Convention on Nuclear Safety 7th Review Meeting – 2017



International Atomic Energy Agency IAEA, Vienna

Country Review Report for

India

Drafted by Country Group $N^{\circ}\,7$

(Australia, Croatia, Denmark, India, Ireland, Mali, Netherlands, Peru, Sri Lanka, Switzerland, Ukraine)

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Version: Final

DISCLAIMER: Per INFCIRC 571, Revision 7, Para. 16-19 and Annex IV, Contracting Parties were invited to comment on the implementation of the CNS reporting guidance. Contracting Parties were also encouraged to submit proposed Good Practices, Challenges, and Suggestions prior to the Review Meeting. The draft Country Review Report documents the preliminary observations identified by the Contracting Parties. The Country Review Report is the result of the CNS Review Process and was agreed by consensus by the Country Group.

Glossary

The Glossary provides here the definitions of "Challenges", "Suggestion" and "Good Practice" according to Annex IV of INFCIRC/571/Rev. 7. The definition of "Area of Good Performance" was agreed upon by the Officers of the 7th CNS Review Meeting at the CNS Officers' Meeting on 3-4 October 2016.

A **Challenge** is "a difficult issue for the Contracting Party and may be a demanding undertaking (beyond the day-to-day activities); or a weakness that needs to be remediated."

A **Suggestion** is "an area for improvement. It is an action needed to improve the implementation of the obligations of the CNS."

A **Good Practice** is "a new or revised practice, policy or programme that makes a <u>significant</u> contribution to nuclear safety. A Good Practice is one that has been tried and proven by at least one Contracting Party but has not been widely implemented by other Contracting Parties; and is applicable to other Contracting Parties with similar programmes."

An **Area of Good Performance** is "a practice, policy or programme that is worthwhile to commend and has been undertaken and implemented effectively. An Area of Good Performance is a significant accomplishment for the particular CP although it may have been implemented by other CPs."

Executive Summary

India has 21 nuclear power reactor units in operation with an installed capacity of 5780 MWe, 8 units (6300 MWe) under construction and 4 planned. Most of the existing reactors are of the PHWR-type (18), 2 are BWR-type reactors and 1 PWR. The reactors under construction or planned are from the following types : PHWR, VVER and PFBR.

1 out of 3 Challenges and 4 out of 4 Suggestions from the 6th Review Meeting have been closed.

The Country Group highlights the following measures to improve safety in India's national nuclear programme:

- Enhancing the severe accident management programme: station specific accident management guidelines have been developed and reviewed and are currently in place at all stations.
- Strengthening hydrogen management provisions by including passive catalytic recombiner devices in combination with homogenizing of the containment atmosphere.
- > Provision of containment filtered venting, based on wet scrubbing concept.
- Establishing On-Site Emergency Support Centers (OESCs) at all NPPs. This facility would have capability to remain functional under radiological conditions following a severe accident and will be capable of withstanding extreme external events (flood, cyclone, earthquake, etc.). This centralized on-site emergency support centre at each site will be constructed in the next two years.

India reported on the KAPS-2 and KAPS-1 events (pressure tube leaks) during a specific side event, organized by India, as well as during the country-group session. The CG-members recognized the sharing of information up to now and welcomes the commitment of India to continue actively sharing further technical information as the analysis will develop.

The staff of AERB has shown a significant increase and will still be increasing (an additional increase of 50%). Because of the number and variety of reactor types, this number is needed and justified.

The Country Group highlights the following results of international peer review missions of India:

- During March 16 27, 2015, India hosted IRRS Mission. The IRRS Mission report identified 5 good practices, 13 recommendations and 21 suggestions. The actions required with respect to improvements in the regulatory processes as per the recommendations and suggestions of the IRRS Mission have already been taken. However, effective performance of the regulatory processes with these measures needs to be observed for some time. Currently AERB is in this phase.
- The OSART Follow up Mission to Rajasthan Atomic Power Station 3&4 was completed in February 2014. The mission was performed using the revised scope and modules updated form the lessons learnt from the Fukushima accident. The mission found presence of strong safety culture at the nuclear power plant and has recorded many good practices.
- The first and second round WANO peer review have been completed for all NPPs and the 3th round is near completion. A pre-start up peer review for the four plants at construction phase has been performed, as well as a WANO corporate review of NPCIL.

