

Vietnam Agency for Radiation and Nuclear Safety (VARANS)

# VIETNAM PRESENTATION THE IRRS FOLLOW-UP MISSION IN VIET NAM

Bui Thi Thuy Anh

Maryland, 10 March 2015

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1. IRRS Follow-up Mission Preparations .....
2. Updated Situation since IRRS 2009 .....
3. Status of Recommendations and Suggestions .....
4. Report from IAEA .....
5. National Request in 2015 .....

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## IRRS FOLLOW-UP PREPARATIONS

- 1
  - IRRS mission in Hanoi from 28 Sept - 9 Oct 2009
  - Mission report and recommendations received
- 2
  - 7 Sept 2012: VARANS sent official request to the IAEA to conduct of the IRRS Follow-up mission
  - 17 Sept 2012: Acceptance letter from the IAEA
- 3
  - 12 Aug 2014: Confirmation of the mission date and members
  - 29 Sept – 9 Oct 2014: IRRS Follow-up Mission was performed

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## IRRS FOLLOW-UP PREPARATIONS (cont.)

- Decision No. 99/QĐ-ATBXHN dated 29 Apr 2014 of VARANS DG on the preparation for the IRRS Follow-up Mission in 2014;
- ✓ Assignment for the response to IRRS 2009's recommendations;
- ✓ Assignment for the response to the questions given in SSG16.




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## IRRS FOLLOW-UP PREPARATIONS (cont.d)

Assignment for the response to the IRRS 2009's recommendations:

Sr. No	Areas	Units in charge	Persons in charge	Leader in charge
1	Legislative & governmental responsibilities	Division of Information and Legislation	Mr. Dinh Ngoc Quang	DG. Vuong Huu Tan
2	Responsibilities and Functions of the Regulatory Body	Division of Information and Legislation	Mr. Dinh Ngoc Quang	DG. Vuong Huu Tan
3	Organization of the regulatory body	Division of Personnel & Administration; Training Division; Division of International Cooperation	Mr. Le Minh Tuan; Mr. Nguyen Quoc Anh; Mr. Luu Nam Hai	DG. Vuong Huu Tan
4	Activities of the regulatory body	Division of Licensing; TSC for Radiation Safety & Emergency Response; Division of Nuclear Safety; VARANS Inspectorate; Division of Information & Legislation	Mr. Duong Quoc Hung; Mr. Nguyen Viet Hung; Mr. Nguyen Duc Thanh; Mr. Nguyen An Trung; Mr. Dinh Ngoc Quang	DG. Vuong Huu Tan
5	Control of medical exposures	TSC for Radiation Safety & Emergency Response	Mr. Lai Tien Thinh	DDG. Le Quang Hiep

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## IRRS FOLLOW-UP PREPARATIONS (cont.d)

Assignment for the response to the IRRS 2009's recommendations:

Sr. No	Areas	Units in charge	Persons in charge	Leader in charge
6	Emergency Preparedness and response	TSC for Radiation Safety & Emergency Response	Mr. Tao Xuan Khanh	Former DDG. Dang Thanh Luong
7	Code of Conduct on Safety and Security of Radioactive Sources	Division of Nuclear Security & Safeguards; TSC for Radiation Safety & Emergency Response	Ms. Nguyen Nu Hoai Vi; Mr. Nguyen Duc Thanh	Former DDG. Dang Thanh Luong
8	Education and Training	Division of Training	Mr. Nguyen Quoc Anh	DDG. Le Quang Hiep
9	The management system for the regulatory body	Division of Information & Legislation	Mr. Dinh Ngoc Quang	Former DDG. Le Chi Dung
10	Safety infrastructure for a national nuclear power programme	Division of Information & Legislation; Division of Nuclear Safety; Division of Personnel & Administration; TSC for Radiation Safety & Emergency Response	Mr. Nguyen An Trung; Mr. Dinh Ngoc Quang; Mr. Le Minh Tuan; Mr. Nguyen Duc Thanh; Ms. Nguyen Nu Hoai Vi	Former DDG. Dang Thanh Luong

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## IRRS FOLLOW-UP PREPARATIONS (cont.d)

Assignment for the response to the questions given in SSG16:

