitions of operability and availability from Canada and the United States. It appears that ASN inspectors are generalists and solicit technical help by utilising IRSN staff. This approach appears similar to NRC technical staff (technical reviewer) or a contractor the NRC hires to assist in inspections where high technical skills are required. All verification criteria for the ASN inspection stem from directives (internal, temporary, or particular) that are issued by EDF head office, rather than regulations. The briefing on security onsite and radiation protection performed on Monday appears afterwards not detailed enough. [communication] Also, the personal alarming dosimeters issued were not personal, and the visitors were not informed of the dose and dose rate alarms, if any, and the required actions if it alarms. There were no specific entry requirements for contamination areas. The briefing performed between the shift manager and the auxiliary field operators before they start their field walk downs was good and thorough. [Although this was noted as a good practice in the report, this would more appropriately be categorised as an observation of a licensee's professional behaviour] [communication]
Notification of this type of inspection is sent to licensee months in advance with detailed scope. Entrance meeting presentation given by ASN team lead was very comprehensive and included an explanation and justification as to why this site was chosen for this type of comprehensive inspection. **[communications]**	
A labour inspector (from ASN) accompanies the inspection team to make labour-related observations separate from the inspection. If the labour inspector observes noncompliance, a separate letter or report is generated and issued. **[inspection resources]**	
Maintenance activities selected the day of the inspection were unannounced to the workers. **[inspection planning]**	
During outages, access control to the reactor building involves the handing over of access badges and acquiring a temporary badge, which prevents the potential of any worker leaving site without contamination monitoring in case of an emergency. **[licensee programmes]**	
Good oversight over contractors performing work; hold points built into records and procedures. **[procedures]**	
All record requests are addressed on the spot. Licensee has access to its databases and documents, which are projected on the screen such that all document requests can be easily electronically retrieved and shown to the inspection team. This is because once the inspection day is finished, the communications cease and the inspection team makes their conclusions solely based on the facts presented and verifications performed. (No grace period.) **[communications]**	
Heat sink is a good inspection sample because of its contribution to plant risk. [inspection planning]	
ASN and IRSN staff are [sic] thoroughly prepared before the inspection and conduct themselves professionally and in a non-threatening manner while interviewing the licensee. This approach encourages open and candid dialog and consequently increases efficiency. [Although this was listed as a good practice, it does note the need to act professionally during inspections. Thus, this comment would fit more appropriately as an observation]. **[inspection resources]**	
Field operators performing routine field rounds or walk downs computerise their observations using a mini computer which they carry with them- so it's a verifiable record. The record from the mini computer is downloaded onto a database and stored indefinitely as a record. **[equipment]**	

At the beginning of the inspection, the licensee begins by making a brief PowerPoint presentation to provide an overview of the topic scope. **[communications]**	It appears that the licensee is supportive of the inspection. It readily responds to inspector questions and quickly gets support from other staff when they are unable to answer specific questions asked by the inspectors. [Although this was noted as a good practice in the report, this would more appropriately be categorised as an observation of a licensee's professional behaviour]. [communication] An independent safety engineer was present. [This comment was noted as a good practice in the report; however, it would more appropriately fit as an observation of licensee good performance] [inspection resources]
There is an information screen in the MCR displaying all the impairments, when they were started and when they must be removed, as well as chemistry specifications. [This comment was noted as a good practice in the report; however, it would more appropriately fit as an observation of licensee good performance]. **[communications]**	
The inspection was not disruptive to plant operations. The licensee was generally very cooperative and transparent. ASN inspectors were very well prepared, professional, and cordial. **[communications]**	
There was a good balance during the inspection between time spent performing document reviews, field walk down observations, and interviews with licensee representatives. **[communications and inspection planning]**	
At the end of each day, the three inspection teams debrief the inspection team leader on their observations and findings using a template form. The inspection team leader is not part of any particular team but rather oversees the inspection and collects the teams' conclusions. Her responsibility is to amalgamate them in a presentation to present at the exit meeting to the licensee. **[communications]**	
The inspection team leader may select his or her team members (those from ASN, not IRSN). **[inspection resources]**	
Laguna Verde Nuclear Power Plant (BWR) (Mexico): 4 – 9 September 2016	
CNSNS has prepared a summary of the Laguna Verde PSA that lists all the risk significant systems and components, which includes the description and procedure number used by the licensee to monitor and test the components. CNSNS inspectors used this summary to determine which system to choose for the system alignment configuration verification. **[procedures]** The observed inspection team held a progress meeting with the licensee during the inspection. This gave the licensee the opportunity to look into the situation and gather any additional information, which might be helpful in the inspection, before the exit meeting was conducted. **[communications]** The involvement of the resident inspector in inspections from headquarters contributes to the success of the inspection. **[inspection resources]**	

Enclosure 2: Final commendable practices approved by the WGIP

Inspection planning

CP1 The regulatory body (RB) should establish an inspection issues database for site specific significant issues and to assign a responsible inspector for each database issue for tracking through to resolution.

CP2 RB inspectors should use flow charts to track completion of inspection activities, through to a final assessment and conclusion of the licensee's performance.

CP3 To most accurately determine licensee performance during the conduct of maintenance activities, the RB should not announce to the licensee which maintenance work will be observed in the field.

CP4 Inspectors should strike a good balance during inspections between time spent performing document reviews, field observations and interviews of licensee representatives.

Use of procedures

CP5 The RB should develop and implement inspection procedures for different types of inspections

CP6 For each inspection, the RB should develop inspection guides (or checklists) that include regulatory requirements.

Communications

CP7 The RB should ensure adequate situational awareness, by promoting frequent communication between resident inspectors/regional inspectors and other inspectors and their superiors by means of a conference call that allows all of them to participate at the same time.

CP8 The RB should request information be sent by the licensee to the resident and regional inspectors on a daily basis about the status of the units in refuelling outage and in operation and to inform the RB inspectors of the main activities that have occurred.

CP9 The RB should communicate identified inspection issues promptly to ensure they are clearly understood and which allow the licensee to address plant performance issues in a timely manner.

CP10 The RB should use a standardised format for quickly communicating the results of field inspections to the licensee.

CP11 The RB should conduct interviews of system engineers as part of an inspection that is focused on plant systems.

CP12 Where appropriate, a comprehensive entrance meeting presentation should be given by the RB fully describing the inspection aim and scope, similarly, the RB should request the licensee at the very beginning of the inspection provide a brief formal overview presentation of the plant and current licensee activities.

CP13 The RB should develop a standardised template to ensure the appropriate type and level of detail of daily inspection observations and findings is provided to the team leader by each inspector.

CP14 The RB should ensure that licensees provide inspectors with briefings on radiation protection that are sufficiently detailed and comprehensive before entering in a protected area.

Inspection resources

CP15 The RB should ensure that inspectors are granted full access to a licensee's information technology system (databases, technical documentation, work orders, etc.) while on-site during the conduct of inspections.

CP16 The RB should use a multidisciplinary team of inspectors from different regions and specialists to form strong inspection teams performing parallel integrated activities on multiple topics.

Equipment and availability of office space

CP17 The RB should ensure that licensees provide inspectors with a dedicated work space (office), information technology equipment and administrative support when requested.

CP18 The RB should ensure that inspectors use gamma meters during inspection walk downs to verify radiological protected areas, hot spots, components and other items.

CP19 The RB should ensure that inspectors use a camera while in the field to gather photographic evidence as part of inspections.