The Country Group identified the following Challenges for India:

- Challenge 1: Prepare for the planned rapid expansion of nuclear power in the coming years, including the buildup of the needed competence for many different types of new reactors.
- Challenge 2: Completion of the identified long term measures after accident at Fukushima Daichii (see also challenge 1 & 2 of the 6th RM).
- > Challenge 3: Identification of root cause of the events of pressure tube leak at KAPS-1&2.

In addition the country group identified 1 Suggestion and 3 Areas of Good Performance.

The Country Group concluded that India:

- Submitted a National Report, and therefore complies with Article 5 and in time following Rule 39 of INFCIRC/573 Rev. 6;
- > Attended the 7th CNS Review Meeting, and therefore complies with Article 24.1;
- ➢ Held a national presentation and answered questions, and therefore complies with Article 20.3.

1. Basic Information on India's Nuclear Programme

India has 21 nuclear power reactor units in operation with an installed capacity of 5780 MWe, 8 units (6300 MWe) under construction and 4 planned, as shown in the table below. Most of the existing reactors are of the PHWR-type (18), 2 are BWR-type reactors and 1 PWR. The reactors under construction or planned are from the following types : PHWR, VVER and PFBR.

| NPPs in Operation | | | | | |
|---------------------------------|------|----------------------------|------------------|---------------------|-------------------------------------|
| Unit | Туре | Gross Capacity (MWe) | Licensee / Owner | Reactor Supplier | Commencement of Operation |
| KGS-1 | PHWR | 220 | NPCIL | NPCIL | Nov-2000 |
| KGS-2 | PHWR | 220 | | | Mar-2000 |
| KGS-3 | PHWR | 220 | | | May-2007 |
| KGS-4 | PHWR | 220 | | | Jan- 2011 |
| KAPS-1 | PHWR | 220 | | | May-1993 |
| KAPS-2 | PHWR | 220 | | | Sep-1995 |
| MAPS-1 | PHWR | 220 | | | Jan-1984 |
| MAPS-2 | PHWR | 220 | | | Mar-1986 |
| NAPS-1 | PHWR | 220 | | | Jan-1991 |
| NAPS-2 | PHWR | 220 | | | Jul-1992 |
| RAPS-1 | PHWR | 100 | NPCIL / DAE | AECL, CANADA | Dec-1973, Shutdown since 2004 |
| RAPS-2 | PHWR | 200 | NPCIL - | AECL/ DAE | Apr-1981 |
| RAPS-3 | PHWR | 220 | | NPCIL | Jun-2000 |
| RAPS-4 | PHWR | 220 | | | Dec-2000 |
| RAPS-5 | PHWR | 220 | | | Feb-2010 |
| RAPS-6 | PHWR | 220 | | | Mar- 2010 |
| TAPS-1 | BWR | 160 | | GE, USA | Oct-1969 |
| TAPS-2 | BWR | 160 | | | Oct-1969 |
| TAPS-3 | PHWR | 540 | | NPCIL | Aug-2006 |
| TAPS-4 | PHWR | 540 | | | Sep-2005 |
| KKNPP-1 | VVER | 1000 | | ASE, RUSSIA | Dec, 2014 |
| NPPs under construction/planned | | | | | |
| Unit | Туре | Gross Capacity (MWe) | Licensee / Owner | Reactor Supplier | Start of Construction |
| KKNPP-2 | VVER | 1000 | NPCIL | ASE, RUSSIA | Mar-2002 |
| PFBR | PFBR | 500 | BHAVINI | BHAVINI | Oct-2004 |
| KAPP 3&4 | PHWR | 700 each | NPCIL | NPCIL | Nov-2010 |
| RAPP 7&8 | PHWR | 700 each | NPCIL | NPCIL | Jul-2011 |
| KKNPP 3&4 | VVER | 1000 each | NPCIL | ASE, RUSSIA | under launch |
| GHAVP 1 to 4 | PHWR | 700 each | NPCIL | NPCIL | Siting consent issued |

2. Follow-Up from previous CNS Review Meeting

2.1 Challenges

India provided the following updates on Challenges identified during the 6th CNS Review Meeting.

Challenge 1: Implementation of containment filtered venting system.

India issued plant specific accident management guidelines and training of the operators on these aspects. Significant progress has been made towards severe accident mitigation efforts, in particular for containment filtered venting to maintain containment integrity. This system is based on wet scrubbing concept and has been developed indigenously through extensive experimentation. These measures have been initiated for implementation, to be completed in a phased manner over the next two years.

Follow Up Status: Open.

Challenge 2: Implementation of measures for hydrogen mitigation.