Sr. No	Areas	Prime responsible person	Collaborator	Leader in charge
1	National policy and strategy for safety	Mr. Dinh Ngoc Quang	Ms. Duong Hong Anh	DG. Vuong Huu Tan
2	Global nuclear safety regime	Ms. Nguyen Nu Hoai Vi	Mr. Nguyen An Trung	DDG. Le Quang Hiep
3	Legal framework	Mr. Dinh Ngoc Quang	Mr. Nguyen An Trung	DDG. Le Quang Hiep
4	Regulatory framework	Mr. Duong Quoc Hung	Mr. Nguyen An Trung; Mr. Nguyen Viet Hung	DG. Vuong Huu Tan
5	Transparency and openness	Mr. Dinh Ngoc Quang		DDG. Le Quang Hiep
6	Funding and financing	Mr. Le Minh Tuan		DG. Vuong Huu Tan
7	External support organizations and contractors	Mr. Nguyen An Trung	Mr. Lai Tien Thinh	DG. Vuong Huu Tan
8	Leadership and management for safety	Mr. Dinh Ngoc Quang	Mr. Nguyen Viet Hung; Mr. Duong Quoc Hung	DG. Vuong Huu Tan
9	Human resources development	Mr. Le Minh Tuan	Mr. Nguyen Quoc Anh	DDG. Le Quang Hiep
10	Research for safety and regulatory purposes	Mr. Le Minh Tuan		DG. Vuong Huu Tan

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## IRRS FOLLOW-UP PREPARATIONS (cont.d)

Assignment for the response to the questions given in SSG16:

Sr. No	Areas	Prime responsible person	Collaborator	Leader in charge
11	Radiation protection	Mr. Lai Tien Thinh		Former DDG. Dang Thanh Luong
12	Safety Assessment	Mr. Nguyen An Trung	Mr. Lai Tien Thinh	DDG. Le Quang Hiep
13	Safety of radioactive waste management, spent fuel management and decommissioning	Mr. Nguyen Duc Thanh		DDG. Le Quang Hiep
14	Emergency preparedness and response	Mr. Tao Xuan Khanh		Former DDG. Dang Thanh Luong
15	Operating organization	Omit		
16	Site survey and site evaluation	Mr. Nguyen An Trung		DDG. Le Quang Hiep
17	Design safety	Mr. Nguyen An Trung		DDG. Le Quang Hiep
18	Preparation for commissioning	Omit		
19	Transport safety	Mr. Nguyen Viet Hung		Former DDG. Dang Thanh Luong
20	Interfaces with nuclear security	Ms. Nguyen Nu Hoai Vi		Former DDG. Dang Thanh Luong

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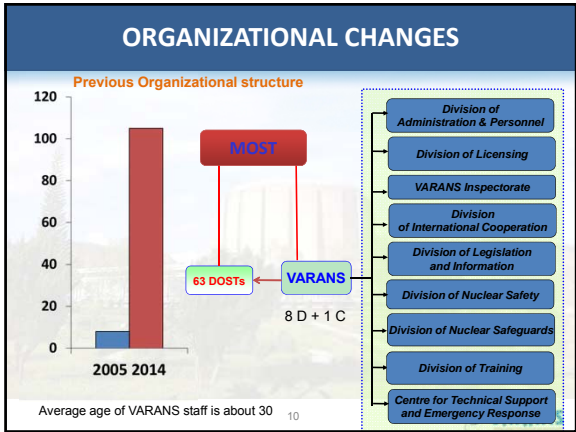
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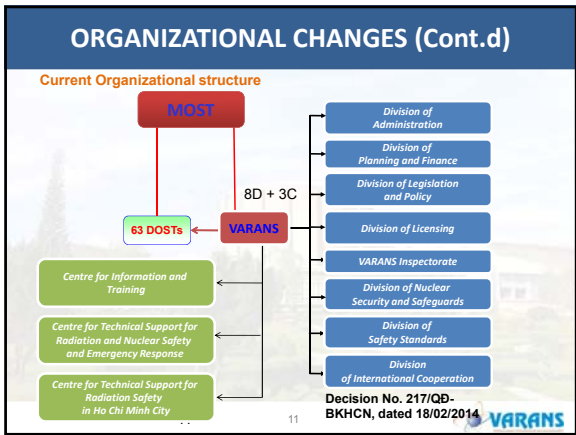
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- ### LEGAL DOCUMENT DEVELOPMENT
- General**
- Atomic Energy Law
  - Decree No.07/2010/ND-CP on guiding for implementation of some provisions of Atomic Energy Law
  - Decree No.70/2010/ND-CP on guiding for implementation of some provisions of Atomic Energy Law on nuclear power plants
  - Decree No. 107/2013/ND-CP on Administrative Sanctions in the Field of Atomic Energy
  - Circular No. 21/2013/TT-BKHCHN dated 12/9/2013 on Application of codes and technical standards of nuclear safety for siting, design, construction, operation and decommissioning of NPPs
  - Circular No.19/2012/TT-BKHCHN dated 08/11/2012 on control and assurance of radiation safety in occupational irradiation and public irradiation
- VARANS

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## LEGAL DOCUMENT DEVELOPMENT (Cont.d)

### For site approval

- Circular No. 13/2009/TT-BKHCHN dated 20th May, 2009 by Minister of Science and Technology guiding on preliminary nuclear safety assessment for site selection for nuclear power plants in the investment decision stage (Pre-FS stage);
- Circular No. 28/2011/TT-BKHCHN dated 28th November, 2012 on nuclear requirements for nuclear power plants site
- Circular No. 29/2012/QĐ-BKHCHN dated 28th December, 2012 on format and content of SAR for NPP site approval.
- Circular No. 20/2013/TT-BKHCHN dated 6th September, 2013 on inspection during site study and investigation for NPPs



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## LEGAL DOCUMENT DEVELOPMENT (Cont.d)

### For site approval (cont')

- Nuclear Safety Standards 6941 :2013 – External Human Induced Events in Site Evaluation for Nuclear Power Plants (based on NS-G-3.1).
- Nuclear Safety Standards 6942 :2013 - Dispersion of Radioactive Material in Air and Water and Consideration of Population Distribution in Site Evaluation Nuclear Safety (based on NS-G-3.2)
- Nuclear Safety Standards 6943 :2013 – Meteorological and Hydrological Hazards in Site Evaluation for Nuclear Power Plants Nuclear Safety (NS-G-3.4)
- Nuclear Safety Standards 6944 :2013 – Seismic hazards in site evaluation for nuclear installations (based on SSG -9)
- Nuclear Safety Standards 6945 :2013 – Geotechnical aspects of site evaluation and foundations for nuclear power plants (based on NS-G-3.6)



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## LEGAL DOCUMENT DEVELOPMENT (Cont.d)

### For FS approval and Construction phase

- Circular No. 30/2012/QĐ-BKHCHN on requirements on nuclear safety of NPP design (SSR 2/1);
- Circular No. 08/2014/QĐ-BKHCHN Guiding on format and content of SAR for FS approval phases;
- Circular Guiding on Review and Assessment of SAR for NPP FS approval (to be issued by QIV/2014)
- Circular Guiding on format and content of SAR for Construction Permit phases (to be issued by QIV/2014);
- Circular Guiding on DSA and PSA (to be issued by QIV/2014).



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## HUMAN RESOURCE DEVELOPMENT

- The Government Project 1558/QD-TTg dated 18/8/2010: 150M \$ for training and human development in the nuclear energy field
- Long-term education and training:
  - Local education & training (assigned universities & training centers, training programs of MoET and MoIT );
  - Dispatching personnel abroad for Ph.D, Master/Engineer (Russia, Japan, Sweden, Czech Republic, France, Korea, etc.)
- Short-term training:
  - Dispatching personnel abroad for short training courses.
  - Training courses with assistance of IAEA






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## STATUS OF RECOMMENDATIONS AND SUGGESTION

- Recommendations from 2009 Mission (89)
- Suggestions from 2009 Mission (47)
- Status of Safety Infrastructure Related to Introduction of Nuclear Power (SSG-16)



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STATUS OF RECOMMENDATIONS AND SUGGESTION				
Sr. No	Areas	Number of open	Number of closed	Number of closed with confidence
1	Legislative & governmental responsibilities	6/7	1/7	0/7
2	Responsibilities and Functions of the Regulatory Body	8/9	1/9	0/9
3	Organization of the regulatory body	6/7	1/7	0/7
4	Activities of the regulatory body	26/37	10/37	1/37
5	Control of medical exposures	5/5	0/5	0/5
6	Emergency Preparedness and response	13/18	4/18	1/18
7	Code of Conduct on Safety and Security of Radioactive Sources	5/9	4/9	0/9
8	Education and Training	5/5	0/5	0/5
9	The management system for the regulatory body	5/5	0/5	0/5
10	Safety infrastructure for a national nuclear power programme	24/33	8/33	1/33

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**IAEA Evaluation**

**Purpose**

- Review measures taken on the 2009 mission recommendations and suggestions
- Review further development of the regulatory safety infrastructure to support Vietnam’s nuclear power programme
- Share experiences and learn from each other for regulatory improvement



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**IAEA Evaluation**

**Preparation By VARANS**  
IAEA team appreciated:

- Planning Effort Prior to Mission
- Completion of a Status of Recommendations and Suggestions
- Completion of a Self Assessment of National Program Against SSG-16