India issued plant specific accident management guidelines and training of the operators on these aspects. Significant progress has been made towards severe accident mitigation efforts, in particular for including the passive catalytic recombiner devices (PCRDs) to strengthen the hydrogen management. PCRDs have been indigenously developed and performance checks and qualification was carried out at the Hydrogen Recombiner Test Facility at Tarapur. The technology transfer for large scale manufacturing of PCRDs has been carried out. These measures have been initiated for implementation, to be completed in a phased manner over the next two years.

Follow Up Status: Open.

Challenge 3: Readiness for review of new reactor designs.

The licenses of the first 1000 MWe VVER of Russian design at Kudankulam were issued in 2015 by AERB, after satisfactory review of results of the commissioning tests and performance during initial operation. The second unit has achieved criticality on July 10, 2016 and is in advanced stage of commissioning for power operation.

The construction of a 500 MWe pool type, sodium cooled, mixed oxide (MOX) fuelled, Prototype Fast Breeder Reactor (PFBR) has been completed. Preparatory activities for commissioning of the PFBR are in progress.

AERB is currently reviewing the application for construction consent for two additional units of 1000 MWe VVERs (units 3&4 of KK NPP) at the Kudankulam site (identical to the 2x1000 MWe VVER units already built at the site). AERB has issued permission for excavation (first sub-stage of construction consent).

Construction of the four units of indigenously designed 700 MWe PHWRs, coming up at the Rawatbhata site in Rajasthan (RAPS-7&8) and Kakrapar site in Gujarat (KAPS-3&4) is presently in advanced stage. AERB had issued the regulatory clearance for major equipment erection for these units during 2014 & 2015.

In July 2015, AERB has issued the siting consent for establishing four more units of 700 MWe PHWR units at Gorakhpur in the northern state of Haryana. Review of the application for construction consent for the first two units is in progress.

AERB has updated the Safety Code on Site Evaluation of Nuclear Facilities - AERB/NF/SC/S (Rev.1, 2014)- and also issued a new Safety Code on Design of Light Water Reactor Based NPPs - AERB/NPP-LWR/SC/D (2015). These codes incorporate the lessons learnt from the Fukushima accident and contain requirements that are in line with the latest international standards.

India has been involved in the activities of committees of NEA and their various working groups such as the Committee on Safety of Nuclear Installations (CSNI) and Committee on Nuclear Regulatory

Activities (CNRA). AERB is also member in MDEP.

Follow Up Status: Closed.

2.2 Suggestions

India provided the following updates on Suggestions identified during the 6th CNS Review Meeting:

Suggestion 1: Describe in next National Report progress on implementing Nuclear Safety Regulatory Authority (NSRA) Bill.

The NSRA Bill, 2011 could not be passed by the Indian Parliament before the term of the Lower House expired in 2014. Necessary administrative approvals are currently being obtained by the Government of India for re-introduction of the NSRA Bill in the Parliament. Since it involves a legislative process it is not clear when the law will be in place.

Follow Up Status: Closed.

Suggestion 2: Describe in next National Report progress in assessing safety culture in the regulatory body.

India established a comprehensive system towards competence enhancement of AERB personnel and conscious efforts have been made to strengthen the safety culture at regulatory body. AERB also has a programme for assessment of its safety culture. Currently this assessments is being done on annual basis. Based on the safety culture assessments, management actions are taken for overcoming the weaknesses identified.

Follow Up Status: Closed.

Suggestion 3: Consider expanding scope of PSA studies for NPPs and report to the next Review Meeting.

In continuation of Level-1 and Level-2 PSA studies, reported in previous national reports, NPCIL has expanded the Level-1 PSA for a typical 220 MWe PHWR unit. This includes internal events PSA for low power operation, shutdown state, internal flood and internal fire; and seismic PSA for external events (site specific). Level 2 PSA studies for a typical 220 MWe PHWR have been completed. The submitted reports are being concurrently reviewed by AERB.

Follow Up Status: Closed.

Suggestion 4: Report on outcomes of the IRRS mission particularly concerning the frequency of inspections at operating NPPs.

India addressed this Suggestion by:

- AERB hosted an IRRS Mission of the IAEA in March 2015. The IRRS Mission report identified a suggestion on frequency of inspections at NPPs. The Government of India has made the report of the IRRS Mission publicly available through the website of AERB.
- ➤ AERB is working on multiple options of increasing the on-site surveillance. These include the increased number of inspections by headquarter staff, inspections by staff at regional centres and deployment of on-site observers at some sites. The final decision in this regard will be taken up after assessing these options. AERB does not have site-inspectors at the different sites. There are so called site-observers at selected plants or projects, depending on the need. They do not have any enforcement powers: they only report to AERB. If needed, following their observations, specific inspections can be organized.

Follow Up Status: Closed.

3. Measures to improve safety

3.1 Changes to the regulatory framework and the national nuclear programme

Since the last Review Meeting, the Country Group took note of the following changes to the regulatory framework and the national nuclear programme:

- The installed electricity generating capacity in India as of March 2016 is 298 GW. With this capacity, India is among the top five producers of electricity globally. The contribution from nuclear energy to the overall installed capacity is currently about 2%. To enhance the power generation capacity, India is in the process of setting up Light Water Reactors with foreign collaboration while continuing its own programme of PHWR based NPPs and indigenously designed light water reactor based NPPs. Four units of 700 MWe PHWRs are already under construction at KAPS-3&4 and RAPS-7&8. Recognizing the need for developing indigenous capability to support this growth, setting up/augmentation of facilities to manufacture major components by the leading industry partners has also been taken up.
- ➢ KKNPP-1 started commercial operation since 31st December 2014. KKNPP-2 is in an advanced state of commissioning (first criticality on 19th August 2016).
- ➤ The Atomic Energy Act 1962 was amended to change the definition of "government company" with a view to expand its scope.
- The staff of AERB has shown a significant increase and will still be increasing (an additional increase of 50%). Because of the number and variety of reactor types, this number is needed and justified. The retention degree of AERB-employees is very high, especially for safety and technology related aspects. Only for branches like IT, there is a noticeable turnover.

3.2 Safety improvements for existing nuclear power plants

The Country Group took note of the following implemented and planned safety measures for existing nuclear power plants in India.

Safety assessments of the existing NPPs following the Fukushima accident have re-confirmed inherent strengths in design, practices and safety regulation followed in India. The NPPs in India can withstand currently defined design basis external events (with sufficient margins available), and their consequential events such as sustained loss of electrical supplies (prolonged SBO) and loss of normal heat sink. However, based on the assessment certain safety enhancements were identified for strengthening the defences against rare external events exceeding the design bases and enhancing the severe accident mitigation capabilities. The safety enhancements identified were classified as short, medium and long term measures. Implementation for the short and medium term actions has been completed at all the NPPs operating and under construction. Following long term measures are under implementation:

- Enhancing the severe accident management programme: the generic technical basis document on accident management guidelines has been reviewed by the AERB. Station specific accident management guidelines have been developed and reviewed and are currently in place at all stations.
- Strengthening hydrogen management provisions by including passive catalytic recombiner devices in combination with homogenizing of the containment atmosphere. These combiners will be installed at all NPPs in a phased manner over the next two years.
- Significant progress has been made towards severe accident mitigation efforts including containment filtered venting to maintain containment integrity. This system is based on wet scrubbing concept and has been developed indigenously through extensive experimentation. These measures have been initiated for implementation, to be completed in a phased manner over next two years.

- AERB has framed requirements and guidelines for establishing On-Site Emergency Support Centers (OESCs) at all NPPs. This facility would have capability to remain functional under radiological conditions following a severe accident and will be capable of withstanding extreme external events (flood, cyclone, earthquake, etc.). This facility will be in addition to the existing emergency control centers. The design basis for the facility has been finalised and the work for creation of the facility at sites is in progress. This centralized on-site emergency support centre at each site (foreseen for extreme conditions) will be constructed in the next two years. The design parameters are now defined and India is confident that the construction will start soon and will proceed according to the schedule.
- India reported on the KAPS-2 and KAPS-1 events (pressure tube leaks) during a specific side event, organized by India, as well as during the country-group session. Investigation revealed multiple cracks on the pressure tubes of KAPS-1 as well as corrosion spots. As a result of these events, all other operating Indian PHWR units were inspected for similar issues : no corrosion was observed at the other units. The utility is actually performing the work needed to restart the units again (like for example root cause analysis of the event, removing and replacement pressure tubes, etc...). Anyhow, restart of the reactors is subject to clearance of AERB, after the root cause analysis is completed. The CG-members recognized the sharing of information up to now and welcomes the commitment of India to continue actively sharing further technical information as the analysis will develop.