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**IAEA Evaluation**

**Advantages of VARANS**

- Strong Leadership
- Positive and Cooperative Attitude
- Continual Improvement
- Openness to IAEA standards, and other internationally recognized good practices
- Dedication to Improve Legislation and Regulation
- Participation in International Activities



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**IAEA Evaluation**

**Progress**

- Significant Effort to Improve in Many Areas Including:
  - Strengthened Regulatory Control of Medical Uses of Radiation
  - Code of Conduct Implementation
  - Regulatory Framework to Support Nuclear Power



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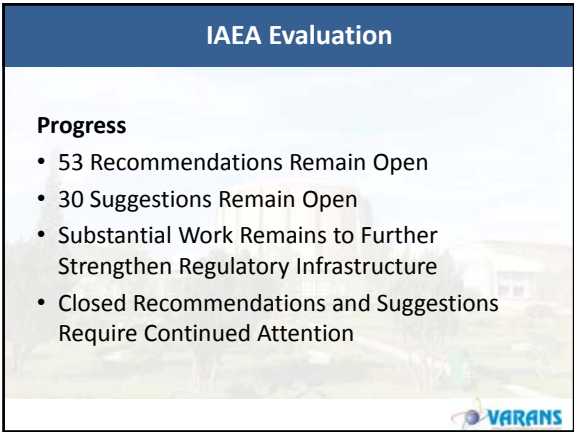
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**IAEA Evaluation**

**Progress**

- 53 Recommendations Remain Open
- 30 Suggestions Remain Open
- Substantial Work Remains to Further Strengthen Regulatory Infrastructure
- Closed Recommendations and Suggestions Require Continued Attention



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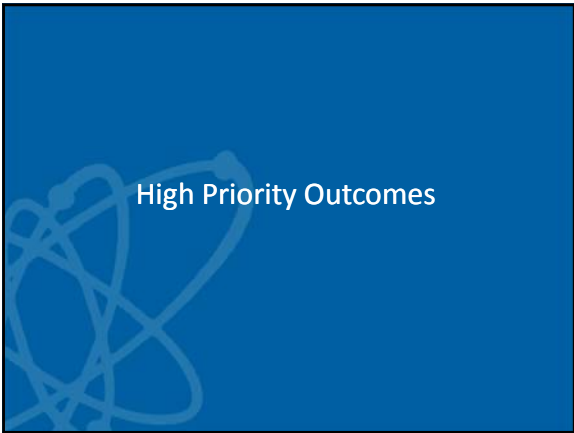
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**High Priority Outcomes**



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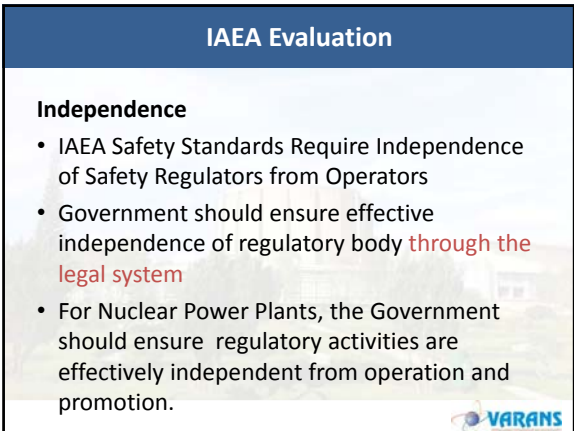
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**IAEA Evaluation**

**Independence**

- IAEA Safety Standards Require Independence of Safety Regulators from Operators
- Government should ensure effective independence of regulatory body **through the legal system**
- For Nuclear Power Plants, the Government should ensure regulatory activities are effectively independent from operation and promotion.



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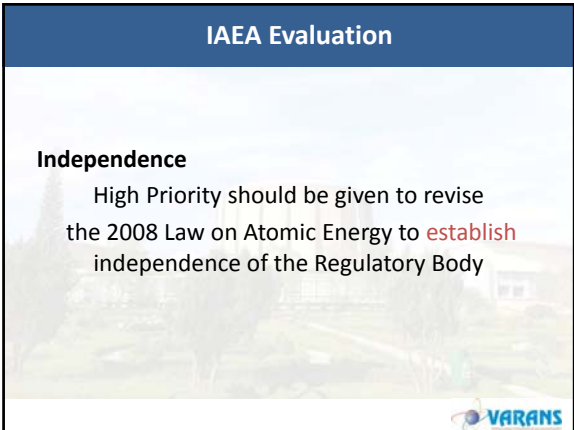
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**IAEA Evaluation**