3.3 Response to international peer review missions

The Country Group took note of the following implemented or planned measures in response to international peer review missions:

- During March 16 27, 2015, India hosted IRRS Mission. The IRRS Mission report identified 5 good practices, 13 recommendations and 21 suggestions. The Government and the AERB have initiated steps to address the recommendations and suggestions identified. The Government of India has made the report of the IRRS Mission publicly available through the website of AERB. The actions required with respect to improvements in the regulatory processes as per the recommendations and suggestions of the IRRS Mission to AERB have already been taken. However, effective performance of the regulatory processes with these measures needs to be observed for some time. Currently AERB is in this phase. A follow up mission will be scheduled, but no formal date has been set yet.
- The OSART Follow up Mission to Rajasthan Atomic Power Station 3&4 was completed in February 2014. The mission was performed using the revised scope and modules updated form the lessons learnt from the Fukushima accident. The mission found presence of strong safety culture at the nuclear power plant and has recorded many good practices. India has declassified the OSART mission report for making it available in IAEA OSMIR (OSART Mission Results) database. Since the design of the NPPs are quite similar, India considers that part of the results of the OSART missions are applicable as well to other units: a corporate review process handles this analysis and dissemination of results to the other plants. Another OSART mission is not formally planned as of now.
- The first and second round WANO peer review have been completed for all NPPs and the 3th round is near completion. A pre-start up peer review for the four plants at construction phase has been performed, as well as a WANO corporate review of NPCIL.
- > No decision has been taken regarding a EPREV mission.

4. Implementation of the Vienna Declaration on Nuclear Safety (VDNS)

On 9 February 2015, the Contracting Parties adopted INFCIRC 872, "Vienna Declaration on Nuclear Safety", which is a commitment to certain principles to guide them in the implementation of the CNS' objective to prevent accidents and mitigate their radiological consequences, should they occur. The Contracting Parties agreed to discuss the principles of the Vienna Declaration on

Nuclear Safety in their National Reports and in the subsequent Review Meetings.

4.1 Implementation of the VDNS's principle on new nuclear power plants

The first principle of the VDNS is:

"New nuclear power plants are to be designed, sited, and constructed, consistent with the objective of preventing accidents in the commissioning and operation and, should an accident occur, mitigating possible releases of radionuclides causing long-term off site contamination and avoiding early radioactive releases or radioactive releases large enough to require long-term protective measures and actions."

India defines a new nuclear power plant in the following way: For the purpose of the Vienna Declaration on Nuclear safety, India considers 'new NPPs' as those which are given construction consent after the current design code of AERB, i.e. Safety Code on Design of Light Water Reactor based NPPs (AERB/NPP-LWR/SC/D) was issued in January 2015.

India reports, that its national requirements and regulation incorporate appropriate technical criteria and standards to address the objectives of the first principle

The objective of preventing accidents in the commissioning and operation of new nuclear power plants is addressed by:

- Considering the generic requirements and design principles specified in the LWR design code also for PHWR-reactors.
- > Development of a "Safety Code on Design of LWR reactor based NPP's" which includes:
 - Technical criteria for preventing accidents in the commissioning and operation of NPP;
 - Provision of complementary safety features for mitigating the consequences of severe accidents;
 - Measures to protect against severe accidents and accident management arrangements.

The objective of mitigating against possible releases of radionuclides causing long-term offsite contamination and avoiding early radioactive releases or radioactive releases large enough to require long-term protective measures and actions by:

Requiring in the design of NPP that design extension conditions that could lead to large or early releases of radioactivity are practically eliminated. For design extension conditions that cannot be practically eliminated, only protective measures that are limited in terms of area and time shall be necessary for protection of the public, and sufficient time shall be made available to implement these measures.

The Country Group made the following observation:

> India meets the requirements of First Principle of VDNS.

4.2 Implementation of the VDNS's principle on existing nuclear power plants

The second principle of the VDNS is:

"Comprehensive and systematic safety assessments are to be carried out periodically and regularly for existing installations throughout their lifetime in order to identify safety improvements that are oriented to meet the above objective. Reasonably practicable or achievable safety improvements are to be implemented in a timely manner."

India reports, that its national requirements and regulation address the application of the principles and safety objectives of the Vienna Declaration to existing NPPs in the following way :

require the performance of periodic comprehensive and systematic safety assessments of existing NPPs as part of the license renewal process.

- > For NPPs of a new design, a first PSR is required after 5 years of operation.
- Safety assessments performed during PSR take into account current regulatory requirements, safety standards and operating practices. It also considers factors such as cumulative effects of plant ageing& obsolescence, modifications, feedback of operating experience, safety analysis and development in science and technology.
- Require reasonably practicable/achievable safety improvements to be implemented in a timely manner.

The Country Group made the following observation:

> India meets the requirements of Second Principle of VDNS.

4.3 Taking into account IAEA Safety Standards and other international Good Practices in the national requirements and regulations addressing the VDNS principles

India reports that its national requirements and regulation take into account the relevant IAEA Safety Standards throughout the life-time of a nuclear power plant, by:

AERB safety codes and guides, the safety requirements recommended by IAEA and the regulatory agencies of other countries are also considered. The safety documents are reviewed and updated periodically based on experience and scientific developments and to harmonize these with the recommended current safety standards of IAEA.

Furthermore, India reports that its national requirements and regulation also take into account other international Good Practice throughout the life-time of a nuclear power plant, such as taking into account best practices from all over the world in their NPP design and regulatory processes.

The Country Group made the following observation:

> India meets the requirements of Third Principle of VDNS.

4.4 Issues faced by India in the implementation of the VDNS

India does not face any specific issues in applying the Vienna Declaration principles and safety objectives to its existing fleet or new builds of nuclear power plants:

Expeditious development of requirements, safety conscious utility and regulatory review practices have facilitated the application of principles of Vienna Declaration in safety regulation of existing NPPs as well as for upcoming projects.

5. **Results of the Review**

5.1 General Quality of the National Report

Contracting Parties and officers were invited to provide general comments on the India' implementation of the obligations of the CNS (e.g., report submitted on time), addressed all articles, addressed the Vienna Declaration on Nuclear Safety, and addressed all Challenges and Fukushima lessons learned, the general quality of its National Report, transparency issues, and the compliance with the CNS guidance documents and special peer review topics identified in the previous CNS Review Meeting or specified by the President of the CNS (reporting on the management of spent fuel on site and radioactive waste on site - especially for CPs not signatories of the Joint Convention and if relevant on the use of the templates for articles 17 and 18).

With regards to the general quality of the National Report and transparency issues, the members of the Country Group made the following observations:

- > The Report is qualified to be comprehensive and reader friendly.
- Reviewing of the national report will be more practicable if the topics highlighted in the summary refer directly to the corresponding articles. Specific Information about the topics addressed under clause VIII of art. 19 as well as detailed information about waste management

strategy should be provided in the next National Report.

With regards to the compliance with the requirements of the CNS and its Guidelines, the members of the Country Group made the following observations:

- ➤ The Report was submitted on time.
- > The content and structure of India's National Report complies with the CNS guidance.
- > The directions of the Summary Report of 6^{th} Review Meeting were taken into consideration.
- \succ The directions given by the President of the 7th Review Meeting were followed.

5.2 Participation in the Review Process

With regards to India's participation in the Review process, the members of the Country Group made the following observations. India:

- posted 110 questions to Contracting Parties;
- delivered answers to the questions of Contracting Parties on time;
- delivered its national presentation.

5.3 Challenges

The Country Group identified the following Challenge(s) for India.

- Challenge 1: Prepare for the planned rapid expansion of nuclear power in the coming years, including the buildup of the needed competence for many different types of new reactors.
- Challenge 2: Completion of the identified long term measures after accident at Fukushima Daichii (see also challenge 1 & 2 of the 6th RM that remained open).
- Challenge 3: Identification of root cause of the events of pressure tube leak at KAPS-1&2.

5.4 Suggestions

The Country Group identified the following Suggestion for India.

Suggestion 1: (related to challenge 1): Consider continuing participation to NEA activities, specifically with respect to WGHOF and the related R&D activities.

5.5 Good Practices and Area of Good Performance

During the peer review of India's National Report, the Contracting Parties were invited to recommend Good Practices and to highlight Area of Good Performance.

The Country Group identified no Good Practices.

The following Areas of Good Performance of India were commended by the Country Group:

- Good Performance 1: National level system for training and competence building for nuclear power programme and safety regulation.
- Good Performance 2: System for operating experience feedback for safety enhancements and improvement of regulatory requirements / processes.
- Good Performance 3: Review and follow up by regulatory body of collective dose budgeting for NPPs.

6 Fulfilment of CNS Review Requirements

The Country Group concluded that India

Submitted a National Report, and therefore complies with Article 5 and in time following Rule 39 of INFCIRC/573 Rev. 6;

Country Review Report for India

- > Attended the 7th CNS Review Meeting, and therefore complies with Article 24.1;
- ➢ Held a national presentation and answered questions, and therefore complies with Article 20.3.