**Independence**  
High Priority should be given to revise the 2008 Law on Atomic Energy to **establish** independence of the Regulatory Body



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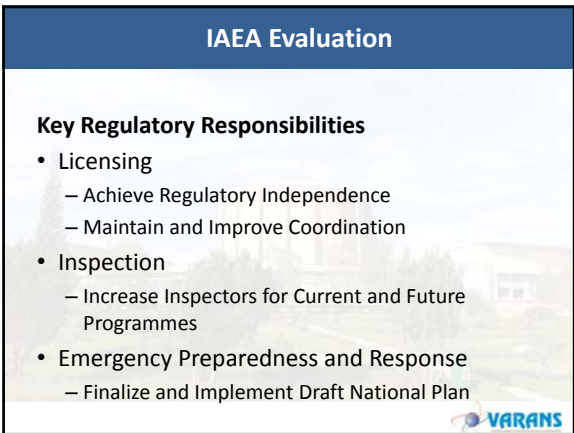
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**IAEA Evaluation**

**Key Regulatory Responsibilities**

- Licensing
  - Achieve Regulatory Independence
  - Maintain and Improve Coordination
- Inspection
  - Increase Inspectors for Current and Future Programmes
- Emergency Preparedness and Response
  - Finalize and Implement Draft National Plan



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**IAEA Evaluation**

**VARANS**

- Continued Development as the Competent Agency in Radiation and Nuclear Safety
  - Staffing
  - Financing
  - Technical Competence
- Balance Between:
  - Safety of Current Facilities
  - Building for Nuclear Power Programme



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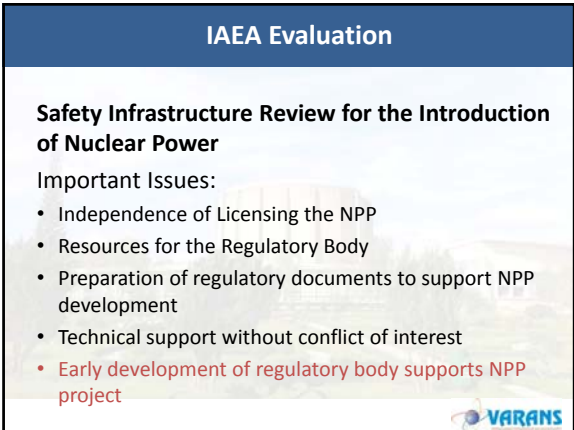
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**IAEA Evaluation**

**Safety Infrastructure Review for the Introduction of Nuclear Power**

Important Issues:

- Independence of Licensing the NPP
- Resources for the Regulatory Body
- Preparation of regulatory documents to support NPP development
- Technical support without conflict of interest
- **Early development of regulatory body supports NPP project**



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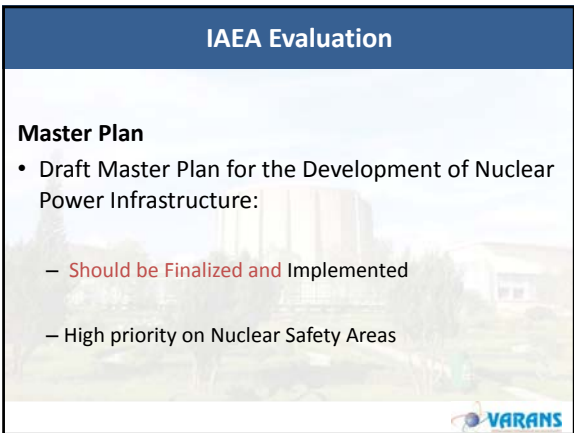
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**IAEA Evaluation**

**Master Plan**

- Draft Master Plan for the Development of Nuclear Power Infrastructure:
  - **Should be Finalized and** Implemented
  - High priority on Nuclear Safety Areas



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## National Request in 2015

- **EPRTG**

National Workshop on an effective national emergency response centre for radiological and nuclear emergency, **QIII/2015** (postponed from 2014)

National Workshop on methods for radiological and nuclear threat/hazard assessment for all radioactive sources and installations in Viet Nam, **QIII/2015**.

- **RWMTG**

National Workshop on Radioactive waste management of rare earth mining, milling and processing activities, **23-27 Mar 2015**

- **SMRRTG**

Training course/Expert Mission on safety design of Research Reactors, **QII/2015**

Expert Mission to review the inspection program for RR, **QI-II/2015**



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*Thank you for your attention !*

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